



## A STUDY TO ASSESS THE COUNSELING TECHNIQUE ON KANGAROO MOTHER CARE IN SIMULATED SCENARIO IN ORDER TO PREPARE INFORMATION BOOKLET

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**Abstract:** Background: Kangaroo mother care (KMC) is a special way of caring low birth weight infants by skin to skin contact, it promotes their health and well being by effective thermal control, breast feeding and bonding. So, KMC Is initiated at hospital and continued at home also. This study aimed to assess the counseling skill of Third Year GNM students in Simulated Scenario in order to prepare the information booklet in selected colleges of Kheda and Anand District. Methods: A Descriptive Study design was used for this study. Total of 167 students were selected based on non probability convenient sampling technique. Tool consisted of two parts, socio demographic variable and Checklist on Counseling of Kangaroo mother care, it consisted of 30 items. A self structured checklist was prepared to assess the counseling skill in simulated scenario by direct observation. Information booklet was prepared on counseling of Kangaroo mother care and it was given to study participants at the end of the data collection. A study was conducted between 23<sup>rd</sup> December, 2019 to 4<sup>th</sup> January, 2020. Analysis was done using descriptive and inferential statistics and based on study objectives. Results: Study result showed that Majority of the subjects were Female 74.25%, 94.61% have not attended any conference, CNE or Workshop, 80.84% were Hindu, 63.47% were living with their family, 55. 59% were spending 1 hour per day for study and 52.09% were living in Joint family type. Study result revealed that majority of the Third Year GNM students 64.67% had an average counseling skill. Association between socio-demographic variable and simulated counseling technique on Kangaroo mother care showed that Average number of hours spend per day to study is significant at  $p < 0.10$ . Conclusion: This study concluded that Skills on counseling of Kangaroo mother care among Third Year GNM students is average and there is need to improve the skills by increasing their exposure to Kangaroo mother care technique during their clinical exposure as they are future nurses.

**Keywords:** Kangaroo Mother Care, Simulated Scenario, Counseling

### I. INTRODUCTION

"The children of today will make the India of tomorrow. The way we bring them up will determine the future of the country." – Jawaharlal Nehru

Kangaroo mother care (KMC) is a special way of caring low birth weight infants by skin to skin contact, it promotes their health and well being by effective thermal control, breast feeding and bonding. So, KMC Is initiated at hospital and continued at home also. <sup>[1]</sup>

Kangaroo care, named for the similarity to how certain marsupials carry their young, was initially developed in the 1970s to care for preterm infants .In 1978, due to increasing morbidity and mortality rates in the Instituto Materno Infantil NICU in Bogotá, Colombia, Dr. Edgar Rey Sanabria, Professor of Neonatology at Department of Paediatrics - Universidad Nacional de Colombia, introduced a method to alleviate the shortage of caregivers and lack of resources. He suggested that mothers have continuous skin-to-skin contact with their low birth weight babies to keep them warm and to give exclusive breastfeeding as needed. This freed up overcrowded incubator space and care giver- <sup>[2]</sup>

Skin-to-skin care is also used to describe the technique of placing full-term newborns very soon after birth on the bare chest of their mother or father. This also improves rates of breastfeeding and can lead to improved stability of the heart and breathing rate of the baby- <sup>[2]</sup>

Kanagaroo mother care's Benefits are:

Physiological effects: kangaroo mother care improves the physiological stabilization of the infant with regard to heart rate, respiration rate, oxygenation and temperature control- <sup>[3]</sup>

Behavioral effect: Infants receiving kangaroo mother care has more mature and enhance sleep paten and cry less <sup>[4]</sup>.

