The Study to Assess the Effectiveness of Kangaroo Mother Care on Physiological Parameters among Low Birth Weight Babies, SMCH

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ABSTRACT

AIM: The present study aims to assess the effectiveness of kangaroo mother care on physiological parameters among low birth weight babies at Smch. **METHODS AND MATERIALS**: A quantitative research design was used for the present study. A total 30 samples were collected using purposive sampling technique. The demographic variable and pretest posttest level of low weight babies was assessed among newborn and samples were exposed kangaroo mother care, followed by that data was gathered and analyzed. **RESULTS**: the study revealed that there is a significant association between post level of selected demographic at the level of p<0.01 **conclusion**: Thus, the present despites that factors associated with post test level of selected demographic.

KEYWORDS: *Kangaroo mother care, physiological parameters, low birth weight*

INTRODUCTION

Ensuring Child Health, an investment for the future. Newborn is the heritage of the family and newborns health of the nation. The arrival of human life into this world and its subsequent struggle for independent existence has tested the time of all those who take care of the newborn. **WORLD HEALTH ORGANIZATION,**

Low birth weight (LBW) and premature infants are main reason for newborn deaths goballyabout 28% of death is due to low birth weight and premature birth [1]. It is a major factor to neonatal and infant morbidity, were 30 per cent mortality is estimatsd in developing countries. [2] It is distributed that globally,, each year out of 139 million live births more than 20 million LBW babies are born were about 95% of them in developing countries, mainly of South Asia and sub-Saharan Africa.[3] It is also estimated that, in developing countries, LBW infants are approximately 13 times more likely to die than normal birth weight newborns.[4] Kangaroo mother care (KMC) was an natural technique with zero cost and easily accessible for premature infants.[5]. Early continuous skin-to-skin contact with exclusive breastfeeding is the of features of KMC. KMC has been found be early recovery from hypothermia, reduced morbidities, early discharge from hospital and weight gain amongst LBW stabilized infant.[6]. Skin-to-skin contact and promotion of exclusive breastfeeding have been the essential components of newborn care programme of the Government of India.[7] The government has been promoting KMC through Facility Based Integrated Management of Newborn and Childhood Illnesses (F-IMNCI), through *Navjaat Shishu Suraksha Karyakram* (NSSK).[8] A major problem with such babies is their inability to control body temperature which is a natural method to prevent their morbidity and mortality.[9] A World Health Organization (WHO) supported study in Nepal showed that hypothermia was common in newborn infants soon after birth;

increased mortality was noted across all grades of hypothermia, and the risk was 12 times higher among preterm babies.[10]

Material and methods

Quantitative approach, Quasi experimental pre and posttest research design was adopted to assess the effectiveness of Kangaroo Mother Care on level of physiological parameters among 30 low birth weight babies. who satisfied the inclusion criteria and the baby with high risk were excluded in Neonatal Intensive Care Unit (NICU) at SMCH. Non-

probability purposive sampling technique was used to select the samples. Kangaroo Mother Care otherwise known as skin-to-skin care, placing the baby directly to mothers bare skin for 7 consecutive days along with hospital routine (warmer care) was performed into the study group an hospita l routine (only warmer care) was given to the control group. The pre and post test level of physiological parameters was assessed by using World Health Organization (WHO)guidelines. Collected data was analyzed. The project has been approved by the committee of the institution.

RESULTS AND DISCUSSION

SECTION A: Description of the demographic variables of low birth weight babies

Table 1: Frequency and percentage distribution of demographic variables of low birth weight babies

n = 30

Demographic Variables	Frequency (f)	Percentage (%)
Age of the neonate		
1/365 days	2	6.7
2/365 days	12	40.0
3/365 days	5	16.7
Above 3/365 days	11	36.6
Sex of the neonate		
Male	20	66.6
Female	10	33.3
Birth weight of the neonate		
1.5-2 kg	23	76.6
2-2.5 kg	7	23.3
Birth order		
First	2	6.7
Second	13	43.3
Third	7	23.3
Above 3	8	26.7
Educational status		
Illiterate	14	46.7
Primary	3	10.0
Secondary	3	10.0
Collegiate	10	33.3
Monthly income of the family		
Below 1000/month	5	16.7
Rs1001-3000/month	2	6.7
Rs 3001-5000/month	10	33.3
Above Rs 5001	13	43.3
Religion		
Hindu	22	73.3
Muslim	7	23.3
Christian	1	3.3
Residence		
Rural	9	30.0
Urban	21	70.0
Type of family		
Nuclear	27	90.0
Joint	3	10.0

