Original Research Article

MATERNAL EXPERIENCES OF HOME-BASED KANGAROO MOTHER CARE FOLLOWING DISCHARGE FROM A RURAL-URBAN HEALTH FACILITY, NSAWAM GOVERNMENT HOSPITAL, GHANA

ABSTRACT

Background: Preterm birth (PTB) is the leading cause of child mortality worldwide and Sub-Saharan Africa is disproportionately affected. Inadequate access to cost-effective interventions in most poor resource areas threatens to reduce preterm birth related mortalities. Kangaroo mother care has proven to be a cost-effective intervention and has reduced death as a result of complications of PTB by half.

Purpose: This study therefore sought to explore and document the experiences of mothers regarding KMC following discharge from Nsawam Government Hospital.

Methodology: An exploratory descriptive design was used to collect data from mothers who had preterm births and their experiences of practicing kangaroo mother care at home. Fourteen participants in the Nsawam municipality who met the inclusion criteria were purposively selected to participate in the study. Data was analyzed using inductive thematic analyses.

Findings: The findings of the study indicated that mothers are encouraged to practice KMC based on the benefits of KMC like provision of warmth, bonding and improvement in growth and development. The study also indicated that support systems available to mothers at home included family, churches, community and healthcare providers.

Recommendations: The study recommended that; proper follow-up care should be undertaken by clinicians on mothers practicing KMC especially in their respective home environment to ensure adherence KMC practice experiences in the home.

Key words: *Preterm, Kangaroo Mother Care, Experiences, Mothers, Skin to Skin*

INTRODUCTION

Preterm birth is the leading cause of child mortality worldwide (World Health Organization [WHO], 2019). Approximately one million child deaths are attributable to preterm birth globally and preterm birth also serves as a risk factor for more than 50% of all neonatal deaths (Blencowe et al., 2013). A substantial number of these births occur in Africa (WHO, 2019; Chawanpaiboon et al., 2019; Cattaneo et al., 2018). This clearly shows the magnitude of the problem. Several factors are implicated to contribute to preterm birth (Butali et al., 2016; Zhang et al., 2012). A study that sought to identify the risk factors for preterm in Beijing found that obesity, stressful life events, placenta praevia, gestational diabetes, and history of preterm delivery were important risk factors (Zhang et al., 2012). It is concerning that preterm birth can also present medical complications to the newborn including cognitive impairment and cerebral palsy (Moster, Terje, Markestad, 2009). The problem is further compounded by inadequate modern equipment such as incubators and lack of skilled workforce to care for preterm birth. This poses a heavy burden on healthcare and social systems mostly in low-income countries where resources are scarce.

Over the years, different interventions have been explored to reduce the number of deaths associated with preterm birth. The most cost-effective intervention that is widely used in poor resource settings is Kangaroo Mother Care (KMC) (Chan, Valsangkar, Kajeepeta, Boundy, & Wall, 2016; Opara & Okorie, 2017). KMC focuses on skin-to skin contact, exclusive breastfeeding and close monitoring of preterm or low birth weight babies (Chan, Valsangkar, Kajeepeta, Boundy, & Wall, 2016). Though most mothers have come to understand the benefits of KMC, they are unable to comply with KMC protocol following discharge (Anaba, 2016). Hence, this study sought to explore the experiences of mothers with preterm birth practicing kangaroo mother care following discharge from Nsawam Government Hospital.

MATERIALS AND METHODS

Study design: An exploratory descriptive design was used.

Research Setting: The study was conducted in the Nsawam Government Hospital in the Nsawam municipality in the Eastern region.

Target Population: Fourteen Mothers with preterm babies who are practicing KMC in the Nsawam municipality.

Inclusion criteria: Participants were included in the study if they were 18 years and above, delivered a preterm baby and practicing KMC at home.

Exclusion criteria: Mothers who have experienced birth complications or do not reside in the municipality were excluded from the study.

Sample Size and Sampling Technique: Participants were selected using purposive sampling technique and 14 mothers were selected for this study.

Data collection procedure and instrumentation: Following ethical clearance, from the ethics review committee of the Ghana Health Service, permission was sought from the management of the Nsawam Government hospital to use the facility as a data collection site. The researcher used the birth and NICU register to trace the location of all mothers who delivered a singleton preterm baby or had multiple births of preterm babies and initiated KMC in the facility but discharged home for continuity of care.