Non-behavioral effect: improve general development and mental and motor scores have been observed in infant receiving kangaroo mother care- <sup>[5]</sup>

KMC helps LBW infants following way, and following is benefit of mother , The mother's confidence in caring for her infant is boosted , Improving bonding between mother and infant due to the physical closeness between them, mother are empower to play and active role in their infant care , also breastfed is promoted which also provides nutrients to infants .<sup>[6]</sup>

KMC is defined as the practice of skin-to-skin care continuously throughout the day without breaking the contact between mother and baby. KMC was associated with a 40% lower risk of mortality at the time of discharge or at 40–41 weeks postmenstrual age compared to conventional care. Continuous KMC was also associated with a 33% reduction in the risk of mortality at the latest follow-up contact, compared with conventional care.<sup>[7]</sup>

## II. NEED OF STUDY

As per 2017 data Infant mortality rate is total 39.1 deaths/1,000 live births, male: 38 deaths/1,000 live births, female: 40.4 deaths/1,000 live births. Premature birth is the biggest contributor to the IMR <sup>[8]</sup> Low birth weight makes up 60–80% of the infant mortality rate in developing countries. The New England Journal of Medicine stated that "The lowest mortality rates occur among infants weighing 3,000 to 3,500 g (6.6 to 7.7 lb).

For infants born weighing 2,500 g (5.5 lb) or less, the mortality rate rapidly increases with decreasing weight, and most of the infants weighing 1,000 g (2.2 lb) or less die. As compared with normal-birth-weight infants, those with low weight at birth are almost 40 times more likely to die in the neonatal period; for infants with very low weight at birth the relative risk of neonatal death is almost 200 times greater."

Infant mortality due to low birth weight is usually a direct cause stemming from other medical complications such as preterm birth, poor maternal nutritional status, lack of prenatal care, maternal sickness during pregnancy, and unhygienic home environments.<sup>[9]</sup>

Many factors contribute to infant mortality, such as the mother's level of education, environmental conditions, and political and medical infrastructure.<sup>[10]</sup> High rates of infant mortality occur in developing countries where financial and material resources are scarce and there is a high tolerance to high number of infant deaths. There are circumstances where a number of developing countries to breed a culture where situations of infant mortality. This all are as a barrier for implementation of KMC .nurse should plays important role to implementation of KMC by proper counseling.

One of lacking factor for implementation of KMC is improper counseling skills KMC may seem an unusual way of caring for the baby, so it is very important that you allow time for counseling the mother, the father and the family about what it entails, as well as about its benefits. She (and they) will need to be convinced and willing to undertake KMC for several days continuously. And the father and other members of the family will need to be ready to provide the necessary emotional and physical support to the mother while she is giving KMC.<sup>[11]</sup>

Studies conclude that Main reason of infant's mortality is low birth weight and lack knowledge about kangaroo mother care to community. During our clinical posting we experienced that inadequacy in counselling parents about kangaroo mother care leads to unbeneficial effect of kangaroo mother care. Counseling is not just giving information but also demonstration of KMC. Improper counseling results in ineffectiveness of implementation of KMC. Health member therefore should have effective counseling skills.

## III. REVIEW OF LITERATURE

### i. Literature review of simulates scenario

Natalia Villegas a,\*, Rosina Cianelli a,b, Madeline Fernandez a, Shakira Hendersona,c, Solange Sierraa, Yarilys Alfonsoa, Crystal Jacksona was conducted study

"Assessment of breastfeeding clinical skills among nursing students using the Objective Structured Clinical Examination (OSCE)" in 2016 ,This is quantities descriptive type study ,in this study 23 undergraduate nursing students from maternal health nursing course ,University of Miami was selected . The breastfeeding OSCE consisted of 10 stations where the students performed different clinical skills and observation were made by checklist and analyzed. Results shows that the stations with the highest score were: interventions for sore, leaking, and inverted nipples and indicators of adequate latching range. The stations with the lowest scores were: pump set up to breast and how to remove the infant from the breast and breastfeeding positions. OSCE is one of simulated scenarios, excellent method for teaching and assessed clinical skills. <sup>[12]</sup>

### ii. Literature review about counseling

Deborah J. Cohen , Nicole F. Isaacson, Elizabeth C. Clark, Benjamin F. Crabtree was conducted study "Coordination of Health Behaviour Counseling in Primary Care".in 2011 , This is practice based rearsch in this study Site visit notes, documents, interviews, and online implementation diaries were collected from July 2005 to September 2007 from practice-based research networks (PBRNs) participating in Prescription for Health: Promoting Healthy Behaviors in Primary Care Research Networks (P4H). An iterative group process was used to conduct a cross-case comparative analysis of 9 interventions. Published patient outcomes reports from P4H interventions were referenced to provide information on intervention effectiveness . Results show that in practice health risk assessment and brief counselling with referral and outreach to valued and known counselling resources emerged as a best way to consistently coordinate and encourage follow through for health behaviour counselling .<sup>[13]</sup>