The result shows that most of the low birth weight babies were falling in the age 2/365 days, sex of neonate indicates that maximum of them were males, with birth weight of 1.5-2 kg, 43.3% were in the birth order of second ,47.7% were illiterate, 43.3% were earning monthly income of more than 5001, 73.3% were hindu, 70% were residing in urbanized area and 90% of them of nuclear family.
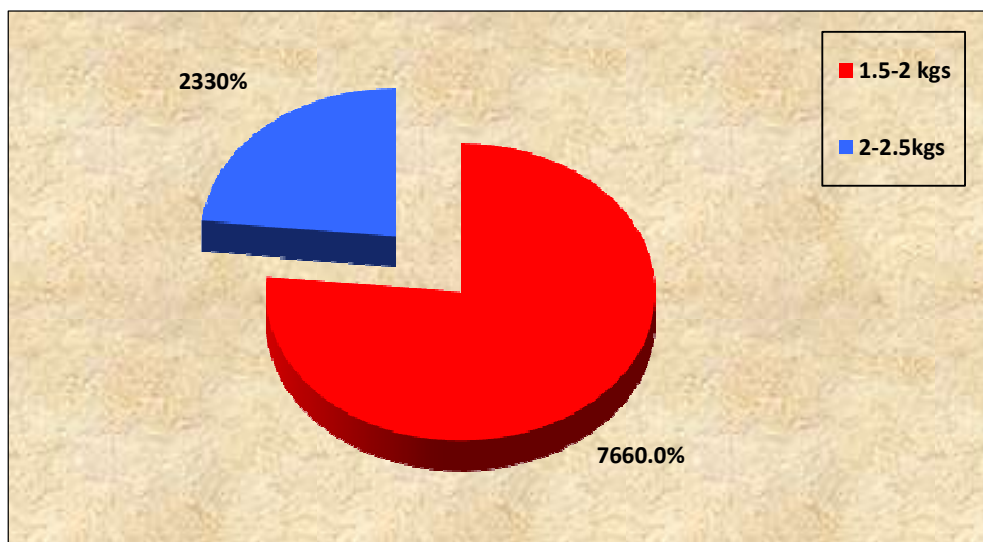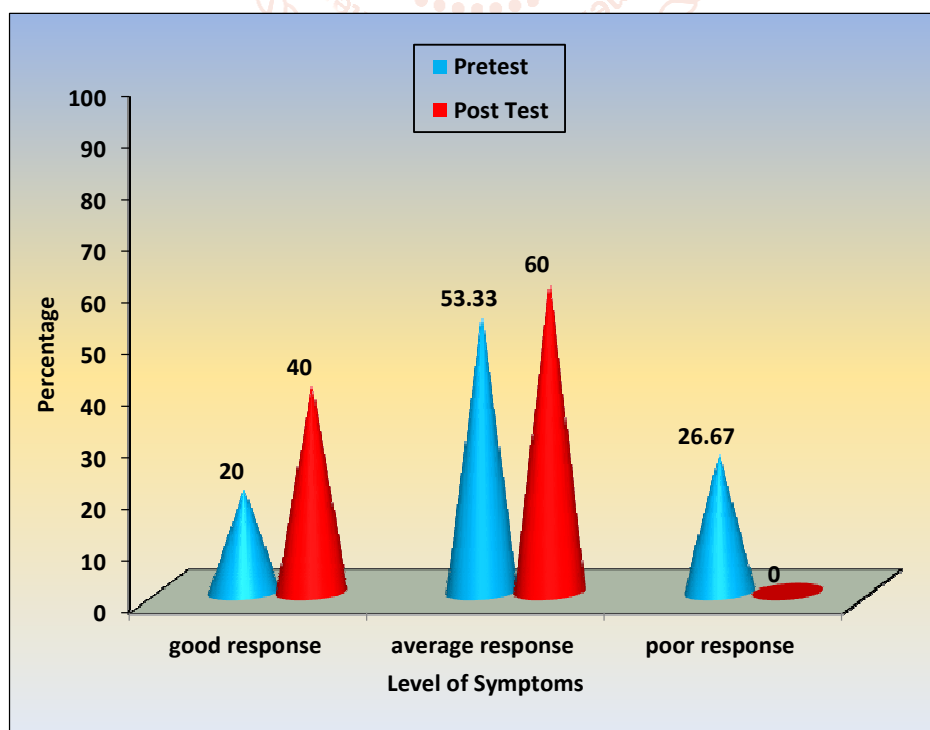

Percentage distribution of birth weight of neonate

SECTION B: Assessment of level of responses on physiological parameters among low birth weight babies

n = 30

Physiological parameters	Good response		Average response		Poor response	
	No.	%	No.	%	No.	%
Pretest	6	20.0	16	53.33	8	26.67
Post Test	12	40.0	18	60.0	0	0