Permission was sought from the participants to record the interviews after the rationale has been explained to her and the study information sheet given out.

Those who agreed to take part in the study were given a consent form (written) to sign or thumb print. The interviews were done with the aid of an interview Guide.

The first part of the interview was designed to collect participants' demographic data which was to give them an opportunity to relax before the interview. Other areas explored during the interview with these mothers were; factors that contributed to the practice of KMC, support systems available for mothers practicing KMC and the challenges faced by mothers who have been practicing KMC following discharge from the hospital.

Data Analysis: Data was analyzed using inductive thematic analyses (Vaismoradi, Turunen & Bondas, 2013). In this study, the responses that were recorded from the interviews were organized and transcribed for coding. The coding process was then followed by generating categories and themes and subthemes. Interpretations were made by comparing the results of the findings with available literature to gain understanding of the current study.

Methodological Rigour: The procedure of ensuring trustworthiness as indicated by Polit and Beck (2014) was followed. These include, credibility, transferability, Confirmability, and dependability.

Credibility: Credibility was ensured by pre-testing the interview guide using two participants at Ga East Municipality.

Transferability: This was ensured first by thorough, robust description of the research design. Secondly, transferability was ensured when researcher asked herself questions such as whether the research will necessarily be applicable to other settings and if the same findings will reflect in similar studies in the same settings. Thirdly, transferability was ensured by the researcher through an in-depth description of the research setting and by the recommendation of areas for future studies.

Dependability: Data of this study is also dependable in the sense that, interviews were carried out and analyzed till data was saturated and there were no known new themes that could be recognized. The Resident and her supervisor also examined the data critically as analysis was conducted.

Conformability: To ensure conformability, researcher made sure that she was watchful of her own disposition taking into consideration her professional knowledge about the area being studied so as not to enforce them on the responses of the mothers.

Ethical Considerations: According to Polit and Beck (2013) ethics is mostly associated with morality and deals with issues of right and wrong among groups, society or community. Introductory letter from Ghana College of Nurses and Midwives was obtained and the research proposal submitted to the Ghana Health Service to gain ethical clearance. Following clearance from the ethics committee of the Ghana Health Service, permission letter was sent to the Administrator of the Nsawam government hospital to allow the recruitment of mothers from their KMC clinic. Informed consent was obtained from the participants before the commencement of the interview.

Data management: Data was managed with utmost confidentiality. This was done by keeping all the research data including interview transcripts and interview recordings locked, and access restricted to the researcher and supervisor only. All electronic data was kept in password protected computer.

RESULTS

The findings have been categorized into two parts. The first part describes the demographic characteristics of the participants in the study. The second part describes the themes and sub-themes derived from the transcribed data of the interview.

1.1 Demographic characteristics of the participants

1.2

A sample size of 14 participants were recruited. Ten (10) participants were between the ages of 32-38 years and four (4) were between the ages of 24-29 years. Seven (7) of the participants were traders, two (2) were hairdressers, a caterer, a cleaner, a teacher, a nurse and one was unemployed. Five (5) of the participants' gestational age was 30 weeks, three (3) were of 31 weeks gestation, three (3) were of 29 weeks gestation, two (2) were of 33weeks and one (1) was of 34 week gestation. Majority fell within 30 weeks gestation and the least number fell within 34 weeks gestation with one participant. Two (2) participants had twin delivery. One (1) baby recorded the biggest weight of 2.8 kg at 33 weeks gestational age, and three (3) babies recorded 1.3 kg as the least weight. 6 of the babies were of 1.6kg, five were of 1.8kg, and one baby was of 1.9 kg weight. The details are outlined in table 1 below:

Table 1 below showing detailed demographic distribution: age, occupation, marital status, gestational age and birth weight of baby of participants:

Table 1: Demographic Characteristics of Participants

Participants	Age- (yrs.)	Gestational age (weeks)	Occupation	Marital status	Birth weight of baby
Adwoa	36yrs	30 weeks	Trading	Yes	1.8kg
Abena	32yrs	31weeks	Hairdressing	Yes	1.8kg&1.6kg
Akua	24yrs	29weeks	Nursing	Yes	1.3kg
Serwaa	33yrs	30weeks	Caterer	Yes	1.8kg
Sarah	30yrs	30weeks	Cleaner	No	1.9kg
Lois	24yrs	29weeks	Trading	Yes	1.6kg
Yaa	29yrs	33weeks	Trading	Yes	2.8kg
Mary	38yrs	31weeks	Teaching	Yes	1.3kg
Esi	36yrs	31weeks	Trading	No	1.3kg
Hilda	35yrs	34weeks	Trading	Yes	1.8kg
Maame	30yrs	30weeks	Unemployed	Yes	1.6kg
Ama	35yrs	30weeks	Trading	Yes	1.8&1.6kg
Efua	28yrs	29weeks	Trading	Yes	1.6kg
Kate	38yrs	33weeks	Hairdressing	Yes	1.6kg

1.2 THEMES AND SUB THEMES

Table 2: Themes and Sub-themes

THEMES	SUB-THEMES
1. Benefits	a. Provision of warmth b. Improvement in growth and development c. bonding
2. Support systems	a. Family b. Community c. Church d. Health professionals

Can elaborate the table 2 as text

1.2.1 Benefits of KMC practice at home

The World Health Organization (WHO) describes KMC as "an effective way to meet Baby's needs for warmth, breastfeeding, protection from infection, stimulation, safety and love (WHO, 2013). Most of the mothers talked about the benefits gained through KMC practice. Some of the participants said KMC helps to maintain heat in the body of the baby, there is growth and development and there is also bonding between baby and child. These were some of their comments.

1.2.1a Provision of warmth

Some of the mothers recounted that, the animal kangaroo as has been named after the practice of providing heat to the child. Similarly, same will be applied in humans. One of them said;

"Okay, we do that for the babies to get heat. You see that animal Kangaroo they taught us about, its gestational age does not reach full term. It then put the child in its bosom to give heat to its child. Therefore, when we also practice kangaroo mother care, our babies will also get heat and

*grow well. After practicing kangaroo mother care for some time, I have realized it is true***.**

(Maame)

Some of them also linked the provision of warmth to the feeling of heat when two people stay together for some time. One of them said;

> *Oh, I have not practiced kangaroo mother care for long because I delivered three weeks ago. However, one thing that I know is that the preterm babies need heat to stay alive or to keep them. So, I know when the baby's body touches your body, it will feel the heat in you. Even if your body touches another man's body, you feel the heat. The same applies to the preterm baby.*
> **(Hilda)**

Yet, some connected the benefit gained in KMC concerning provision of warmth to normal babies. This is what one of them recounted;

> *I know even for normal babies, wealways advice to dress them in such a way that the baby's body can retain heat. Sometimes our mothers' advise us to stay indoors in the room with our babies so that the baby will not feel cold. I think that kangaroo mother care as we have been practicing all this while helps the baby to maintain heat in the body.*
> **(Mary)**

Another person also has this to say:

When you remove the child's dress and his chest is in touch with yours, then you wear cap and socks for the child. By doing this cold air will not blow around the child's head and feet. The little coldness the child experiences will not augur well for the child. It is warmth the child needs. **(Adwoa)**

1.2.1b Improvement in growth and development

Yet others also talked about KMC practice in relation to improvement in growth and development. Some said the feeding schedules were stressful but good for the improvement of the child's weight. Others recounted their babies have grown so well such that you cannot even see the difference between them and term babies. This is what they said;

> *They said if I practice kangaroo mother care, it will help the child to grow well and will become fine. Therefore, I should not stop, therefore I told them I have heard. I decided to take this advice and follow the feeding schedules they taught us. My child has really improved in* weight.
> **(Esi)**

> *I have seen a lot of benefits. One of them is that the twins have grown fine and there is no difference between them and a baby that is born at nine months unless I personally tell you they are pre-term. They eat so well and I have been following the feeding schedules the nurses taught us. I will advise all mothers who give birth to preterm to practice kangaroo mother care.*
> **(Abena)**

Some of the participants said kangaroo mother care has improved their babies' skin texture. One of them said;

> *I want my children to grow well therefore I must do it to assist my children to grow well. Initially it was difficult to do because my kids are two. I told myself whatever it takes to help them grow I will do. Therefore, I had sleepless nights all because I wanted to follow the feeding schedules. My kids have grown in size and their skin is looking so fresh compared to their earlier skin which appeared wrinkled.*
> **(Ama)**

