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Original Article

A Study to Assess the Knowledge and Practice of Nursing Personnel regarding Kangaroo Mother Care and Seek their Association with Selected Factors with a View to Develop an Information Booklet on Kangaroo Mother Care in Selected Hospital of Rajasthan

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Abstract

Introduction : The LBW infants are 40 times more likely to die during their first four weeks of life than normal birth weight babies. Low birth weight is the most significant factor contributing to neonatal mortality and morbidity. Most of these LBW deaths can be prevented with simple interventions known as KMC.

Methodology : A survey approach and descriptive co-relational research design was used on 150 nursing personnel in S.P. M. & C. Health institute Jaipur, Rajasthan. A Structured knowledge and expressed practice questionnaire were prepared and given to nursing personnel for assessment of knowledge and practice regarding KMC. The responses received were tabulated and analysed using descriptive and inferential statistics.

Results : The knowledge and practice of nursing personnel about KMC was inadequate, Coefficient of correlation was found to be statistically significant it means that the practice of nursing personnel was dependent of the knowledge possessed by them, Nursing personnel's knowledge on KMC was not associated with selected factors and the nursing personnel's practices of KMC was associated with age, total working experience but it was not associated with sex, professional qualification, experience of working in paediatric units, and in-service education program on KMC.

Conclusions : Nursing personnel were having inadequate knowledge and practice of KMC. There was statistically significant positive correlation between knowledge and practice of nursing personnel on KMC. After observing the final study findings the information booklet was prepared and distributed to nursing personnel on KMC.

Keywords : KMC, LBW; Adequate Knowledge; Adequate Practice; Nursing Personnel

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Introduction

Globally, about 18 million infants are born with a birth weight of <2500gm every year. Though, low birth weight infants constitute only about 14% of the total live births, they account for 60-80% of total neonatal deaths.

The new born health challenge faced by India is larger than experienced by any other country. Three neonates die every minute in our country and every 4th baby born is low birth weight.

LBW neonates are a special group which needs attention and care. However, there is widely shared but mistaken idea that improvement in LBW morbidity and mortality requires advanced technologies and highly specialized staff. Most of these LBW deaths can be prevented with simple interventions such as extra attention to the warmth, early initiation of breast feeding and prevention from infection are improve their survival in resources restricted settings. An effective healthcare technique developed in 1978 may offer

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a solution to this problem and additionally be of use in wealthy countries too known as KMC. It was developed initially as a way of compensating for the overcrowding and scarcity of resources in hospitals caring for low birth weight (LBW) infants.

Department of RCH and research, W.H.O 2005, stated that, Kangaroo Mother Care is a special way of caring of low birth weight babies. It fosters their health and well being by promoting effective thermal control, breastfeeding, infection prevention and bonding. The term KMC is derived from practice a similarity to marsupial care giving, i.e. the premature infant is kept warm in the maternal pouch and close to the breasts for unlimited feeding.

KMC is at least as safe as standard care, and it improves BF rate, decreases infection, reduced hospital stay, non-significant reduction in mortality, and slight improvements in developmental indices (but infants at higher developmental risk had markedly better neurodevelopmental outcomes), and improved bonding. (Ruiz, J.G. and et al. 2004)

KMC improves growth in low birth weight infants and has a significant role in protecting the LBW infant from hypothermia, hypoglycemia and sepsis. It is definitely feasible, acceptable to mothers and can be continued at home in the Indian set up. (PN Rao. Suman, 2008)

Objectives

- To assess the knowledge of nursing personnel regarding kangaroo mother care.
- To assess the practice of nursing personnel regarding kangaroo mother care.
- To seek the relationship between knowledge and practices of nursing personnel regarding kangaroo mother care.
- To seek the association of knowledge of nursing personnel regarding kangaroo mother care with selected factors.
- To seek the association of practice of nursing personnel regarding kangaroo mother care with selected factors.
- To develop, validate and disseminate an information booklet on the basis of identified need of nursing personnel on kangaroo mother care.

Methodology

Research Approach : The research approach used for the study was the "survey approach".

Research Design : a "descriptive co-relational research design" was chosen for the study.

Variables :

Independent Variables : Age, sex, professional qualification, total working experience, experience of working in the pediatric units and in-service education program on K.M.C.

Dependent Variables : Knowledge and practice of nursing personnel regarding K.M.C.

Setting of the Study : The study was conducted in selected government hospital i.e. Sir Padampat Mother & Child Health Institute [S. P. M. & C. H. I.] Jaipur, in Rajasthan.

