VOLUME-7, ISSUE-7, JULY-2018 • PRINT ISSN No 2277 - 8160

Original Research Paper

Nursing

AWARENESS AND PERCEPTION OF KANGAROO MOTHER CARE AMONG MOTHERS AND THE ROLE OF THE HEALTHCARE PROVIDERS IN SELECTED PRIMARY HEALTHCARE FACILITIES IN CALABAR SOUTH LOCAL GOVERNMENT AREA OF CROSS RIVER STATE, NIGERIA.

Nsemo, Alberta David* (RN, Ph.D), Department of Nursing Science, University of Calabar, Calabar, Cross River State, Nigeria. *Corresponding Author

Mgbekem, Mary A. (RN, Ph.D), Department of Nursing Science, University of Calabar, Calabar, Cross River State, Nigeria.

Ekwere, Jane (RN, BNSc.), Department of Nursing Science, University of Calabar, Calabar, Cross River State, Nigeria.

ABSTRACT Kangaroo Mother Care (KMC) is an innovative method developed to provide thermal care for all newborns. The study examined awareness and perception of kangaroo mother care among mothers and the role of health care providers in selected primary healthcare facilities in Calabar South Local Government Area of Cross River State. The objectives of the study were to determine the level of awareness of Kangaroo mother care; examine the perception of mothers towards Kangaroo mother care and investigate the role of health care providers in the awareness and perception of Kangaroo mother care, among mothers in selected primary health care facilities in Calabar South Local Government Area. A descriptive survey design employed and sample size of 100 respondents was selected through the simple random and convenience sampling techniques. A structured questionnaire with four (4) sections was used for data collection. Descriptive analysis was done using SPSS 21.0 statistical packages while inferential statistics of Pearson Product Moment Correlation was used to test the hypothesis at 0.05 level of significance. The finding revealed low awareness of Kangaroo mother care among mothers 24(24.0%), negative perception of mother towards practice of Kangaroo mother care, 50(50.0%) respondents strongly agreed that they feel very reluctant practicing Kangaroo mother care, and a significant positive relationship between role of health care providers and awareness of kangaroo mother care among mother. The study therefore recommended among others, the need for health care providers to be more responsive in raising awareness of Kangaroo mother care among mothers, which could impact on the perceptions of the mothers positively.

KEYWORDS : Awareness, Perception, Kangaroo mother care, Roles, Healthcare providers, Primary healthcare facilities

Introduction

Kangaroo mother care (KMC) also known as skin-to-skin care is a technique of newborn care where babies are kept in direct body contact with their mothers. This technique is commonly used for low birth weight and premature babies who are more likely to suffer from hypothermia to keep them warm and support early breast feeding. Kangaroo Mother Care (KMC) was invented by Edgar Rey in 1978, and developed by Hector Martinez and Luis Navarrete until 1994, when the Kangaroo Foundation was created (Solomon, 2012). The first trial of KMC was launched to address over-crowding, cross-infection; poor prognosis and extremely high mortality rate associated low birth weight. The goals of the trial were to improve outcomes for infants and reduce the length and cost of hospitalization. While much of this was accomplished, the most dramatic result, documented through a pre and post-intervention study of the trial, showed a drop in neonatal mortality from 70% to 30%. Thirty-two years later, KMC is now recognized by global experts as an integral part of essential newborn care (Ludington-Hoe, 2013).

According to Flyn and Leahy-Warren, (2010), kangaroo Mother Care (KMC) is the early, prolonged and continuous skin – to – skin contact between the mother (or substitute) and her infant, both in hospital and after early discharge, until at least the 40th week of postnatal age. KMC has been proven to significantly improve growth, reduce mortality and morbidity particularly from hypothermia, hypoglycemia and nosocomial sepsis in neonates. Currently it is identified by United Nations international Children Education fund (UNICEF) as a universally available and biologically sound method of care for all newborns, in both developed and developing countries . Essential components of KMC are: skin-to-skin contact for 24 hours per day or at greater part of the day as possible, exclusive breastfeeding and support to the mother-infant dyad. Successful implementation of KMC requires relevant education of nurses, education of mothers on KMC by nursing staff to raise their awareness level, monitoring of the implementation of KMC by nurses, planning for a staff mix with varying levels of skill and experience with KMC, the identification of institution specific barriers to the implementation of KMC, and the implementation of institution specific strategies to overcome these barriers (Saeidi, Tafazoli & Robatsangi, 2010).

In Nigeria KMC was first introduced in the late 1990s through a resident pediatrician at the University of Lagos Teaching Hospital following a month-long training in Bogotá, Colombia. KMC was also declared as the best option of practice in 1998 during the 29th annual general and scientific conference of the Paediatric Association of Nigeria. More than two decades after the adoption of KMC in Nigeria, with various training programs organized by ministry of health and Non-governmental organizations at different levels of heath care from tertiary to primary, there has not been a study done to assess the level of adoption of this practice in health institutions in Nigeria (Onubugo & Okoh, 2016).

Onubugo and Okoh, (2016) noted that after its introduction in the 1990s in Nigeria, it was estimated that KMC would save over 19,000 lives as at 2015 if all preterm neonates were to be reached. The desire for successful attainment of this estimation, prompted health worker that renders pediatric care towards implementing KMC in the health facilities where they practice, and also scale it up to involve the grass roots accordingly. Within the health facility, more detailed information on KMC should be provided to mothers to improve their knowledge on KMC, while the creation of a home-like environment may enhance the well-being of mothers and infants. To improve the implementation of KMC, bigger and better equipped KMC wards, as well as regular KMC training sessions for nursing staff are required. This research therefore seeks to examine awareness and perception of kangaroo mother care among mothers and the role of health care providers in selected primary health care facilities in Calabar South Local Government Area of Cross River State, Nigeria.

Statement of Problem

It is expected that the impact of kangaroo mother care in newborn care would be greatest in Calabar South Local Government Area of Cross River State with a significant number of low income families.

One of the reasons attributed to poor expansion of KMC practice on a large scale in most low- and middle-income countries is because in these countries, KMC practice started at a teaching or other tertiary hospital without expanding to general hospital and primary health care facilities. Kangaroo mother care has been confused with routine skin-to-skin care (SSC), which the World Health Organization (WHO) recommends immediately after delivery for every baby as part of routine care, to ensure that all babies stay warm in the first two hours of life. This is also applicable for sick newborns before they are referred for further care. There is also limited options for care for preterm babies in primary health care facilities, with few or no neonatal care units. These are located often in distant referral hospitals which are understaffed and ill-equipped. Poor implementation of KMC on an appreciable scale in the relatively few health facilities in Calabar South has acted as a barrier in making significant impact in reducing the unacceptably high neonatal mortality in these low income areas. It is against this backdrop, that this study seeks to answer the following question;

1. *What is the level of awareness of kangaroo mother care among mothers in Calabar South Local Government Area of Cross River State?*
2. *What is the perception of mothers towards kangaroo mother care?*
3. *What are the roles of health care providers influence the awareness and perception of kangaroo mother care among mothers?*

Research Hypotheses

There is no significant relationship between role of health care providers and awareness of kangaroo mother care among mothers in primary health care facilities in Calabar South Local Government Area

Significance of the Study:

The findings from the study will help the healthcare providers appreciate the factors responsible for the poor practice of kangaroo mother care. Hence, will serve as a guide in adopting effective measures to enhance kangaroo mother care practice by mothers for better outcome, especially for low birth weight infants in the rural communities.

To the mothers, the study findings will help in creating awareness on the importance of kangaroo mother care in improving the outcome of their babies.

Finally, findings of the study will influence policy formulation and implementation to enhance the practice of KMC by mothers.

Study Setting

The study area was Calabar South Local Government Area of Cross River State, Nigeria. Calabar South Local Government Area is in the Southern Senatorial District. It was created from the former Calabar Municipal council. There are eleven political council wards in the area, with twenty seven primary health care facilities, whose responsibility is to administer immunization, family planning, maternal and child healthcare services including antenatal care, delivery and postnatal services. They also carry out treatment of minor illnesses, prevention of communicable disease, dispensing of essential drugs etc.

Methodology:

A descriptive survey design was adopted for this study. A self-structured questionnaire comprising four (4) sections was used to elicit information on the demographic data of the respondents, awareness and perception of kangaroo mother care among mothers and the role of health care provider in the selected primary health care facilities. A simple random sampling technique was used to select ten (10) out of twenty seven (27) primary health care centers in Calabar South Local Government Area. These Primary Healthcare Centres were; Uwanse PHC, Ekpo Abasi PHC, Goldie PHC, PHC Moore road, PHC Anderson, PHC Murray, PHC Jebs, PHC Ebuka Ebuka, PHC Efio Anwan and PHC Atakpa. A convenient sampling technique was used to select 100 respondents across the 10 health care facilities, 10 mothers per facility. The inclusion criteria was those mothers whose children were between 0 – 24 months.

