A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge regarding Kangaroo Mother Care among Staff Nurses of Rajindra Hospital Patiala (Punjab)

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Abstract: *A Study to Assess the Effectiveness of Structured Teaching Programme (STP) on knowledge regarding kangaroo mother care among staff nurses in selected Hospital Patiala.* <u>*Material and method:*</u> *A pre experimental research design was used for the present study. A study sample of 60 nursing staff were selected by non- probability purposive sampling technique. The data was collected by self-structured questionnaires regarding kangaroo mother care among selected nursing staff of Patiala Punjab. The data was analyzed in terms of objectives of the study using descriptive and inferential statistics in terms of frequency, percentage distribution, mean, Standard deviation, t- value, and chi-square.* <u>*Results:*</u> *The study findings reveals that the Mean±SD of post-test knowledge score of staff nurses (25.1±2.063) was higher than the Mean±SD of pre-test knowledge score of selected nursing students (0.03±2.144). The computed paired t- value of 38.006 was found statistically significant. The t-value showed that there was statistically significant difference between mean pre-test and post-test knowledge scores regarding kangaroo mother care among selected nursing staff..Chi Square values have shown that there was significant association of with demographic variables i.e. source of information, qualification and experience and with other demographic variables i.e Age, Gender, Source of information, type of family, place of residency, Income per month there was no significant association with knowledge regarding kangaroo mother care among selected nursing staff.* <u>*Conclusion:*</u> *It was concluded from the findings of the study There was significant association of demographic variable i.e. source of information, qualification and experience, with other demographic variables there was no association with knowledge regarding kangaroo mother care. The knowledge of selected nursing staff was improved. It was helpful for the nursing students or nursing staff to improve their knowledge level.*

Keywords: Kangaroo mother care, Structured teaching programme, Low birth weight, Pretest, Posttest

1. Introduction

"We must turn to nature itself, to the observation of the body in health and in disease to learn the truth".

Kangaroo mother care is special way of caring of low birth weight babies. It foster their health and well being by promoting effective control, breast feeding, infection prevention and bonding. Kangaroo Mother Care is a type of care for preterm infants and their parents that provide early skin- to -skin between the baby and the parents. This method enables parent to provide primary care and comfort to the child during their time in hospital.[1]

Skin to skin thermal protection (kangaroo mother care) fosters greater involvement of in the care of Low Birth Weight babies and reduces reliance on equipment evidence indicates that using Kangaroo Mother Care for preterm babies results in stability of cardiac and respiratory function lower rate of severe infection, increased breast milk supply, higher rate of exclusive breast feeding and better weight gain Kangaroo Mother Care is gentle. Effective method that leads to shorter stay and early discharge for hospitalized babies, encourages frequent. Observation of the baby by the mother and fosters bonding.[2]

The benefits for all babies on Kangaroo Mother Care are that they stabilize faster on skin to skin care than in the incubator. They do not stabilize in the incubator in the first six hour of life. then KMC babies have stable oxygen rates and breathing.

The heart rate is stable. The temperature is most stable on the mother in skin to skin care the mothers chest automatically warms a cold baby, and the mothers core temperature can drop if her baby has a temperature. Another of the essential factors of Kangaroo Mother Care is breast feeding, breast milk production is stimulated by skin to skin care so baby gets all the benefits of breast milk including the correct milk for human.[3]

Kangaroo Mother Care can be started as soon as the baby is stable. Babies with severe illnesses or requiring special treatment should be managed according to the unit protocol: short Kangaroo Mother Care sessions can be initiated during recovery with ongoing medical treatment (intravenous fluids, oxygen therapy).Kangaroo Mother Care can be provided while the baby is being fed via orogastric tube or on oxygen therapy.[4]

Kangaroo mother care is a method of holding an infant with skin contact, prove and upright on the chest of the parent. It promotes better maintenance of temperature, better maintenance of regular heart rate, respiration and oxygen saturation, low oxygen requirement, less apnea, improved pulmonary function reduced crying, improved pulmonary function reduced crying, improved sleep weight gain, reduction in gastric reflux, reduction in hospital stay, improved bonding between baby and parent. Lactation for longer period, more milk production, promotion of self confidence, increased self esteem and decreased maternal stress. Infants given kangaroo care gained weight more