Population : The population of study comprised of all nurses who were working in the selected government hospital Jaipur, in Rajasthan.

Sample : The sample comprised of nursing personnel who were working as nurse grade II in the selected government hospital of Jaipur, in Rajasthan.

Sample Size : Sample size for this study was 150 nursing personnel i.e. nurse grade II.

Sampling Technique : For the study, sample of nursing personnel i.e. nurse grade II were selected by purposive sampling technique. Selection of setting was done by convenient sampling technique.

Data Collection Tool and Technique : Structured knowledge questionnaire and expressed practice questionnaire were prepared to assess the knowledge and practice of the nursing personnel regarding K.M.C. Paper and pencil method was used as a technique to collect data about the knowledge and practice regarding K.M.C.

Content Validity of Tool : In order to measure content validity, the questionnaire was given to nine experts along with criteria rating scale. Minor modifications were made according to suggestions given by the experts.

Reliability of the Tool : Reliability was computed by Kuder Richardson's formula (KR-20). The reliability co-efficient was found to be 0.93 for structured knowledge questionnaire and 0.85 for expressed practice questionnaire.

Development of Information Booklet : Information booklet for nursing personnel on KMC was developed based on the findings of the study. Information booklet it was given for content validation to the nine experts along with the criteria rating scale. The final draft of information booklet was prepared, incorporating the suggestions and modifications given by the experts.

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Results :

Section-I : Description of Sample Characteristics

Table-1 **N=150**

S.No.	Variables	Frequency	Percentage
1.	**Age**		
	21-25 years	29	19.33%
	26-30 years	42	28%
	31-35 years	29	19.33%
	36-40 years	23	15.34%
	Above 40 years	27	18%
2.	**Sex**		
	Male	40	26.67%
	Female	110	73.33%
3.	**Professional qualification**		
	GNM	105	70%
	D.N.E.A.	2	1.33%
	Post basic B.Sc. Nursing	25	16.67%
	Basic B.Sc. Nursing	18	12%
	M. Sc. Nursing	0	0%
4.	**Total working experience**		
	1-2 year	44	29.34%
	3-5 years	21	14%
	6-8 years	11	7.33%
	9-11 years	17	11.33%
	Above 11 years	57	38%
5.	**Experience of working in paediatric units**		
	1-2 year	68	45.34%
	3-5 years	31	20.67%
	6-8 years	4	2.66%
	9-11 years	9	6%
	Above 11 years	38	25.33%
6.	**In-service education program on K.M.C.**		
	Yes	43	28.67%
	No	107	71.33%

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The data presented in table-1 shows the following findings regarding the sample characteristics:

- Out of a total of 150 nursing personnel maximum number of subjects 42 (28%) were in age group 26-30 years, 29 (19.33%) in 21-25 years and 31-35 years, 27 (18%) in above 40 years and 23 (15.34%) in the age group of 36-40 years.
- There were 40 (26.67%) males and 110 (73.33%) female.
- According to professional qualification, most of the nursing personnel were G.N.M. i.e. 105 (70%), Post Basic B.Sc. 25 (16.67%), Basic B. Sc.18 (12%), only 2 (1.33%) had DNEA qualification and no sample in the M.Sc. nursing category.
- Most of the nursing personnel i.e. 57 (38%) had more than 11years of total working experience, whereas 44 (29.34%) had 1-2 years, 21 (14%) had 3-5 years, 17 (11.33%) had 9-11 years and 11 (7.33%) had 6-8 years of total working experience.
- Most of them i.e. 68 (45.34%) had 1-2years of experience in working in pediatric units, 38 (25.33%) had above11 years, 31 (20.67%) had 3-5 years, 9(6%) had 9-11 years and 4 (2.66%) had 6-8 years of working experience in pediatric units.
- Only 43 (28.67%) nursing personnel had in-service education program on K.M.C. and 107 (71.33%) had not attended any in service education program on K.M.C.

Section-II : Knowledge of Nursing Personnel Regarding K M C

Table-2 **N=150**

Area	Range of Scores	Mean	Median	Mode	S.D.
Knowledge	13-34	22.66	23	24	4.23

Maximum possible score=40

The data presented in table-2 shows that the mean of knowledge scores computed was 22.66, median 23, Mode 24 and standard deviation was 4.23. The obtained scores of knowledge ranged from 13-34. The maximum score obtained was 34 and minimum obtained was 13 on the structured knowledge questionnaire which had maximum possible score as 40. The mean knowledge score of 22.66 of nursing personnel was less than the 80% of the total scores i.e. 32. These findings indicated that the nursing personnel's were having inadequate knowledge of KMC.