Method of Data Collection:

Questionnaires were given to all mothers that met the inclusive criteria and were available and willing to participate in the study. Face-to-face method was employed and on the spot collection made. 100% return was accomplished. The data collected was analyzed using simple percentages and presented on frequency tables while the hypotheses was tested using the Pearson Product Moment Correlation Coefficient test at 0.05 level of significance.

Ethical Consideration:

Approval for the study was obtain from the Chairman of Calabar South Local Government Area, through the Director of Primary Health Care in Calabar South Local Government Area. The participants were adequately informed about the study and its objectives, and their consent obtained accordingly. All information gathered were treated with confidentiality as no name of respondent was mentioned anywhere in the study.

Results:

Table 1 showing the socio-demographic variables of the respondents (n=100)

Variables	Frequency	Percentages
Age in Years		
18 - 24	18	18.0
25 - 31	54	54.0
32 - 38	28	28.0
39 and above	-	-
Total	**100**	**100.0**
Marital Status		
Single	32	32.0
Married	62	62.0
Divorce	6	6.0
Total	**100**	**100.0**
Occupation		
Employed	29	29.0
Self employed	18	18.0
unemployed	25	25.0
House wife	28	28.0
Total	**100**	**100.0**
Religion		
Christianity	86	86.0
Islam	14	14.0
Total	**100**	**100.0**
Age of Baby		
< 3 months	45	45.0
4-6 months	39	39.0
7-12months	16	16.0
Total	**100**	**100.0**
Sex of Baby		
Male	67	67.0
Female	33	33.0
Total	**100**	**100.0**
Gestation age		
28-35 weeks	13	13.0
36-40 weeks	87	87.0
Total	**100**	**100.0**
Weight of baby		
< 1.9 kg	6	6.0
2 - 2.5 kg	17	17.0
2.6 – 3 kg	21	21.0
3.1 – 4 kg	52	52.0
4.1 and above	14	14.0

The socio-demographic data in table 1 above showed that out of 100 respondents that participated in the study, 18 (18.0%) were between the age group of 18 - 24years; 54(54.0%) were between

25-31 years; while the remaining 28 (28.0%) respondents were between the age group of 32- 38years. 32(32.0%) of the respondents were single, 62(10.2%) were married while 6 (6.0%) were divorce; none of the respondent was a widow. Majority of the babies were male (67%), 13% were born at the gestational age of 28-35 weeks, 26% weighed within 2.5kg.

Table 2 Showing Responses on awareness of kangaroo mother among mothers (n=100)

VARIABLE	FREQUENCY	PERCENTAGE %
Have you ever heard of kangaroo mother care?		
Yes	24	24.0
No	76	76.0
Are you aware kangaroo mother care is a method developed to provide thermal care for newborns?		
Yes	33	33.0
No	66	66.0
Are you aware that the essence of kangaroo mother care is to improve outcomes for newborn and preterm infants?		
Yes	18	18.0
No	82	82.0
Are you aware that the focus of kangaroo mother care is to reduce the period of stay in the hospital after delivery?		
Yes	21	21.0
No	79	79.0
Are you aware that kangaroo mother care can serve as incubator for your preterm baby?		
Yes	28	28.0
No	72	72.0
Are you aware that Kangaroo mother care requires continuous skin–to – skin contact between the mother and her newborn?		
Yes	31	31.0
No	69	69.0
Are you aware that kangaroo mother care can improve the wellbeing of your newborn?		
Yes	29	29.0
No	71	71.0
Are you aware that kangaroo mother care have reduced neonatal mortality (death of newborn)?		
Yes	12	12.0
No	88	88.0
Are you aware that kangaroo mother care encourage exclusive breastfeeding?		
Yes	22	22.0
No	78	78.0
Are you aware that KMC creates a strong bond between baby and mother?		
Yes	42	42.0
No	58	58.0

From table 2, it could be deduced from the study that there is poor awareness of kangaroo mother care among mothers in Calabar South Local Government Area of Cross River State, Nigeria. 76% have never heard of kangaroo mother care, 66% are not aware that KMC can provide thermal care for newborn, 82% are not aware that it can improve the outcome for preterm infants, (79%) are not aware that it can reduce the length of hospital stay after delivery, and can serve as incubator for preterm infants (72%), 69% are not aware that KMC requires skin –to-skin contacts between mother and infant. 88% are not aware that KMC can reduce infant mortality, (78%) can encourage exclusive breastfeeding and can create a strong bond between mother and baby(58%).