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quickly than babies not given, weight can often leads to shorter hospital stays. Mother are able to control the infants temperature better than an incubator. Nurses working in neonatal care units play a vital role in providing an individual comprehensive care for high risk Low birth weight babies based on their need[5]

2. Literature Survey-

Urmila K. V, Ravi Kumar, (2018) conducted a cross – sectional descriptive study to assess the knowledge regarding kangaroo mother care among postnatal mothers. The study was conducted on 201 mothers whose neonates were admitted in neonatal intensive care unit(NICU).mothers were interviewed at enrolment to assess their knowledge of KMC and were oriented on its practice. It was concluded that (95.4%)mothers did not know about KMC.80% of mothers could follow the verbal instructions in first sitting.92,8% of mothers reflected photo exhibition would have been better than verbal explanation.91.8% of mothers thought that KMC is beneficial for their babies and 89% thought it was beneficial for them too. at discharge 99% were willing to continue KMC at home with 93.1% willing to practice at night.

Sarmila mazumder, Raviprakash Upadhyay, (2018) conducted formative research to assess the feasibility, acceptability and adoption of KMC with the aim of designing an intervention package for a randomized controlled trial in LBW infants in Haryana, India. Qualitative methods included 40 in –depth interviews with recently delivered women and 6 focus group discussions. It was found that most mothers in the community recognized that babies born small required special care. Inspite of being aware of the practice of KMC, respondents felt that creating awareness of KMC benefits will promote practice.

Meena Joshi, Tanushree Sahoo, (2018) conducted a study in improving the duration of kangaroo mother care in a tertiary-care neonatal unit **.**the potential barriers for prolonged KMC were evaluated using fish bone analysis. A variety of measures (allowing family members including male members during night for doing KMC, making KMC an integral part of treatment order ,introducing the concept of weekly KMC champions.etc.).20 eligible mother-infant dyads were studied during implementation period. It was concluded that the duration of KMC increased to 6 hours –a-day over a period of 7weeks.evaluation at 6 and 12 months in the post- implementation phase suggested sustenance of improved KMC duration upto 9h/day in the unit.

Joyce Mathews (2018) A quasi experimental study was undertaken to study the effect of kangaroo mother care on neonatal temperature and weight among newborns in SCB medical college and hospital Cuttack. A sample of 40 newborns in the postnatal wards was selected among which 20 were put in the control group and 20 in experimental group .The mothers of experimental group were educated about KMC ,and made to practice KMC method on their babies. Thereafter temperature and weight of the babies were check four consecutive days. Mean, standard deviation, Standard error and paired t test were compared from row score obtained in pretest or posttest. It was observed that babies in

the experimental group showed better thermoregulation and weight gain then those in the control group. The study concluded that KMC permotes good temperature control and better growth for pre and term newborns.

3. Problem Definition

- **Assess:** It refers to the evaluation of effective planned teaching programme on kangaroo mother care.
- **Effectiveness**: It refers to the extent to which planned teaching programme has achieved the desired effect as measured by the subject gain in knowledge score.
- **Planned Teaching Programme**: Refers to the systematically arranged facts regarding kangaroo mother care.
- **Knowledge:** It refers to level of understanding of staff nurses on kangaroo mother care.

4. Material and Method

1) **Research Design:** Experimental research design.
2) **Research Setting:** Rajindra Hospital Patiala.
3) **Variables**
   - Independent variable: Structured teaching programme,
   - Dependent variable: Knowledge of staff nurses.
4) **Population**: Staff nurses of Rajindra Hospital Patiala District Patiala.
5) **Sample and Sampling Technique:** 60 staff nurses of Rajindra Hospital District Patiala.
6) **Sampling:** Purposive non-probability sampling technique.

5. Result/ Discussion

Table 1: Frequency and percentage distribution of selected socio demographic variables of Staff nurses of Rajindra Hospital Patiala, N=60

S. No.	Socio-demographic variable	Category	Frequency (f)	Percentage (%)
1	Age	20-25	14	23.33
		26-30	15	25.00
		31-35	13	21.67
		36-40	10	16.67
		Above 40	8	13.33
2	Gender	Male	11	18.33
		Female	49	80.00
3	Source of Information	Books	30	50.00
		Journals	19	31.67
		Internet	8	13.33
		Newspaper	3	5.00
4	Qualifications	ANM	4	6.67
		GNM	37	61.67
		B.Sc.	12	20.00
		M.Sc.	7	11.67
5	Experience	<5	21	35.00
		6-10	23	38.33
		11-15	11	18.33
		>15	5	8.33
6	Place of Residency	Rural	28	46.67
		Urban	22	36.67
		Semiurban	10	16.67
7	Type of Family	Nuclear	32	53.33
		Joint	21	35.00

