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Exploring the experiences of mothers who attended the kangaroo mother care facility in a tertiary care hospital in Swat, Pakistan: A descriptive qualitative study

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EXPLORING THE EXPERIENCES OF MOTHERS WHO ATTENDED THE KANGAROO MOTHER CARE FACILITY IN A TERTIARY CARE HOSPITAL IN SWAT, PAKISTAN: A DESCRIPTIVE QUALITATIVE STUDY

By

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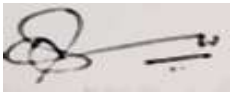

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22nd October, 2023

Dedication

I am dedicating this thesis to a few beloved people in my life who have meant and continue to mean so much to me. It is my genuine gratefulness and warmest regard that I first of all dedicate this work to my parents as their desire for a healthcare professional in the family brought me into this profession. Nevertheless, my brothers also deserve dedication as they kept encouraging me to get enrolled in the master's program and motivated me to successfully complete it with bright colors and always expressing an aspiration to see me high. Next, I extend my warmest gratefulness to my wife, who despite being miles away from me, always stood beside me and who had a blind trust in me that no matter what I am never going to fail.

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Abstract

Background

Globally, four million neonates die yearly, and the substantial reasons for the deaths are low birth weight and being preterm. The neonate mortality rate was 18 per thousand live births in the year 2021, which means that approximately 7000 deaths occur worldwide daily. Pakistan is among the top ten countries with many preterm births.

Purpose

To explore the mother's experiences with KMC, and the motive is that it will reduce the neonate's mortality rate by preventing preterm babies from hypothermia.

Method

A qualitative descriptive study design was used to explore the mothers' experiences who attended the KMC facility. The setting of the study was the KMC facility in a major public hospital, Swat. The purposive sampling technique was used to conduct in-depth interviews with 12 mothers. Content Analysis was used to analyze the data.

Finding(s)

The mothers have little knowledge and awareness regarding KMC. They know the positive outcomes and benefits of KMC. They were ready to practice KMC at the individual and community levels. The enabling factors to practice KMC include professional support and help in the hospital, family support and reassurance, and the societal acceptance of the KMC method. The circumstances hindering the KMC practice were the infrastructure of the hospital, lack of family support, and cultural values and traditions.

Conclusion

Mothers know the benefits of KMC. Minimal changes could be required in the KMC method according to the local norms and cultural settings. Mother's privacy and well-being is

an important aspect in the Pakistani context. More focus should be placed on the availability, accessibility, and affordability of KMC to everyone. The government and Non-government organizations should take the initiative to establish the chain of KMC in Pakistan, especially in the cold areas like the northern areas.

Keywords

Preterm and Low Birth Weight, Kangaroo Mother Care, Skin to Skin Contact, Exclusive Breastfeeding, Hypothermia, Neonates Mortality

List of Abbreviation / Acronyms

AKU	Aga Khan University
CA	Content Analysis
DMP	Data Management Plan
ERC	Ethical Review Committee
IDI	In-depth Interviews
KMC	Kangaroo Mother Care
KP	Khyber Pakhtunkhwa
LBW	Low Birth Weight
LMIC	Lower and Middle-Income Countries
NGO	Non- Government Organizations
NICU	Neonatal Intensive Care Unit
NMR	Neonatal Mortality Rate
PRISMA	Preferred Reporting Items for Systematic reviews and Meta-analyses
UNICEF	United Nations International Children's Emergency Fund
USA	United States of America
WHO	World Health Organization

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Thank you all

Declaration

I declare that this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any university and to the best of my knowledge it does not contain any material previously published or written by another person, except where due reference has been made in the text.

The editorial assistance provided to me has in no way added to the substance of my thesis which is the product of my own research endeavours.

(Signature of Candidate)

22nd October, 2023

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Chapter One: Introduction

This chapter includes a brief background of the topic and a brief overview of Kangaroo Mother Care. This chapter also highlights the importance of Kangaroo mother care in preterm babies, its uses and effectiveness in cold weather areas, and the literature description. Further, this chapter contains the study question, the aim of the study, and the importance of the study, particularly in developing countries like Pakistan.

Background of the Study Problem

Globally, four million neonates die yearly, and the significant reasons for the deaths are low birth weight and being preterm (Jayne Z Chisenga et al., 2015). The neonate mortality rate was 18 per thousand live births in the year 2021, which means that approximately 7000 deaths occur worldwide daily (*UNICEF Neonatal mortality*, 2021). This figure is very alarming, especially for lower- and middle-income countries. Approximately 60% to 80% of neonatal deaths occur in the developing world due to the prematurity of the babies. Pakistan is among the top ten countries with many preterm births. According to UNICEF, approximately 860,000 preterm births occur in Pakistan annually, with almost 102,000 babies dying due to complications. Pakistan is listed as second of those ten nations responsible for approximately two-thirds of all global premature delivery-associated mortality (*UNICEF Global goals for health and well being cannot be achieved without reduction in preterm births and child deaths*, 2017). The government and non-government organizations introduced several strategies to decrease the preterm mortality rate. The World Health Organization suggests kangaroo mother care (KMC), a science-based practice, to lower preterm fatality and morbidity (J. Sjömar et al., 2023). WHO also released updated guidelines for the management of preterm infants in 2022.

Along with the KMC, continuous positive airway pressure, medications like caffeine for breathing issues, and simple interventions such as kangaroo mother cares right after birth can profoundly lower fatality in premature and low birth weight neonates (*Preterm birth*, 2022). KMC does not need specialized tools or equipment, neonatal intensive care units, or technical expertise. According to a current meta-analysis, KMC may meaningfully decrease neonatal deaths in premature babies and low birth weight new-borns by up to 36%. According to a review of KMC enablers and barriers, KMC can be unified into maternal health care by raising consciousness, catching families, and allowing social inclusion in the intervention (Tahir & Fatmi, 2019). This five-bedded KMC facility provides excellent care to the preterm and has saved hundreds of innocent lives so far. Due to this facility, preterm mortality is significantly decreased.

Kangaroo mother care (KMC) is a cheap, high-impact guidance strategy for preterm babies in developing nations (N. D. Ndou et al., 2021). KMC only needs skin-to-skin contact and exclusive breastfeeding, which prevents preterm babies from infection and as well as from hypothermia (R. Sohail et al., 2019).

Kangaroo Mother Care (KMC is defined as the skin-to-skin contact of the mother with their baby, exclusive and complete breastfeeding, and the early departure of the neonates from the health centers are the major component of the KMC (Chan et al., 2016). The concept of kangaroo mother care originated in 1978 by Rey and Martinez, two pediatricians employed in a neonatology ward in Bogota, Colombia (Bailey, 2012). During an early morning walk, Dr. Rey and Martinez noticed a village woman with a large protrusion on her chest. They went to her to see the bulge, pondering it was serious. It turned out to be a tumor. When asked, the woman proudly said she was the town's wet nurse, holding a newborn against her chest. She said all the babies she looked after did well and grew well (Kostandy & Ludington-Hoe, 2019). Kangaroo mother care is a cost-effective and easily doable technique

for preterm care. Literature also showed that the infants who received KMC surpassed the conventional control group regarding physical development by achieving their milestones and physical growth (Bera et al., 2014).

Researcher's Reflection

While working in the district's main public hospital neonatology ward for two years, I observed that the neonates mainly died from hypothermia. The winter season in the northern areas of Pakistan is freezing. Sometimes the temperature goes to a minus degree due to rain and heavy snowfall. Most of the population lived in the mountains. Due to harsh cold weather, the newborn babies could not survive. Besides the harsh cold weather, lack of knowledge about the KMC and resources like well-equipped hospitals are the main reasons for neonatal mortality in the swat district. The population of this area is approximately about 5 million (*Final Results Census-2017).* Through this research, I would like to increase the chain of KMC facilities on a large scale. For nearly 5 million people, the 5-bed KMC facility is not enough. The general masses did not know how to prevent the neonate's mortality. The main reason for the parents was that the baby became blue and was not fed properly. Therefore, we received the neonates in very critical conditions. Sometimes they died on the way to the hospital. There is no accurate data available on the Swat district, but looking into the admission register, approximately, the neonate mortality rate of preterm in this area was about 98% in 2020. This is a very alarming figure. Hypothermia and feeding issues are the main reasons which can be easily preventable.

Research Question

What are the mothers' experiences who attended the Kangaroo Mother Care facility in a tertiary care hospital, Swat?

Research Objective

- To enquire about the mother's feelings regarding Kangaroo Mother Care
- To enquire about the mother's knowledge regarding Kangaroo Mother Care.
- To identify the barriers/ challenges to the mothers while providing kangaroo mother care.

Significance of the Study

According to the UNICEF data in Pakistan 2020, the newborn infant mortality rate is 40 per thousand live births (*Pakistan Key demographic indicators*, 2020). It is a very alarming figure. The leading cause of this Swat area is hypothermia. The general people of this area do not know how to prevent newborn from hypothermia. Research also shows that prenatal steroids and KMC are the top and easy interventions to save the lives of preterm babies (Kinney et al., 2012). The United Nations International Children's Emergency Fund (UNICEF) excels in this area. They have established this 5-bed KMC facility with the government. The government is also working with non-government organizations to decrease neonatal mortality by giving awareness and arranging workshops for healthcare workers. According to research, Premature and low birth weight-related neonatal death are still the major problems in Pakistan. A special, cheap method known as kangaroo mother care (KMC) has been exhibited to increase the rate of exclusive breastfeeding mothers and decrease newborn death and morbidity (Ariff et al., 2021). While looking into the severity of the problem, with our efforts and with the help of UNICEF, the government started a five-bed Kangaroo Mother Care facility in 2020 in the neonatology ward in a tertiary care hospital, Swat. This was a significant step by the government and UNICEF to decrease neonate mortality and save the precious lives of innocents.

World Prematurity Day, observed worldwide on November 17th, gives millions of premature babies and their relatives all over the globe a voice (*UNICEF Global goals for*

health and well being cannot be achieved without reduction in preterm births and child deaths, 2017). It is necessary to pivot world attention on the most common source of mortality in children below the age of five, preterm birth complications, and the impact of premature birth on individual people, relatives, and society (Lincetto & Banerjee, 2020). This Kangaroo Mother Care has considerably reduced the preterm mortality rate. The provision of KMC in preterm babies is momentous because they easily gain weight with exclusive breastfeeding and reduce their stay in the hospital (Siddiqui et al., 2020).

The research was done in Punjab, Pakistan, to check the efficacy of the KMC in 2017. The result showed that the KMC significantly reduced the neonate's morbidity and mortality rate (Rasul et al., 2017), but this study only focused on the neonate's morbidity and mortality rate. Based on this facility intervention, the researcher would like to explore the mothers' experiences who attended this KMC facility. Some studies have already been done in Pakistan on comparing morbidity and mortality and the community acceptance of kangaroo mother care. However, I have found no study that can explore the mother's experiences giving KMC in our Pakistani cultural context.

Generally, I have observed that those who attended the KMC facility are satisfied with the care. The people of this area accept KMC and are willing to avail this opportunity. The public also demands such type of facilities in our area. With this study, I want to highlight the issue further to the government to work more on it. This study will guide several facilities in the region. This kangaroo mother care is cheap and easily accessible to the population. With the establishment of such facilities, we can decrease the neonate mortality rate and save thousands of innocent lives.

Study purpose

The purpose of this research is to know about the mother's experiences with KMC, and the motive is that it will reduce the neonate's mortality rate by preventing preterm babies from hypothermia. In various low-income countries like Malawi and Pakistan, moms cannot make choices about their babies, having dads and mothers-in-law making choices about babies' health, especially premature babies. Through this study, the public can demand more KMC facilities from the government in this cold area. This study will also provide a road map for future research in this area. Through this study, the researcher will also have to know about the challenges mothers face during KMC in our cultural context. The data of this study can also be used by other government and non-government organizations to arrange seminars and workshops for the people to educate, be aware and train the public, especially the mothers, about the KMC.

Summary of the Chapter

This chapter highlights the importance of kangaroo mother cares in decreasing the preterm neonate's morbidity and mortality rate. This chapter further highlighted the significance of global kangaroo mother care for preterm babies. KMC is cost-effective, easily accessible, and does not need special expertise or skill to perform. The literature support and literature have supported the importance of the KMC in lower and middle-income countries, especially Pakistan. Using KMC can significantly reduce preterm and low birth weight morbidity and fatality. This study will help to explore the experiences of mothers who experienced the KMC, their knowledge, feelings, and challenges while providing KMC in our cultural context. This research data can also be used by the government and non-government organizations (NGOs) to implement the KMC facilities in hospitals and as well as in community settings in Pakistan.

Chapter 2: Literature Review

This chapter provides an integrative literature review of the perceptions and experiences of mothers who attended Kangaroo Mother Care (KMC). This chapter is divided into four sections. The first section is a brief introduction and background on KMC. The second section focused on the search strategy through which a literature review was conducted regarding the mother's experiences with KMC. The third section presented the significant themes and challenges identified from the mother's experiences. Finally, the fourth section provides a gap analysis and a chapter summary.

Introduction

Preterm delivery and low birth weight are the primary causes of the almost four million neonates yearly perish worldwide (Jayne Z Chisenga et al., 2015). According to (Klutse et al., 2022), In 2018, the Neonate Mortality Rate (NMR) was 18 in thousand live births, equal to 7000 deaths worldwide. This chapter highlights the mother's experiences who provided kangaroo mother care to their babies. After a thorough literature search, the researcher identified four main themes related to mother experiences, which are emotional exposure to the mothers with their babies, baby and mothers' interaction, mothers' insight on support and care with other staff, and the challenges they have faced during the provision of KMC.

Looking into the severity of the problem, the World Health Organization deliberated on a method to decrease the neonate mortality rate, which is easily accessible, available, and cost-effective. As a result, they formulated a method named KMC.

WHO defined KMC as the chest-to-chest connection of the preterm with their mothers and exclusive breastfeeding of their baby (Liu et al., 2020). More recent attention is focused on the delivery of KMC in the developing world due to the burden of preterm mortality and limited resources. KMC is an economical method to increase the survival of preterm and low

birth weight by providingexclusive breastfeeding, improving bonding, helping in the development of trust, weight gain, decreasing the risk of apnea, pneumonia, sepsis, and infection chest-to-chest contact with the mother (Liu et al., 2020). KMC also helps initiate earlier breastfeeding, which is necessary for the baby (Iqbal et al., 2022). The early discharge of the infant from the hospital with awareness and acceptance is another element of the KMC (Nyondo-Mipando et al., 2020).

Background

The concept of KMC has evolved. However, its origin can be traced back to 1978. Due to the high neonatal mortality rate and limited resources available, a Colombian pediatrician named Edgar Rey gave the concept of Kangaroo Mother Care in 1978. It is only since the work of Edgar Rey that the study of Kangaroo Mother Care has gained momentum (Grayson & Infant, 2018).

Due to skin-to-skin contact, the baby's temperature is stabilized, and increase the production of prolactin in the mother (Pratomo et al., 2020). The first discussion and analysis of KMC emerged during the 1990s with the interest of the World HealthOrganization and UNICEF. One another good step "Baby Friendly Hospital Initiative" was started by the WHO and UNICEF in 1991 to create a strong bond between mothers with their babies and promote breastfeeding (Wesołowska et al., 2022). Early initiation of a mother's milk can also help in the cognitive development of preterm babies (Viglione et al., 2022). During the past 30 years, much more information has become available on KMC.

Method:

For this literature review, two databases were used: PubMed and CINAHL. The literature review was conducted till December, 2022.

Results:

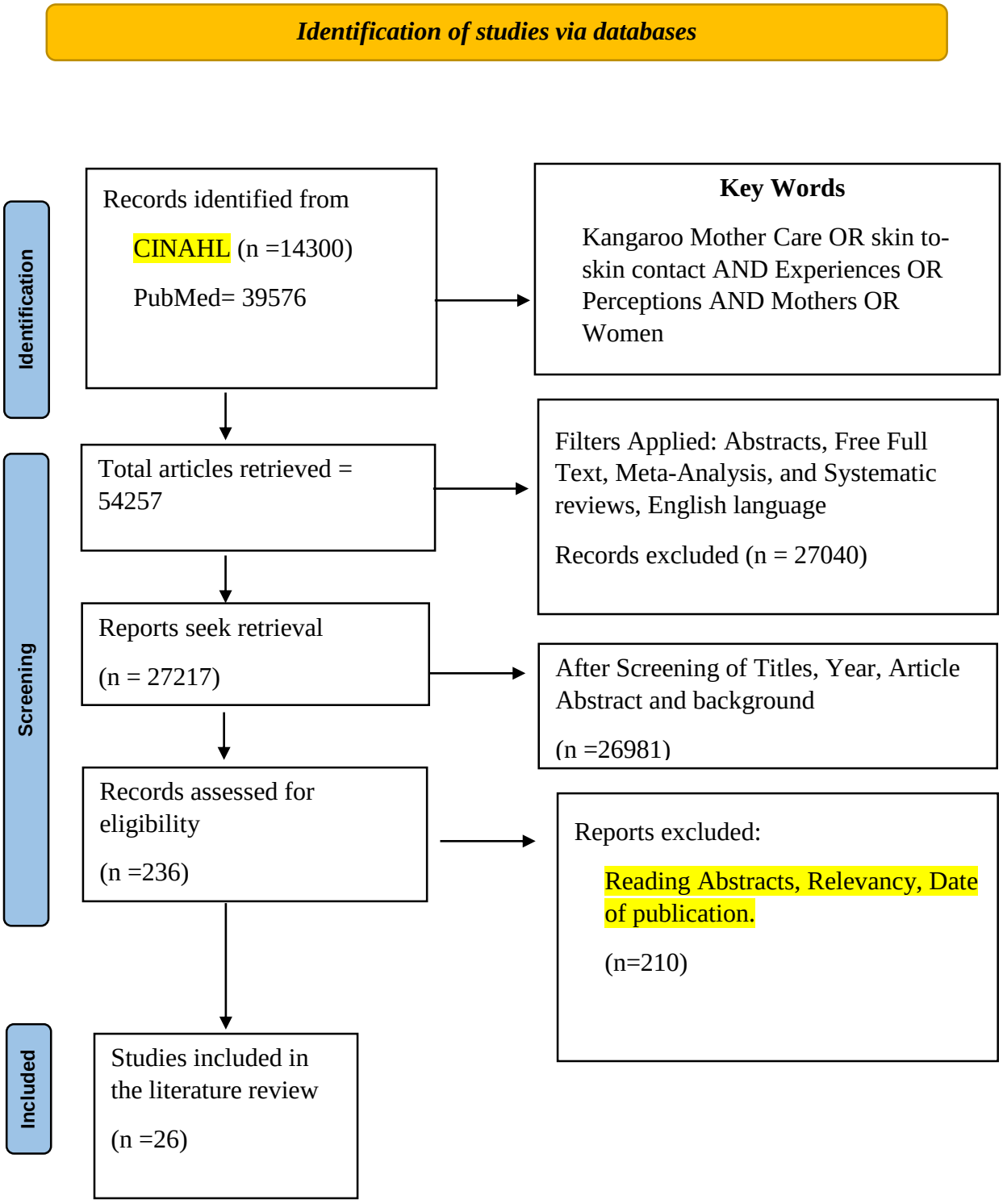
The number of total retrieved articles on CINAHL was 14300 and the number of articles on PubMed was 39576. The Boolean Operators “AND and OR” and the keywords Kangaroo Mother Care AND Experiences OR Perceptions AND Mothers were used in PubMed.

The total number of articles retrieved was 54257. Out of which 27217 articles were full text, in English language, and original. Out of 27217 articles, 236 articles were recent and relevant to mother experiences. Out of 236 articles, 210 articles were excluded on the basis of relevancy, title and high impact journals. Therefore, 26 relevant and recent articles were selected from both databases.

A total of twenty-six articles were selected for this review. The articles selected for this study comprised 10 studies from different African countries, South America, Europe, Canada, Sweden, Australia, China, Indonesia, the USA, Saudi Arabia, and Pakistan.

The PRISMA diagram of my literature review is given below, including identifying and screening the articles. After the initial identification and screening, like most recent, full English texts related to my topic were selected for the literature review.

Figure 1 PRISMA



My research is related to exploring the mother's experiences who attended the Kangaroo mother care facility in a tertiary care hospital in Swat, Pakistan. For exploring experiences, the researcher searched the mother's experiences related to KMC.

Mother Experiences Related to kangaroo mother care

After a thorough literature review and skimming and scanning the articles related to the mother experiences, four major themes were identified, which will be discussed one by one below.

Emotional Exposure of Mothers

The emotional experiences of mothers who underwent KMC were a common theme across the studies. Mothers described a strong bond with their infants and an overwhelming sense of love and protectiveness. The physical closeness of KMC was found to facilitate this emotional connection (Grayson & Infant, 2018). Mothers showed mixed emotional feelings, positive and negative, depending on the situation. Some of the negative feelings were related to the delivery outcome and the baby's age, while the positive feelings were the birth of a baby, the sex of the baby, and gaining weight during KMC care (Lomotey et al., 2020). Some mothers said that initially, they did not interact with other mothers in the KMC, but with time there was a good positive feeling, a sense of security, and a support group for us (Anneline E Robertson & Talitha Crowley, 2020).

Baby and Mother Interaction

The mothers who had spontaneous deliveries have direct interaction with their babies, while those who were born with caesarean sections will take some time. The baby and mother interaction started with chest-to-chest contact and initiated breastfeeding (Lomotey et al., 2020). The Moms desire to remain near to their premature child. Parents of premature babies

also find KMC fruitful as it stabilizes the baby's temperature and increases bonding. The neonatal intensive care unit (NICU) setting and personnel can support KMC by giving parents and babies a separate room and enabling moms to nurse and express breast milk (Norén et al., 2018b). While in a Muslim community like Pakistan, they started breastfeeding after giving Azan in the ears of the baby to remove all the impurities and practicing Rooming-In called Chilla for 40 days (Ariff et al., 2022). For about forty days, this Chilla established a strong bond between the mothers and their babies and helped in exclusive breastfeeding while looking into the early cues for breastfeeding. The World Health Organization (WHO), World Bank, and United Nations International Children Emergency Fund (UNICEF) formulated a framework called Nurturing Care for early childhood development. This framework supports the KMC and skin-to-skin contact beneficial for preterm and low birth weight babies. Furthermore, this framework consist of five components: good health, adequate nutrition, safety and security, opportunities for early learning, and responsive caregiving. This framework highlights and gives stressed on early childhood development, safe environment, skin-to-skin contact, exclusive breastfeeding and provides a responsive caregiving environment, like identifying early feeding cues (Vittner et al., 2018).

Mother Insight on Support and Care

The support and information provided to mothers during KMC were important themes identified in the studies. Mothers described the importance of access to information about KMC and its benefits to their infants. They also reported the importance of having supportive healthcare professionals who could provide guidance and reassurance during the KMC process.

The mothers share their views regarding the availability of the staff and appreciate the role of nurses and other mothers in caring for our babies and teaching us about KMC (Lomotey et al.,

2020). After discharge, the baby's father and grandmother are also willing to give chest-to-chest contact and support to the baby while the mother is busy with household work (Ariff et al., 2022). Some mothers also say that with chest-to-chest contact, starting breastfeeding is easy, and we can observe our baby for feeding cues, it also increases the trust and bonding between mother and baby (Chisenga, Chalanda& Ngwale, 2015). Through the interaction of mothers with staff in KMC, Mothers became active carers of premature infants rather than merely passive viewers (Tarus & Tjale, 2015).

Challenges in the KMC Environment

Some mothers report that the strict policies of the KMC timing and insufficient accommodation facility were the challenges to the mothers (Lomotey et al., 2020). Some mothers said KMC is challenging to practice in the summer because of harsh hot weather (Ariff et al., 2022). Other mothers report that lying in one position is the main challenge in KMC (N. Ndou et al., 2021). According to (Robertson & Crowley, 2020), the most challenging situation in KMC was the separation from the family and partner. The challenges identified included physical discomfort, fatigue, and the need to monitor the infant's vital signs continuously. Mothers also reported challenges in breastfeeding, particularly in the early days of KMC when infants were not yet fully developed. Breast milk expression can be complicated for some women since the process takes a lot of energy and time. As they found it challenging or demanding to express breast milk while having skin-to-skin with a newborn, many feel it conflicted with the baby's skin-to-skin contact (Norén et al., 2018a). The Established cultural practices for carrying preterm infants and providing comfort for neonates represent obstacles to KMC. Newborns are generally taken just on the back, and women regard carrying them on the chest as strange and disgraceful (Bayo et al., 2022). Barriers to KMC included hospital policies

and practices that did not support KMC, limited resources, and lack of access to information about KMC.

Discussion and Analysis

Most research on KMC has been conducted in developing countries due to the high neonatal mortality rate. Previous studies have also analyzed the relationship between the KMC and the neonate's mortality rate. If we investigate the literature, due to cost-effectiveness and ease of doing, The KMC is very useful in the developed world for reducing neonatal mortality rates. Prenatal care in Asian nations is also gradually receiving attention, and sustainable scale-up requires a defined, coordinated region-led KMC scale-up strategy with a corresponding strategic plan and finances (Bergh et al., 2016). While in lower- and middle-income countries like Pakistan, despite its ease and effectiveness, it received little popularity due to the cultural restraints on the applicability of KMC (Siddiqui et al., 2020). Culture is the main hindrance to KMC in Pakistan, so we must examine how we can adopt or modify the KMC according to our culture. Through proper guidance and education, the Pakistani population will accept and apply the KMC practice in homes and as well as in communities.

This is the research area on which we can focus so that we can decrease our neonate mortality rate easily and culturally acceptable.

Newborn deaths are primarily related to hypothermia, insufficient birth weight, and illnesses. Pakistani research has found that a risk for infant death and morbidity is more prevalent in rural locations due to cultural attitudes prohibiting early adoption of recommended practices, such as the feeding of colostrum, early commencement of breast milk, and deferred hygiene, as well as lower provision to newborn and maternal medical care (Habib et al., 2019). In Pakistan, moms may benefit from the *Chilla* phase, or rooming-in for roughly 40 days, by

giving their newborns KMC while friends and relatives take care of the mother's housekeeping duties (Ariff et al., 2022). Preterm babies only need breastfeeding to support warmth, safe air, and oxygen (Mahwasane et al., 2020). A study also shows that skin-to-skin contact enhances cardiac and pulmonary functions, lower hypoglycemia, improves thermoregulation, and increases the timing of exclusive breastfeeding and maturation of the brain.

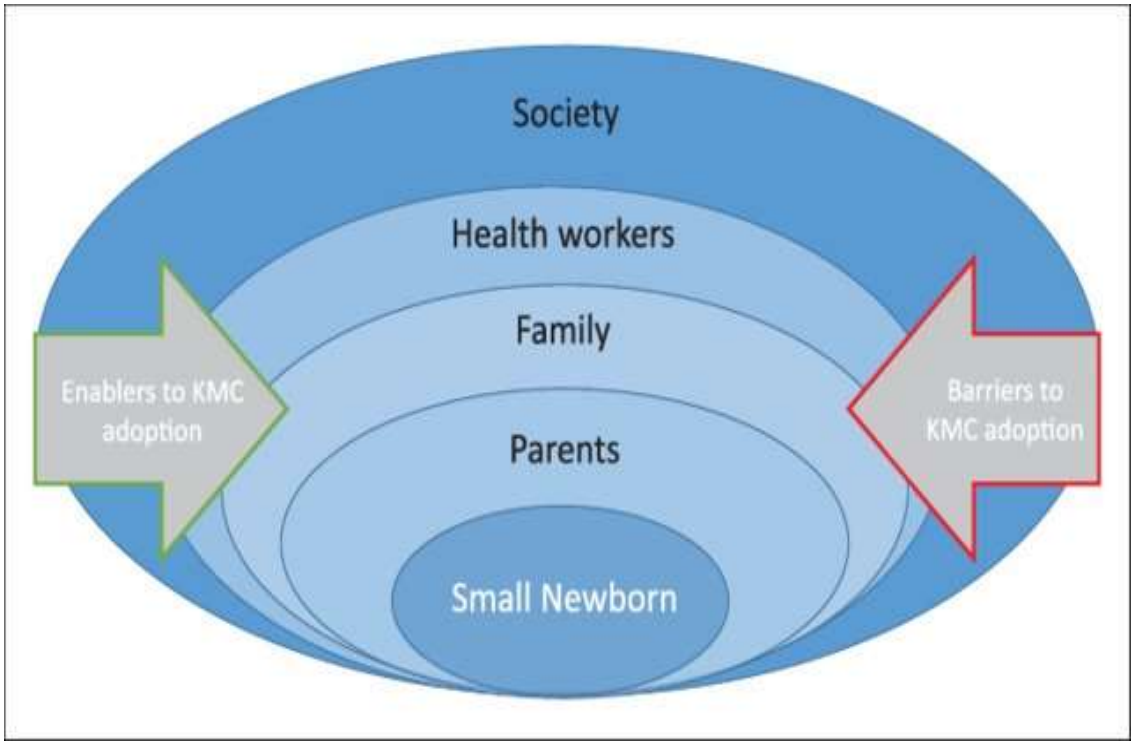
Furthermore, the KMC also positively impacts the mother’s emotional, psychological, and physiological health by lowering postpartum depression and stress and decreasing the chances of postpartum hemorrhage (Almutairi, 2022). In addition, it is now well established from various studies that providing KMC decreases the neonate’s mortality rate. So, there is a win-win situation for the mother and baby; both the mother and baby will benefit from it. The findings of this literature review provide insights into the experiences of mothers who underwent KMC with their premature babies. Mothers' emotional experiences during KMC were overwhelmingly positive, with mothers describing a solid bond with their infants and a sense of empowerment and pride in their capacity to care for their babies. The physical experiences of KMC, including the warmth and comfort provided by skin-to-skin contact, were also chief factors in mothers' experiences.

Besides mothers and babies, healthcare workers must also have sufficient knowledge about the KMC (Mhango et al., 2020). According to a Pakistani study, education is crucial for adopting KMC at the ward level. The study results demonstrated the importance of education programs in preparing healthcare professionals to support KMC. Recognition of KMC was also made possible by extending education to other healthcare workers, including supervisors and volunteers (Jamali et al., 2019). Proper training must be arranged for the health workers, especially those in neonatology, obstetrics and gynecology, and labor room settings. After sufficient knowledge and skills, we can guide and educate the mothers of KMC. Governments

should work with non-government organizations to improve the knowledge of healthcare workers. They should also arrange awareness sessions and seminars for the public to orient them about the KMC and its benefits for the baby and the mothers.

Furthermore, the researcher was guided by a conceptual framework that suggested that KMC could be implemented at main three levels: (a) parents, especially mothers and family members; (b) healthcare providers; and (c) facilities available to the people for providing KMC (Brotherton et al., 2021). The study guide questions were made around this conceptual framework where the researcher explore the mothers' knowledge, feelings, social and emotional support, their interaction with the healthcare providers, and their challenges while providing KMC. The researcher has asked open-ended questions to invoke the participant's deep and inner knowledge and perception about the issue or particular KMC. The conceptual framework and the questions used in the study are given below:

Figure 2 The Conceptual Framework



Note. The conceptual framework for implementation of kangaroo mother care (KMC). (Brotherton et al., 2021)

Conclusion

Neonates' mortality rate is very high in LMIC. About 60% to80% of neonate deaths occur due to prematurity in the developing world. Pakistan is oneof the top ten countries with the maximum number of premature births (Rubina Sohail et al., 2019). This situation is challenging and alarming, especially for lower- and middle-income countries like Pakistan.

The specialized care named KangarooMother Care was established by the WHO, especially for Lower- andmiddle-income countries, to decrease the neonatal mortality rate. KMC consists of a skin-to-skin connection of the baby with the mother, exclusive breastfeeding, and preventing hypothermia and infection (Ogola et al., 2022). KMC is an effective and easily accessible method to prevent preterm babies from complications and death.

The mothers who attended the KMC facility had mixed positive and negative feelings. They show that through KMC, good bonding andconnection were developed with their babies. However, they also highlight some cultural and physical challenges regarding KMC.

In Pakistan, notwithstanding its ease and effectiveness, the KMC did not receive popularity due to some cultural restraints (Siddiqui et al., 2020). However, KMC can be included in the framework of medical care for mothers by promoting consciousness, including the family, and providing stakeholder engagement in the initiative. If supported with minimum benefits, it would significantly lower the hospitalization cost and lessen the patient load in hospitals by lowering postpartum hospital stays (Tahir & Fatmi, 2019). Considering all this evidence, the KMC is the best option to decrease the mortality rate of neonate while looking into cultural and religious differences. Training is being held to help educate medical professionals about the importance of early kangaroo mother care. They are still dealing with disagreements and difficulties with establishing KMC in many hospitals across Pakistan. However, strengthening KMC facilities in medical centers is critical because it minimizes infant mortality (Rasul et al., 2017). This is the area of research we can further explore the challenges in providing KMC in a multi-religious and cultural society like Pakistan.

Table 1 Tabulated Summary the studies

Year of Publication	**Purpose of Study**	**Study Design**	**Sample Size**	**Key Findings**
2022	This study aimed to explain and determine the relationships among knowledge, training, perceptions, and SSC application	Cross-sectional descriptive	40	SSC implementation may increase concurrently as nurses' awareness, schooling, and belief systems improve.

	in Jeddah, Saudi Arabia.			
2020	The goal of this study was to evaluate the advantages of KMC in hospital-setting neonates regarding weight gain and early discharge	A retrospective case-control study	144 total cases Divided into two groups, 77 each	KMC encourages proper weight gain and shortens hospitalization
2020	To investigate adolescent mothers' perceptions and experiences while providing KMC	A qualitative descriptive phenomenological design	10 mothers	To ensure that mothers receive a coherent approach, supportive educational surroundings should be established in KMC wards
2022	To notify the development and implementation of culturally acceptable platforms for presenting KMC in Pakistani societies.	Qualitative exploratory study	35	The public broadly acknowledges KMC as a way to treat LBW babies.
2015	To examine mothers' Kangaroo Mother Care experiences in two hospitals in Bwaila and Zomba	Quantitative descriptive study	113	Once they were informed about the advantages of KMC, mothers had a friendly perception towards it
2020	To explore the viability and parenting practices experienced with KMC adoption in a Chinese setting	A cross-sectional study	135	Intermittent KMC was implemented on more premature and high-risk newborns after advocacy, teaching, and advertisement, and parents embraced it.

2021	To record the perceptions and experiences of moms who provide KMC in South Africa.	Qualitative phenomenological design	13	Mothers understood KMC's practice, logic, and advantages. However, mothers reported difficulties such as tight family bonds, tiredness from KMC practice, and insufficient hospital facilities.
2019	To observe a preterm case with the provision of KMC	Case Report	1	The preterm baby was saved after providing KMC
2020	To assess KMC perception and knowledge among healthcare workers	Qualitative study	32	KMC's clinical provider knowledge was adequate, owing primarily to their health-related education level. Nevertheless, some perceptions may be critical obstacles to or facilitators of KMC integration.
2015	To understand the mother's experiences and perception towards KMC	Phenomenological study	9	Notwithstanding their weariness, the moms in the study all expressed a great deal of happiness with KMC.
2018	To explain moms' experience giving Kangaroo Mother Care to their premature babies	A qualitative descriptive design.	13	The NICU setting and personnel can support KMC by giving parents and babies a separate room and enabling moms to nurse and express breast milk.
2020	Examine healthcare providers' opinions and knowledge of KMC	Qualitative study design	21 IDI and 3 FGD	Health providers acknowledge the benefits of Kangaroo Mother Care (KMC), including temperature stabilization, weight gain, and maternal-infant bonding. However, misconceptions persist

2018	To describe mothers' experiences of providing their preterm infants with KMC.	A qualitative descriptive study	13	Facilitating Kangaroo Mother Care in the NICU involves creating private spaces and providing evidence-based support for breastfeeding, fostering a strong parent-infant bond and positively impacting preterm infants' well-being and development
2017	To determine the effect of education about KMC on the confidence and ability of young mothers to implement KMC	A controlled-random experimental approach	13 Intervention arm 13 Control arm	Gradual KMC education involving the family, coupled with family visits for low birth weight babies, ensures ongoing implementation and assesses young mothers' proficiency in KMC
2021	To find the facilitators and barriers of KMC	A qualitative study	20	Facilitators to Kangaroo Mother Care (KMC) include supportive staff, positive attitudes, provider substitution, and family support, whereas barriers encompass a lack of family support, limited male involvement, maternal stress, health challenges, multiple gender roles, infrastructural issues, and misconceptions associated with preterm births Top of Form
2019	To describe the lived experiences of mothers with preterm babies	A descriptive phenomenological study	10	Mothers, initially anxious about premature delivery, expressed joy in Kangaroo Mother Care and breastfeeding interactions, praising nurses' competence, but

				raised concerns about inadequate accommodation and high care costs
2021	To explore and describe the experiences of mothers of preterm infants	A qualitative study	38	Mothers perceived breastfeeding as a positive bonding experience but encountered challenges, including difficulties initiating expression and sustaining milk production, despite the promotion of breastfeeding in the KMC unit
2019	To understand barriers and facilitators to provision of KMC in the NICU	A qualitative study	20	Addressing a mother's ability to provide Kangaroo Mother Care involves mental, emotional, physical, and structural factors, suggesting the importance of implementing social supports, including enhanced maternity leave policies and reliable access to childcare, accommodation, and transportation services, to alleviate structural barriers, reduce costs, and enhance the overall well-being of mothers and their preterm infants.