Table 3 Showing Responses on perception of mothers towards kangaroo mother care (n=100)

STATEMENT	SA	%	A	%	D	%	SD	%	Total	%
Carrying my new born baby skin –to-skin all day puts me under pressure	34	34.0	36	36.0	12	12.0	18	18.0	100	100
I like practicing kangaroo mother care, it keeps my baby calm and sleeping for me to carry out household chores	40	40.0	30	30.0	22	22.0	8	8.0	100	100
I feel very reluctant practicing kangaroo mother care because it makes me feel pains in my chest	50	50.0	30	30.0	8	8.0	12	12.0	100	100
I practice kangaroo mother care only when am in the hospital	12	12.0	50	50.0	24	24.0	14	14.0	100	100
I enjoy skin-to-skin contact with my new born baby because it gives me a sense of closeness	26	26.0	44	44.0	20	20.0	10	10.0	100	100
I like practicing kangaroo mother care because it keeps my baby healthy	16	16.0	50	50.0	22	22.0	12	12.0	100	100
I don't like carrying my baby skin-to-skin all day due to the nature of my job	10	10.0	40	40.0	32	32.0	18	18.0	100	100
I feel so much heat carrying my baby skin-to-skin	12	12.0	42	42.0	28	28.0	18	18.0	100	100

The weight of the baby makes me not to practice kangaroo mother care	6	6.0	38	38.0	36	36.0	20	20.0	100	100
I experience back pain when I carry my baby for a long period of time.	16	16.0	42	42.0	30	30.0	12	12.0	100	100

Summary: summation of Strongly Agree and Agree (50% and above) =good perception for positive worded items, and vice versa for negative worded items.

From table 3 above, 70% of the participants perceive that practicing KMC puts them under pressure, (80%) perceive that it cause them pain in the chest, (62%) claim to practice KMC only when they are in the hospital, (50%) don't practice because the nature of their jobs, (54%) claim that it cause them much heat, while (58%) claim the weight of their babies cause them backache with KMC. These findings imply negative perception of KMC by mothers.

Table 4: Responses on the role of health care providers on influencing the awareness and perception of kangaroo mother care among mothers(n=100)

STATEMENT	SA	%	A	%	D	%	SD	%	Total	%
Health care providers tell us about KMC	16	16.0	22	22.0	34	34.0	26	26.0	100	100
Health care providers give relevant information to mothers about kangaroo mother care	10	10.0	22	22.0	36	36.0	32	32.0	100	100
Health care providers tell mothers about the benefit of KMC	12	12.0	26	26.0	34	34.0	28	28.0	100	100
Health care providers teach us how to practice KMC	22	22.0	13	13.0	34	34.0	31	31.0	100	100
The health care providers organize regular training sessions on kangaroo mother care in health facilities	8	8.0	20	20.0	38	38.0	34	34.0	100	100
Health care providers encourage mothers to practice KMC	6	6.0	30	30.0	28	28.0	36	36.0	100	100
Health care providers create a supportive environment for mother in the practice of kangaroo mother care	8	8.0	20	20.0	30	30.0	42	42.0	100	100
Health care providers help motivate mother on the need to practice kangaroo mother care	6	6.0	28	28.0	24	24.0	40	40.0	100	100
The manner of approach of health care providers determine whether or not the mothers will accept practicing kangaroo mother care.	10	10.0	22	22.0	26	26.0	42	42.0	100	100
Health care providers create a supportive environment for mothers in the practice of kangaroo mother care	12	12.0	20	20.0	26	26.0	40	40.0	100	100

Summary: summation of Strongly Agree and Agree (50% and above) =good perception for positive worded items, and vice versa for negative worded items.