8	Income Per Month	Extended	7	11.67
		<30,000	13	21.67
		31,001--60,000	33	55.00
		61,001-90,000	12	20.00
		>91,001	2	3.33

Table 2: Over all Pre test knowledge levels on kangaroo mother care among Staff nurses of Rajindra Hospital Patiala N=60

Sr. No.	Knowledge Level	Range of Score	No. of Respondent		Mean	S.D.
			Frequency (f)	Percentage (%)		
1	Excellent	23-30	-	-	10.03	2.144
2	Good	16- 22	-	-		
3	Fair	8- 15	53	88.33		
4	Poor	0-7	7	11.67		
	Total		60	100.00		

Table 3: Over all Post test Knowledge levels on kangaroo mother care among Staff nurses of Rajindra Hospital Patiala, N=60

Sr. No.	Knowledge Level	Range of Score	No. of Respondent		Mean	S.D.
			Frequency (f)	Percentage (%)		
1	Excellent	23-30	52	86.67	25.1	2.063
2	Good	16- 22	8	13.33		
3	Fair	8- 15	-	-		
4	Poor	0-7	-	-		
	Total		60	100.00		

Table 4: Association of Pre test Knowledge Scores with their selected Socio demographic variables of Staff nurses of Rajindra Hospital Patiala on kangaroo mother care, N=60

Sr. No.	Socio-demographic variable	Category	Poor Knowledge		Fair Knowledge		Total	χ2 Value	DF
			f	%	f	%			
1	Age	20-25	4	28.57	10	71.43	14	8.826[NS]	4 (9.488)
		26-30	0	0.00	15	100.00	15		
		31-35	0	0.00	13	100.00	13		
		36-40	1	10.00	9	90.00	10		
		above 40	2	25.00	6	75.00	8		
2	Gender	Male	0	0.00	11	100.00	11	1.981[NS]	2 (5.991)
		Female	7	14.58	42	85.42	48		
3	Source Of Information	Books	7	10.00	23	90.00	30	7.924[*]	3 (7.815)
		Journals	0	15.79	19	84.21	19		
		Internet	0	0.00	8	100.00	8		
		Newspaper	0	33.33	3	66.67	3		
4	Qualifications	ANM	3	50.00	1	50.00	4	18.791[*]	3 (7.815)
		GNM	1	5.41	36	94.59	37		
		B.Sc.	2	16.67	12	83.33	12		
		M.Sc.	1	14.29	6	85.71	7		
5	Experience	<5	6	14.29	15	85.71	21	9.313[*]	3 (7.815)
		6-10	1	8.70	22	91.30	23		
		11-15	0	9.09	11	90.91	11		
		>15	0	20.00	5	80.00	5		
6	Place of Residency	Rural	3	10.71	25	89.29	28	0.84[NS]	2 (5.991)
		Urban	2	9.09	20	90.91	22		
		Semi urban	2	20.00	8	80.00	10		
7	Type of Family	Nuclear	6	18.75	26	81.25	32	3.454[NS]	2 (5.991)
		Joint	1	4.76	20	95.24	21		
		Extended	0	0.00	7	100.00	7		
8	Income Per Month	<30,000	2	15.38	11	84.62	13	0.942[NS]	3 (7.815)
		31,001--60,000	3	9.09	30	90.91	33		
		61,001-90,000	2	16.67	10	83.33	12		
		>91,001	0	0.00	2	100.00	2		

* Significant at p=0.05% level, NS =Not significant

The study findings were discussed in this chapter with reference to the Socio-demographic variables of the study: Table-1, indicated that out of 60 staff nurses, majority 15 (25%) were found in the both age group of 26-30 years and 20-25 years followed by 14(23.33%) staff nurses were in the age group of 31-35 years followed by 13(21.67%) and 10(16.67 %) of the staff nurses were in the age group of 36-40 years & 8 (13.33) of the staff nurses were in the age group of above 40 years.

With regard to gender 48 (80%) of them were female and 11 (18.33%) were Male staff nurses and 1(1.67%) were others.

