

# A Study to Assess the Effectiveness of a Health Education Programme on Application of Kangaroo Mother Care of Low-Birth-Weight Babies in Terms of Knowledge and Practice among Post Natal Mothers at Selected Gujarat Medical & Education Research Society Hospitals of Gujarat State

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**Abstract:** A pre-experimental study was conducted to assess the Effectiveness of a Health Education Programme on Application of Kangaroo mother care of Low-Birth-weight babies in terms of knowledge and practice among post-natal mothers at selected Gujarat Medical & Education Research Society hospitals of Gujarat State. The samples of 40 post-natal mothers were selected through simple random sampling technique. A structured knowledge questionnaire and structured observational checklist were prepared to assess the knowledge and the practice of the samples. Data were analyzed using descriptive and inferential statistics. Result depicted that the mean pretest knowledge score was 10.27 and the mean posttest knowledge score was 17.30. The mean pretest practice score was 8.37 and the mean posttest practice score was 14.07. There was significant increase in the knowledge and practice of post-natal mothers after the administration of the health education programme on kangaroo mother care. Hence it is concluded that health education Programme was effective in improving the knowledge and practice of the post-natal mothers.

**Keywords:** KMC, Low- birth weight babies, post-natal mothers.

## 1. Introduction

Department of R.C.H. and research, W.H.O. Geneva stated that every minute of every day somewhere in the world and most often in developing country, a new born dies from complications related to birth. Kangaroo Mother Care for low-birth-weight infants started in Colombia in 1978. Edgar Rey in Bogota, Colombia initiated what became known as KMC as a response to both the incubators and the separation of mother and infant. A universally available and biologically sound method of care for all newborns, but in particular for premature babies with 3 components: 1. Skin – to – skin contact 2. Exclusive breast feeding 3. Support to mother and infants

**Aim:** The main objective of this study is to assess the Knowledge of post-natal mothers of Low-birth-weight babies before and after administration of Health Education Programme on Kangaroo Mother Care at selected Gujarat Medical & Education Research Society hospitals of Gujarat state.

## 2. Methodology

**Research Approach & design:** Quantitative approach with pre-experimental one group pretest posttest design was used.

**Setting:** The study was conducted in selected NICU of Gujarat Medical & Education Research Society Hospital of Selected Cities of Gujarat State.

**Sample:** 40 post-natal mothers of LBW babies at the NICU of Gujarat Medical & Education Research Society hospitals of Gujarat state.

**Sampling technique:** Lottery method of Simple Random Sampling.

### Tools:

Tool 1: Structured knowledge questionnaire to assess the knowledge of postnatal mothers.

Section A: Socio-demographic variables

Section B: Structured knowledge questionnaire -There are total 24 multiple choice items having one correct answer.

Tool-2: structured observational checklist to assess the Practice- It comprises of 18 items on Kangaroo Mother Care.

### Ethical Consideration:

Ethical approval was obtained from the institutional ethical committee of the college of the college. Approval was obtained from the authorized persons of the selected area for the pilot as well main study.

### Validity and Reliability:

The tool was validated by 11 experts in the field of nursing and the final tool was translated into Gujarati language by Gujarati expert translated tool was retranslated into English-by-English experts. Thus, content validity of translated tool was established. Reliability was established using test-retest method. The value obtained for structured knowledge

questionnaire was 0.74 and for observation checklist was 0.71.

**Data collection:** The translated tool was administered to the samples after explaining about study. The samples needed 15-20 minutes to answer the tool.

#### Data analysis:

Data was organized and analyzed using descriptive and inferential statistics. Quantitative data was analyzed using mean and standard deviation. Paired t test was used to determine Comparison of between pretest and posttest Knowledge score obtained by the sample on Kangaroo Mother Care. Karl Pearson co-efficient was used to determine correlation between posttest knowledge and practice score whereas Chi square test was used to determine association with demographic variables.

### 3. Results

#### Sociodemographic variables of samples:

The findings revealed that out of the 40 samples 18 (45%) belongs to age group of up to 20 years. Same ways 25(62.5%) had primary education. The maximum number of samples 34(85%) were primi para and 33(82.5%) belongs to weight of the baby below 1.5 kg also 22(55%) belongs to age of the were 1 day.

**Table 1:** Mean and Standard Deviation of pretest and posttest knowledge and practice score.

Group	Knowledge		Practice	
	Mean	SD	Mean	SD
Pre test	10.27	2.09	8.37	1.81
Post test	17.30	2.37	14.07	1.97
Difference	7.03	0.28	5.70	0.1

As evident from table 1, mean score of pretests was 10.27, SD 2.09 whereas posttest mean score was 17.30, SD 2.37. This

**Table 4:** Comparison between pretest and posttest knowledge score.

Knowledge test	Mean score	Mean Difference	SD	Calculated 't' Value	Table 't' Value	DF	Level of Significance
Pre test	10.27	7.03	2.09	18.01	3.18	39	0.05
Post test	19.5 17.30		12. 2.37				

Table 4 revealed that the mean posttest Knowledge score was significantly higher than the mean Knowledge score with the mean difference of 7.03 and the calculated 't' value ( $t=3.39$ ) was greater than tabulated 't' value ( $t=3.18$ ) which was statistically proved this indicated that the difference obtained in the mean pretest and posttest Knowledge score was a real difference and not by a chance.

shows that there is increase in knowledge level of postnatal mothers.