Table 4 above reveals that only (38%) of the participants agreed that healthcare providers do tell them about KMC, (32%) agreed that healthcare providers give mothers relevant information about KMC, and only 38% agreed that healthcare providers tell mothers about the benefits of KMC. Participants who agreed that health care providers organize regular training sessions on kangaroo mother care were (28%), and actually teach mothers on how to practice KMC (35%). Furthermore, (72%) participants disagreed that health care providers create a supportive environment for mother to kangaroo mother care, (64%) disagreed that Health care providers motivate mother on the need to practice kangaroo mother care, while only (28%) participants were of the opinion that the attitude of the healthcare provider can influence the practice of KMC by mothers.

Table 5: The relationship between the role of Health Care Providers and awareness of Kangaroo mother care

Variables	$\sum x$	$\sum y$	$\sum x^2$	$\sum y^2$	$\sum xy$	Cal.r
The role of health care providers	2648		4793			
Awareness of kangaroo mother care		2367		4585	67938	0.71

Significant at 0.05; df = 98; critical r = 0.195

Table 5 shows that, the null hypothesis is rejected. The result obtained from analysis of data reveals that the calculated r-value of 0.71 is greater than the critical r-value of 0.195 when tested at 0.05 level of significance with 98 degree of freedom. This implies that, there is a significant positive relationship between the role of health care providers and awareness of kangaroo mother care among mothers.

Discussion:

Findings from the study revealed that awareness of kangaroo mother care among mothers in the study area is very low. This is greatly influenced by the roles of health providers in creating awareness of kangaroo mother care among mothers. This findings contrast the findings from the studies by Solomon, (2012) which revealed that mothers were very much aware of KMC, hence strongly agreed to the facts that when implementing skin-to-skin contact, the newborn were found to spend more time in quiet sleep, their heart rate was lower and the body temperature was maintained better and the infants' oxygenation and gas exchange improved. Accordingly, Pushpamala & Abeer, (2016), asserts that the infants receiving kangaroo care also tend to cry less and therefore the stress hormones in their blood are reduced. As a result of all these factors KMC was found to improve weight gain of infants, decrease the severity of infections, provide infants with physiologic stability, and more organised sleep/ wakefulness behaviours (Muddu, Bogu and Chodavarapu, 2013). Pushpamala and Abeer, (2016), further states that kangaroo mother care for newborn especially low birth weight babies is initiated in the hospital after the condition of the baby is stabilized.

As regards mothers' perception of KMC, findings revealed negative perception about kangaroo mother care among mothers as shown in table 3 above.. The negative perception of kangaroo mother care among mothers in Calabar South Local Government could be attributed to the low level of awareness of the benefits of KMC. Those who were better informed had a positive perception about KMC. These findings are in line with the submission of Muddu, Bogu and Chodavarapu, (2013) that despite the recognition, benefits and longevity of KMC, few developing countries have made the intervention available and accessible to families with low birth babies. According to Pushpamala and Abeer, (2016), introducing and expanding KMC services on a national level require commitment from the government, in particular, ministries of health, and the support of local professional bodies, local champions, international organizations, and governmental and nongovernmental agencies. Solomon, (2012) reported that when implementing skin-to-skin contact the newborn were found to spend more time in quiet sleep, their heart rate was lower and more

stable, apnoea decreased, the body temperature was maintained better and the infants' oxygenation and gas exchange improved. Another benefit of KMC is the increased stimulation of breast milk production that facilitates more frequent breastfeeding ((Pushpamala & Abeer, 2016). Mothers if well informed of all these benefits will readily change their perceptions and embrace the practice of KMC.

Findings from the study as shown in table 4, implies that health care providers are not doing much in terms of creating awareness about the benefits of KMC, motivating the mothers by creating a conducive environment, and encouraging mothers to practice KMC. This could be due to the level of knowledge of kangaroo mother care among health care providers. Health care providers who had better knowledge about kangaroo mother care could perform a better role in creating its awareness among mothers. The findings agree with Solomon and Rosant, (2012) assertion that the attitudes of health care providers are considered to be the most important factor in determining whether or not parents perceive KMC to be a positive experience. According to Conde-Agudelo, Diaz-Rossello and Belizan, (2011), the most helpful support provided by nurses was information on KMC and the infant's response to stimulation, spoken encouragement and reassurance, as well as the provision of a private and comfortable environment. Therefore, the successful implementation of KMC requires dedicated health care providers who have been trained in all aspects of KMC, as well as a supportive environment, and a willing mother (Muddu, Bogu and Chodavarapu, 2013). Onubugo and Okoh, (2016) noted that after its introduction in the 1990s in Nigeria, it was estimated that KMC would save over 19,000 lives as at 2015 if all preterm neonates were to be reached. The desire for successful attainment of this estimation, prompted health worker that renders pediatric care towards implementing KMC in the health facility where they practiced and also scale it up to involve the grass roots accordingly.