Chapter Three: Methodology

The Introduction

The following section includes a review of the population being studied and sampling as well as the design of the research, the location, and the criteria for participation. Additionally, it covers the procedure for gathering information and doing assessments. Furthermore, this chapter also talks about how the data analysis was done and how the data management plan was executed. Lastly, this chapter also talks about the ethical considerations that were followed, the rigour of the study, and how the credibility and reliability were maintained.

The Methodology

This section elaborates on the study design, the setting, the duration, the study population, the sampling strategy, the design, the eligibility, inclusion and exclusion criteria, and other background details related to the study.

The Study Design

The researcher used a qualitative descriptive study design to explore the mothers' experiences who attended the KMC facility. The literature says that for exploring experiences, a qualitative descriptive study design is commonly used (Willis et al., 2016). In this study design, each mother's experiences were comprehensively summarised and described without any changes or manipulation. Qualitative designs do not solely permit however promote freedom in the subject matter and progression of questions to test and explore for more profound significance results or pursue new avenues that might result in a more thorough apprehension of a problem or the phenomenon (Wolff et al., 2019).

The Conceptual Definitions

The following are the major conceptual definitions of terms and phrases frequently used in this work:

Kangaroo Mother Care

Kangaroo Mother Care (KMC) is specialised care developed for preterm babies to prevent hypothermia. The main components of KMC are chest-to-chest contact of the baby with the mother, and it promotes exclusive breastfeeding and early discharge of the baby from the hospital (Liu et al., 2020).

According to the World Health Organisation's 2003 guide, KMC is the chest-to-chest contact of a mother with their baby, exclusive breastfeeding, and early discharge of the baby from the healthcare facility. KMC prevents the babies from infections and improves the mother and baby bonding with each other.

Operational Definitions

The following are the major operational definitions of terms and phrases frequently used in this work:

Experiences

Experiences mean the interaction of the mothers who attended the KMC facility with the staff or other mothers in the KMC unit. Experiences also include learning something through observation, the screen videos, their perceptions, and the challenges they have faced in providing KMC.

Mothers

Mothers are those women who attended the KMC facility in a tertiary care hospital in Swat, Khyber Pakhtunkhwa, KP, and were discharged. In this study, the mothers mean those women who gave KMC to their preterm and low birth weight babies.

The Study Setting

The setting of the study was the KMC facility in a major public hospital, Swat. The name of the hospital was Saidu Group of Teaching Hospital, Saidu Sharif Swat, Pakistan. This KMC was a five-bed facility inside the neonatology ward. There were five beds in which only the mother was allowed with the baby to provide KMC. In this facility, the preterm and low birth weight babies were admitted along with their mothers, and the UNICEF protocols were followed for KMC and teachings were given to the mothers at the time of discharge.

The Study Duration

The study duration is the time frame in which the researcher was to collect the data. The duration for conducting this study was of six months, from May 2023 to October 2023. First, the researcher conducted two pilot interviews, and after approval from the supervisor, the actual data was collected.

The Study Population

The study population was those mothers who attended the KMC facility in a tertiary care hospital in Swat and were discharged from the hospital.

The Sampling Strategy

First and foremost, the sample under study was mothers who attended the KMC facility in a tertiary care hospital, in Swat, KP. In qualitative studies, a non-random sampling technique called purposive sampling is frequently used to find and pick examples and issues, with the

help of plenty of pertinent data and information about a particular topic (Palinkas et al., 2015). Thus, I used a purposive sampling technique to enrol the study participants. Literature also highlights that the other advantage of purposive sampling to the researcher, besides providing easy access to the participants, is that the researcher can select those participants whose qualities and experiences are in line with the study's specific requirements (Bradshaw et al., 2017).

Moreover, in qualitative research, the number of participants must be determined, much like in quantitative research, yet without using similar techniques. For instance, "saturation" is the term used for the sample size determination in qualitative research. However, the phrase "saturation" is haphazardly used, and it is intimately associated with a particular practice. According to a research study, fewer subjects are required when the population being studied contains more material, on the basis of this criterion they are selected for that particular research (Malterud et al., 2016).

In the context of this study, the sample size depended on the saturation of the data. By taking nine interviews with the participants, the saturation of data was achieved. The data were available on the neonatology, KMC chart in a tertiary care hospital, in Swat. The names, cell numbers, and National Identity Card numbers were there on the KMC chart. Hence, the sample was recruited through phone calls and with the submission of a request and consent form.

The Study's Sample Size

The data saturation was achieved at nine interviews. This was because the same answers were given by the mothers asked in the semi-structured interviews. The researcher had taken three further interviews to have well-enriched data. So, the researcher had taken 12 in-depth interviews in total. Moreover, the target sample size was 12.

The Eligibility Criteria

The following eligibility criteria were used to enlist the mothers for the purpose of research:

The Inclusion Criteria

1. All those mothers were included who had attended the KMC facility in a tertiary care hospital, in Swat, Pakistan.
2. The researcher had included all the mothers who wanted to take part in the study.
3. All the mothers were included who had spent at least three days in the KMC facility.
4. All the mothers were included who had one baby.

The Exclusion Criteria

1. Those mothers who were unwilling to participate were excluded from the study.
2. Those mothers who had spent less than three days in the KMC facility were excluded.
3. Mothers who had twin babies were also excluded from the study.
4. Sick babies were also excluded from the study.

The Data Collection Period

The duration for conducting this study was of six months, from May 2023 to October 2023. Specifically, the researcher collected the data in June 2023.

The Data Collection Process

A brief introduction of the study was given to the mothers about the study research and they were interviewed. In addition, the researcher translated the consent form and the study guide questions into Urdu and Pashto for the convenience and understanding of the participants. Moreover, a short demographic data was also obtained from the participants to

determine their demographic profile. Furthermore, through the study guide questions, the researcher collected data and explored the experiences of mothers who attended the KMC facility and were discharged from the hospital.

The Semi-Structured Interviews

In-depth discussions that are semi-structured help the investigator understand the respondents' viewpoints, opinions, experiences, and feelings. Thus, based on the previous studies, the researcher had identified the study guide questions which were asked of the participants to explore the mothers' experiences.

Moreover, these questions were related to mothers' experiences like the emotional exposure of mothers during the provision of KMC, the support they received while giving the KMC, the feelings of the mothers during KMC, and the challenges they faced during the KMC (Anneline E Robertson & Talitha Crowley, 2020).

The researcher asked the study guide questions along with probing and open-ended ones to explore the mothers' experiences. The 'Enabler and Barriers to Adaptation of KMC' framework also guided the researcher about the factors working as enablers and barriers to KMC adoption. Moreover, in line with the aim of the qualitative descriptive study, in-depth interviews were taken with the participants while protecting their identity. In addition, the participants were also made aware that they had the right to take part in the study or pull out from it at any point in time. It depended on the participant's willingness to participate in the research study or not (Bradshaw et al., 2017).

The Pilot Testing Phase

Pilot testing was carried out on two different individuals at AKUH at the initial stage of this information-gathering phase. This was done to spot any potential discussion issues as well

as any changes that required being addressed in the question guide. The researcher had taken two interviews that were transcribed and checked by the supervisor. The researcher tried to truly address the research question before moving on with the actual data collection.

Regarding research methods, research says that recording conversations is a good technique for helping accurately collect information (Jamshed, 2014). This research followed the strategy. Thus, all the interviews were audio recorded which was convenient for the researcher. Then the recordings were transcribed into English from the Pashto language. Next, the data were transcribed in such a way that the true meaning of the data was not compromised.

To iterate, the transcription process of a conversation is a laborious and challenging task, however, it offers the greatest material for study. Hence, to ensure that precise statements were gathered, the written notes were thoroughly reviewed and compared with the recorded tapes. Moreover, this practice additionally provided an opportunity for contemplation on the discussion by recognising the subjects' emotions and voice, as well as the overall attitude of the discussion. Thus, this was a crucial procedure for investigators to go through since it enabled them to become more comfortable with the material. Moreover, reviewing the written version as well as listening to the recorded version of the conversation repeatedly to completely immerse yourself in what is being said constitutes content familiarity. Furthermore, research also shows that content familiarity is very important to gain the true meaning of the verbatim and consequently its impact on the results (Nasheeda et al., 2019).

Saturation

Data saturation is defined as the moment when no fresh concepts or patterns 'emerge' from data, and it is frequently used in qualitative studies. In this respect, several investigators have tried to 'operationalise' information saturation by providing specific instructions on the

number of focus group meetings or interviews required to reach some level of information in the study. Moreover, this technique helps to stay focused and stick to the questions and explore the phenomenon (Braun & Clarke, 2021).

Similarly, achieving saturation is a crucial component in the qualitative study; it roughly describes the moment when collecting additional material that won't yield any fresh knowledge pertinent to the study's objectives. Thus, if no new information is coming from the participants, it means your saturation is achieved (Lowe et al., 2018). In the context of this specific study, the researcher stopped the data collection, when no fresh themes, answers, or knowledge were coming from the mothers.

Challenges During Data Collection

Cultural background of the participants was the main challenge while interviewing, as the female are not allowed to speak to men alone other than their own family. The researcher overcome this hurdle with interviewing the participant in the presence of their husbands or mother in law, so that the participants feel comfortable and share their experiences regarding KMC openly.

The Data Analysis Plan

To know the experiences of mothers who attended the KMC facility, the researcher interviewed the mothers for at least 60 minutes. Next, to analyse the interviews, the researcher used a Content Analysis (CA). The content analysis was applied to the study's analysis to understand the similarities and patterns of the interviews. Content Analysis (TA) refers to a technique for "finding, analysing, and presenting trends (or themes) in datasets." Furthermore, CA is defined as a method of description that lowers information in an adaptable format that integrates with additional analysis approaches. Similarly, CA is widely utilised due to a large

range of study problems and subjects that can be tackled through using this data collection technique. In CA, themes are made based on the participants' remarks verbatim (Castleberry & Nolen, 2018). Next, further categories were also developed from the data for further exploration. Also, finding trends or commonalities within the data was done through CA. Pertinently, CA is a technique for finding, examining, and presenting similarities and patterns in datasets. In qualitative data analysis, the term is commonly utilised to organise and describe an array of information in the simplest way possible. In fact, the process of analysing is quite thrilling as you unearth commonalities and ideas within the conversations you've conducted. This is because the researcher familiarises himself/herself with the data (J. Sjömar et al., 2023) by firstly reading it numerous times to grasp the data and then looking for patterns and resemblances. Moreover, the open coding method was used to analyse the text which was mostly made up of word repetition, key-indigenous words, and keywords in the setting.

Qualitative research explore the issue or the phenomenon (Castleberry & Nolen, 2018). Furthermore, as a way to guarantee the accuracy of the results, a content analysis of broad answers in questionnaires or transcripts of conversations may help the researcher investigate the historical backdrop of learning and instruction at an extensive level, which quantitative research does not have. In addition, carrying out the content analysis enables the researcher to acquire enough adaptability to make sense of the information being analysed.

Next, the interviews were transcribed into English. The transcript was reread and listened to. Research also shows that you have to simplify the data in such a way that it is coherent, verbatim and consistent and as well as makes sense (Terry et al., 2017). Thus, through repetitive reading, the meaning was extracted from each sentence. Moreover, coding was done based on the statements of the mothers. then, the data collection and data analysis were done

simultaneously (Polit & Beck, 2012). The data were analysed by identifying the patterns and themes and determining how these themes addressed the research objectives and questions (Creswell & Creswell, 2017). The steps followed for analysis are given below:

- Organisation
- Coding
- Categories and themes

The process of CA is about familiarising oneself with the information, creating preliminary codes, looking for themes, assessing, describing, and labelling themes, and producing the results (Javadi & Zarea, 2016).

The Data Management Plan/ Safety of the Data

A Data Management Plan (DMP) is a formal record that outlines the way the material was managed during the duration of a study, spanning collection to storage. DMPs emphasise the various kinds of material which were collected and utilised in the scope of the work and deal with how to handle it during the lifespan of the data. Furthermore, they help teams stay out of legal and ethical issues and can be used as models for subsequent efforts regarding how to handle and manage material. Scholars can see the advantages of effective data handling in terms of efficiency, preventing losing data, and preventing hacking of data. The trust of the participant is very important in research. Sometimes, the participants share some sensitive important, for which, cultivating a trustworthy relationship is crucial. Research supports the observation that participants are more likely to get involved in research endeavours when they feel trusted (Corti et al., 2019).

The Study's Rigour

The researcher safeguards the quality of the obtained data from the participants. Studying the rigour of a qualitative investigation was an important factor in its credibility. Furthermore, the trustworthiness of the qualitative data can be measured by the rigour of the study. Likewise, credibility is a standard metric by which qualitative research methods and results are capable of being evaluated, according to Lincoln and Guba (1985). It seeks to bolster the claim of the results of qualitative research as being "deserving of giving attention to" (Rettke et al., 2018). To know the in-depth quality of the data, there are four trustworthiness criteria, which are credibility, dependability, transferability, and conformability (Bradshaw et al., 2017). Given below, these aspects have been discussed one by one:

Credibility. Credibility was achieved through spending adequate time with and giving time to the participants. Thus, through spending sufficient time, trust and rapport were built with the participant. Without building trust, the participants could not disclose their information about the experience of the KMC to the researcher. Therefore, rapport building and trust were the main components through which a researcher can show the participants his/her credibility. Thus, in the context of this study, the researcher ensured that the participants fully understood the study and the questions that were being asked. Similarly, the researcher had to listen to the members or the mothers who were participating during the interviews actively. Research also shows that active listening is very important during an interview (Mahwasane et al., 2020).

Dependability

Dependability denotes the stability of the data over time. For this purpose, the researcher shared his themes with the committee members and the supervisor and an agreement was reached regarding the final themes. Peer debriefing was carried out with the committee

members and as well as with the supervisor. Dependability simply means that an independent person and the researcher analyses the data and make themes accordingly. After making the final themes from the data, they both shared the final themes together. In essence, it refers to having the capacity to replicate the research and come up with similar outcomes. The approach used in the study is sufficiently described by the scholar such that it might be duplicated (Johnson et al., 2020).

Transferability

Transferability simply means the generalisation of the study. It also means that the findings of this study can be generalised to the other population or in another context or not. We can also call it the external validity of the study. Moreover, through a rich description, the researcher can expedite or generalise the findings in other settings. Likewise, ‘fittingness’ is an acronym for adaptability. This denotes that results from the current study were comparable to results from studies on related topics. Furthermore, the term also implies that the results were applicable in the foreseeable future and could be generalised to the population (Ghafouri & Ofoghi, 2016).

Conformability

Conformability means we confirm our data analysis from a second source. For instance, an assistant can transcribe the data independently, including all verbal and nonverbal communications. The researcher and the assistant then match the same data with each other for conformity. Thus, conformability has to do with the impartiality standard that's applied to quantitative research. About the type of qualitative studies, the investigator mostly gathers information by using a hands-on method. Therefore, in qualitative studies, firstly, the information analysis should be free from the investigator's prejudices, and secondly, the way it

is displayed should make sense. More importantly, the researcher has to look at the matter from a researcher's point of view and aside from his own biases and prejudices about the phenomenon being studied. To evaluate conformability, the investigator used Reflexive assessment, which looks for proof of investigators pointing out in their research how they have controlled their biases (Singh et al., 2021).

Ethical Considerations

The literature stresses that a study should comply with the organisation's standards and code of conduct. There is a research board in every organisation which looks at and maintains the integrity of the research culture. Furthermore, an organisational review board is a forum that examines one's dissertation's ethical acceptability and compliance with the organisation's standard of ethics. They examine and evaluate the compliance of one's study methods and materials (Bhandari, 2021).

Following the ethical requirements for research, before conducting this study, the researcher had taken approval from the Ethical Review Committee of the AKU, Karachi. After that, a permission letter from the department was submitted to ERC for approval. In addition, written consent was taken individually from those participants who were willing to participate in the study. In this respect, all the pros and cons of the research were explained to the mothers who were participating and the confidentiality of their shared information was assured. After that, interviews were taken and recorded. Moreover, to ensure confidentiality, codes were assigned to each participant's interviews. Furthermore, the recorded interviews were kept in a locked place to ensure confidentiality. Also, the mothers who participated in this study were informed that they had the right to pull out of the research study whenever they wanted.

Likewise, symbols were entered in place of the names of subjects to guarantee confidentiality, and the study's researcher alone had access to the data through a password-secured file containing the information being collected. As a result, no personal details or other personally identifiable information were disclosed in any study's paper. Conclusively, all the ethical considerations were followed for this study.

The Summary

Considering the study question, to explore the experiences of mothers, a qualitative descriptive study design was used. Moreover, data was collected through semi-structured interview guide questions. Prior permission was taken from the hospital, and approval from the Ethical Review Committee of AKU. A purposive sampling technique was used for data collection. Moreover, a content analysis was used for the analysis of the data. The meaning of the data was identified through codes, categories, and themes. All ethical policies and protocols were maintained according to the AKU policies. Lastly, throughout the procedure, the elements of the study’s rigour like credibility and reliability were maintained all the time.

Chapter Four: Results

The Introduction

The chapter is divided into two parts: The first part consists of the demographic data of the participants like age, socioeconomic status, and number of children. The second part consists of an analysis. Firstly, four themes were discussed, along with their categories, in detail. Secondly, an in-depth analysis of the themes was done, along with the verbatim data taken from the transcription of the interviews. At last, the chapter was concluded.