The above table 1 shows that in the pretest, 16(53.33%) had average response, 8(26.67%) had poor response and 6(20%) had good response

Whereas in the post test, 18(60%) had average response and 12(40%) had good response during assessment

Percentage distribution of level of responses of physiological parameters during newborn assessment

SECTION C: Effectiveness of kangaroo mother care on physiological parameters among the low birth weight babies

Table 4: Comparison of pretest and post test level of responses on physiological parameters assessments of low birth weight babies.

n = 30

Variables	Response	Mean	S.D	Paired 't' test Value
Physiological parameters	Pretest	21.53	5.34	t = 3.022
	Post Test	17.83	3.96	p = 0.005 S**
Birth weight	Pretest	6.23	2.61	t = 3.079
	Post Test	4.27	1.74	p = 0.005 S**

**p<0.01, S – Significant

The table depicts that the pretest mean score was 21.53 with standard deviation 5.34 and the post test mean score was 17.83 with standard deviation 3.96. The calculated paired 't' test value of t = 3.022 was found to be statistically significant at p<0.01 level.

The table also depicts that the pretest mean score was 6.23 with standard deviation 2.61 and the post test mean score was 4.27 with standard deviation 1.74. The calculated paired 't' test value of t = 3.079 was found to be statistically significant at p<0.01 level.

This clearly infers that there was significant improvement was observed after kangarro mother care technique

SECTION D: Association of post test level of response with selected demographic variables of low birth weight babies.

Table 5: Association of post test level of response on physiological parameters with their selected demographic variables of low birth weight babies.

n = 30

Demographic Variables	Good response		Moderate response		Severe average response		Chi-Square Test
	No.	%	No.	%	No.	%	
Age of the neonate							
1/365 days	1	3.3	1	3.3	-	-	χ^2=0.158 d.f=3 p = 0.984 N.S
2/365 days	5	16.7	7	23.3	-	-	
3/365 days	2	6.7	3	10.0	-	-	
Above 3/365 days	4	13.3	7	23.3	-	-	
Sex of the neonate							x2=1.178 d.f=2 p = 0.555 N.S
Male	8	26.7	10	33.3	-	-	
Female	4	13.3	8	26.7	-	-	
Birth weight of the neonate							**x2=8.148 d.f=3 p = 0.043 S***
1.5-2 kg	8	26.7	15	50.0	-	-	
2-2.5 kg	3	10.0	2	6.7	-	-	
Birth order	1	3.3	1	3.3	-	-	
First							χ^2=2.550 d.f=3 p = 0.466 N.S
Second	1	3.3	1	3.3	-	-	
Third	6	20.0	7	23.3	-	-	
Above 3	1	3.3	6	20.0	-	-	

Educational status	4	13.3	4	13.3	-	-	
Illiterate							χ^2=3.146 d.f=2 p = 0.207 N.S
Primary	5	16.7	9	30.0	-	-	
Secondary	0	0	3	10.0	-	-	
Collegiate	6	20.0	4	13.3	-	-	
Monthly income of the family	1	3.3	2	6.7			
Below 1000/month							χ^2=2.746 d.f=2 p = 0.253 N.S
Rs1001-3000/month	-	-	-	-	-	-	
Rs 3001-5000/month	1	3.3	1	3.3	-	-	
Above Rs 5001	8	26.7	7	23.3	-	-	
Religion	3	10.0	10	33.3	-	-	
Hindu							χ^2=0.690 d.f=1 p = 0.406 N.S
Muslim	10	40.0	15	50.0	-	-	
Christian	0	0	1	3.3	-	-	
Residence	2	6.7	2	6.7			
Rural							χ^2=0.238 d.f=1 p = 0.626 N.S
Urban	3	10.0	6	20.0	-	-	
Type of family	9	30.0	12	40.0	-	-	
Nuclear	10	33.3	17	56.7	-	-	χ^2=0.988 d.f=1 p = 0.320 N.S
Joint	2	6.7	1	3.3	-	-	

*p<0.05, S – Significant, N.S – Not Significant

The table shows that the demographic variable birth weight of neonate had shown statistically significant association with level of response at p<0.05 level and the other demographic variables had not shown statistically significant association.

CONCLUSION
The findings of the study revealed that the result shows that the demographic variables of low birth weight of neonate had shown statistically significant association with level of physiological parameters response at p<0.05 level. From the results of the present study shows significant improvement of researcher.

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AUTHORS CONTRIBUTION
All the authors actively participate in the work of study. All the authors read and approved the final manuscript.

CONFLICT OF INTEREST
The authors declare no conflict of interest.

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