

Effectivity of KMC and KFC Methods on Newborn Babies Body Temperature in BPM Istri Utami Sleman

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ABSTRACT

Aim: The objective of this study was to determine the effectiveness of the Kangaroo Mother Care (KMC) compare to the Kangaroo Father Care (KFC) method, implemented to newborn babies' temperature, in BPM Istri Utami, Sleman Region.

Method: This research using the Quasy Experimental method with a pretest-posted control group design. I was also using the accidental sampling method to get the sample. The sample was divided into two groups. (First, BBL were given both KMC and KFC) and the control group was just assigned KMC.

Results: The result shows that the first method (both KMC and KFC method) was more effective than only the KMC method to uprise babies' temperature.

Keywords: Kangaroo Father Care (KFC), Kangaroo Mother Care (KMC), Newly baby born temperature, Quasy Experiment.

INTRODUCTION

Hypothermia is one of the causes of death in neonatal. It counts for 6.3 %. Hypothermia escalates oxygen consumption to help the thermogenesis process. If this situation is prolonged, it will cause acidosis and hypoglycemia. Newly baby born, cannot regulate their temperature. So it needs to be insuperable. Otherwise, it will be dangerous for the baby. The new baby born, whose weather was too declining, was high risk, and it also will come to the dead [1].

The research conducted by Nurlaila, among 413 new babies (89.65 %) got from the Hospitals given the KMC continuously and recorded that 98 babies (46 %) get hypothermia [2]. This study shows that the group which was given KMC, not one of them got hypothermia; on the other side, mothers who are not giving KMC to their babies the temperature on average suffering from hypothermia.

KMC itself has already written in National Guidance to take care of BBLR and premature babies and noted evidently in some countries. It also includes the Decree of the Indonesian Minister of Healthy, No: 203/Menkes/SK/III/2008, about forming the National Groups in implementing PMK. The effort in brings in to PMK is one of proper technology to decrease mortality of babies born [3].

Based on the research conducted on 11 August 20011 in BPM Istri Utami Sleman, in January to July 2017, among 140 newborn babies who suffered hypothermia three months later, on May 45 %, on June 33,3 % and on July 51,8 % [4]. Based on these problems, we, as researchers, attend to do this research about implementing the KMC and KFC method in BPM Istri Utami Sleman.

METHOD

This research is designed using the Quasi Experiment method with a pretest-posttest control group design [4]. The population is all newborn babies (BBL), which were delivered in BPM Istri Utami Sleman. In this case, researchers got 30 persons as a sample, a group given KMC and KFC, and the other 30 persons as a control

group, given KMC only. So is called accidental sampling. This research was conducted in 3 months.

The instruments in collecting primary data were to collect the data of babies' born temperature. The thermometer was used to measure the baby's temperature, and all of the data were written in sampling and observation form.

RESULTS AND DISCUSSION

The study was conducted on BPM Istri Utami Sleman from October to December 2017 by taking 30 people as the primary informant in the intervention group and 30 people as the control group. The results are as follows:

Characteristics

Table 1. Distribution of Respondent Intervention Group's and Control Group Frequency

Characteristics	Intervention Group		Control Group	
	F (n = 30)	%	F (n= 30)	%
Parity				
Primigravida	7	23.3	10	33.3
Multigravida	23	76.7	20	66.7
Mother's age				
Non-Reproduction	1	3.3	3	10
Reproduction	29	96.7	27	90
Weight BBL				
BBLR	6	20	5	16.7
BBLN	24	80	25	83.3

Based on table 1, it can be analyzed that the characteristics of parity are the same in the intervention group; the majority of multigravida is 23 (76.7%) and in the control group 20 (66.7%). The characteristics of maternal age in the intervention and control groups were the same as the majority of reproductions 29 (96.7%) and 27 (90%). In comparison, the characteristics of the majority weight of BBL in the BBLN category were 24 (80%) and 25 (83.3%).

Analysis Univariate

Based on table 2, most BBL body temperature in the intervention group became standard after the intervention of KMC and KFC 17 (56,7%).

Table 2. Distribution of BBL's Body Temperature after intervened by KMC and KFC

BBL Body Temperature	f	%
Heavy Hypothermia	2	6.7
Light Hypothermia	11	36.7
Normal	17	56.7
Total	30	100.0

Table 3. Distribution of BBL's Body Temperature after KMC intervention

BBL Body Temperature	f	%
Heavy Hypothermia	2	6.7
Light Hypothermia	12	40
Normal	16	53.3
Total	30	100.0

Based on table 3, most BBL body temperature in the control group became standard after the intervention of KMC 16 (53,3%).