### iii. Literature review of Kangaroo mother care components

Iqbal mahmad , Mahmaad jamal ,Nursat khan was conducted study "Effect of mother infant skin to skin contact on breastfeeding status in department of obstetrics of Pakistan institute of medical prayers ." in 2011 .This is randomized control –experimental study in which 183 mother infant pairs selected from obstetrics hospital of Pakistan institute of prayers (92 pairs are in skin to skin contact , 91 in conventional care) : Eligible mothers were assessed for the successful breastfeeding by using IBFAT tool, results shows that first breastfeed was 26.25 % more successful in skin to skin care group , Maternal infant early skin to skin contact significantly enhanced the success of breastfeed and continuation of exclusive breastfeeding till one month of age .<sup>[14]</sup>

## IV. RESEARCH METHODOLOGY:

A quantitative research approach, Descriptive survey design was adopted for this research to assess the counseling skills of Third year GNM students in simulated scenario in selected colleges of Kheda and Anand District. Ethical consideration was taken from the institutional ethical committee to conduct the study. After Pilot study, Kuder Richardson 20 formula is applied on the data & values found was 0.718 which indicates that tool is reliable. Data collection was conducted between 23<sup>rd</sup> December, 2019 to 4<sup>th</sup> January, 2020. Total 5 different colleges were selected based on convenience and proximity of the researcher. Total 167 samples of Third Year GNM students were selected based on non-probability convenient sampling technique and based on inclusion and exclusion criteria. To select the samples from different colleges, initially permission was taken from the head of department of

institute to conduct a study and informed consent was taken priorly from the samples by explaining purpose of the study. Tool, simulated scenario and Information booklet was validated from 7 different experts. Tool consisted of two parts, Socio-demographic variables including sex, Conference/CNE/ Workshop attended on KMC, Religion, Living with, Average number of hours spends per day to study and Family type. Second part consisted of counseling skill checklist of KMC; it consisted of 30 different items. Investigator tick marked the items of checklist by direct observation in simulated scenario. Each item was scored by the investigator during direct observation as one based on the counseling given by third year GNM students in the simulated scenario and given 0 for the item which was not included in the counseling in simulated scenario. After the data collection Information booklet was given to the study participants. After the data collection, data were tabulated in the master sheet for the final analysis and interpretation. Analysis was done using Descriptive and Inferential statistics. It was presented as tables and graphs.

**Problem statement:** A study to assess the counseling technique on kangaroo mother care in simulated scenario in order to prepare information booklet.

**Objectives of the study:**

1. To assess the skill of counseling of Third year GNM students in simulated scenario on kangaroo mother care.
2. To find association between socio-demographic variable and simulated counseling technique on kangaroo mother care.
3. To formulate informational booklet on Counseling of Kangaroo mother care.

**Inclusion criteria:**

1. Students who are willing to participate in this study.
2. Students who are studying in Third GNM nursing.
3. Students who are studying in selected institutes of Kheda and Anand District.

**Exclusion Criteria:**

1. Students who are not available at the time of data collection.
2. Students who have missed classes of KMC in 3<sup>rd</sup> year GNM nursing.

**V. RESULTS AND INTERPRETATIONS**

The investigator collected the data for analysis and interpretation, using a Checklist prepared to assess the counseling skill on KMC in simulated scenario. Information Booklet on Counseling on Kangaroo mother care was formulated and given to the study participants at the end of data collection.

Collected data were entered into the master sheet for tabulation, analysis and interpretation using descriptive and inferential statistics. Below data shows the study result as per objective.