> *Ah, you know my baby's weight was not normal, it was down, so I had no choice I have to do it. So that, my baby can have weight and I can also rest. You know, if your baby is not getting enough weight, you will stress up. But if you are doing the kangaroo mother care, it helps to improve the baby's weight.*
> ***(Yaa)***

1.2.1c Bonding

More so, some participants talked about the bond that has existed between them and their babies as compared to their other children as a result of practicing KMC. This is how they recounted it;

> *One, it just the bonding. It makes you and your baby have a special oneness. Your baby is even able to identify you are around and sometimes makes some movements to call for your attention. It is so exciting to see that. I am glad my baby smells the scent on me and feels my presence so well through the practice of kangaroo mother care.* **(Lois)**

> *You know, sometimes I wish I don't leave my baby to anyone. When I am tired, I just lie down on my back so that I can still keep my baby in my chest. I think my baby has also observed the love and as she is growing, I see her making some grinning to show she is happy. When I see that, I also become so happy and even want to carry her the more.* **(Sarah)**

Some of them talked about how their babies sleep very well through the practice of kangaroo mother care.

Participant AKUA has this to say;

> *Kangaroo mother care is very fine since I have realized that when I place the baby on my chest the baby can really sleep well. When I place him in my chest, I am able to do a lot of my household chores. The baby also sleeps so soundly. I have seen that my baby feels so relaxed and happy anytime he is in my chest.* **(Akua)**

Another participant also had this to say:

What made me accept to do the kangaroo mother care is that I delivered my child pre-term and it scared me since I haven't seen some before. Since this was my first baby, I wanted to have so much time with her, so that both of us can enjoy each other and thereby creating an intense closeness between us. So, I decided to do kangaroo mother care and it has helped both of us greatly to achieve my desire. **(Lois)**

1.2.2 Support systems available for mothers practicing KMC at home

Participants also talked about the support systems available to them. They talked about the people who give them support and the kind of support they receive from such people. The support systems included the family, community, church and health professionals. This is what they have to say;

1.2.2a Family

Some participants said their husbands' have been of great support to them. Some of them said;

> *My husband assists me a lot. My husband washes our dresses, cooks food, and does almost everything for me. Because of the carrying of the baby in my chest, I don't do much house chores, he does everything for me. He also says he cannot tie the baby on the chest because he is afraid the baby will fall down. Therefore, he virtually does everything for me so that I can have more time for the baby***. (Kate)**

> *My husband helps with the household chores especially when he is around. During those periods, I will make sure I carry the baby for lengthy hours. I only remove the baby from my chest when I have to feed him and then put him back on my chest after breaking the air. Daddy's presence gives me more comfort and that gives me the emotional stability to keep practicing KMC***. (Mary)**

Yet some of them related much of the support they receive to their mothers. Participant Esi said;

> *My mother supports me, just that she cannot carry the baby in the chest. Sometimes when I am tired after putting the baby in my chest for some time, she takes the baby so I can also rest for a while. She will then feed the baby while I rest. She will always say the feeding takes some time. So as much as possible, she will also do some of the feeding schedules while I rest or eat***. (Esi)**

Yet, some of the mothers also narrated that the mother in-law is so patient with the baby's feeding. Others also recounted how the mother in-law does to support. They had this to say;

*My mother in-law is with me in the house, so she does the washing and the cooking. Sometimes when I am tired of carrying the baby, she carries the baby in her chest and feed him as well. She is so patient in feeding the baby that the baby has gained so much weight within the shortest possible time***.** **(Kate)**

One woman also said the baby's uncle supports them financially. This is what she said;

*The father of my baby did not accept the pregnancy and the baby, especially knowing that he is a preterm. One of the child's uncles then decided to take responsibility of the child by sending us money on a monthly basis. Sometimes, he comes around to visit and hold the baby for some time before living to his house. He said he wants the baby to feel he has a family he belongs to***.** **(Lois)**

1.2.2b Community

The community was very supportive to the practice of KMC at home. This streamed from congratulatory messages, helping with house hold chores and the supply of food stuffs.