Whereas Pretest mean score of practice was 8.37, SD 1.81 where as in posttest mean score practice was 14.07, SD 1.97. This shows that difference in practice score of pretest and posttest practice score.

**Table 2:** Level of knowledge among post-natal women regarding KMC.

Score	Grade	Pre-test		Post-test	
		Frequency	Percentage	Frequency	Percentage
≤8	Poor	08	20%	00	00%
9-16	Average	32	80%	15	37.5%
17-24	Good	00	00%	25	62.5%
Total		40	100%	40	100%

Above data reveals that the majority 80% postnatal women had average level of knowledge regarding KMC before health education Programme. After health education Programme majority 62.5% post-natal women had good level of knowledge. It indicated that health education programme was effective to improve the knowledge of postnatal women's.

**Table 3:** Practice score among post-natal women regarding KMC

Score	Grade	Pre-test		Post-test	
		Frequency	Percentage	Frequency	Percentage
≤6	Poor	13	32.5%	00	00%
7-12	Average	27	62.5%	22	55%
13-18	Good	0	0	18	45%
Total		40	100%	40	100%

The data presented in table 3 reveals that in pre-test 13(32.5%) had poor Practice and 27(62.5%) had average Practice. Whereas in post-test 22(55%) attained average Practice and 18(45%) attained good Practice and no one had poor Practice.

**Table 5:** Comparison between pretest and posttest practice score

Score	Grade	Pre-test		Post-test	
		Frequency	Percentage	Frequency	Percentage
≤6	Poor	13	32.5%	00	00%
7-12	Average	27	62.5%	22	55%
13-18	Good	0	0	18	45%
Total		40	100%	40	100%

The data presented in table 5 reveals that in pre-test 13(32.5%) had poor Practice and 27(62.5%) had average Practice. Whereas in post-test 22(55%) attained average Practice and 18(45%) attained good Practice and no one had poor Practice.

**Table 6:** Correlation between post-test knowledge score and post-test practice score

Karl Pearson's Correlation Coefficient (r)				
Post test Knowledge mean score (x)	Post test Practice mean score (y)	Number of Samples (n)	Correlation Coefficient (r)	Inference
17.30	14.07	40	0.13	0 Positive correlation at 0.05 level of significance.

Table shows the correlation between the post test Knowledge score and post test Practice score of post natal mothers of GMERS Hospitals of Gujarat State regarding Kangaroo Mother Care. It suggests of a positive correlation between the post test Knowledge score and post test Practice score of samples.

[4] An Article Kangaroo Mother Care 2008-2013.

[5] [www.who.int/Newborn/thermalprotection/chapter-2](http://www.who.int/Newborn/thermalprotection/chapter-2)

[6] [www.pubmed.com](http://www.pubmed.com)

[7] [www.medler.org](http://www.medler.org)

#### **Association between posttest Knowledge score and posttest Practice score of with selected demographic variables.**

There was no any significant association found between posttest Knowledge score and posttest Practice score of with selected demographic variables.

## **4. Discussion**

The findings of the study indicate that the mean post-test Knowledge score 17.30 was higher than mean pre-test Knowledge score 10.27 with the mean difference of 7.03. The mean posttest Practice score is 14.07 and the mean pre-test Practice score is 8.37 with a mean difference of 5.70. significance of difference between pre-test and post-test Knowledge and Practice was statistical tested using paired 't' test and it was found significant and correlation between post-test Knowledge and post-test Practice score was significant. The same result has been shown by **Sivapriya S, Subash J, Kamala S. (2008)**- Finding of the study revealed that, the pretest Knowledge of the KMC was Nil. After the structured teaching programme posttest Knowledge of the mother regarding KMC was increased. 17.10% mothers had inadequate Knowledge on KMC, 71.4% mothers had moderately adequate Knowledge and 11.5% mothers had adequate Knowledge on KMC.

## **5. Conclusion**

The findings indicate that the Health Education Programme developed by investigator was effective in enhancing the Knowledge and Practice of the samples regarding Kangaroo Mother Care of LBW babies.

## **6. Recommendations**

Comparative study can be done to find out the effect of different teaching methods in improving Knowledge and Practice of nurses.

## **References**

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- [3] An Article of Kangaroo Care Studies at University College London: