Original Article

Study Of Care Comparation Of Kangaroo Method Treatment And Massage Therapy Methods On Weight Improvement In 0-28 Day Of Lbw In Room Perinatology

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ABSTRACT

Background: Infants Low Birth Weight (LBW) is a newborn baby who weighs 2500 grams or lower regardless of gestation. Kangaroo method treatment and baby massage therapy can be given for therapy to increase the baby's weight in LBW. Objective To find out the differences in Kangaroo Method Treatment and Infant Massage Therapy on Increasing Body Weight in LBW Age 0-28 Days in the Perinatology Room of Torabelo Regional Hospital, Kab. Sigi Central Sulawesi.

The design used in the study was Quasi Population Experiments which were all low birth weight babies. The sample size was 16 respondents using the Independent Variable Purposive sampling technique. The research was kangaroo method treatment and baby massage. The dependent variable is the baby's weight. Data was collected using a questionnaire, then the data were analyzed using the Independent t test with a significance level of $\alpha \leq 0.05$.

The results of the PMK influence test using paired t test obtained p = 0,000 with a <0,05 so that Ho was rejected, and H1 was accepted which means there was an effect of Kangaroo Method Treatment on Increased Body Weight on LBW, there was the effect of baby massage treatment on increasing body weight on LBW. The results of different tests of PMK intervention with infant massage using Independent t test obtained p = 0,000 with a <0,05 so that Ho was rejected, and H1 was accepted which meant there was a difference in Kangaroo Method Care and Infant Massage Therapy Against Increased Body Weight at LBW Age 0- 28.

There are differences in Kangaroo Method Treatment and Infant Massage Therapy Against Increased Body Weight at LBW Age 0-28 Days in the Perinatology Room of Torabelo Regional Hospital, Kab. Sigi Central Sulawesi.

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Introduction

Babies born weighing less than 2500 grams, which are weighed at birth until the first 24 hours after birth. Low Birth Weight Babies (LBW) is a newborn whose weight is 2500 grams or lower regardless of gestational period. The most common causes of LBW are premature birth, other maternal factors are age, parity, placental factors such as vascular disease, multiple / multiple pregnancy, and fetal factors are also a cause of LBW. The causes of LBW in general are multifactorial, so sometimes it is difficult to take preventative measures. But the most common cause of LBW is premature birth. In theory, the causes of LBW include maternal factors (age, parity, distance of pregnancy, history of illness, socioeconomic, habits), fetal factors, placental factors and environmental factors (Proverawati, 2010; Pantiawati, 2010). About one baby is born dead every six minutes, one of which is due to having a low weight in Indonesia. One way to prevent babies dying from low weight is to use the kangaroo method. The Kangaroo method is very useful for caring for babies born prematurely and born with a low weight, which can be done during treatment at the hospital or at home (Achmad, 2010).

Based on the World Health Organization (WHO) in 2017, in developing countries nearly 70% of 5 million neonatal deaths and 17 of 25 million deliveries per year give birth to a baby with LBW (less than 2500 gr). Based on the results of the 2018 Riskesdas the prevalence of LBW is 8.9% and most of the 33 provinces in Indonesia (Riskesdas 2018). Preliminary study results on 27 September 2018 found that in the Peritology Room of Torabelo Regional Hospital The last three months (July-September 2018) there were an average of 32 LBW babies per month, 6 of them due to PEB, 8 due to bleeding during childbirth, 4 babies because the mother is anemic, and 10 babies because of a mother's lack of nutrition

The cause of LBW is premature birth. In theory, the causes of LBW include maternal factors (age, parity, distance of pregnancy, history of illness, socioeconomic, habits), fetal factors, placental factors and environmental factors (Proverawati, 2010; Pantiawati, 2010). Several studies on factors that can influence LBW include maternal habits such as smoking, types of illnesses suffered by mothers during pregnancy such as hypertension, pre-eclampsia, eclampsia, anemia and malaria. Other related factors are pregnancy distance, education level, socioeconomic status, frequency of maternal visits for antenatal checks and nutritional status (Rao, 2010). Risk factors related to low birth weight include short birth intervals, previous birth weight history, race, maternal age, nutritional status, socioeconomic status, excessive alcohol consumption, smoking, irregular antenatal care, marital status , placental factors, genetic factors and pharmacological factors.