**Table 1: Findings related to socio-demographic variable**

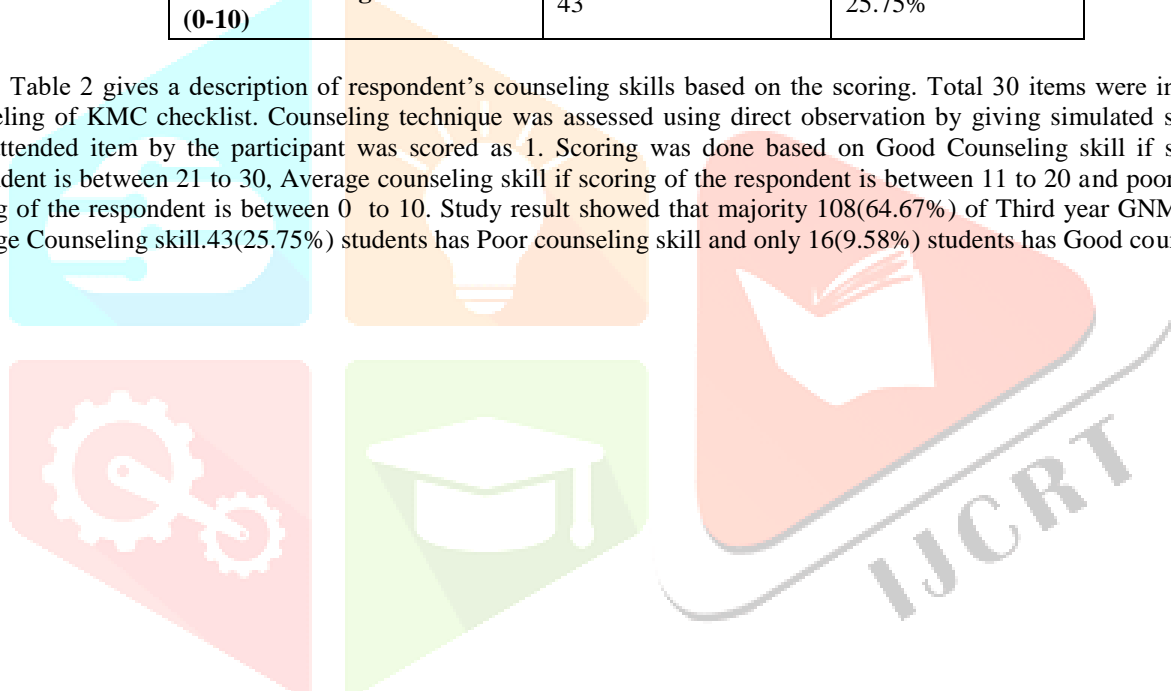
Sr. No	Socio demographic data	Frequency	Percentage %
<b>1</b>	<b>Sex</b>		
a.	Male	43	25.75
b.	Female	124	74.25
<b>2</b>	<b>Conference/ CNE/ Workshop attended</b>		
a.	Yes	9	5.39
b.	No	158	94.61
<b>3</b>	<b>Religion</b>		
a.	Hindu	135	80.84
b.	Muslim	4	2.39
c.	Christian	28	16.77
d.	Any other	0	0
<b>4</b>	<b>Living with</b>		
a.	Hostelite	61	36.53
b.	With Family	106	63.47
<b>5</b>	<b>Average number of hours spent per day to study</b>		
a.	1	93	55.69
b.	2	44	26.35
c.	3	23	13.77
d.	4 or more than 4	7	4.19
<b>6</b>	<b>Family type</b>		
a.	Single	2	1.20
b.	Nuclear	78	46.71
c.	Joint	87	52.09
d.	Extended	0	0

Above Table 1 gives a description of classification of respondent's by their Sex, Conference /CNE /Workshop attended, Religion, Living With, Average Number of Hours spend per day to study and family type. Majority of the subjects were Female 74.25%, Males were 25.75%. Majority of the subjects 94.61% have not attended any conference, CNE or Workshop. Rest 5.39% have attended conference, CNE or Workshop. Out of all the respondents 80.84% were Hindu, 16.77% were Christian, 2.39% were Muslim and there were no any other respondents belonged to any religion. Majority of the subjects 63.47% were living with their family. 36.53% were hostelite. Majority of the subjects 55.59% were spending 1 hour per day for study, 26.35% were spending 2 hour per day for study, 13.77% were spending 3 hour per day for study, 4.19% were spending 4 or more than 4 hour per day for study. Majority of the subjects 52.09% were living in Joint family type. 46.71% were living in Nuclear Family, 1.20% were living with single parent and no respondent were living in extended family.