Analysis Bivariate

Table 4. Analyze Results of Intervention Group

Before-After Temperature	Mean	df	Sig. (2-tailed)
	-.5000	29	0.000

Based on table 5, it can be shown that there is an effect from the KMC method on the newborn baby's body temperature.

Table 5. Analyze Results of Control Group

Before-After Temperature	Mean	df	Sig. (2-tailed)
	-.5333	29	0.043

Based on table 6, it can be showed that there is an effect from the KMC method on the body temperature of the newborn baby.

The majority of newborn babies in this study were normal babies that before giving birth, mothers were provided with health education related to infant care after birth. But in this study, there were several newborns with low birth weight. This is in line with the research of Melmon [5], which states that temperature changes occur in newborn neonatal. Once the neonatal is born, the mother's relationship has been broken, and the neonatal must keep up his body temperature through metabolic activity. The smaller the neonatal body, the hypothermia risk will be higher and the less fat reserves. It could lead to heat loss. As the baby's weight increases, the basal metabolism will increase too, where the basal metabolism plays an essential role in maintaining body temperature.

KMC and KFC are an innovation in newborn care that brings babies and their mothers closer than the KMC method [6]. As a result, many respondents want to know and do this method correctly and well.

As stated by Legault [7], the treatment of kangaroo methods is beneficial in stabilizing the baby's body temperature, stabilizing the heart rate and breathing, reduced-calorie use, a better weight gain, and longer sleep, the relationship between the baby and mother is better and will reduce infection in infants. With the benefits of the KMC and KFC methods, it can be adjusted to the results of Worku & Kassie's [8] research, which identified significant differences in mortality between LBW who were

conventionally treated with LBW with KMC, which was 38% compared to 22.5%. This proves that Kangaroo Mother Care (KMC) is safe for babies. In addition to the KMC method, the KFC method is no less useful, which involves the father's role in caring for the baby properly and well. Doing skin-to-skin techniques between babies and fathers can establish good relationships between babies and fathers.

According to Srinath [9], the benefits of KFC for fathers is that the baby and father ties better, emotional healing in the father, able to read cues for the father, the father will feel calmer, and the baby will sleep more.

The majority of BBL body temperature in the control group became normal after being given a KMC 16 intervention (53.3%). BBL has limitations in regulating body function, one of which is body temperature instability, which can cause hypothermia in BBL babies. Kangaroo Mother Care (KMC)/Kangaroo Father Care (KFC) KFC/KFC is one solution to prevent hypothermia at BBL. The principle is skin-to-skin contact, namely the transfer of heat by conduction from mother to baby to stay warm. Mother/father body temperature is an efficient and inexpensive heat source, provides a friendly environment for babies, and improves the mother/father relationship with her baby [10]. This KMC / KFC method can be done in 2 ways, namely continuously in 24 hours called continuously and intermittently or alternately. The time and duration of KMC depend on the baby's behavioral response and maternal physiology with a minimum duration of 1 hour [11].

Mothers who carried out KMC well, the average body temperature of babies did not suffer from hypothermia. Simultaneously, the group of mothers who did KMC poorly showed that the baby's average body temperature suffered from hypothermia [12].

This is in line with Medeiros et al. that KMC affects the physiological functions of BBL, including increased body temperature, thereby contributing to the improvement of thermal control, increased peripheral oxygen saturation, increased tissue oxygenation, and stabilizing breathing which brings more respiratory comfort big [13]. LBW babies are treated with KMC and KFC and in full-term neonates who have limited shivering ability to produce heat [14]. The successful implementation of KMC can reduce neonatal mortality in low birth weight infants (birth weight <2000 grams) in hospitals [15].

CONCLUSIONS

Based on the results below, it can be concluded that the Kangaroo Mother Care (KMC) method is effective in increasing the newborn babies' body temperature. Nevertheless, Kangaroo Mother Care (KMC) and Kangaroo Father Care (KFC) methods effectively increase the infant babies' body temperature.

Parents play a significant role in taking care of their babies, especially keeping the body temperature stable with the KMC and KFC methods. Health workers expected to increase their midwifery services, especially on KMC and KFC method usage during neonates and infants caring to prevent hypothermia. The next research could take place in the other location. Therefore, the KMC and KFC methods could be applied correctly widely.

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