Impact Low birth weight babies are more susceptible to possible growth inhibitions, changes in body proportions and a number of metabolic and cardiovascular changes. In addition, low birth weight babies will also have a higher risk of mortality and morbidity, malnutrition, short or thin problems during childhood (Rao, 2010). Complications that can occur in infants with low birth weight, mainly related to the 4 adaptation processes in newborns including the respiratory system: meconium aspiration syndrome, neonatal asphyxia, respiratory distress syndrome, hyaline membrane disease, Cardiovascular system: patent ductus arteriosus, Thermoregulation: Hypothermia, symptomatic hypoglycemia.

Management of LBW includes setting the temperature of the environment, feeding, and if necessary giving oxygen, preventing infection and preventing vitamin and iron deficiencies. The Kangaroo Method is an early treatment method with a skin-to-skin touch between mother and newborn in a position like a kangaroo. This method is able to meet the basic needs of premature newborns by

providing situations and conditions similar to that of the mother's uterus. Thus providing opportunities to be able to adapt well to the outside world. Baby's skin contact with the skin of the mother so that the mother's body temperature will maintain the stability of the baby's body temperature and function as a thermoregulator (Romauli, 2011). This kangaroo treatment has been proven to produce effective and long-term body temperature regulation and stable heart rate and breathing in premature babies. Skin-to-skin care encourages infants to look for nipples and suck them, as well as assist in the success of breastfeeding (Puspitaningstyas, 2013). Skin-to-skin care encourages the baby to look for the nipple and suck it, as well as helping the success of breastfeeding and ultimately the baby's weight increases. Baby Massage Therapy is a touch and emphasis to produce teapuetic results. Massage throughout the body can improve blood circulation and lymph nodes, including the digestive tract. This helps launch the digestive system and can help the absorption of nutrients by the tissues. Most of these effects occur in babies born prematurely. The effect of massage and weight gain on babies, especially babies born prematurely. Massage increases the body's vagal activity, thus triggering the release of hormones that play a role in the absorption of food, such as the hormones gastrin and insulin, and indirectly increases the baby's appetite and body weight. Kangaroo care methods and infant massage therapy can be given to increase the baby's weight on LBW. Kangaroo methods and baby massage therapy make babies calm and breastfeed a lot (Roesli, 2010).

Kangaroo and massage treatments are interventions that are easy for respondents and do not require expensive tools and costs. Based on this background researchers are interested in researching the title Comparative Study of Kangaroo Care Methods and Infant Massage Therapy Against Weight Gain at LBW Ages 0-28 Days in the Perinatology Room of Torabelo District Hospital. Sigi Central Sulawesi.

Method

The design used in the study was Quasi Population Experiments which were all low birth weight babies. The sample size was 16 respondents using the Independent Variable Purposive sampling technique. The research was kangaroo method treatment and baby massage. The dependent variable is the baby's weight. Data was collected using a questionnaire, then the data were analyzed using the Independent t test with a significance level of $\alpha \leq 0.05$.

Results

Table 1. Characteristics of Research Variables

	Intervention	Average BB	SD	Average Increase in BB	Shapiro-Wilk
1	Treatment of the kangaroo method				
	Pre test	1783,13	228,078	14,87	0,253
	Post test	1798,00	229,891		0,237
2	Baby Massage				
	Pre test	1785,56	284,244	9,81	0,905
	Post test	1795,94	281,868		0,871

The results showed that respondents with the kangaroo method treatment had an average pretest weight of 1783.13 grams, and had an average posttest weight of 1798 grams with an average increase of 14.87 grams. The results showed that respondents with infant massage had an average pretest weight of 1785.56 grams, and an average posttest weight of 1795.94 grams with an average increase of 9.81 grams. The results of the normality test using shapiro-wilk (because the respondents were less than 50 respondents) with a significance value> 0.05 were considered significant, obtained p pre test PKM = 0.253, p post PKM test = 0.237, p pre test baby massage = 0.905, p PKM post test = 0.871, so it can be concluded that the variable has a normal

group of data which means that the influence test uses paired t-test and different test uses independent t test.

Table 2. Test Statistics

	Intervensi	Paired T test	Independent T test
1	Treatment of the kangaroo method		0,012
	Pre test	0,000	
	Post test		
2	Baby Massage		
	Pre test	0,000	
	Post test		

The statistical test in this study used paired t test with a <0.05 to determine the effect of interventions in each group, and independent t test with a <0.05 to find out the differences between the 2 groups: the groups that were given PMK intervention and baby massage.