One mother has this to say;

*With the community the frequent sayings of congratulations alone is a good morale for me. Sometimes a lot of my community members will come around just to greet and ask of our wellbeing. They spend quality time with the baby and me for a lengthy time before going back to their homes***.** **(Serwaa)**

Another also said that*;*

My neighbors have been very good to me and the baby since I gave birth. Some bring buckets of water every day for me to use for my daily activities in the house. Other

times they come around to wash my dresses and that of the baby, dry them on the line and wait for all to get dry and fold into my bag before going home **(Adwoa).**

Yet another said*;*

In my community, when you give birth, everybody becomes so happy and support in diverse ways until your baby is of quality age. Some bring food for us from their farms or gardens to supplement feeding in the house. Others even prepare the food and carry it to your house so that I may not even prepare food for a whole day. That gives me ample time to practice kangaroo mother care. **(Efua)**

Another participant also said:

I stay in a very quiet environment where most of the people living in the community have been to school and hence understand people and behave maturely towards each other. I was never discouraged to put my baby in my chest to walk around. This is because, most of the community members did not look down upon me when they see me carrying my baby. They rather show concern and even encourage me to practice kangaroo mother care to save my baby. **(Mary)**

1.2.2cThe Church

Some of the participants also recounted how their religious denomination has been of great support to them. This support came in the form of prayers offered for them and their babies, carrying baby in the chest by some members, performing household chores and words of encouragement. Some said that;

My church members were very supportive. Some of the youth in the church come around to fetch water for me. Others also come around to clean the house for me by sweeping, mopping and dusting the whole house. The men even come around to weed the environment. They said they don't want any insect or mosquitoes to bite me or the baby. This support gave me enough time to practice KMC. **(Hilda)**

In terms of household chores. I wasn't allowed to do anything but to focus my attention on my baby. There is one lady from my church who has completed senior high school and waiting for her results. She comes around in the evening to feed and carry the baby in her chest as I rest. As a church member, she has been of great support to me and the baby. **(Kate)**

Some participants narrated those prayers offered at home by their church members gave them much

comfort. One of them said;

My church members come around to pray for us. I believe that it has been the grace and mercies of God that I survived through pregnancy. If it has not even been the hand of God, my baby would not have survived all this while. I give all praise to my God. It is so heartwarming when my church members come around to pray for me and the baby. **(Akua)**

The wife of my pastor has been of great help to me and the baby. She said she also gave birth to a preterm and practiced kangaroo mother care. When she heard that I have given birth to a preterm, she quickly rushed to the hospital to comfort and to encourage me that all is not lost. My baby will survive with the help of God and placing the baby on my chest. She has always been coming home to assist me after discharge from the hospital by carrying the baby in her chest so that I can also rest for a while. **(Mary)**

1.2.2d Healthcare provider support

Some of the participants also expressed how the nurses and doctors have supported in the

practice of KMC. This is what a number of them said;

Though I have seen a preterm before in my life, I was worried about how I will take care of my baby. However, after they have sent the baby to the NICU, they took very good care of the baby. After discharging the baby, they taught my husband and I how to practice kangaroo mother care and the benefits we shall all receive if we practice

kangaroo mother care." I was so grateful to God and thanked the nurses for the support.

(Yaa)

Some of the participants said the way the doctors and nurses talked to them gave them hope and confidence to practice KMC. Some of them said that;

*Because of the way the doctors and nurses talked to us, you obtain some form of confidence in you to practice kangaroo mother care. They took their time well to teach us about the practice of kangaroo mother care when we were on admission. They will spend time with you to practice it with a doll. You are allowed to switch from the doll to your own baby when you are perfect in positioning the baby in your chest. They have been so helpful***.**
(Ama)

*I had lost so much hope of ever carrying a baby in my laps. I have had three pregnancies. Two aborted and one was a preterm. I delivered in a clinic and I was told unless I move to a hospital with incubator, my baby will not survive. I had no money to travel even to the clinic, let alone hospital bills. This time, I delivered in a hospital and right away, my baby was sent to the NICU. They encouraged me to practice KMC and it has been helpful. See, I now have this healthy-looking child. God bless them***.** **(Sarah)**

Other participants also recollected how their babies' lives were saved through prompt admission or right instruction from the nurses and doctors. One particular woman said;

*Sometimes if things go wrong, the doctors and nurses admit us. Other times if they don't admit, they tell us what to do to improve the health of the baby, else I wouldn't have known what I would have done and what would've happened if I should send my baby home. They have been of great source of support to us***.** **(Hilda)**

Summary

This chapter entails the findings of the study on mother's experiences of kangaroo mother care following discharge from Nsawam government hospital in the Nsawam Adaogyiri municipal of the Eastern region of Ghana. The findings were categorized into two parts. The first part described the demographic characteristics of the participants in the study. The second part described the themes and subthemes derived from the transcribed data of the interview. The themes derived were; benefits and support systems that mothers had while practicing KMC at home.

