

## EFFECTS OF KANGAROO MOTHER CARE ON HEART RATE, RESPIRATORY RATE AND BODY TEMPERATURE OF LOW BIRTH WEIGHT BABIES

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### Abstract

Low birth weight babies impose a heavy burden on healthcare and social systems in developing countries. KMC has been documented as safe, effective, alternative and comprehensive method for the care of LBW babies. So the study aimed at assessing the effects of KMC on the Heart Rate, Respiratory Rate and Body Temperature of the low birth weight babies.

The research design was quasi experimental and was conducted in the NICU and Postnatal wards of GGSMC&H, Faridkot on 60 LBW Babies (30 in Control/ Conventional care group and 30 in experimental/KMC group) selected through purposive sampling. The socio-demographic data was collected through structured interview schedule and a data sheet was prepared to record the readings of Heart Rate, Respiratory Rate and Body Temperature of the sample subjects using Pediatric Stethoscope & Clinical Thermometer.

The results revealed that effects of KMC on the Heart Rate, Respiratory Rate and Body Temperature of the LBW Babies were found to be statistically significant. Moreover no episodes of hypothermia and bradycardia were noted in the experimental/KMC group.

**Key Words:** Kangaroo Mother Care (KMC), Low Birth Weight Babies (LBW Babies), Heart Rate, Respiratory Rate and Body Temperature

### About Author:



The author Ms Parmees Kaur is Graduated and Post graduated in nursing. She ranked among toppers in grades. She has two books, two paper presentations & one national publication to her credits. For the accomplishment of the present project, she has tried hard reached all possible zones to bring the authenticity and genuineness in the work.

### Introduction

*"There is no indicator in human biology, which tells us so much about the past events and future trajectory of life, as the weight of infant at birth"*

-V Ramalinga Swami

World-wide, 25 million LBW infants are born each year, the great majority of them is in developing countries and India accounts for about 7-10 million, which imposes a heavy burden on healthcare and social systems in developing countries. Medical care of low birth weight infants is complex, demands an expensive infrastructure and highly skilled staff, and is often a very disruptive experience for families. Premature babies in poorly resourced settings often end up in understaffed and ill equipped neonatal care units that may be turned into potentially deadly traps, increased morbidity and mortality by a range of factors colluding- for example, malfunctioning incubators, non- working monitors, overcrowding, Nosocomial infections etc (Kadam S et al., 2005 and Maastrup R. and Greisen, G., 2010).

Thus, the researcher conducted the study entitled as a quasi- experimental study to assess the effects of Kangaroo Mother Care on the Heart Rate, Respiratory Rate and Body Temperature of the Low Birth Weight Babies in selected hospital, Faridkot, Punjab. Kangaroo Mother Care was

#### Results

Table 1: Frequency and percentage distribution of sample subjects according to selected socio demographic variables (n=60)

Sr. No.	Socio demographic Variables	Frequency (n)		Percentage (%)	
		Control (30)	Experimental (30)	Control (100)	Experimental (100)
1.	<b>Age</b>				
	<1 day	15	18	50	60
	1-3 days	3	6	10	20
	>3 days	12	6	40	20
2.	<b>Birth weight</b>				
	1-1.5 kgs	1	3	3.33	10
	1.5-2 kgs	5	4	16.66	13.33
	2-2.5 kgs	24	23	80	76.66
3.	<b>Sex</b>				
	Male	19	18	63	60
	Female	11	12	37	40
4.	<b>Mode of delivery</b>				
	NVD	17	17	57	57
	LSCS	13	13	43	43
5.	<b>Pre Term/Term/Post Term</b>				
	Pre term	24	20	80	67
	Term	6	10	20	33
	Post term	0	0	0	0
6.	<b>SGA/AGA/LGA</b>				
	SGA	15	20	50	67
	AGA	15	10	50	33
	LGA	0	0	0	0

direct skin to skin contact of the Low Birth Weight baby with his/her mother for minimum 4 hrs/day where baby wearing diapers, cap and booties placed upright between the mother's breasts and mother reclined in a bed/chair. LBW Babies were stable babies born by Caesarean Section or Normal Vaginal Delivery with birth weight of less than 2500gms, irrespective of the period of gestation. Body Temperature was Axillary Body Temperature of the baby 36.5°C -37.5°C (97.7-99.5°F). Heart rate was 140 ± 20 beats/min and Respiratory rate was 40-60 breaths/min.

#### Material and Methods

A total sample of 60 Low Birth Weight babies 30 of Experimental/ KMC group and 30 of Control/ Conventional care group) admitted in the NICU and Post natal wards of GGSMC&H, Faridkot, Punjab were selected for the study by Purposive sampling technique. Socio demographic data was collected by structured interview schedule. The data sheet of study variables was filled using the standardized measuring instruments like Paediatric Stethoscope & Clinical Thermometer.