Pearson Product Moment Correlation Coefficient of the relationship between the role of health care providers and awareness of kangaroo mother care among mothers revealed that a significant positive relationship between the role of health care providers and awareness of kangaroo mother care among mothers (significant at 0.05; df = 98; critical r = 0.195). This implies that the most helpful support expected from health care providers to mothers in the practice of KMC is information, encouragement and reassurance. Therefore, the successful practice of KMC by mothers requires dedicated health care providers who have been trained in all aspects of KMC. This finding is in line with the assertion of Chia, Sellick & Gan (2016) that lack of knowledge of the health care providers and practical constraints beyond their control have a negative impact on KMC. These constraints include: a busy environment, lack of leadership, resources, colleague attitude, lack of continuous education of health care providers and patient feedback, the number of staff, staff skill mix and support of managers. Based on these, Echeverria, (2008) recommended that in health facilities where constraints are identified, strategies need to be developed by health care providers to overcome these constraints. Gathwala, Singh & Singh, (2010) opine that nurses are seen as a catalyst for KMC implementation and practice, and need to have a positive attitude towards it in order to motivate and encourage mothers. It has also been documented that the attitudes of health care providers are considered to be the most important factor in determining whether or not parents perceive KMC to be a positive experience (Solomon & Rosant, 2012).

Conclusion and recommendation:

Based on the research findings, it was concluded that kangaroo mother care like every clinical skill, improves with persistent practice, so it is not surprising that its level of practice was low among mothers in the study area. KMC has been described as primarily a nursing intervention with medical support, therefore health care providers should consider themselves as the catalyst for KMC implementation and practice.

The study therefore recommends the need for health care providers to be more responsive in creating awareness of kangaroo mother care and its importance among mothers, in order to change the negative perceptions, and encourage them to practicing KMC.