The benefits of KMC that came out of the study were provision of warmth, improvement in growth and development and bonding. The support systems that were available to mothers were family, community, church and health professionals.

DISCUSSION

The key findings of this study would be discussed in details according to the objectives which included; beneficial factors contributing to the performance of KMC and the support systems that are available for mothers with preterm infants practicing KMC following discharge from the Nsawam government Hospital.

Beneficial factors contributing to the performance of KMC among mothers with Preterm baby following discharge from Nsawam Government Hospital.

In this study, there was simultaneous data collection and analysis from mothers practicing kangaroo mother care following discharge from the hospital. The experiences indicated that the beneficial factors that contributed to optimal performance of KMC at home for mothers with

preterm infants were mainly; provision of warmth, bonding and improvement in growth and development.

The provision of warmth is crucial for the survival of the preterm infant. Therefore, mothers acknowledged in this current study that the practice of KMC provided warmth for their infants and contributed to their growth and development. Some other participants thought that their infants needed heat to survive which could be provided through KMC and so they practiced KMC with determination. In the Irish quantitative study by Flynn & Leahy-Warren (2010) including 75 neonatal nurses who were implementing KC in their practical work and had a positive belief about the method, indicated that KMC prevents hypothermia. Similarly, a qualitative approach with a descriptive phenomenological design was used to explore the experiences of 10 adolescent mothers aged 15 to 19 years on providing kangaroo mother care to their infants in Karl Bremer and Tygerberg hospitals in the Western Cape and the mothers asserted to this fact that KMC promotes the provision of warmth (Robertson, 2018).

In the light of bonding, some participants talked about the bond that has existed between them and their babies as compared to their other children through the practice of KMC. Rasaily et al (2017), indicated that, the practice of KMC brings about certain outputs. One of these outputs borders on mother and infant bonding and improvement in the preterm infant's condition. The mothers in this study agreed that KMC practice brings about close proximity between the preterm infant and mother bringing about a strong emotional bond and good affective behaviour. In the KMC position, the preterm infant is able to recognize the scent on the mother

and will even resist strangers. Further, the mothers added that this bonding and affection between the preterm infant and the mother is enhanced through eye-to-eye contact.

In Tarus & Tjale, 2015, study the authors agreed among other things that, KMC increases bonding between mother and baby. Participants describe bonding as an ongoing affectionate process that take place between the mother and her preterm baby during their close contact, talking, playing and breastfeeding. As a result of maternal-infant interactions, close contact and commitment to love and care, attachment process progresses between the mothers and their babies and endures over time as the mothers come to know love, and accept their baby. As a result, the mothers develop some enthusiasm to engage in KMC. Also confirming this is a quantitative study by Solomon and Rosant (2015). They indicated that about 53% of nursing staff agree that KMC enhances bonding between mother and baby. Another confirmation was given by Anderzen-Carlsson et al (2014) who in their quantitative study revealed that about 90% of mothers believed that KMC increases mothers' affection and improves mother-neonate relationship and hence was encouraged to practice it.

Another finding that was prominent in the results of this current study was the fact that KMC promotes growth and development. Tarus & Tjale, 2015 study under the theme output of KMC also had the mothers revealing that, KMC has some positive impacts on the condition of the baby. They gave the indication that, KMC improves the brain activity, the heart rate and avert the occurrence of hypothermia in the baby Also, mentioned in this study, the mothers indicated that, KMC brings about improvement in the weight of the baby and as a result increases the survival of chances of babies. Confirming this is also in the qualitative study with adolescent mothers in Robertson (2018) research which indicated that the

adolescent mothers stated that KMC promotes growth and development in the preterm infant.

