## KANGAROO MOTHER CARE: EFFECT ON PHYSIO LOGICA L PARA METERS OF NEW BORN.

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Background & Objectives: One third of Indian babies have birth weight < 2500 g (low birth weight [LBW]). Globally1.1 million infants die each year due to preterm birth complications. Medical cost is significantly higher for preterm & LBW babies compared to their normal birth weight counterparts. Kangaroo Mother Care (KMC) is a non-conventional low cost method for newborn care which is believed to confer significant survival benefit to such babies. Objective of this study was to identify and compare the physiological states of LBW babies during conventional care and KMC in a tertiary level teaching hospital setting.

Methods: Study population comprised LBW babies born at SSKM Hospital & their mothers – 320 mother-baby pairs were selected through purposive sampling. The design was quasi-experimental with the study group serving as their own control. Initially, KMC was started for 1 hour duration per day and then increased 1 hour each day to maximum 10-12 hours daily. Heart rate (HR), respiration rate (RR), body temperature (axillary) and oxygen saturation (O2%; measured using a pulse oxymeter) were assessed for three consecutive days, immediately before and after KMC.

Results: Changes in physiological parameters before and after KMC are depicted in the following table:



	Statistics of paired differences (change)						
Difference between post- KMC and pre-KMC value with respect to	Mean change	Standard devia-tion	Standard error of mean	95% confidence interval of change	t value	df	p value
Respiration rate – Day 1	2.643	2.887	0.190	2.268 – 3.019	13.886	229	< 0.001
Respiration rate – Day 2	3.452	3.315	0.219	3.021 – 3.883	15.792	229	< 0.001
Respiration rate – Day 3	3.822	3.676	0.242	3.344 – 4.299	15.769	229	< 0.001
Heart rate – Day 1	4.978	8.617	0.568	3.859 – 6.098	8.761	229	< 0.001
Heart rate – Day 2	5.783	8.598	0.567	4.666 – 6.900	10.200	229	< 0.001
Heart rate – Day 3	5.448	6.759	0.446	4.570 – 6.326	12.224	229	< 0.001
Temperature (°C) – Day 1	0.332	0.169	0.011	0.310 – 0.354	29.760	229	< 0.001
Temperature (°C) – Day 2	0.389	0.238	0.016	0.358 – 0.420	24.769	229	< 0.001
Temperature (°C) – Day 3	0.411	0.201	0.013	0.385 – 0.437	31.069	229	< 0.001
O <sub>2</sub> saturation (%) – Day 1	5.626	3.157	0.208	5.216 – 6.036	27.030	229	< 0.001
O <sub>2</sub> saturation (%) – Day 2	5.191	6.834	0.451	4.303 – 6.079	11.520	229	< 0.001
O <sub>2</sub> saturation (%) – Day 3	6.061	3.092	0.204	5.659 – 6.463	29.729	229	< 0.001

Conclusions: The babies receiving KMC showed a statistically significant rise in HR, RR, temperature and O2% following KMC on all 3 days. However, the rise in HR and RR are not clinically significant. KMC is a satisfactory strategy to provide LBW baby care in resource constrained settings.