Regarding source of information 30(50%) were got from books, followed by 19 (31.67%) from journals, 8 (11.67%) from Internet, 3 (5%) from News paper got information.

Qualification shows that majority 37 (61.67%) of the Staff nurses were GNM, followed by 12 (20%) were B.Sc. and 7 (11.67%) who were M.Sc. and remaining 4(6.67%) were ANM.

Regarding Experiences out of 60 Staff nurses, majority 23 (38.33%) were have experience 6 to ten years followed by 21 (35%) were have less than five years, 11 (18.33%) were have

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11 -15 years of experience, 5 (8.33%) were have more than 15 years.

With regard to Place of residence 28% (46.67%) of them were Rural and 22 (36.67%) staff nurses were belong to urban area and remaining 10(16.67%) were belongs to semi urban.

With regard to type of family 32(53.33%) of them were belongs to nuclear and 21(35%) staff nurses were belong to joint and remaining 7(11.67%) were belongs to extended families.

Income per month shows 33 (55%) of staff nurses have 31,001 to 60,000 income and 13(21.67%) were have less than 30,000 income and 12 (20%) were have 61,001 to 90,000 incomes and remaining 2(3.33%) have more than 91,001 income.

Section II: Analysis of pre-test knowledge of staff nurses on kangaroo mother care.

The level of knowledge of staff nurses showed that 88.33% staff nurses have fair knowledge, 11.67% staff nurses have poor knowledge and 0% staff nurses have good and excellent knowledge. A similar study was conducted by **ZHANG** descriptive study was conducted to assess the knowledge and beliefs regarding kangaroo mother care among neonatal intensive care nurses in China. .The results showed that 58.9% (242) nurses, working in maternity hospital had acceptable level of knowledge, 66.9% (301) nurses, working in general hospital had low level of knowledge. It was concluded that there is a need to promote knowledge of nurses who are working in general hospitals.

Section III: Evaluation of the effectiveness of structured teaching programme (STP) on kangaroo mother care

(A)Distribution of pretest and post-test knowledge score of staff nurses on kangaroo mother care. Effectiveness was observed by using Table method which showed that the differences between pretest mean score was 0% in excellent knowledge and where as in post -test 86.67% staff nurses have excellent knowledge .This indicate the higher effectiveness of STP. A similar study conducted by **Kiran Batra, Mamta 2014** A pre experimental study was conduct to assess the effectiveness of structured teaching programme on knowledge regarding kangaroo mother care among staff nurses of two selected hospitals of Mohali, The Results showed that overall score percentage of nurses in pretest was 67.5% and score percentage during post test was 100%.This represents a total increase of 32.5% knowledge among the nurses. The study concluded that staff nurses had excellent level of knowledge regarding Kangaroo Mother Care

Section IV: Testing of hypothesis.

The difference between the knowledge score of post- test and pre-test of staff nurses were analyzed using paired "t" test. The result found to be highly significant (t=83.67, p=0.05). A very high increase in the posttest knowledge score was observed in staff nurses regarding kangaroo mother care .Finding revealed that STP was very effective in improving knowledge of staff nurses regarding kangaroo mother care. So the hypothesis 1 is accepted.

The findings of study showed that there was significant association between the levels of score of staff nurses with Source of information, qualification and experience with level of knowledge and with other demographic variables there is no association with knowledge level score of staff nurses. The calculated chi square were less than table value at the 0.05 level of significance for staff nurses. So there was significant association between pretest knowledge with their selected demographic variables that's why the hypothesis was accepted.

6. Conclusion

Kangaroo Mother Care is a powerful, easy method to use and to promote the health and wellbeing of low birth weight babies. Kangaroo Mother Care helps in maintaining temperature of infant; facilitates breast feeding; Improves growth; Reduces infection; and improves mother-infant bonding. Kangaroo Mother Care may be practiced in the following cases i.e., premature or low birth weight babies in neonatal care, full-term babie.

7. Future Scope

This study implies a basis for developing knowledge of kangaroo mother care in the hospital.
- As a nurse educator, there are an abundant opportunities for nursing professional to educate people regarding the kangaroo mother care.
- This study helps nurse researcher to develop appropriate information for educating the staff nurses regarding the kangaroo mother care, according to the demographic characteristics.
- The study will motivate the beginning researchers to conduct same study with different variables on a large scale.

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