Support systems that were available for mothers with preterm births practicing KMC following discharge from the Nsawam Government Hospital

According to the participants, KMC was very demanding and support was of tremendous help to the successful practice of KMC. Mothers had several support systems that assisted them at home for the practice of KMC which were; family, community, church and health professionals. In this current study, mothers expressed that their husbands, in-laws and other family members really supported with the practice of KMC by especially doing household chores as they concentrate on the practice of KMC.

Similarly, in Brazil, mothers were grateful to have someone help them during kangaroo Mother care, such as grandmother and sisters, who could take care of house work and take care of the babies. Peer support from other mothers through the sharing of their KMC experiences also helped promote acceptance. Research results emphasize on significance of parents' interaction (and not only the mother) and their involvement in the kangaroo care, that is, this method is not restricted to the contact between mother and neonate but it is also effective for father, sister, brother, and other relatives as well (Salimi, 2014). The adolescent mothers said the support from family and their partners was indispensable for them because it provided the opportunity of companionship. These supports provided the participants with an outlet for their frustrations and in turn, they received encouragement to persevere with providing KMC (Robertson, 2018).

A study conducted by Opara & Okorie (2017) with 42 mothers in a quantitative study carried out in the neonatal clinics of the University of Port Harcourt Teaching Hospital (UPTH), Nigeria indicated that grandmothers do play a significant role in childcare in Africa. Therefore, the study recommended that as part of education prior to discharge fathers and perhaps grandmothers too should be encouraged to get involved as KMC has been reported to strengthen bonding between the parents (father inclusive) and their baby. Grand mothers are known to have a strong commitment to promoting the well-being of children, their mothers and families and do participate in child care in Africa. Solomons and Rosant contrasted that the mothers expressed that they felt lonely and isolated from their families, especially in cases where family members were unable to visit them regularly (Solomons & Rosant, 2012).

Some of the participants also expressed how the nurses and doctors have supported in the practice of KMC. They said the heartwarming interaction between them and the doctors and nurses any time they attended KMC clinic became much source of encouragement and support. Consequently, a qualitative study conducted by Robertson, 2018 revealed that, mothers interacted with the doctors, the nurses, the housekeeping staff and the other mothers in the KMC ward. Their interactions with the doctors were polite and related to the care and condition of the infant. The adolescent mothers found the interactions with the doctors meaningful, supportive and they appreciated the respect portrayed to them by the doctors and medical students. The interactions with the nurses were also formal and related to the care and condition of the infant. The nurses provided a supportive and an assisted role for the adolescent mothers.

A similar study conducted by Opara & Okorie (2017) with 42 mothers in a quantitative study carried out in the neonatal clinics of the University of Port Harcourt Teaching Hospital (UPTH), Nigeria indicated that, 73.8% the mothers, nonetheless, revealed that the nurses could have rendered a more nurturing role by being more engaging. The mothers indicated that support from family members was not much (except grandmothers who gave their support as in most African countries, grandmothers give support without asking for) because the nurses did not communicate to them that other family members can be involved in the KMC practice at home. Studies conducted in Sweden by Blomqvist and Nyqvist (2010), in Columbia by Johnson (2007) in Malawi by Chisenga, Chalanda and Ngwale (2015), and in South Africa by Solomons and Rosant (2012) also found that the mothers felt that the nursing staff was not being supportive to their needs in the practice of KMC.

CONCLUSION

Kangaroo Mother Care practice is a natural practice that must be incorporated in our training institutions, hospitals and home care settings like traditional birth attendants set ups to encourage its successful use. The key findings of this study were discussed in details according to the objectives which included; the beneficial factors contributing to the performance of kangaroo mother care among mothers with preterm infants at home and the support systems that are available for mothers with preterm infants practicing kangaroo mother care at home.

The findings of this study revealed that mothers were encouraged to practise kangaroo mother care based on the benefits of kangaroo mother care that came out of the study as provision of warmth, improvement in growth and development and bonding. The support systems that were available to mothers were family, community, church and health professionals. Much time is

spent at home than the health facility. Assessing KMC practice at home following discharge from the hospital is an important factor in the care of the preterm. The study recommended that, proper follow-up care should be undertaken by the various hospitals and clinics for mothers practicing kangaroo mother care especially in their respective home environment to cover kangaroo mother care experiences in the home.

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