The Demographic Profile of the Participants

The sample size included shortlisting 12 participants after considering data saturation. Consequently, 12 in-depth interviews (IDIs) were conducted with the mothers who had provided kangaroo mother care (KMC) to their preterm babies at the hospital. In addition, consent was taken prior and the mothers were willing to participate in the study. The demographic profiles of the mothers are given below in the tables.

The demographic data were analysed in a statistical package of social sciences (SPSS) version 26.

Table 2 Descriptive Statistics of Quantitative Variables

		Age	Years of marriage	Number of children	Income
N	Valid	12	12	12	12
	Missing	0	0	0	0
Mean		25.7500	7.1667	2.4167	56666.6667

Table 3 Demographic data

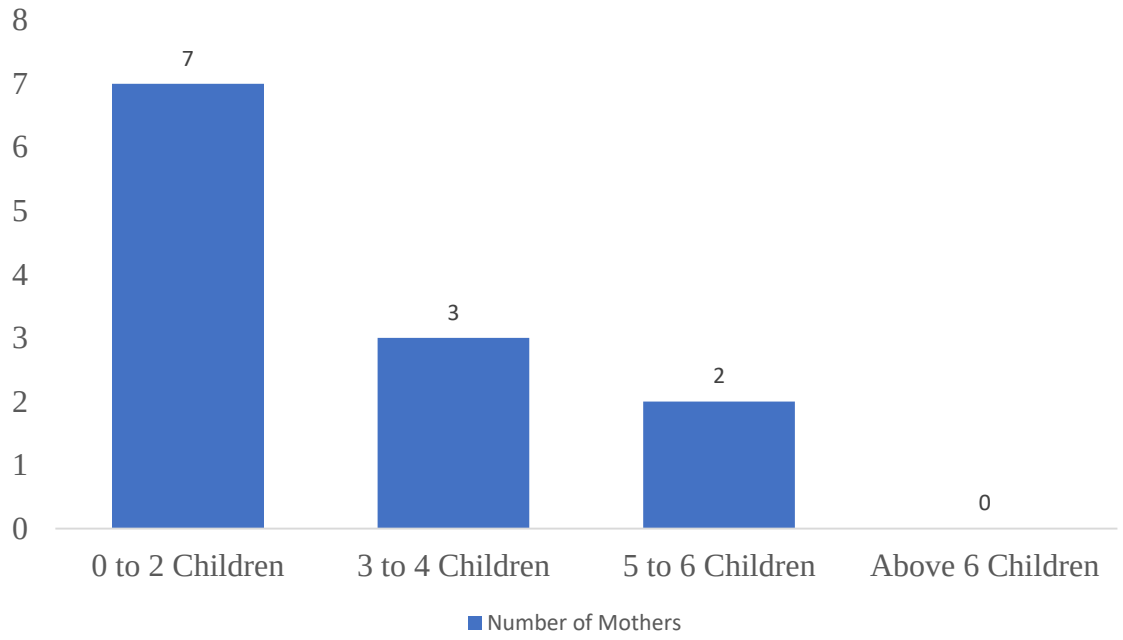
Variable Name	Number of Participants	Percentage
Education		
1. No Formal Education	06	50%
2. Primary Education	00	0%
3. Secondary Education	03	25%
4. Intermediate Education	01	8.33%
5. Diploma/Degree	02	16.66%
Occupation		
1. House Wife	11	91.6%
2. Charge Nurse	01	8.3%

The participants' ages ranged from 18 to 40 years. The mean age of the participants was 25.75 years. Moreover, the mean years of marriage was 7.166. Furthermore, the mean of

the number of children was 2.4. Meanwhile, the total household income ranged from 30000 to 100000 per month. On the other hand, the mean monthly income was 56666.66 rupees.

Additionally, if we look into the qualitative variables, they reveal that 50% of the participants have no formal education. Moreover, 25% of participants have secondary education, while 8.33% have intermediate education. 16.66% of the participants have degrees or diplomas. 91.6% of the participants were housewives and one was a charge nurse.

Figure 3 Number of Children the Participants Had



Note. This chart elaborates the number of children each study participant had.

The above graph shows mothers with the number of children: Mothers have several children ranging from 1 to 6. Out of twelve mothers, 7 mothers have 2 or less than 2 children. 3 mothers have 3 to 4 children. 2 mothers have 5 to 6 children. But none of the mothers has more than 6 children.

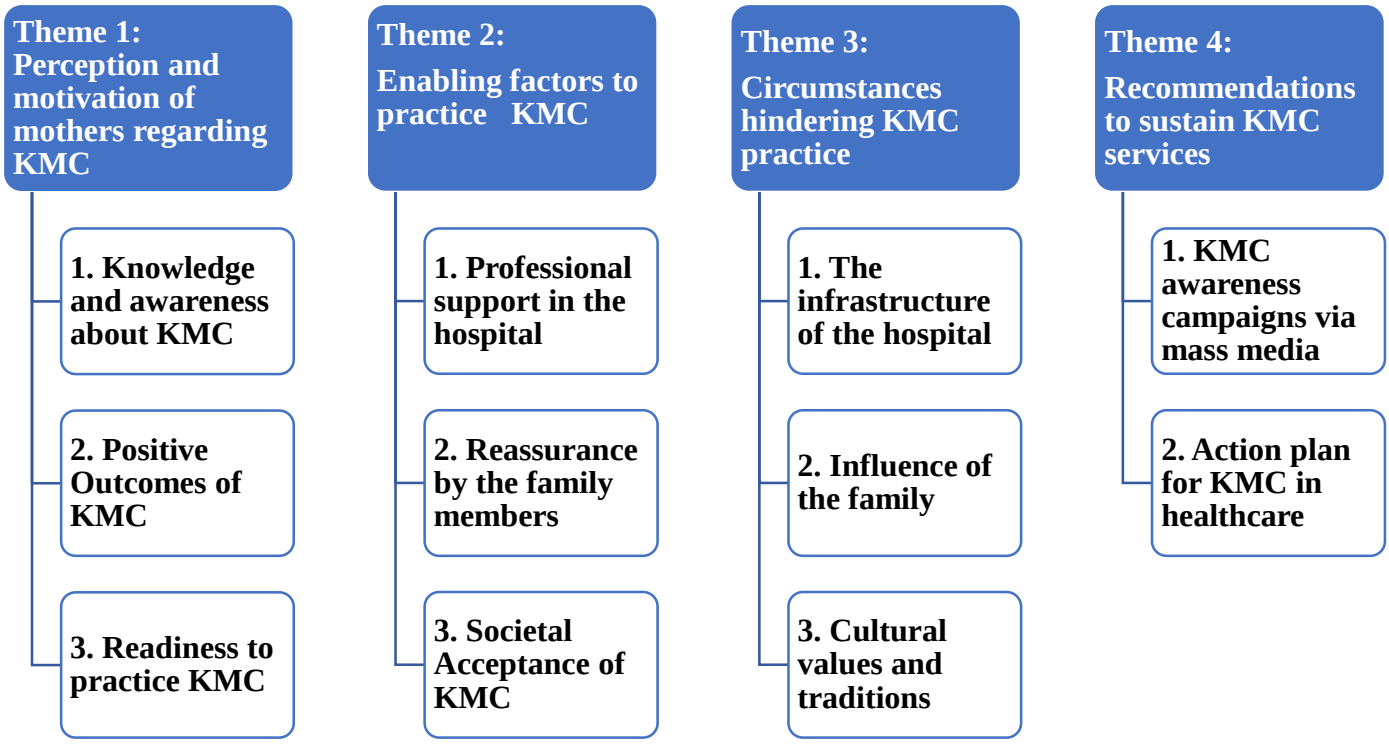
The Content Analysis

The interviews were conducted in the Pashto language and then transcribed into the English language. Moreover, the transcription was done in such a way that the spirit and essence of the interview did not modify. After the transcription, the researcher read and reread it, again and again, to familiarise himself with the data and its core meaning. Once well familiar with the data, the researcher then started coding the transcriptions. Moreover, the researcher used Content Analysis (CA) for this study to abstract the true meaning of the data. Through using Creswell and Creswell's (2017) method, the data were analysed by identifying the patterns and themes and determining how these themes addressed the research objectives and questions. The steps followed for analysis are given below:

- Organisation
- Coding
- Categories and themes

Through following this series of steps, several similar codes were generated and gathered. These similar codes were then assembled to form a single category. Next, numerous categories were then combined to form themes. Moreover, one theme consisted of 3 to 4 categories. These categories were then merged to form one bigger theme. The following diagram shows the themes and the categories:

Figure 4 Themes and Categories



Next, each theme, along with its categories, has been discussed. The four themes are:

1. The perceptions and motivation of mothers regarding KMC
2. The enabling factors to practice KMC
3. The circumstances hindering the KMC practice
4. The recommendations to sustain the KMC services

Theme One - The Perception and Motivation of Mothers Regarding KMC

Based on the participants' responses, this theme was generated by the researcher to know about the mothers' perceptions and motivation regarding KMC. Furthermore, the mothers' understanding and inspiration regarding the KMC were explored. Moreover, what they think are the benefits of KMC for the baby and as well for their health. The theme further discusses the mothers' willingness and readiness regarding KMC.

Next, this theme is further divided into three categories. These subcategories are related to the knowledge and awareness regarding KMC, the positive outcomes or benefits of KMC, and the mothers' and people's readiness to practice KMC at the individual and community levels.

Category (1): The Knowledge and Awareness about KMC. This category is about the knowledge and awareness of mothers and people regarding KMC. Moreover, it talks about the information and responsiveness to the KMC method at the individual and community levels. Firstly, the participants identified that they had no prior knowledge or awareness about KMC. They also stated that the community was, at large, unaware of the KMC method. One of the participants stated in this regard,

> I did not have an idea about the kangaroo mother care, but during my pregnancy in the 8th month and after the delivery of the baby, I heard this word in this hospital from the nursery staff when the baby was delivered. (IDI 01)

Similarly, one more participant expressed the limitation about their knowledge and awareness about KMC as follows, "I did not hear this word before the admission to the nursery. I finally heard about it in this hospital" (IDI 02).

Likewise, another participant also iterated the same views as follows, “First, the nursing staff told me about the KMC during my admission to the neonatology ward” (IDI 04).

Furthermore, regarding the introduction to KMC and its effectiveness, one more applicant stated the following,

> The staff taught me different techniques and methods of KMC, which was very supportive for my baby. For the first time, I heard the word KMC in this hospital from the nursery staff. We are living in very cold mountain areas and that coldness is not good for the health of newborn babies. They [the hospital staff] also taught me the technique of KMC through the use of videos. (IDI 09)

Hence, it is evident from the shared data that most of the mothers were unaware of the KMC method prior to their entry into the hospital. They further acknowledged the role of the hospital in making them familiar with the concept of KMC and its potential benefit for their newborns.

One mother also shared her own experience of learning about and implementing the KMC method as follows, "The staff teaches the mothers about the KMC method. They teach how the babies will be cared for and can be given KMC at home. I have done the same technique which they teach us in the hospital” (IDI 03).

Moreover, some mothers also talk about the community's lack of knowledge and unawareness regarding KMC. One of the mothers particularly shared with said,

> When I went home, the people were telling me that from where you have learned this method. This is a new method that we did not know about it. I told them that this is very

beneficial for my baby. So, in my opinion, this method should be used by the mothers in the community. (IDI 03)

Some participants stated that people especially mothers are not using KMC because they did not know about it. According to them, people in the community are not using KMC because of a lack of awareness about KMC. According to one participant, "I do not know about the other mothers whether they are using it or not. I think they don't have an idea or knowledge about it. In the community, the general people are unaware of the specific KMC method" (IDI 04). Hence, almost all the mothers stated that they didn't have prior knowledge about the KMC method. Moreover, many participants also verbalised that the general people were also unfamiliar and unaware about this new method.

One participant acknowledged the potential and worth of KMC for the community in the following way:

> This is very wrong if the other mothers are not doing it [using KMC]. They do not know the benefits of it. I think they don't have an idea or knowledge about it. There is no other reason besides this. In the community, the general people are unaware of the specific KMC method. (IDI 07)

In conclusion, mothers reported that they were not aware of and had no knowledge about KMC. Likewise, the community was also unaware of the potential of KMC. They had the perception that if the community knew about the KMC and its potential, they would have utilised it.

Category (2): The Positive Outcomes of KMC. This category sheds light on the benefits of the KMC method. Evidently, KMC has benefits and positive results for the mothers as well as for the babies. For instance, many mothers verbalised that the KMC method could

increase love and bonding between a baby and its mother. Secondly, KMC could also prevent babies from catching cold and infection. They also reported that the method definitely helped in exclusive breastfeeding and the baby became calm and relaxed. One of the participants stated in this respect,

> KMC increases the love and bonding between the mothers with their babies. Suppose a baby is in an incubator and one baby is on the mother's chest. So in my opinion, the bond and love will be more and stronger for the baby who is on the mother's chest rather than in the incubator. (IDI 03)

Moreover, another participant also stated the same in the following words,

> Yes, the bond and love are always there between the baby and mother. As I told earlier that KMC increases the love and bonding between the mothers with their babies. I liked this method because our babies are under our control this way and we can see it every time. (IDI 07)

Furthermore, almost all mothers appeared to be agreeing that the KMC method prevents babies from cold and hypothermia. As one mother stated “By doing the KMC method, my baby becomes calm and relaxed. Chest-to-chest contact prevents the baby from coldness because our area is very cold” (IDI 03). One more mother also verbalised the same finding as follows,

> Yes, of course, the KMC helps to prevent the baby from hypothermia and cold. I have noticed that when I hug and close him to my chest, he becomes relaxed and easily goes to sleep. So I think KMC is beneficial for older babies also. (IDI 05)

In addition, most mothers say that the KMC method helps them in conveniently breastfeeding a baby, as one mother stated “The KMC method also helps in breastfeeding. This method helps in maintaining the baby's temperature and prevents the baby from cold. Over here the baby is also comfortable along with their mothers” (IDI 04).

Similarly, another participant stated the benefits of KMC “My baby very well responds to KMC. I noticed my baby. While providing KMC, my baby feels relaxed and has a soothing effect. During KMC, my baby easily goes to sleep. It also helps in timely breastfeeding” (IDI 01). Thus, most of the participants agree that the KMC was beneficial and had a positive impact on their babies’ health

Moreover, one of the participants pointed out another benefit of KMC as follows, “KMC helps in exclusive breastfeeding. The chest-to-chest contact improves the oxygenation process and levels in the baby” (IDI 02). Likewise, another mother also verbalized in such a way that “Look, the people also say that if you let the baby in the prone position on your chest, it will help in maturing the lungs and in oxygenation as well” (IDI 01). Thus, most mothers agreed that KMC increased the love and bonding between the baby and the mother. It also helped in breastfeeding and oxygenation of the baby. Furthermore, KMC had a soothing effect and the babies easily go to sleep, as one mother said that, “I gave KMC to my baby when he is crying. He immediately stops crying and easily goes to sleep” (IDI 06).

Likewise, a new mother highlighted another benefit of KMC as follows,

> KMC gives warmth to the babies because my baby's body was very cold every time. KMC also helps in breastfeeding. The KMC also helps in the weight gain of the baby and his health. When the baby is at peace and relaxed, the mother will be able to rest and be happy. (IDI 02)

Furthermore, most mothers acknowledged that this KMC method was very helpful for their babies. Some mothers added that it also helped them in breastfeeding and increasing breast milk production, one mother stated “Yes, during KMC, I can breastfeed my baby in a timely way. Normally, I breastfeed my baby every two hours or on demand. Chest-to-chest contact of the baby with their mother increases breast milk production*”* (IDI 01). In addition, another mother added that “KMC prevent babies from illness and infections*”* (IDI 06).

Apparently, most of the mothers are aware of the benefits of KMC for their babies as well as for them. According to one mother, “KMC helps me in identifying early feeding cues of my baby. KMC gave me a sense of satisfaction” (IDI 11).

Most importantly, one mother admitted the value of KMC in rather emotional words as follows,

> Due to this method, my baby becomes calm and relaxed, feels comfortable, gains weight. It is also good for their heart. I am witnessing the benefits and fruits of this method. All the people in the community told me that my baby is so small, it will not survive. But due to this method and with the help of staff members, he finally survived, and I am so happy. (IDI 03)

Likewise, a few mothers also verbalized the major benefit of KMC in the following way, “our baby is alive because of KMC” (IDI 02, 03& 09).

Conclusively, all the mothers appeared to be very well aware of the positive outcomes of KMC. More importantly, they all agreed that the benefits of KMC were many, yet, at the same time, there appeared to be no cons associated with this method.

Category (3): The Readiness to Practice KMC. This category talks about the eagerness and willingness of the mothers about the KMC method. Firstly, it was evident from the gathered data that almost all the mothers were willingly doing KMC at home, without any hesitation or pressure. Another mother added that, "I am willingly doing KMC because it is useful for my baby. There was no pressure on me from the family members" (IDI 04).

Secondly, the mothers were very happy and enthusiastic about the KMC. Moreover, they showed an inclination towards KMC over the other conventional methods, as one mother agreed that, "This KMC method is very helpful for preterm babies" (IDI 04). Likewise, another mother also says that "I am willingly doing KMC for my baby and I will use this method as well" (IDI 02). Similarly, another participant also verbalised the preference for this method as follows, "I do not know about the other babies, but surely I will use it for my babies in the future as well. I will prefer the KMC method in future for my babies" (IDI 02). Another mother also pointed out that, "The KMC method is different from the conventional methods which our elders used in homes. I will use this method because it is very beneficial and helpful for my baby" (IDI 02).

Thus, almost all the mothers were readily doing KMC for the betterment of their baby's health.

Moreover, the mothers also added that KMC was a very easy and cheap method in terms of skills and financial resources. One participant says that, "I think there is no need for resources to do KMC. The only thing you need to do is to remove your shirt or wear a loose shirt so that your baby feels comfortable during chest-to-chest contact" (IDI 03).

Furthermore, most of the mothers preferred the KMC method over the opting for the incubator or other care, as one mother pointed out that, "During KMC, our baby is under our supervision rather than lying on the bed or in the incubator" (IDI 12).

They thought that the KMC method did not need any special skills or training and they could do it anywhere at home or in the hospital. One mother elaborated that “KMC method is easily accessible sand achievable. There is no need for resources or special skills. We can give it anywhere depending on our availability” (IDI 06).