REFERENCES

1. Arzani A, Zahedpasha Y, Ahmadpour-Kacho M, Khafri S, Khairkhah F and Aziznejad P.(2012). Kangaroo care effect on self-esteem in the mothers of low birth weight infants. JBUMS.14:52–8.
2. Aboda A and Williams A. (2012). An update technical brief: Saving Low Birth Weight Newborn Lives through Kangaroo Mother Care (KMC) PRRINN-MNCH Experience. Available at :http://www.prrinn-mnch.org/documents/KMC
3. Barros, F. C, Bhutta, Z. A, Batra, M, Hansen, T. N, Victora, C. G and Rubens, C. E (2010). Global report on preterm birth and stillbirth (3 of 7): evidence for effectiveness of interventions. BMC Pregnancy Childbirth, 10(1): 3.
4. Bergh, A. M, vanRooyen, E., and Pattison, R. C. (2008). Scaling up Kangaroo Mother Care in South Africa:'on-site' versus 'off-site' educational facilitation. Human Resources for Health 6:13
5. Celeste, R. (2009). Knowledge of and attitudes towards kangaroo mother care in the Eastern Subdistrict, Cape Town: Unpublished thesis
6. Conde-Agudelo, A., Diaz-Rossello, J. L, Belizan, J. M. (2011). Kangaroo mother care to reduce morbidity and mortality in low birthweight infants. Cochrane Database of Systemic Reviews Issue 3.
7. Davy, K., and VanRooyen, E. (2011). The neonatal nurse's role in kangaroo mother care. Prof Nurs Today.;15(3):32-37
8. Douglass, R. L and McGadney-Douglass, B. F (2008). The Role of Grandmothers and Older Women in the Survival of Children with Kwashiorkor in Urban Accra, Ghana. Research in Human Development, 5(1):26-43.
9. Echeverria, A,(2008). Effect of Kangaroo Mother Care on Postpartum Depression. Journal of Tropical Pediatrics 55:1 36–28.
10. Ekure, E. N., Esezobor C. I., Balogun, M. R, Woo, J. G., Mukhtar-Yola, M. and Ojo O. O.(2013). Paediatrician workforce in Nigeria and impact on child health: Niger J Paediatr 40 (2): 112 –118.
11. Flynn A, and Leahy-Warren P. (2010).Neonatal nurses' knowledge and beliefs regarding kangaroo care with preterm infants in an Irish neonatal unit. Journal of Neonatal Nursing. 16:221–8.
12. Gathwala, G, Singh, B and Singh, J (2010). Effect of Kangaroo Mother Care on physical growth, breastfeeding and its acceptability. Trop Doct, 40(4):199-202.
13. Hill, Z, Tawiah-Agyemang, C, Manu, A, Okyere, E and Kirkwood, B. R(2010). Keeping newborns warm: beliefs, practices and potential for behaviour change in rural Ghana. Trop Med Int Health,15(10):1118-1124.
14. Kinney, K., Lawn, J. and Kerber, k. (2009). Save the Children US. Science in Action; saving the lives of Africa's mothers, newborns & children. Report. African Science Academy Development Initiative. Available at http://www.who.int/ pmnch/topics/ continuum/ scienceinaction.pdf Accessed febuary 3, 2016.
15. Lawn, J.E., Mwansa-Kambafwile, J., Horta, B.L., Barros, F.C., and Cousens, S. (2010). Kangaroo mother care' to prevent neonatal deaths due to preterm birth complications. Int. J. Epidemiol;39Suppl 1: 144-154
16. Ludington-Hoe S. (2013). Kangaroo care as a neonatal therapy. Newborn Infant Nurs Rev. 13:73–5.
17. Mahboobeh, N., Sedigheh, T., Majid M., and Fatemesadat, M., (2016).The implementation of kangaroo mother care and nurses' perspective of barriers in Iranian' NICUs: Iran J Nurs Midwifery Res. 21(1): 84–88.
18. Muddu, G., Boju, S. and Chodavarapu R.(2013). Knowledge and awareness about benefits of Kangaroo Mother Care. Indian J Pediatr. 80 (10) :799-803
19. Nguah, B. S, Wobil, P. N. L, Obeng, R., Yakubu, A., Kerber K, J., and Lawn J. E., (2011). Perception and practice of Kangaroo Mother Care after discharge from hospital in Kumasi, Ghana: A longitudinal study. BMC Pregnancy Childbirth; 11:99
20. Onubogu, U. C and Okoh, B. A, (2016). Implementation of Kangaroo mother care by health workers in Nigeria: Niger J Paediatric; 43 (4): 252 –257
21. Otoo, G. E, Lartey, A. A, Perez-Escamilla, R (2009). Perceived incentives and barriers to exclusive breastfeeding among periurban Ghanaian women. J Hum Lact, 25(1):34-41.
22. Pushpamala, R. and Abeer, M, (2016). A study to determine the knowledge and practice regarding Kangaroo mother care among postnatal mothers of preterm babies at rural centres in India: J Nurs Care, 5:4(Suppl)
23. Saeidi R, Tafazoli M and Robatsangi M., (2010). Kangaroo Mather Care for infantile colic: A randomized clinical trial. Tehran Univ Med J. 67:870–5.
24. Samuel, B, Priscilla, N. Wobil, R., Ayi, Y., Kate, J. Lawn, E. and Gyikua P.(2011). Perception and practice of Kangaroo Mother Care after discharge from hospital in Kumasi, Ghana: A longitudinal study. BMC Pregnancy and Childbirth 11(9): 1471-2393.
25. Seidman, G., Unnikrishnan, S., Kenny, E., Myslinski, S., Cairns- Smith. S., and Mulligan, B.,(2015).Barriers and enablers of kangaroo mother care practice: a systematic review. PLoS One 2015; 10(5).
26. Solomon, N.(2012). Knowledge and attitudes of nursing staff and mothers towards kangaroo mother care. S Afr J Clin Nutr 25(1):33-39
27. Solomons, N and Rosant C.,(2012). Knowledge and attitudes of nursing staff and mothers towards kangaroo mother care in the eastern sub-district of Cape Town. S Afr J Clin Nutr;25(1):33-39.
28. Victora, C.G and Rubens, C.E., (2010). Global report on preterm birth and stillbirth (4 of 7): delivery of interventions. BMC Pregnancy Childbirth. 10 Suppl 1:S4.