Section-III : Practice of Nursing Personnel Regarding K M C

Table-3 **N=150**

Area	Range of Scores	Mean	Median	Mode	S.D.
Practice	4-18	9.49	9	8	2.63

Maximum possible score=20

The data presented in table-3 shows that the practice scores had a mean of 9.49, median 9, Mode 8 and standard deviation of 2.63. The obtained scores of practice ranged from 4-18. The maximum score achieved was 18 and minimum score achieved was 4. The maximum possible score on expressed practiced questionnaire was 20. The mean practice score of 9.49 of nursing personnel was less than the 90% of the total scores i.e.18. These findings indicate that the nursing personnel were having inadequate practice of KMC.

Section - IV: Relationship between Nursing Personnel's Knowledge and Practice of K M C

Table-4 **N=150**

Knowledge score of all the subjects	Practice score of all the subjects	Co-efficient of correlation	Significant at 0.05 level
3400	1424	0.56	Significant

Significant at 0.05 levels, Degree of freedom -148

The data in table-4 shows that the Co-efficient of correlation "r" value computed between knowledge scores and practice scores of nursing personnel regarding KMC i.e. r = 0.56 was statistically significant at 0.05 level of significance. This reveals that there is positive significant relationship between the knowledge and practice of nursing personnel regarding KMC. This further suggests that with the increase in knowledge of nursing personnel they would have improved practice of KMC.

Section-V : Findings Related To Association of the Nursing Personnel Knowledge on KMC with Selected Factors

- There was no significant association of knowledge of nursing personnel on KMC with age. The chi-square value of 2.26 for df (4) was found not significant at 0.05 level.

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- There was no significant association of knowledge of nursing personnel with sex. The chi-square value of 0.02 for df (1) was not significant at 0.05 level.
- There was a no significant association of knowledge of nursing personnel with professional qualification on KMC. The chi-square value of 6.04 for df (4) was not significant at 0.05 level.
- There was a no significant association of knowledge of nursing personnel with total working experience on KMC. The chi-square value of 6.66 for df (4) was not significant at 0.05 level.
- There was a no significant association of knowledge of nursing personnel with experience of working in pediatric units on KMC. The chi-square value of 3.01 for df (4) was not significant at 0.05 level.
- There was no significant association of knowledge of nursing personnel with in-service education program on KMC. The chi-square value of 0.58 for df (1) was not significant at 0.05 level.

Section-VI : Findings Related To Association of the Nursing Personnel Practice on KMC with Selected Factors

- There was a significant association of practice of nursing personnel on KMC with age. The chi-square value of 12.32 for df (4) was significant at 0.05 level.
- There was no significant association of practice of KMC nursing personnel with sex. The chi-square value of 0.34 for df (1) was not significant at 0.05 level.
- There was a no significant association of practice of nursing personnel with professional qualification on KMC. The chi-square value of 3.27 for df (4) was not significant at 0.05 level.
- There was a significant association of practice of nursing personnel with total working experience on KMC. The chi-square value of 9.67 for df (4) was significant at 0.05 level.
- There was a no significant association of practice of nursing personnel with experience of working in pediatric units on KMC. The chi-square value of 4.73 for df (4) was not significant at 0.05 level.
- There was no significant association of practice of nursing personnel with in-service education program on KMC. The chi-square value of 1.09 for df (1) was not significant at 0.05 level.

Section-VII : Findings Related to Validation of Information Booklet for Nursing Personnel on K M C

- An information booklet was prepared, based on the findings of the study which revealed that all nursing personnel possessed inadequate knowledge and inadequate practice of KMC. The information booklet was submitted to nine experts for content validation along with criteria rating scale. The information booklet was found to be valid.

Conclusions

Conclusions drawn from the findings of the study were as follows:

1. Nursing personnel were having inadequate knowledge of kangaroo mother care.
2. Nursing personnel were having inadequate practice of kangaroo mother care.
3. There was statistically significant positive correlation between knowledge and practice of nursing personnel on KMC.
4. Nursing personnel's knowledge on KMC was not associated with age, sex, professional qualification, total working experience, experience of working in pediatric units and in-service education program on KMC.
5. Nursing personnel's practices of KMC was associated with age, total working experience but it was not associated with sex, professional qualification, experience of working in pediatric units, and in-service education program on KMC.
6. After observing the final study findings the information booklet was prepared and distribute among nursing personnel on KMC.

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