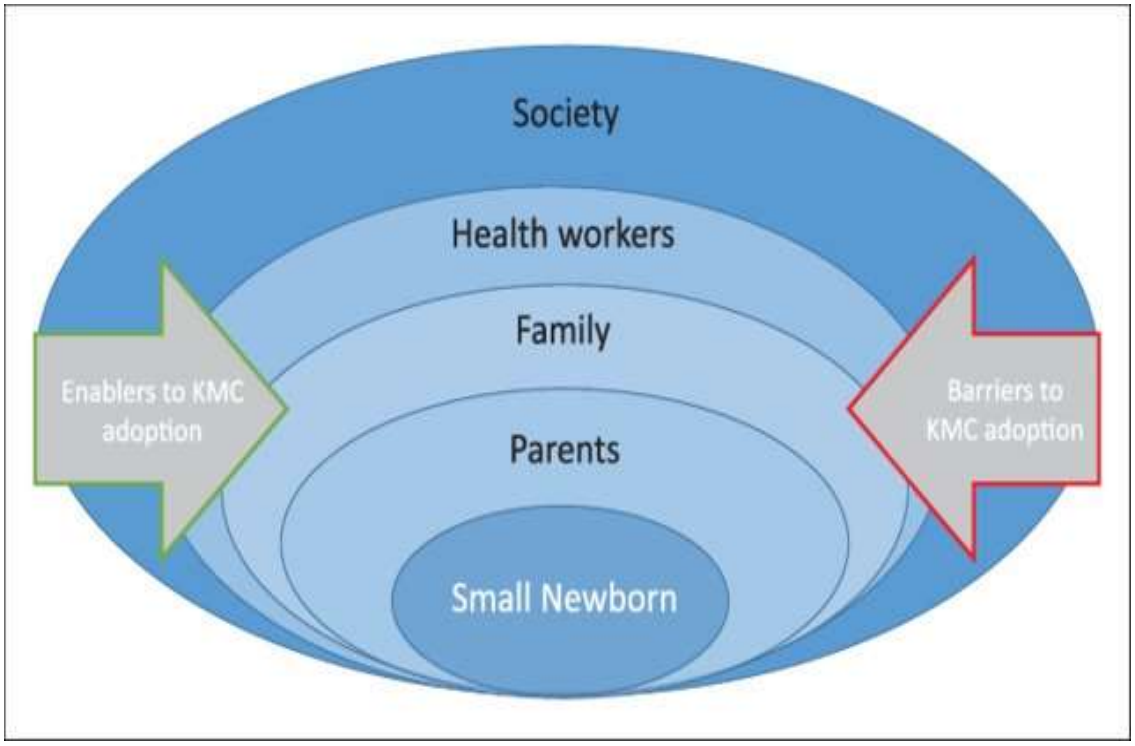
Moreover, the mothers also agreed that KMC was free from religious and cultural compulsions. As the participant verbalized “In my opinion. There is no impact of culture or religion on this care. I preferred this method over the old conventional methods” (IDI 03). Likewise, another participant added, “KMC is not a time-consuming method. Their benefits are far more than their losses. KMC did not need special equipment, it need only time and dedication” (IDI 05). Conclusively, all the participants agreed that KMC was not only beneficial for the babies but it is also helpful for the mothers in managing their babies’ care.

So, almost all the mothers were ready to provide KMC to their babies without any hesitation or worry. In fact, the participants preferred the KMC method over the other conventional methods. Moreover, they were eager to use the KMC in the future. Lastly, they were also teaching the KMC method voluntarily in the community to other mothers.

Theme Two - The Enabling Factors to Practice KMC

This theme talks about the factors which play an important role and provide an enabling environment for KMC. This includes providing professional support and help in the hospital and as well as in homes. The implemented framework developed by Brotherton in 2020, suggested that the enabling factors for KMC are health workers, parents, family, and society, as evident from the below given figure 5:

Figure 5 **The Enabling Factors for KMC**



Note. The conceptual framework for implementation of Kangaroo Mother Care (KMC).

This framework elaborated how the nurses and doctors support parents in the hospital. Furthermore, this also includes society's acceptance of this method and their role in encouraging such type of novel care in adopting KMC in the community. Thus, the data collected from the participants was in line with the framework and showed that through the knowledge and awareness of the parents, the KMC method was now getting momentum in society.

Category One: Professional Support in the Hospital. The category highlighted the environment they have provided to practice KMC in the hospital. Most of the mothers stated that the KMC environment was a supporting factor in the provision of KMC. Moreover, almost all the mothers reported that all the staff like doctors and nurses were very supportive, cooperative, and helpful, which was an enabling factor in the provision of KMC as mentioned

in the implemented framework. Furthermore, they also added that the mothers were also collaborative and helpful with one another. Almost all the mothers stated that the KMC staff was very compassionate and caring. One of the participants stated,

> The staff teach the mothers about the KMC method. They teach how the babies will be cared for and how to give KMC at home. KMC is just like caring for my baby and looking after him at home and in a hospital setting. (IDI 03)

Another participant shared similar views about the staff's competence and compassion,

> I feel very good when I came here. I spend three days here in the KMC ward and I am very much satisfied with the care the staff gave to my baby. The staff teach me different methods of KMC, which was very helpful for my baby. (IDI 07)

Thus, all the mothers agreed that the staff was cooperative and caring. As one mother stated that "All the staff was cooperative, supportive, and helpful. I am very much satisfied with the care. All the staff is very compassionate and caring. They educate the mothers regarding the KMC" (IDI04). Another one echoed the same sentiments when she said, "When I was discharged from the hospital, I was easily giving KMC to my baby, without any hesitation or restriction" (IDI 01).

Another mother stated the need for KMC method in her context and its effectiveness as follows,

> We are living in a very cold area, where all the time it's snowing. The temperature is very cold and a lot of babies died and are ill due to cold. When I came to the hospital, the staff taught me different methods that how to take care of your baby from cold and because of the KMC, my baby survived. (IDI 02)

There was also evidence of collaboration between mothers in the hospital. Most of the participants reported that they learnt and taught one another about KMC, which was very helpful. As one mother stated "When a new mother came to KMC, I teach her how to give KMC to her baby. It is like our second home. We help each other, which is a good sign" (IDI 12). Thus, the mothers also learn from and teach one another about newborns' care.

Conclusively, almost all the participants were satisfied with and appreciative of the KMC provided it the hospital. Moreover, almost all the mothers agreed that the KMC staff was very supportive, cooperative, and caring towards them.

Category Two: Support and Reassurance of the Family Members towards KMC. This category addresses the dimension of family support and acceptance of care at home. In this respect, some mothers confirmed that they were supported by their family members in administering KMC to their babies. Many of the participants stated that there was no pressure from their family side to not do KMC. On the contrary, everybody was assisting and serving them in taking care of the new-borns. In particular, they shared that the respective fathers and mother in laws were very supportive and also helped them in sharing the household activities.

Moreover, a few of the participants reported that their family members were very kind towards and supportive in accepting KMC, Another participant added that "at home, everybody is helping me in giving KMC to my baby. My husband also helped me in providing KMC to our baby" (IDI 04). Similarly, another participant shared with the researcher that, "My husband is quite satisfied with the care. The ultimate goal of KMC is that our baby is in good health and disease-free" (IDI 07).

Furthermore, regarding the level of family's support and involvement in KMC, a mother shared with the researcher that, "When I am busy in my household activities, my elder

daughter provide KMC to my baby" (IDI 04). Similarly, some mothers told the researcher that their mothers-in-law are providing help and support while providing KMC to their babies. For instance, one participant told the researcher that "When I am busy, my mother-in-law gives KMC to my baby. She is very kind and helps me also in our household activities" (IDI 07). Likewise, another mother added that "My mother-in-law helps me in my household activities" (IDI 06).

More importantly, several mothers verbalised that no one in the family was influencing them about KMC. As one mother stated, "No one is influencing or inhibiting me in providing KMC to my baby" (IDI 11). Likewise, another participant shared with the researcher that, "No, I am willingly doing KMC because it is useful for my baby. There was no pressure on me from the family members" (IDI 01). . Likewise, another participant verbalized that, "There was no pressure on me from the family members or my husband. The family member was also angry with me when I am not giving KMC to my baby" (IDI 09).

Thus, from the above given comments and statements, it can be deduced that most of the mothers willingly provided KMC to their babies, without any pressure or hurdles from their families. In fact, most of the participants stated that their family members were kind and supportive at home in managing household responsibilities and providing KMC to the newborns. Not only, the family members accepted KMC but also helped the mothers to provide KMC to their babies in the best possible way, without any worry or hesitation.

Category Three: The Societal Acceptance of KMC. The category explores the societal acceptance of the KMC method. Almost all mothers say that although KMC was a new method for them, they were accepting it. Moreover, the society was also welcoming towards this method of neonatal care, due to the increasing awareness towards its benefits. Thus, the

mothers choosing KMC were facing no resistance towards or hindrance in practising KMC. All of this was highlighted in one participant's comment, who said,

> Yes, when I went home, the people were telling me that from where you have learned this method. Then I told the mothers that I had learned it in the hospital, and the doctors told and taught me this method. This is very beneficial for my baby. So, in my opinion, this method is gaining momentum in the community. (IDI 03)

Likewise, another participant stated, "Now this method is becoming popular in our area. Now people are coming to know the benefits of KMC" (IDI02). Conclusively, it can be deduced that generally, the people of the community were unaware about KMC. However, those who became familiar with KMC welcomed and supported the initiative.

It can be further inferred that the main reason for not using the KMC method in the community initially was the lack of knowledge and awareness. But when people became familiar with KMC, they began accepting it as beneficial for neonate care. This is evident from the views of a participant, as given below,

> When I was discharged from the hospital, people were telling me that from where you have learned this method. This is a new method that we did not know about. I told them that I had learned it in the hospital. So, they also told me that they will use this method for their babies in the future because this is very beneficial for our babies. (IDI 08)

Similarly, one participant shared her resolve for using KMC as follows, "I will use this method for my future babies. Their benefits are more and its drawbacks are none" (IDI 01).

More importantly, a participant acknowledged the immense value of this method as follows, “I will use this KMC method for my other babies also. My baby is alive because of this method” (IDI 06).

Furthermore, one mother shared how she is carrying forward what she had learned at the hospital, she said, “I am teaching at home the KMC method which the hospital staff taught me. The mothers in the neighbourhood were also interested in [learning about this care” (IDI 02). Other mothers also stated that when they were discharged from the hospital, they faced no difficulty in providing KMC to their babies at home or in the community. As one participant stated,

> When I was discharged from the hospital, I was worried about how I would do this method. Whether the people in the home or the community will accept it or not. But all the family members and the neighbours were interested in this care. I have provided this care without any restriction or hesitation. (IDI 10).

Almost all the mothers reported that they were able to provide KMC to their babies in the community without any restrictions. They reported that as a result of the initiative and efforts, people became more welcoming and supportive towards this new method. They were realizing its benefits, which was a positive sign.

Theme Three: The Circumstances Hindering the KMC Practice

The third theme includes the factors that hindered or impeded the KMC practices. The barriers towards the adaptation of KMC include some factors related to the hospital, home, and society, as shown in Figure 4.1. For instance, some mothers reported that the hospital environment was very hot for the mothers. Moreover, they also stated that there should be

curtains for the privacy of the mothers in the KMC ward. Furthermore, almost all the mothers reported that it was difficult to provide KMC in front of males, due to the cultural norms and values. Additionally, some mothers stated that this facility was very far from their area. Also, a few mothers also verbalised the lack of involvement of in baby care. The categories have been discussed in detail below.

Category One: The Infrastructure of the Hospital. The category discusses the factors the mothers have reported to hinder the practice of KMC in the hospital setting. They stated that such circumstances hindered or held back the provision of KMC in the hospital. These hindrances are mainly related to the limitations to the hospital infrastructure and environment. For instance, one mother verbalized her discomfort as follows, "I feel a little hesitancy while providing KMC in front of male staff in the KMC ward" (IDI 03). In my opinion, it is due to cultural norms and values that they are uncomfortable with the presence of the male staff.

Moreover, most of the mothers complained about providing KMC in one position. They face difficulty in one position or changing positions during KMC. One mother verbalised her discomfort by saying, "I felt tired in one position when I was providing KMC for a longer period" (IDI 02). Another mother also stated the same, "It is difficult to be there in the supine position for a longer period. It is difficult to change sides during KMC" (IDI 06).

Furthermore, some mothers also reported that the environment was very hot for the mothers. One mother reported that,

> The KMC environment is hot for the mothers. I feel the surroundings to be very warm. I know that it is because of the babies so that they did not feel cold. But it is difficult for

us as a mother to stay in such a hot environment, especially in the summer season. (IDI 01)

In addition, some mothers also stated that there were no follow-up visits from the hospital. They told the researcher that there should be follow-up visits after the discharge from the hospital and that they should solve the problems that they faced at home regarding KMC. One mother stated, “There should be follow-up visits from the hospital side so that we can discuss our issues related to our baby” (IDI 02).

Many of the participants reported that the KMC facility was far away from their area and had very limited capacity. One participant stated, “This KMC facility is very small. It consists of only five beds. You know I came from a very far area. Our area is very cold and mountainous. We have difficulty in coming to the city” (IDI 11). Another mother also stated in the same manner “We are very poor and cannot afford to come to this hospital. The government needs to provide such a hospital near to our home” (IDI 04). Thus, the participants demanded the provision of such types of facilities from the government in the areas near them.

Moreover, many mothers complained about experiencing backache while providing KMC to their babies. One mother told the researcher, “I feel severe backache while providing KMC to my baby. I cannot stay in one position for more than 10 minutes. It is difficult for me to give KMC for a longer period” (IDI 05).

Furthermore, mothers reported that, “No curtains are there for our privacy. We need curtains for every bed so that we can provide KMC to our babies without any hesitation” (IDI 04). Hence, the need for mothers’ privacy was a major concern while practicing KMC.

Next, some mothers reported that the fathers of the babies were not involved in the care. One mother verbalized her grievance as, “His father is sitting outside. He should be involved in the baby care. He has not even seen his baby for two days” (IDI 03).

Mothers reported physical discomfort, lack of privacy, the need for more involvement from the fathers as some of the hindering factors related to KMC. Conclusively, they highlighted the requirement for establishing more facilities like KMC in areas near them, and the need for follow-up visits from the hospital staff.

Category Two: Influence of the Family. The category addresses the challenges that the participants faced with their families at home. For instance, some mothers reported that they felt hesitant while providing KMC in front of males in joint families. One participant expressed her point of view, “I have a little hesitancy in providing KMC in front of males in our homes. We lived in a joint family” (IDI 11). Meanwhile, other participants told the researcher how KMC affected their household activities and work, thereby making it difficult to administer at home. One mother expressed the difficulties as follows, *“*Yes, the KMC affects my other household activities. In the home, we have a lot of other work to do. I will try my best, but it will be not effective like we are giving it in the hospital” (IDI 03).

Likewise, other mothers said that due to time constraints and a lot of work at home, they were unable to provide the KMC as effectively as they were providing it at the hospital due to their other responsibilities. Hence, the quality of the KMC was suffering at home. One mother expressed her point of view as follows, “I was not able to provide quality KMC to my baby, due to household activity. We, mothers, have a lot of other work to do like preparing our other children for school, preparing the breakfast and lunch” (IDI 08).

Moreover, the joint family system was also listed as a hurdle in the effective provision of KMC, as one mother said, “We lived in a joint family. I have a lot of work to do. I cannot give proper time to my baby care” (IDI 10). However, some mothers also identified the nuclear family as a hurdle in the provision of KMC.

Category Three: Cultural Values and Traditions. This category includes the hurdles or problems faced by the mothers related to cultural values and traditions. For example. some mothers highlighted how people are usually afraid of holding small and preterm babies because of the fear of them slipping from their hands, as follows, “People are usually afraid of taking or holding small babies due to slipping from their hands or due to causing injury to the baby” (IDI 01).

Meanwhile, other mothers listed the *qameez* [the traditional eastern shirt worn by women] as a hindrance in providing KMC effectively. Moreover, some mothers reported that people were still using the conventional method besides KMC.

Furthermore, almost all the participants reported that the fathers were usually less involved in the baby's care. For instance, one mother said, “In our home, the father feels little hesitancy while taking his baby because they are afraid that the baby will slip from their hands” (IDI 07). Another participant echoed the same issue when she said,

> The father is a little hesitant while taking his baby in his hand that they will slip from their hands, or they will injure their baby. When the baby grows and with time, the father becomes competent and holds the baby easily and competently without any hesitation. (IDI 03)

Likewise, almost all the mothers highlighted that it was very difficult to provide KMC in a *qameez*, and a large gown was appropriate for the KMC. One mother further clarified that,

“Here at this hospital, they give us the gown which was very helpful in providing chest-to-chest contact because it is difficult to give chest-to-chest contact in a *qameez*” (IDI 02). Another participant also reported the same issue that, “I can't provide KMC in a *qameez* because it is very tight, and I am afraid that my baby becomes would suffocate due to its tightness” (IDI 07).

Moreover, some mothers also reported inhibitions in providing KMC in front of the males at their home. One participant said, “I feel hesitancy and become cautious when providing KMC at home in front of males” (IDI 04).

Also, a few participants reported that the KMC method was a new one for them, so people were usually using the conventional methods, rather than the KMC method, due to the lack of knowledge and awareness. For instance, one mother explained that, “The KMC method is different from the conventional methods which our elders used in homes. Many people are currently using the conventional method, rather than the KMC method, due to lack of knowledge and awareness” (IDI 07).

Hence, it can be deduced from the data that providing Kangaroo Mother Care (KMC) to babies in traditional *Qameez* clothing can indeed present challenges for mothers. Moreover, fathers might feel less accustomed to such caregiving tasks. Furthermore, mothers may experience underlying inhibitions when practising KMC in the presence of males. This inhibition could stem from cultural and social factors that emphasise privacy and modesty, even within the family circle.

Theme Four: The Recommendations to Sustain the KMC Services

This theme consists of the recommendations that the participant has proposed to sustain the KMC services in the hospital as well as in homes. This consists of two categories: One is the need for massive awareness among the masses regarding the KMC. This could be in the form of seminars and education programmes on print and electronic media to make people aware and educate them about the benefits of KMC. The second one is the action plan in the healthcare sector for the provision of KMC. However, allocating a dedicated budget for KMC initiatives is vital for their successful implementation. Moreover, adequate financial resources can support awareness campaigns, training for healthcare staff, and the establishment of well-equipped KMC units.

Furthermore, special attention should be directed towards regions with colder climates, particularly in the northern areas. Cold weather can present challenges in maintaining infants' body temperature, thus, making KMC even more relevant and effective in these regions.

Category One: KMC Awareness Campaigns via Mass Media. Almost all the mothers reported that before coming to the KMC ward, they were unaware of the KMC method. Almost all the participants reported that it was the government's responsibility to be aware and educate the people regarding the KMC, as one mother stated "I did not hear this word before the admission to the nursery" (IDI 01). Moreover, almost all the mothers reported that it was the government's responsibility to spread the message and aware the people regarding the KMC. One participant rightly analysed that,

> I believe people are unaware of the KMC. People do not know the KMC method. If mothers know about this method and they are not providing it, it would be their mistake, but people are unaware of this method in the community. (IDI 11)

Another participant iterated the novelty of the KMC method as follows,

> As I was discharged from the hospital, people at home and in the community asked me where you have learned this method. We did not see this method before. I told them that I had learned it in this hospital. This method is very beneficial for our baby. So I think that it is the government's responsibility to educate and aware people of this facility. (IDI 03)

Moreover, some mothers offered that they could take the initiative to make the people aware of this facility, as one mother said, “I can educate other mothers in our neighbors about this method and its benefits” (IDI 02). While other mothers highlighted the government’s role in this as, “It is the government's responsibility to arrange some seminars regarding KMC in our area” (IDI 05). Similarly, other participants stressed that, “It is your responsibility to aware the mother of this method. The staff and doctors know better than us. You people can educate these mothers regarding the benefits of KMC” (IDI 09).

Similarly, almost all the mothers agreed that other mothers in the community were not practising the KMC method due to the lack of awareness about this method and its benefits. One mother said, “Other mothers in the community are not doing KMC because they are unaware of this method. There is no other option besides this. If they know the benefits of KMC, they will do it for their babies” (IDI 10).

In addition, besides the government’s role, some mothers stated that the media can play a role in educating people. One participant reported, “If the government is not educating the people regarding this care, it is the responsibility of the media to aware the community about it” (IDI 03). Meanwhile, other mothers talked about the role of the educated community. They said that educated people can lead the task and make the uneducated people aware about KMC.

One participant stressed that, “It is the responsibility of educated people like you to educate the uneducated people regarding this care” (IDI 11).

Likewise, a few mothers also highlighted that healthcare professionals can advocate for KMC. One participant stated, “You can take the lead to educate and aware the people. Mothers are coming to you people. The healthcare professional advocates for KMC” (IDI 07).

The lack of information concerning KMC frequently contributes to its low utilisation, as many people are unaware of its benefits in general. Hence, recognising the importance of educating the general public about KMC, the government's proactive efforts to create awareness and give information is critical. Additionally, the media can play an important role in raising awareness, reaching a large audience, and shedding light on the positive impacts of KMC.

Category Two: The Action Plan for KMC in Healthcare. This category highlights the role of the health sector and what they can do for the provision of KMC. They recommended that the staff can practice the KMC method on the mothers so that they face no difficulty at home in practicing the same. Some participants reported that sufficient funding can help support awareness efforts, healthcare worker training, and the creation of well-equipped KMC units. Thus, the incorporation of KMC into the existing healthcare system is a practical approach to ensure that this helpful practice becomes a routine component of maternity and infant care services. One mother expressed this need as follows, “I think all the healthcare professionals are supportive. The only suggestion which I give to the staff is that they can practice it on the mothers so that they can easily perform it without any hesitation in homes” (IDI 07).

Most of the mothers stressed the need for frequent follow-up visits so that they could share their problems with the staff. One participant expressed this need as follows, “The staff should do frequent follow-up visits so that we can discuss our problems with the staff” (IDI 02).

Furthermore, almost all the mothers demanded provision of more of such facilities in the area. The reason behind this need was the dangerously cold weather of the region and its negative impact on the newborns’ health. Regarding the need and effectiveness of this method, a mother said, “I demand more such facilities like this so that people can avail this opportunity from the government side. This facility helps me a lot. My baby is alive because of this” (IDI 02).

Likewise, the mothers also demand a chain of KMC facilities in the area, as one participant stated, “We are very far from this hospital. We have a very difficult in coming here. We lived in the mountainous area. We demand such facilities from the government to take the lead. It will be very beneficial for us” (IDI 03). Moreover, the mothers also demand such facilities at every district level. As one participant stated, “We demand such facilities in every district. It will be very helpful for the people” (IDI 02).

More importantly, some participants also stated that the government should allocate a proper budget for the KMC facilities, evident from this excerpt, “The government should allocate some portion of the budget to such facilities to help the most vulnerable people” (IDI 04). Thus, almost all the participants stressed that the government should specifically focus on the northern areas. One mother justified this need as follows, “The government focused mainly on the northern areas because of the harsh cold weather, which is very difficult for our preterm babies” (IDI 06).

In a nutshell, the government's proactive involvement in promoting KMC is essential for fostering a healthier future for mothers and infants. Consequently, this can be done by spreading awareness, advocating for its inclusion in healthcare services, allocating resources, and focusing on vulnerable regions.

Conclusion

This chapter included the analysis and the results of the study. Firstly, the researcher explained the demographic profiles of the participants. Next, the researcher used content analysis to analyse the interviews. Then, four themes were identified, mainly related to knowledge and awareness, benefits, challenges, and suggestions to improve the KMC. Moreover, the participants demanded more facilities like it and the need for a massive awareness campaign. Hence, the research has highlighted the need for the government to mainly focus on the northern areas in the provision of facilities due to the harsh cold weather in these regions.

Chapter Five: Discussion

Introduction

This chapter discusses the results from the analysis of the transcriptions and the integration of the data gathered during the conduct of this qualitative research. The results of the study were matched with other similar studies with national and international studies. Besides this, the strengths and limitations of the research study have also been described. Furthermore, recommendations have been made and a conclusion has been drawn from the research findings.

The research study explored the experiences of mothers regarding Kangaroo Care in a tertiary care hospital, in Swat, Pakistan. For this purpose, data were taken from 12 participants. Next, after the transcription of the interviews, a content analysis was done. As a result, four themes were identified by the researcher. These themes were the perception and motivation of the participant mothers regarding KMC, the enabling factors to practice KMC, the circumstances hindering the KMC practice, and the recommendations to sustain KMC services. These findings and results have been discussed in the reference and context to the relevant literature.

The Perception and Motivation of Mothers Regarding KMC

The study findings revealed the mothers' perception and motivation. The findings showed that most of the mothers were initially unaware of the KMC method. The findings also reported that the community was unaware of the KMC method. Moreover, a study was conducted in the Sindh province of Pakistan to know the enabling and hindering factors regarding KMC. This study also showed that the general community was unaware of the KMC method, (Jamali et al., 2019). So, the result is congruent with the researcher's study. Likewise,

one more study was conducted in Malawi, Africa in 2015, which also showed similar results regarding the knowledge and awareness about KMC. Information was obtained to assess participants' understanding and awareness of KMC and the relevance of infants' contact with their skin. Thus, the findings revealed that 84% (n=95) of those interviewed were unaware of the KMC programme before their admission to the hospital (J. Z. Chisenga et al., 2015).

Similarly, another study was conducted in Sweden in which the mothers also showed unawareness and lack of knowledge regarding KMC. The literature states that most of the women who participated showed favourable emotions regarding KMC in their responses. However, most women's replies to remarks and opinions suggested unhappiness regarding the quantity of understanding and information supplied on the practical components of KMC, as well as the possibility of asking people in their social circle to engage in KMC (Blomqvist & Nyqvist, 2011).

Moreover, a systematic review was done in 2015 on the experiences of mothers regarding KMC, which also shows that the mothers had less prior knowledge of the KMC method. This systematic review revealed that a minimal understanding of KMC, while the most profound obstacle to KMC practice was that mainly the lower and middle-income countries (LMIC) articles were included. Hence, there was an absence of knowledge about KMC, hypothermia, and the well-being of babies (Seidman et al., 2015). In this research findings, most of the mothers were unaware about the KMC method and how it could be practised, which is very similar to the previous studies and research in the literature.

Furthermore, another study was conducted in Johannesburg, South Africa, in 2015. The purpose of this research was to express women's observations and opinions of 24-hour KMC at medical healthcare in Johannesburg, about the results indicating that KMC initially appeared

odd and challenging for everyone involved over their initial time of being in the KMC ward. However, their feelings about it progressively increased when they encountered its advantages. Some of the observed advantages included the mothers' proximity and constant contact with their newborn infants, which encourages a maternal-infant connection (Tarus & Tjale, 2015). Similarly, another study was conducted in the USA in 2019 to learn about the enablers and barriers of KMC. Although women expressed great sensations from KMC, they additionally mentioned understanding little or nothing regarding the entire range of its advantages and being apprehensive whether direct contact with their skin or nursing could cause disruption or injure their infant. As previously discovered, nurses had an important role in raising awareness of KMC, encouraging women in its practice, and informing them regarding its importance (Lewis et al., 2019). The research showed that the nurses played an important role in educating the mothers regarding KMC.

Moreover, one other study was done in India which also showed similar results. In this research, a more substantial percentage (95-97%) of women embraced the KMC compared to 70- 86% recorded in India. The result had been nevertheless, comparable to the 95% recorded by different nations. The maternal autonomy, increased confidence, attachment with the newborns, and satisfaction exhibited by over 90% of the moms in this study were similar to the 83- 95% described in the previous research (Parmar et al., 2009).

One more study also reported that preterm and low-birth-weight babies receiving Kangaroo Mother Care had lower postnatal rates of mother despair, anxiety, and tension, as well as stronger maternal-infant bonds (Pathak et al., 2023). The results of these researches agreed with the researcher's results that mothers know the benefits of KMC that it increases bonding between a mother and the newborn and decreases stress and anxiety levels; and thus,

they embrace this care. Another study was conducted which also showed similar results. Facilitating skin-to-skin contact may be a beneficial technique for reducing anxiety among both parents and babies in the hospitals. The results contribute to the investigation of oxytocin as a possible modifier for increasing attentiveness and synchronisation in parent-infant connections (Vittner et al., 2018).

Furthermore, a study was conducted in the rural area of the Sindh province in 2016, which showed that most community-based respondents had previously been unaware of the idea of KMC, A majority of respondents believed that low birth weight (LBW) and premature babies require greater attention compared to full-term babies and may require hospitalisation. The study subjects knew that premature babies require a greater quantity of garments than full-term babies; and hence, they clothed their babies in extra layers of clothes (Jamali et al., 2019). One more study was conducted in the Punjab province of Pakistan in which two groups were taken, one group with the provision of KMC, while the other group not receiving KMC. The results showed that no mortality was found in the group that provided KMC to their preterm babies. The results showed that KMC is an efficient, secure, and cost-effective option for providing premature therapy in underdeveloped nations. It is highly received by women, household members, and professionals. Other benefits include an increased rate of breast feeding and a decreased prevalence of serious medical conditions (Rasul et al., 2017).

Likewise, another study was conducted in the Sindh province in 2022. The results showed that the public at large and medical practitioners in general are unaware of KMC practice and its advantages (Ariff et al., 2022). However, according to this study, the mothers know the benefits of KMC like breastfeeding, helping in oxygenation, and preventing the baby from cold and infection. So, the results of both studies are congruent with the researcher's

results. Moreover, the studies conducted in Pakistan showed that the mothers were willing to provide KMC to their babies, which is parallel to the research study. According to a systematic study, moms within the KMC group experienced more peaceful, powerful active, satisfied, serene, better organised, clearer-headed and quick-witted, less stressed, alert, competent, friendlier, and happy than the other mothers (Athanasopoulou & Fox, 2014). Another study also showed that women who offered KMC reported that their self-esteem grew, and they embraced parenthood. The moms noticed bonding with their newborns by looking at, interacting with, and expressing an affectionate disposition toward their babies. This enabled women to detect newborn cues and deliver care of their babies by the baby's indications (Lewis et al., 2019). All the mothers were willing to provide KMC to their babies and as well as in the future. One more study was conducted which shows the confidence level of mothers who provide KMC. The results showed that following the teachings, adolescent moms' trust and capacity to execute KMC meaningfully improved the situation. Thus, the findings rightly identified that KMC training has to be provided and family participation is required for KMC's successful execution (Kenanga Purbasary et al., 2017).

In this study, the mothers were first unaware of the KMC and its benefits. However, after spending some time in the KMC unit, almost all the mothers somehow came to realize the benefits of the KMC method. They reported that KMC helps in breastfeeding, increases love and bonding between the mother and the newborn, protects the baby from hypothermia and infection, and enables the baby to become calm and relaxed and gain weight.

The Enabling Factors to Practice KMC

A study was conducted in Pakistan to know the enabling and hindering factors to KMC in rural Sindh province Pakistan. This shows that support of healthcare providers, awareness

campaigns at the community level, and acceptance and support from family members are the enabling factors for KMC in Pakistan (Jamali et al., 2019). Moreover, the findings of this research are compatible with the above study results. The researcher also stated that acceptance of KMC at the community level, family support, and support from the healthcare workers are the enabling factors of KMC.

Similarly, a study was conducted in India which also showed that the research determined that in NICU, KMC provides a secure, efficient, and affordable approach to LBWI care. Moreover, mothers, households, and medical professionals all had positive sentiments towards KMC (Parmar et al., 2009). Thus, these results such as healthcare professional support, family support, and societal acceptance are parallel with the researcher's findings.

Likewise, a qualitative descriptive study was conducted in 2020 in Bangladesh to know the enabling and hindering factors of KMC. The results showed that displaying acceptance, having a supportive healthcare staff and family support were the key enablers of KMC. Because KMC was novel to them, the caregiver in this research had a positive view of the practice and was willing to adopt it after being introduced to it. This proved to be observed in Malawi where KMC was considered viable and moms expressed approval after learning about its advantages. The medical professionals played a crucial role as educators and guides for the caregivers who stayed in the medical facility with the newborn. Both medical professionals played critical roles as sources of information and in promoting KMC to the caregiver and their families. Thus, friendly healthcare personnel boost parental preparation and serve as key facilitators for KMC. Moreover, assistance from families was critical for caregivers to perform KMC both in-patient and at home by assisting with everyday tasks and housework (Johanna Sjömar et al., 2023).

Likewise, another study was conducted in South Africa which also shows that healthcare professional support and a supportive environment are the enabling factors for KMC which is compatible with this study's results (Reddy & Mclnerney, 2007). Similarly, one more qualitative study was conducted in China which also showed that family and community support are the enabling factors for KMC (Yue et al., 2020). Hence, the study findings are parallel with the researcher's findings i.e., family and community support were also the enabling factors in the researcher's findings.

Another study conducted in Uganda shows that the key enablers for KMC were the helpful staff members who encouraged an optimistic mind-set in the mothers, the opportunity to replace providers, and the importance of assistance from families (Naloli et al., 2021). Thus, in the researcher's findings, healthcare providers and familial support are the key enabling factors. These results are also parallel with the researcher's study. Another study was conducted in West Africa which also reported that the medical professionals' education, KMC's affordable price, their perception of its usefulness, the interaction between women and medical professionals, and mothers' compliance to KMC were all highlighted as enabling factors towards KMC (Kourouma et al., 2021).

One more study was conducted in Malawi which showed that before the hospitalisation, the mothers were unaware of the KMC, but once they came to know the benefits of it, they preferred KMC over incubator care (J. Z. Chisenga et al., 2015). This study's results are also parallel with the researcher's findings that is, once the mothers became aware of the advantages of KMC, they started preferring it over incubator care. Thus, in this study, the mothers reported that family, healthcare professionals, and community acceptance of the care were the enabling factors to KMC. Likewise, the literature also supports these findings.

The Circumstances Hindering KMC Practice

Although KMC has already proved to offer numerous advantages for the newborn infant and the mother, there may be several factors that impede its application and success. The circumstances that hindered the KMC practice in this study were a lack of awareness, limited resources, cultural and societal norms, lack of family support and follow-up monitoring. Furthermore, a study was conducted in Pakistan in 2016 to know the enabling and barriers to KMC. The findings reported that the lack of training of health professionals, the lack of facility readiness, lack of family support, and socio-cultural norms and practice were the hindering factors towards KMC in Pakistan (Jamali et al., 2019). These findings are coherent with the research findings like lack of family support, lack of training and follow-up visits, and socio-cultural norms. Similarly, a study was conducted in Africa which shows that the hindering factors to KMC were insufficient resources, inadequate entrance area, insufficient visits to houses, and the absence of understanding of the community (Kourouma et al., 2021). These results are congruent with the researcher's results. In these research findings, the infrastructure issue, unawareness, and less follow-up visits are the factors hindering KMC.

One more study was done in Africa which reported that the main obstacles in KMC practice were an abundance of assistance from the family, an absence of male participation, the mother's anxiety and ill health, and infrastructure issues (Naloli et al., 2021). One more study was done in Africa which shows that KMC proved to be an arduous experience for women because of sitting in a single position for extended amounts of time, disrupted rest, limited mobility, fatigue, and confinement throughout the time they were hospitalised, in addition to inadequate support for necessities such as eating (Nyondo-Mipando et al., 2021). These findings are congruent with the researcher's study findings. Most of the mothers

verbalised that they become tired due to the requirement of staying in one position and some also complained about experiencing backache.

Furthermore, Fathers, particularly in Pakistan alongside other cultures with comparable social and cultural customs in the vicinity, are typically not carers for babies and are not as inclined to take a substantial part in KMC practice. Although fathers expressed their readiness to practice KMC to ensure their babies' welfare and survival, it appears they might have minimal time to practice it due to their duties to work beyond their homes. In addition, they may face hurdles from the prevalent patriarchal cultural and social norms and the subsequent practices. For instance, due to societal standards, men in some regions, such as Zimbabwe, South Africa, and South Asia, are reluctant to take care of their newborns or perform KMC, and they consider it solely the job of the women.

Moreover, one more study was done which showed that insufficient backing from the family, culture, insufficient aid during skin-to-skin contact, and the mother's involvement in various tasks were some issues that hindered adherence and the continuance of KMC (J. Z. Chisenga et al., 2015). Thus, these results were parallel with the researcher's findings, which discovered culture, mothers' involvement in household activities, and lack of support from family were also the hindering factors towards KMC in the research study.

Another study was conducted in the USA which revealed that participating in KMC considerably impacted the newborn mothers' psychological, emotional, and physiological effects of premature delivery, especially anxiety and trouble in recuperating from delivery. These difficulties are exacerbated by institutional hurdles such as high-cost accommodation and insufficient pregnancy leave legislation (Lewis et al., 2019). These findings showed some similarities and dissimilarities with the researcher's findings. In this

study, almost all the mothers were housewives; therefore, they could not demand maternal leaves. However, this factor was missing from the researcher's findings

Mothers showed a little anxiety at first, as well as some infrastructure-related hurdles were found to be standing in the way of , which is parallel to the findings of the study conducted in the USA. Meanwhile, the maternal leaves are the new point in the study, which is dissimilar from the findings of the researcher's study. The researcher thinks that this difference between the two studies was due to the lack of education in mothers. Eleven of the mothers were housewives so they were not concerned about the maternal leaves, as shown in the USA study. Another barrier in this research was the cultural barriers faced by women like having to provide KMC in *qameez* [eastern shirt], which is a unique barrier specific to the Pakistani culture.

Moreover, a study conducted in Spain also reported that whenever such programmes are scheduled to be carried out, financial and social considerations must be considered (Vila-Candel et al., 2018). A review of KMC was done from 2010 to 2022 in Middle Eastern countries which showed that insufficient understanding of KMC, the limited mind-set and practices within the families of infant babies; financial, cultural, and structural elements; the public's opinions and norms regarding premature and LBW infants; health professionals' willingness to embrace KMC, in addition to their aspiration to put the idea into effect through practices; as well as the absence of supporting material in hospitals may all be obstacles to KMC practice. Hence, besides the initiatives to expand KMC upward and incorporate it into healthcare systems, efforts should also be made to decrease the hurdles towards it, to encourage the use of the practice widely in society (Taha & Wikkeling-Scott, 2022).

Some infrastructure and socio-cultural issues, lack of family support, and unawareness about the KMC are the hindering factors towards KMC. The unique finding in this study is the cultural hindrance towards practising KMC in the local context, which are practising KMC in *Qameez* and having to provide KMC in front of the male members in the home. Both of these factors make it difficult for mothers to practice KMC. Thus, with the exception of these two factors, the results from most of the studies were congruent with the researcher's study.

The Recommendations to Sustain KMC Services

Under a health-systems upgrading strategy that emphasises the standard, expansion, and long-term viability of KMC, UNICEF assists nations with high rates of newborn fatalities. To evaluate the success ratio across the 25 LMICs in Africa, Asia, and the Middle East that have received assistance from UNICEF, a fast evaluation of KMC deployment was carried out in 2017. The results reported that implementation goes beyond training, and capacity-building must be paired with effective supervision, mentoring and coaching, coordination with service providers and managers, and regular collection of quality data. Ensuring the scale-up of quality Kangaroo Mother Care requires a multipronged approach that includes advocacy, budget allocation at all levels of the health system, monitoring and evaluation, as well as community mobilisation (Hailegebriel et al., 2021). In this research, the mothers reported that the government and the non-government organisations, along with the media, should spread the message regarding KMC. Moreover, the mothers also stated that there should be a chain of KMC facilities to help people from remote areas. Furthermore, the results also stated that the government should allocate a budget for KMC. These results are congruent with the researcher's study.

Similarly, a study was conducted in Pakistan in 2016, the research found that individuals thought it was reasonable to begin KMC practice at a medical centre and keep practising locally after leaving the hospital. Maintaining the service's willingness to introduce KMC, enhancing the abilities of medical professionals across the hospital and community scales, as well as emphasising a public mobilisation approach that targets particular groups may assist lawmakers and programme strategists in initiating KMC at the healthcare facility level and maintaining KMC practice at the level of the family (Jamali et al., 2019). So, UNICEF is working with the government hospitals to establish KMC facilities in the government sector hospitals.

Likewise, a study was conducted in China which reported that it is advised to boost understanding of KMC and be incorporated in prenatal services as well as following birth to enhance the mothers' exposure to KMC. Moreover, extended intervals for KMC service ought to be supported, mothers conducting KMC in neonatal units should have more privacy and close relatives should be urged to assist KMC (Zhang et al., 2021). The researcher's findings also stated the same requirements for boosting KMC services.

Similarly, another study also stated that to guarantee that moms receive comprehensive assistance, appropriate educational settings ought to be provided in the KMC units (A. E. Robertson & T. Crowley, 2020). This recommendation is also parallel to the researcher's findings. The researcher's findings also revealed that proper hands-on practice with mothers about KMC and the teaching and awareness related to KMC and follow-up visits should be provided to new mothers to sustain the KMC services.

Moreover, a systematic review was done on the implementation of KMC in the healthcare system, which also showed that the authorities should offer healthcare workers

KMC education, as many facilities' healthcare workers probably preferred to attend the training sessions. Hence, on the national level, assurance from the Ministry of Healthcare, or similar regulatory authorities in favour of KMC, might assist in its upward mobility. Moreover, the associations of professionals might also be willing to promote KMC-related education and advancement in their fields. National officials have attempted to tailor regulations to their own countries, keeping resources at their disposal and regional customs in consideration (Chan et al., 2017). These findings are parallel with the researcher's findings that mass awareness, community linkage advocacy, and culturally acceptable policy at the government level are necessary to implement and sustain KMC services. Furthermore, a bibliometric analysis of KMC recommended implementing KMC into standard Neonatal care and offering moms the conditions and assistance they need to engage more physically and emotionally with their newborns (Cañadas et al., 2022). The study results were also congruent with the study findings.

Conclusively, the mothers stated that they need a supportive environment and staff to be physically and emotionally healthy. In addition, the participants recommended massive awareness, culturally acceptable policies, a special budget, and advocacy for KMC at the national level.

The Strengths of the Study

The following are the strengths of the study:

1. This study is the first of its kind in Khyber Pakhtunkhwa and northern Pakistan to know the mothers' experiences regarding KMC.
2. This study is conducted in the remote area of Pakistan which is a good sign. Conducting interviews with mothers in such areas is remarkable.

3. Due to the purposive sampling technique and the rich description of the narration, this study can be transferred to a comparable population in a similar context.
4. All the interviews and the transcriptions were taken by the researcher himself, to protect the rigour of the data and to deeply understand the participants, experiences, and their understanding.

The Limitations of the Study

The following are the limitations of the study:

1. Since the study setting was only one tertiary care hospital, the findings may not be transferable to patients in any other KMC unit.
2. Focused group discussion could also be conducted in the study, along with in-depth interviews.
3. Mothers who had caesarean sections were not included in the study.
4. Multiple settings could be included to have a rich description and data.

The Recommendations

Based on the findings of this study, the following recommendations have been proposed.

Mothers Education and Awareness. Mothers' awareness and education regarding the KMC is the most important thing in the study. Almost all the mothers were unaware of the KMC method. Firstly, it is the government's responsibility to educate the people regarding it. Secondly, the non-government organization (NGO) should take the initiative to educate the people. Moreover, the role of media is also important in educating and teaching the masses regarding KMC care. It is also the healthcare professionals' responsibility to provide awareness and education to the masses regarding this form of maternal care. Furthermore, the government

should arrange seminars and training sessions to educate healthcare professionals along with the general public. By giving mothers, Parents households, and medical professionals the appropriate instruction and guidance regarding the advantages and methods of KMC, we can save millions of innocent lives. Medical facilities, healthcare workers, and learning materials in indigenous languages can all assist with this.

***Supportive Environment and Family Involvement*.** There is a need to provide a welcoming environment in medical institutions and hospitals so that moms can easily practice Kangaroo Mother Care. Hence, convenience, confidentiality, and availability of nursing assistance are some of the factors that need to be worked upon. Moreover, there is a need to invite relatives to help with the caregiving of the infant and teach them the value of KMC. Hence, moms can continue to practice KMC through the aid of the aforementioned support network even after their discharge from the hospital. Furthermore, supportive families also play an important role in the continuation of KMC at home. Likewise, societal acceptance is also necessary for KMC. This means that once a family member gets discharged from the medical facility, they continue offering assistance and guidance to them. Moreover, to resolve any issues and guarantee that KMC practices continue successfully, subsequent visits and consultations with healthcare specialists can be helpful. More importantly, the government should allocate a proper budget to increase the KMC facilities, especially in the northern areas, due to the extreme cold weather there.

Regular Monitoring and the Gradual Transition of a Preterm towards Babyhood. Medical specialists ought to check the newborn's development and weight increase, along with the woman's general health, frequently. This guarantees that each of the babies and its mom are doing well while ensuring that any problems are handled as soon as possible. Further, there is a

need to provide additional forms of medical attention steadily as the infant matures and acquires strength while keeping skin-to-skin contact. So, the newborn's phases of development and medical requirements should guide this phase of change. Moreover, this needs to be kept in mind that KMC must be implemented within the setting of the regional health care system and social practices. Thus, collaborating with medical professionals and organisations, and the general public to tailor these suggestions to suit the specific requirements of preterm infants and their guardians in Pakistan is critical towards ensuring the success of KMC implementation.

Conclusion

The current study has provided information about the experiences of mothers regarding KMC. Most of the findings were congruent with the previous studies done in different countries. These findings show that there is a need for minimal changes in the KMC method according to the local norms and cultural settings. However, the mother’s privacy and well-being is an important aspect in the Pakistani context. Thus, more focus should be placed on the availability, accessibility, and affordability of KMC to everyone. Moreover, the government and non-government organisations should take the initiative to establish a chain of KMC in Pakistan, especially in cold areas like the northern areas. Conclusively, we can easily decrease neonatal morbidity and mortality rates through the implementation of culturally acceptable KMC.

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Appendices A Permission Letter for Data Collection

آغا خان یونیورسٹی
THE AGA KHAN UNIVERSITY

Faculty of Health Sciences
School of Nursing & Midwifery

November 14, 2022

To,
The Medical Superintendent
Saidu Group of Teaching Hospital
Swat.
Subject: Permission for data collection

Dear Sir,
I am Muhammad Nasir student of Master of Science in Nursing (MScN) at the Aga Khan University School of Nursing and Midwifery (AKU-SONAM), Karachi Pakistan. I am Conducting a research study which is an integral part of my master's program, under Supervision of Dr. Tazeen Saeed Ali, Professor and Associate Dean of Research and Innovation AKU-SONAM. The committee members are Ms. Nimira Asif, Ms. Shahnaz Shahid, and Mr. Noor Khan.

The title of the study is "To understand or explore the experiences of mothers who attended the Kangaroo Mother Care facility in a tertiary care hospital in Swat, Pakistan"

Study Purpose: The purpose of this study is to know about the mother's experiences with the kangaroo mother care facility. The purpose of this study is also that how we can reduce the neonate's mortality rate and how we can prevent preterm babies from hypothermia. In our Swat district, the preterm mortality rate is approximately 98%. This five-bedded KMC facility provides excellent care to the preterm and has saved hundreds of innocent lives so far. Due to this facility, preterm mortality is significantly decreased. Through this study, the public can demand more kangaroo mother care facilities from the government in this cold area. This study will also provide a road map for other future research in this area as well.

The procedure of data collection: The study population is the mothers who attended the KMC. Data will be collected from mothers. The data will be collected through interviews via a semi-structured questionnaire.

Risk factor and benefit: This study is only for academic purposes and no potential harm is anticipated to the participants for their participation. Moreover, there will be no monetary compensation in response to participation

Stadium Road, P.O. Box 3500, Karachi 74800, Pakistan
Tel: +92 21 3493 0051 Ext. 5400; Direct: +92 21 3414 6880; Fax: +92 21 3493 4294, 3493 2095
sonam.pk@aku.edu; www.aku.edu

Ethical Consideration: Data collection will start after approval from the Ethical Review Committee of AKUH. The proposed study will take into account all the possible ethical consideration, which includes anonymity, confidentiality, informed consent, and the institution's permission. The findings of the study will be disseminated without identifying information about the participants and the name of the institution.

Data will be collected from the mothers who attended the KMC facility. The data will be collected through interviews via a semi-structured questionnaire. The interviews will be conducted in the hospital setting or in the patient home, 30 minutes will be needed for each interview.

I seek your permission to use Saidu Group of Teaching Hospital, Swat, as the study site and request your approval to contact the participants for data collection. Participation in the study will be on a volunteer basis. Your permission as an entity head will be necessary to process the Ethical Review Committee application and approval. After the ERC approval, I will collect my data.

I request you please sign the enclosed form. Looking forward to a positive response.

Sincerely,

Muhammad Nasir
MScN Student
AKUSONAM
muhammad.nasir4@scholar.aku.edu

Dr. Tazeen Saeed Ali
Professor and Associate Dean,
AKUSONAM
tazeen.ali@aku.edu

Title of the Research Study

"To understand or explore the experiences of mothers who attended the Kangaroo Mother Care facility in a tertiary care hospital in Swat, Pakistan".

Primary Investigator: Muhammad Nasir
MScN Student,
Aga Khan University School of Nursing,
Karachi.

Thesis Supervisor: Dr. Tazeen Saeed Ali
Professor and Associate Dean
Aga Khan University School of Nursing,
Karachi.

I, Dr. Ziaullah Khan, Medical Superintendent, Saidu Group of Teaching Hospital, Swat, accept to access participants' data and collect the required information after seeking their informed consent in the above study.

Signature

15-02-2023

Date

آغا خان یونیورسٹی
THE AGA KHAN UNIVERSITY

29-Apr-2023

Dr. TAZEEN SAEED ALI
Department of School of Nursing and Midwifery
Aga Khan University
Karachi

Dear Dr. TAZEEN SAEED ALI,

2023-8512-24759, TAZEEN SAEED ALI: To Explore the Experiences of Mothers Who Attended the Kangaroo Mother Care Facility in a Tertiary Care Hospital in Swat, Pakistan

Thank you for submitting your application for ethical approval regarding the above mentioned study.

Your study was reviewed and discussed in ERC meeting. There were no major ethical issues. The study was given an approval for a period of one year with effect from 29-Apr-2023. For further extension a request must be submitted along with the annual report.

List of document(s) approved with this submission.

Submission Document Name	Submission Document Date	Submission Document Version
Dr Tazeen- CITI Certificate		
CITI Nimira asif		
Shehnaz Shahid certificate		
Certificate		
citiCompletionCertificate_11874781_53668380 (1)		
Study guide	04-Mar-2023	1
انٹرویو گائیڈ	04-Mar-2023	1
سرٹیفکیٹ	04-Mar-2023	1
Permission letter	04-Mar-2023	1
Affidavit of translation poshto	04-Mar-2023	1
Document affidavit	04-Mar-2023	1
Consent form	15-Apr-2023	3
آغا خان یونیورسٹی1	15-Apr-2023	3
آغا خان یونیورسٹی	15-Apr-2023	3
Demographic Profile of participants (1)	15-Apr-2023	2
Sample form for - ERC Response	15-Apr-2023	1
Proposal	15-Apr-2023	2

Any changes in the protocol or extension in the period of study should be notified to the Committee for prior approval. All informed consents should be retained for future reference.

Please ensure that all the national and institutional requirements are met.

Thank you.

Sincerely,

Page 1 of 2

Dr. Shabina Ariff

Chairperson
Ethics Review Committee

Appendices C Informed Consent

The Aga Khan University

Informed Consent Form

Title of study:

Exploring the Experiences of Mothers Who Attended the Kangaroo Mother Care Facility in a Tertiary Care Hospital in Swat, Pakistan

Primary investigator

Dr. Tazeen Saeed Ali

Co. Investigator:

Mr. Muhammad Nasir

Introduction:

I am Muhammad Nasir student of Master in Nursing (MScN) at Aga Khan University School of Nursing and Midwifery Karachi. I am exploring the experiences of mothers who attended the Kangaroo Mother Care facility in a Tertiary Care Hospital in Swat, Pakistan. This study is supervised by Dr. Tazeen Saeed Ali, Professor and Associate Dean of Research and Innovation AKU-SONAM, Karachi Pakistan. I would like to invite you to participate in this research study.

Purpose of research study

This study aims to explore the experiences of mothers who attended the kangaroo mother care facility in a tertiary care hospital, Swat.

Procedure

In this study, a semi-structured interview will be conducted with you regarding the kangaroo mother care facility. If you agree to participate in this study, you will be asked to answer questions about your demographic data and the knowledge, feelings, and challenges you have faced regarding kangaroo mother care. This interview will be audio recorded, which will take at least 60 minutes to complete.

Possible risks or benefits

There is no risk involved in this study except for your valuable time. You will not get any monetary incentive for participating in the study. Your participation in this study will benefit your community by supporting more facilities in the region to combat pre-term baby mortality and morbidity.

Right of refusal to participate or withdraw.

You are free to choose to participate in the study. You may also withdraw at any time from the study. You also have the option not to answer any question with which you are not comfortable.

Confidentiality:

We will respect your privacy. The information provided by you will remain confidential. Your name, address, and data produced during this study will be stored in a secure, locked location. Only members of the research team will have access to the data. This could include external research team members. Following completion of the research study, the data will be kept as long as required before it is securely destroyed. Research results will be shared through journal publications and academic conferences. When the results of this study are shared, your identity will not be disclosed.

Available Sources of Information

If you have any further questions, you may contact muhammad.nasir4@scholar.aku.edu, Co-Investigator, Aga Khan University School of Nursing &Midwifery Karachi Pakistan, and can also contact me on my personal phone number 03438996113.

Reimbursement:

Your participation in this study will be voluntary and there is no financial compensation for your participation in this research.

Participation:

It is your choice to take part in this study. You have to give written or personal identifying consent if you agree to participate in this study. You may refuse to participate without any loss. You may also refuse to answer some or all the questions if you do not feel comfortable with those questions. You may also withdraw at any time from the study.

Conflict of Interest:

The study investigators have no conflict of interest to declare.

Authorization

I agree that I have read and understood this consent form by signing this form. I undertake that the importance and the methods of the research study have been explained to me and I voluntarily agree to participate in it after knowing all the terms and conditions. I understand that I will receive a copy of this form. I understand that my consent does not take away any legal rights in case of negligence or other legal faults of anyone who is involved in this study. I

further understand that nothing in this consent form is intended to replace any applicable Federal, state, or local laws.