**Table 2: Findings related to skill of counseling of Third year GNM students in simulated scenario on kangaroo mother care.**

Counseling Skills		
	Frequency	Percentage
<b>Good Counseling Skill (21-30)</b>	16	9.58%
<b>Average Counseling Skill (11-20)</b>	108	64.67%
<b>Poor Counseling Skill (0-10)</b>	43	25.75%

Above Table 2 gives a description of respondent's counseling skills based on the scoring. Total 30 items were included in the counseling of KMC checklist. Counseling technique was assessed using direct observation by giving simulated scenario. Each item attended item by the participant was scored as 1. Scoring was done based on Good Counseling skill if scoring of the respondent is between 21 to 30, Average counseling skill if scoring of the respondent is between 11 to 20 and poor counseling if scoring of the respondent is between 0 to 10. Study result showed that majority 108(64.67%) of Third year GNM students has Average Counseling skill.43(25.75%) students has Poor counseling skill and only 16(9.58%) students has Good counseling skill.



**Table 3: Findings related to sociodemographic variable and simulated counseling technique on Kangaroo mother care.**

Sr. No.	Socio-demographic Variable	Counseling Skill			Significance			Remarks
		Average Counseling skill	Good Counseling skill	Poor Counseling skill	$\chi^2$ Calculated	df	$\chi^2$ Tabulated	
<b>1</b>	<b>Sex</b>							
a.	Male	29	4	10	0.213	2	5.99	NS P<0.05
b.	Female	79	12	33				
<b>2</b>	<b>Conference/CNE/Workshop attended</b>							
a.	Yes	7	0	2	1.21	2	5.99	NS P<0.05
b.	No	101	16	41				
<b>3</b>	<b>Religion</b>							
a.	Hindu	85	14	36	2.602	6	12.59	NS P<0.05
b.	Muslim	4	0	0				
c.	Christian	19	2	7				
d.	Anyother	0	0	0				
<b>4</b>	<b>Living with</b>							
a.	Hostelite	42	4	15	1.227	2	5.99	NS P<0.05
b.	With Family	66	12	28				
<b>5</b>	<b>Average Number of hours spend per day to study</b>							
a.	1	63	6	24	11.836	6	10.65	S P<0.10
b.	2	22	6	16				
c.	3	18	2	3				
d.	4 or more than 4	5	2	0				
<b>6</b>	<b>Family type</b>							
a.	Single	0	0	2	7.583	6	12.59	NS P<0.05
b.	Nuclear	53	9	16				
c.	Joint	55	7	25				
d.	Extended	0	0	0				

Table 3 shows the analysis of association between socio-demographic variable and simulated counseling technique on Kangaroo mother care. For the purpose of establishing association between simulated counseling technique on Kangaroo mother care was divided in three categories Good Counseling skill, Average counseling skill and Poor counseling skill and socio-demographic variable have been categorized relevant to the study. Analysis shows that sex, Conference/CNE/Workshop attended, Religion, Living with and Family type is not significant at P<0.05. Only Average number of hours spend per day for study is significant at P<0.10.

#### VI. CONCLUSION

Study result concludes that Third year GNM has average counseling skills on Kangaroo Mother Care So, there is a need to strengthen the resources and exposure of the students in the newborn care area during their learning period because they are future nurses. Improving their skill will help in better provision of kangaroo mother care and it will increase sense of confidence among them.

#### VII. RECOMMENDATIONS

Based on the findings of the study the following recommendations are made

1. Instead of descriptive research design can go for Experimental study or comparative study.
2. The size of the geographic region can be extended for effective result.
3. A similar study may be conducted on a larger sample for wider generalization.
4. Instead of Third year GNM students, Staff nurses who are working in the NICU or labour room can be included.
5. Can use mix methodology approach for the study to identify participants qualitative and quantitative both phenomena
6. Exposure to the newborn care areas should be increased to improve the counseling skills during the learning period.

**VIII. Ethical Clearance:** The ethical clearance obtained from our university ethical committee of Bhaikaka University.

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