PMK effect test results using paired t test obtained p = 0,000 with a <0.05 so that Ho was rejected, and H1 was accepted, which means there is an influence of Kangaroo Method Treatment for Weight Gain in LBW Age 0-28 Days in Perinatology Room Torabelo District Hospital . Sigi Central Sulawesi.

The results of the test of the influence of baby massage using paired t test obtained p = 0,000 with a <0.05 so that Ho was rejected, and H1 was accepted, which means there is an effect of baby massage treatment on weight gain in LBW 0-28 days at the Perinatology Room of Torabelo District Hospital Kab. Sigi Central Sulawesi.

The results of different PMK intervention tests with infant massage using Independent t test obtained p = 0,000 with a <0.05 so that Ho was rejected, and H1 was accepted, which means there were differences in the Kangaroo Care Method and Infant Massage Therapy Against Weight Gain in LBW Age 0- 28 Days in Perinatology Room, Torabelo District Hospital. Sigi Central Sulawesi.

Discussion

The results of different PMK intervention tests with infant massage using Independent t test obtained p = 0,000 with a <0.05 so that Ho was rejected, and H1 was accepted, which means there were differences in the Kangaroo Care Method and Infant Massage Therapy Against Weight Gain in LBW Age 0- 28 Days in Perinatology Room, Torabelo District Hospital. Sigi Central Sulawesi.

Low birth weight babies (LBW) are babies with birth weights of less than 2500 grams regardless of gestational age. Weight at birth is the weight of a baby that is weighed within 1 hour after birth. Other references in LBW measurements are also found in the Nutrition Regional Monitoring Guidelines (PWS). In the guidelines, low birth weight babies (LBW) are babies born weighing less than 2500 grams measured at birth or until the seventh day after birth (Putra, 2012). is a method of early and continuous care with skin to skin contact between mothers and premature babies and LBW in positions like kangaroos (De Beibh, 2010). Touching massage on circulatory muscle tissue can improve muscle tissue or muscle position can be restored and repaired so that it can improve the functions of the organs of the body as well as possible (Rukmono P. 2013).

The results showed there were differences between Kangaroo Care Method and Baby Massage Therapy on Weight Gain in LBW Age 0-28 Days in the Perinatology Room of Torabelo District Hospital. Sigi Central Sulawesi. The results showed that respondents with the kangaroo method treatment had an average pretest weight of 1783.13 grams, and had an average posttest weight of 1798 grams with an average increase of 14.87 grams. The results showed that respondents with infant massage had an average pretest weight of 1785.56 grams, and an average posttest weight of 1795.94 grams with an average increase of 9.81 grams. The amount of increase in BB on the use of kangaroo method treatments than baby massage. The Kangaroo Care Method (PMK) is an alternative substitute for incubator in LBW treatment, with several advantages including: an effective way to meet the most basic baby's needs, namely the existence of

baby's skin contact to the mother's skin, where the mother's body will be a thermoregulator for her baby, so the baby gets warmth (avoiding the baby from hypothermia), FMD facilitates breastfeeding, protection from infection, stimulation, safety and affection. FMD can reduce the incidence of infections, serious illnesses, breastfeeding problems and maternal dissatisfaction and increase the relationship between mother and baby as well as increase the growth and development of infants.

Conclusion

1. Test results of PMK effect using paired t test obtained p = 0,000 with a <0.05 so that Ho is rejected, and H1 is accepted, which means that there is an influence of Kangaroo Method Treatment on Weight Gain in LBW Age 0-28 Days in Perinatology Room of RSUD Torabelo District Sigi Central Sulawesi.
2. The results of the test of the influence of baby massage using paired t test obtained p = 0,000 with a <0.05 so that Ho is rejected, and H1 is accepted, which means that there is an effect of infant massage treatment on weight gain in LBW aged 0-28 days in perinatology room Torabelo District Hospital Sigi Central Sulawesi.
3. Different test results of PMK intervention with infant massage using Independent t test obtained p = 0,000 with a <0.05 so that Ho is rejected, and H1 is accepted, which means there are differences in the Kangaroo Method Treatment and Infant Massage Therapy Against Weight Gain in LBW Age 0-28 Days in Perinatology Room RS Torabelo District. Sigi Central Sulawesi.

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