Name of Participant: _____

Participant's Signature _____

Date: _____ Name of the person who explained consent: _____

Signature: _____

Date: _____

For Participants unable to read:

Witness:

I have witnessed the accurate reading of the consent form to the potential participants, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Witness Name: _____ Participant's Thumb Print: _____

Signature: _____

Date: _____

آغا خان یونیورسٹی

باخبر رضامندی فارم

مطالعہ کا عنوان:

ضلع سوات کے ایک ٹرشری کیئر ہسپتال میں کینگرو مدر کیئر کی سہولت میں شرکت کرنے والی ماؤں کے تجربات دریافت کرنا۔

بنیادی تفتیش کار:

ڈاکٹرتاز ین سعید علی

شریک تفتیش کار:

جناب محمد ناصر

تعارف:

میں محمد ناصر آغا خان یونیورسٹی اسکول آف نرسنگ اینڈ مڈوائفری کراچی میں ماسٹر ان نرسنگ (ایم ایس سی این) کا طالب علم ہوں۔ میں ان ماؤں کے تجربات کا جائزہ لے رہا ہوں جنہوں نے سوات، پاکستان کے ایک ٹرشری کیئر ہسپتال میں کینگرو مدر کیئر کی سہولت میں شرکت کی۔ اس مطالعے کی نگرانی ڈاکٹر تزین سعید علی، پروفیسر اور ایسوسی ایٹ ڈین آف ریسرچ اینڈ انوویشن اے کے یو-سونم، کراچی پاکستان کر رھی ہیں۔ میں آپ کو اس تحقیقی مطالعہ میں حصہ لینے کے لئے مدعو کرنا چاہوں گا۔

تحقیقی مطالعہ کا مقصد:

اس تحقیق کا مقصد سوات کے تیسرے درجے کے نگہداشت کے ہسپتال میں کینگرو مدر کیئر کی سہولت میں شرکت کرنے والی ماؤں کے تجربات کو جاننا اور دریافت کرنا ہے۔

عمل:

اس مطالعہ میں، کینگرو ماؤں کی دیکھ بھال کے بارے میں آپ سے ایک نیم ساختہ انٹرویو لیا جائے گا۔ اگر آپ اس مطالعہ میں حصہ لینے سے اتفاق کرتے ہیں تو، آپ کو آپ کے آبادیاتی اعداد و شمار اور کینگرو ماں کی دیکھ بھال کے بارے میں آپ کے علم، احساسات اور رکاوٹوں کے بارے میں سوالات کا جواب دینے کے لئے کہا جائے گا، یہ انٹرویو آڈیو ریکارڈ کیا جائے گا جسے مکمل ہونے میں کم از کم 60 منٹ لگیں گے۔

ممکنہ خطرات یا فوائد:

آپ کے قیمتی وقت کے علاوہ اس مطالعہ میں کوئی خطرہ شامل نہیں ہے۔ مطالعہ میں حصہ لینے کے لئے آپ کو کوئی مالی ترغیب نہیں ملے گی۔ اس مطالعہ میں آپ کی شرکت آپ کی کمیونٹی کو ایک آسان اور مؤثر طریقہ تلاش کرکے فائدہ پہنچائے گی تاکہ قبل از وقت بچے کی اموات اور بیماری کو روکا جا سکے۔

شرکت یا دستبرداری سے انکار کا حق:

آپ مطالعہ میں حصہ لینے کا انتخاب کرنے کے لئے آزاد ہیں۔ آپ کسی بھی وقت مطالعہ سے دستبردار بھی ہوسکتے ہیں۔ آپ کے پاس یہ اختیار بھی ہے کہ آپ کسی بھی سوال کا جواب نہ دیں جس کے ساتھ آپ آرام دہ اور پرسکون نہیں ہیں۔

رازداری:

ہم آپ کی رازداری کا احترام کریں گے۔ آپ کی طرف سے فراہم کردہ معلومات خفیہ رہیں گے۔ اس مطالعہ کے دوران جمع کیا گیا آپ کا نام، پتہ، اور کوائف ایک محفوظ مقام پر محفوظ کیے جائیں گے۔ صرف تحقیقی ٹیم کے ارکان کو ڈیٹا تک رسائی حاصل ہوگی۔ اس میں بیرونی تحقیقی ٹیم کے ارکان شامل ہوسکتے ہیں۔ تحقیقی مطالعہ کی تکمیل کے بعد، اعداد و شمار کو محفوظ طریقے سے مٹانےسے پہلے جب تک ضروری ہو اس وقت تک رکھا جائے گا۔ تحقیقی نتائج کو جریدے کی اشاعتوں اور تعلیمی کانفرنسوں کے ذریعے شیئر کیا جائے گا۔ جب اس مطالعہ کے نتائج کا اشتراک کیا جاتا ہے تو، آپ کی شناخت ظاہر نہیں کی جائے گی۔

معلومات کے دستیاب ذرائع:

اگر آپ کے مزید سوالات ہیں تو آپ آغا خان یونیورسٹی اسکول آف نرسنگ اینڈ شریک مڈوائفری کراچی پاکستان muhammad.nasir4@scholar.aku.edu تفتیش کار سے رابطہ کرسکتے ہیں اور میرے ذاتی فون نمبر 03438996113 پر بھی مجھ سے رابطہ کرسکتے ہیں۔

معاوضہ:

اس مطالعہ میں آپ کی شرکت رضاکارانہ ہوگی اور اس تحقیق میں آپ کی شرکت کے لئے کوئی مالی معاوضہ نہیں ہے۔

اشتراک:

اس مطالعہ میں حصہ لینے کے لئے یہ آپ کا انتخاب ہے۔ اگر آپ اس مطالعہ میں حصہ لینے کے لئے اتفاق کرتے ہیں تو آپ کو تحریری یا ذاتی شناخت کی رضامندی دینا ہوگی۔ آپ بغیر کسی نقصان کے حصہ لینے سے انکار کر سکتے ہیں۔ اگر آپ ان

سوالات کے ساتھ آرام دہ اور پرسکون محسوس نہیں کرتے ہیں تو آپ کچھ یا تمام سوالات کا جواب دینے سے بھی انکار کرسکتے ہیں۔ آپ کسی بھی وقت مطالعہ سے دستبردار بھی ہوسکتے ہیں۔

مفادات کا ٹکراؤ:

مطالعے کے تفتیش کاروں کے پاس اعلان کرنے کے لئے مفادات کا کوئی ٹکراؤ نہیں ہے۔

اجازت:

میں اس بات سے اتفاق کرتا ہوں کہ میں نے اس فارم پر دستخط کرکے اس رضامندی فارم کو پڑھا اور سمجھا ہے۔ میں یہ عہد کرتا ہوں کہ تحقیقی مطالعے کی اہمیت اور طریقوں کی وضاحت مجھے کر دی گئی ہے اور میں رضاکارانہ طور پر تمام شرائط و ضوابط کو جاننے کے بعد اس میں حصہ لینے پر راضی ہوں۔ میں سمجھتا ہوں کہ مجھے اس فارم کی ایک کاپی ملے گی۔ میں سمجھتا ہوں کہ میری رضامندی اس مطالعہ میں ملوث کسی بھی شخص کی غفلت یا دیگر قانونی غلطیوں کی صورت میں کسی بھی قانونی حقوق کو ختم نہیں کرتی ہے۔ میں مزید سمجھتا ہوں کہ اس رضامندی فارم میں کچھ بھی قابل اطلاق وفاقی، ریاستی، یا مقامی قوانین کو تبدیل کرنے کا ارادہ نہیں ہے۔

شرکاء کا نام:----------

شرکاء کے دستخط:.....

تاریخ: ..... **اس شخص کا نام جس نے رضامندی کی وضاحت کی**.....

دستخط:

.....

تاریخ:.....

پڑھنے سے قاصر شرکاء کے لیے:

گواہ:

میں نے ممکنہ شرکاء کو رضامندی فارم کے درست پڑھنے کا مشاہدہ کیا ہے، اور فرد **کو** سوالات پوچھنے کا موقع ملا ہے۔ میں اس بات کی تصدیق کرتا ہوں کہ فرد نے آزادانہ طور پر رضامندی دی ہے۔

گواہ کا نام:..... شرکاء کے انگوٹھے کا نشان.....

دستخط:..... تاریخ.....

Appendices E Informed Consent (Pashto)

آغا خان یونیورسټی

د خبر شوی رضایت فورمه

د څېړنې عنوان:

د سوات ولسوالۍ په یو ترتیږی روغتون کې د کنګاور مور پالنې په مرکز کې د ګډون د میندو تجربې وڅېړئ

لومړنی څېړنی کوونکی:

ډاکټر تازبن سېد علی

همکار:

ښاغلی محمد ناصر

مقدمه:

په (MSCN) زه د محمد ناصر اګا خان پوهنتون د نرسۍ او دایه کراچۍ په ښوونځی کې د نرسینګ برخه کې ماسټر یمږ زه د هغو میندو د تجربو په اړه کتنه کوم چې د پاکستان د سوات په ښار کې د مور پالنې په یوه روغتون کې د کنګاوو د مور پالنې په یوه روغتون کې ګډون کړی ووږ دا څېړنه د پاکستان کراچۍ ښار کې د څېړنې او نوښت د مشر ډاکټر تازبن سعېد علی لخوا تر څارنې لاندې دهږ زه غواړم تاسو ته بلنه درکړم چې په دې څېړنیزه څېړنه کې برخه واخئږ

د څېړنې موخه:

د دې څېړنې موخه دا ده چې د هغو میندو تجربې زده کړی او وپلټی چې د سوات په یو ترتیږی روغتون کې د کنګاوو د مور پالنې په یوه روغتون کې ګډون کوی-

عمل:

په دې څېړنه کې ، تاسو سره به په یوه نیمه جوړ شوی مرکه کې د کنګاو میندو ته د ښه والی په اړه مرکه شوی وی-که تاسو موافقه وکړئ چې په دې څېړنه کې برخه واخلئ ، نو له تاسو څخه به وغوښتل شی چې ستاسو د ډیموګرافیک ډاټا او ستاسو د پوهې ، احساساتو او د کینګرو مور ته د پام کولو د خندِ په اړه پوښتنو ته ځواب ونه وایږ دا مرکه به اډیو ثبت شی ، کوم چې به لږترلږه 60 دقیقې وخت ونیسږ

احتمالی خطرونه یا ګټې:

ستاسو د قیمتی وخت نه پرته په دې څېړنه کې هیڅ خطر نشته- تاسو به په دې څېړنه کې د ګډون لپاره هیڅ مالی هڅونه ترلاسه نه کړئ- په دې څېړنه کې ستاسو ګډون به ستاسو ټولنې ته د بې وخت ماشومانو د مړینې او له منځه تګ څخه د مخنیوی لپاره یوه ساده او اغیزمنه لاره پیدا کړی-

د ګډون او یا د نه استولو د نه کولو حق:

تاسو آزاد یاست چې غوره کړئ چې په مطالعه کې برخه واخئ- تاسو هم هر وخت د مطالعې څخه ځان راوبابنه- تاسو دا اختیار هم لرئ چې هیڅ پوښتنې ته ځواب مه ورکوئ چې تاسو ورسره هوسا نه یاست-

محرمیت:

مونږ به ستاسو د محرماتو درناوی وکړو- هغه معلومات چې تاسو یې وړاندې کوئ هغه به محرم پاتې شی- ستاسو نوم ، پته ، او هغه معلومات چې د دې څېړنې په ترڅ کې راټول شوی دی په خوندی ځای کې به ذخیره شی- یوازې د څېړنې ډلې غړی به معلوماتو ته لاسرسی ولری- په دې کې کیدی شی د بهرنی څېړنیز ټیم غړی شامل وی- د څېړنې د بشپړیدو وروسته، دا معلومات به تر هغه وخته پورې وساتل شی چې اړین وی مخکې له دې چې په خوندی توګه پاک شی- د څېړنې موندنې به د ژورنالیکې خپرونې او علمی کنفرانسونو له لارې شریکې شی- کله چې د دې څېړنې پایلې شریکې شی، ستاسو پېژندګلو به څرګنده نه شی-

د معلوماتو ترلاسه شوې سرچینې:

که تاسو نورې پوښتنې لرئ ، نو تاسو کولی شئ د اګا خان پوهنتون د نرسی او د کار پوه د میدی کراچۍ پاکستان سره اړیکه ونیسئ او زما د muhammad.nasir4@scholar.aku.edu شخصی تلیفون 03438996113 سره اړیکه ونیسئ-

تاوان:

په دې څېړنه کې ستاسو ګډون به په خپله خوښه وی او په دې څېړنه کې ستاسو د ګډون لپاره مالی تاوان نشته-

کومک:

دا ستاسو خوښه ده چې په دې څېړنه کې برخه واخئ- که تاسو موافق یاست چې په دې څېړنه کې ګډون وکړئ، تاسو باید لیکلی یا د شخصی پېژندنې رضایت ورکړی- تاسو کولی شئ پرته له کومې ضایعې له ګډون څخه انکار وکړئ- تاسو هم ممکن د ځینو یا ټولو پوښتنو له ځوابولو څخه انکار وکړئ که تاسو د دې پوښتنو سره د آرامۍ احساس ونه کړئ- تاسو هم هر وخت د مطالعې څخه ځان راوبابنه-

د ګټې شخړه:

د څېړنې څېړنه کوونکی د ګټې په اړه هیڅ ډول شخړه نه لری چې اعلان یې کړی-

اجازه:

زه موافق یم چې ما د دې فورمې په لاسلیک کولو سره د رضایت فورمه لوستلې او پوه کړې ده- زه ژمنه کوم چې د څېړنې د مطالعې اهمیت او طریقې راته بیان شوې دی او زه په خپله خوښه موافقه

کوم چې د ټولو شرایطو او شرایطو له پوهېدو وروسته په دې کې ګډون وکړم- زه فکر کوم چې زه به د دې فورم کاپۍ ترلاسه کړم- زه پوه شوم چې زما رضایت د هر هغه چا په برخه کې چې په دې ځیړنه کې شامل وی د بې پروایی یا نورو قانونی غلطیو په صورت کې هیڅ ډول قانونی حقونه نه تر سره کوی- زه نور پوه شوم چې په دې رضایت فورم کې هیڅ شی نه غواړی چې د تطبیق وړ فدرالی ، ایالتی ، یا محلی قوانینو ته بدلون ورکړی-

د ګډون کوونکو نوم:----------

د ګډون کوونکو لاسلیکونه----------

تاریخ----------

د هغه چا نوم چې رضایت یې بیان کړ----------

لاسلیک----------

تاریخ----------

فون کوانکو لاپاررا چاهویل یویستل ینه او کولای:

شاهد:

ما د رضاکارۍ د فورم صحیح لوستل د احتمالی ګډون کوونکو لپاره وڅارل، او دا موقع مې ترلاسه کړه چې فرد ته پوښتنې وکړم- زه تایید کوم چې فرد په خپلواکه توګه رضایت ورکړی دی-

د شاهد نوم----------

د ګډون کوونکو د لاس تاثر----------

لاسلیک---------- تاریخ----------

Appendices F Demographic Profile of the Participants

Demographic Profile of Participants

Study Title: Exploring the Experiences of Mothers Who Attended the Kangaroo Mother Care Facility in a Tertiary Care Hospital in Swat, Pakistan

Study Participants ID: _____

Interview Date: _____

Interview start time: _____

Interview end time: _____

Contact: Muhammad Nasir, MScN student

Aga Khan University, School of Nursing and Midwifery (AKU-SONAM)

Mobile # 03438996113

General Demographic Information

Age: ☐ years

Level of Education: ☐ No formal education ☐ Primary education

☐ Secondary Education ☐ Intermediate ☐ Diploma/Degree

Occupation: _____

Marital Status: ☐ Married ☐ Unmarried

Years of marriage: _____

Number of children: _____

Total Household Income: _____

Type of family: ☐ Joint Family ☐ Nuclear Family

Appendices G Study Guide English

Title: Exploring the Experiences of Mothers Who Attended the Kangaroo Mother Care Facility in a Tertiary Care Hospital in Swat, Pakistan

Interview guide:

Interview protocol project:

What are the experiences of mothers who attended the Kangaroo Mother Care facility in a tertiary care hospital, Swat?

Time of Interview: 10am

Date: Place: 1st May, 2023, Swat

Interviewer: Muhammad Nasir

Interviewee: Mothers

Briefly describe:

Questions:

1. What is your knowledge regarding kangaroo mother care?
2. What was your social support while providing kangaroo mother care?
3. What was your emotional support while providing KMC?
4. What were your positive feelings regarding the kangaroo mother care?
5. What were your negative feelings regarding KMC?
6. How was your interaction with the healthcare providers during KMC?
7. What were the challenges while providing kangaroo mother care?

Appendices H Affidavit for Translation into Pashto

AFFIDAVIT FOR TRANSLATION

I, Gul Faraz Khan, am fluent in English and Pashto.

I hereby certify, to the best of my knowledge, the document(s) listed below and attached to this affidavit is true and accurate translations of the original document in English into Pashto

Name of Original Document in English	Version
To Explore the Experiences of Mothers Who Attended the Kangaroo Mother Care Facility in a Tertiary Care Hospital in Swat, Pakistan. (Consent Form for In-depth Interview).	1
Study Guide for In-depth Interview	1

Name of Translated Document in Pashto	Version
د هغو مېندو د تجربو د راوسپړو لپاره چې د کنګاور د مور پالنې په مرکز کې یې د پاکستان د سوات په ښار کې د ترتیبرۍ پاملرنې په روغتون کې ګډون کړی وو. (د ژورۍ مرکې لپاره د رضایت فورم).	1
د ژورۍ مرکې لپاره د مطالعې لارښود	1

Gul Faraz Khan — **Printed name of Translator**

Signature of Translator

28 November 2022 — **Date**

Dr. Tazeen Saeed Ali — **Printed Name of Principal Investigator**

Signature of Principal Investigator

29 November 2022 — **Date**

Appendices I Affidavit of translation into Urdu

AFFIDAVIT FOR TRANSLATION

I, Gul Faraz Khan, am fluent in English and Urdu.

I hereby certify, to the best of my knowledge, the document(s) listed below and attached to this affidavit is true and accurate translations of the original document in English into Urdu.

Name of Original Document in English	Version
Exploring the Experiences of Mothers Who Attended the Kangaroo Mother Care Facility in a Tertiary Care Hospital in Swat, Pakistan. (Consent Form for In-depth Interview).	1
Study Guide for In-depth Interview	1

Name of Translated Document in Urdu	Version
ضلع سوات کے ایک ٹرشری کیئر ہسپتال میں کینگرو مدر کیئر کی سہولت میں شرکت کرنے والی ماؤں کے تجربات دریافت کرنا۔	1
تفصیلی انٹرویو کے لئے اسٹڈی گائیڈ	1

Gul Faraz Khan — 28 November 2022

Printed name of Translator | **Signature of Translator** | **Date**

Dr. Tazeen Saeed Ali — 29 November 2022

Printed Name of Principal Investigator | **Signature of Principal Investigator** | **Date**