Figure 1, 2 & 3 is showing the effects of KMC on the heart rate, respiratory rate and body temperature of the LBW babies. KMC was shown to bring significant change in Heart Rate, Respiratory Rate and Body Temperature of the LBW babies being within normal range. Additional findings showed that Heart rate rose by 9beats/min, respiratory rate dropped by 6breaths/min and Body Temperature rose by 1.186°F with effect of KMC in Experimental/ KMC group. Moreover no episodes of hypothermia and bradycardia are noted in the Experimental/ KMC group with effect of KMC.

### Discussion

Body Temperature significantly rose by 0.6°C/1.186°F with effect of KMC in the present study. Ragnhild Maastrup, 2010 & Veena Rani Parmar, 2008 too founded that temperature rose. The heart rate rose by 9beats/min with effect of KMC significantly in the present study. This finding was supported by Bohnhorst B, 2001. Also, no episodes of hypothermia and bradycardia are noted in the Experimental/ KMC group which was supported by Veena Rani Parmar, 2008 who found that apnea, bradycardia, and periodic breathing were absent during KMC.

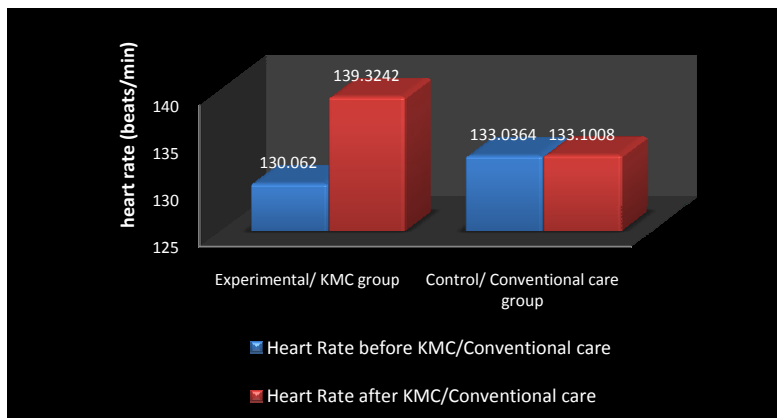


Figure 1: bar graph showing effect of KMC on heart rate (beats/min) (n=30)

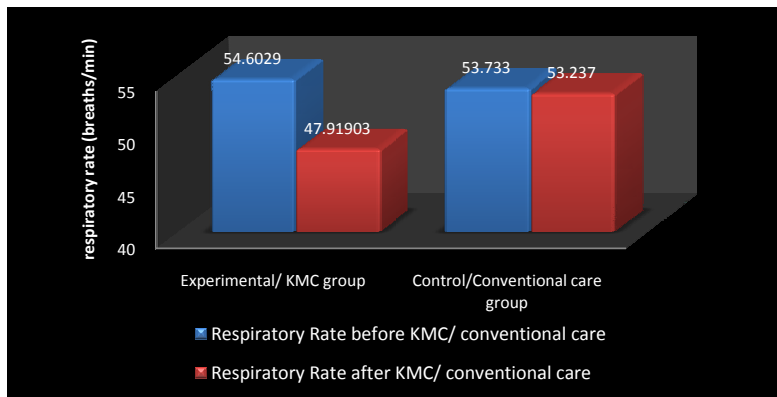


Figure 2: bar graph showing effect of KMC on respiratory rate (breaths/min) (n=30)

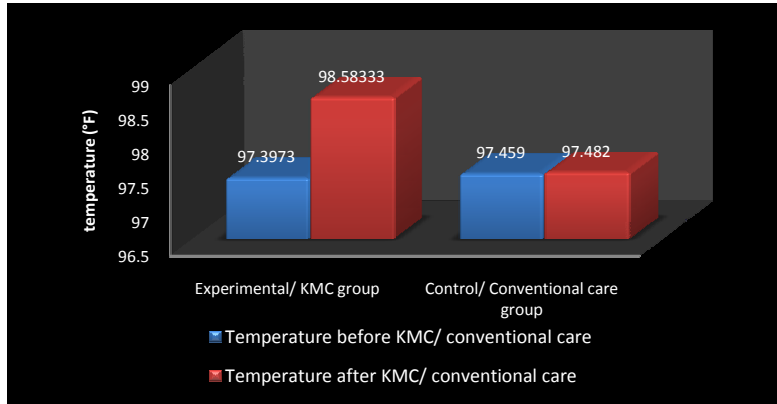


Figure 3: bar graph showing effect of KMC on body temperature (°f) (n=30)

### Conclusions

There are beneficial effects of KMC on Heart Rate, Respiratory Rate and Body Temperature of LBW babies which were found to be statistically significant.

### References

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