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Education On Kangaroo Care And Nesting Method On Mother's Skills To Care For Low Birth Weight (LBW) Babies

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ABSTRACT

LBW babies are at risk of experiencing health problems, so they require intensive care, including kangaroo care and nesting methods. This research aims to determine the effect of education on kangaroo care and nesting methods on mothers' skills in caring for LBW babies. This research is a pre-experimental study with a two group pre and post test design without control design. The population in this study were mothers with LBW who were treated. The sample size in this study was 30 people who were taken using the technique. total sampling. statistical test with the Wilcoxon test. The results of the research from 15 respondents, almost all respondents had skills regarding kangaroo care methods in the good category, namely 13 respondents (86.7%), and from 15 respondents almost all respondents had nesting method care skills in the good category, namely 12 respondents (80 %).The results of bivariate analysis using the Wilcoxon test obtained a p value of 0.005<0.05, so HI was accepted, which means that there is an influence between education on kangaroo method care skills. Based on the results of the Wilcoxon statistical test, a p value of 0.014<0.05 was obtained, so HI Accepted means that there is an influence between education and nesting method care skills. It can be used as evaluation material to improve educational methods that are more interesting and it is hoped that it can increase mothers' knowledge and skills in carrying out LBW care.

Keywords: Education, Kangaroo care method, LBW, Nesting, Skills

INTRODUCTION

World Health Organization (WHO) in 2019 stated that the global prevalence of low birth weight (LBW) is 20 million (15.5%) annually, with developing countries accounting for the largest share, at around 96.5%. Indonesia is a developing country, where the prevalence of low birth weight (LBW) remains quite high. Indonesia ranks ninth in the world for the incidence of low birth weight (LBW), accounting for over 15.5% of births annually (Perwiraningtyas et al., 2020).

Based on data from 34 provinces to the Directorate of Nutrition and Maternal and Child Health, in 2021 there were 3,632,252 newborns reported to be weighed (81.8%). Meanwhile, of the newborns weighed, there were 111,719 LBW babies (2.5%) (Ministry of Health of the Republic of Indonesia, 2022). The incidence of LBW in Central Kalimantan in 2021 was 640 babies (1.77%) and in West Kotawaringin in 2019 there were 145 (3.22%) LBW babies (Central Kalimantan, 2021).

Data obtained from Sultan Imanuddin Regional Hospital from January to December 2022 showed that 730 babies were born, with 280 cases of low birth weight (LBW), and 20 cases of babies dying due to low birth weight. From data at Sultan Imanuddin Regional Hospital in 2023, from January to May, out of 91 low birth weight babies treated, there were 18 cases of low birth weight babies who were readmitted less than a month after returning home from the hospital, the causes of which were sepsis, jaundice, and hypothermia.

Low Birth Weight (LBW) babies have a greater risk of experiencing morbidity and mortality than babies born with normal weight. Gestational periods of less than 37 weeks can cause complications in babies because the growth of organs in their bodies is less than perfect, in addition, babies with LBW are at high risk of experiencing health problems that can occur from birth, during hospitalization and continue until after discharge, there are 7.4% of LBW babies who have to be readmitted in the first two weeks after returning home from the hospital due to milk aspiration, diarrhea, infection, and hypothermia (Julianti et al., 2019).

In general, LBW care uses an incubator, which is a tool specifically designed to help create an optimal environment so that an optimal environmental temperature can be created as well. The use of an incubator requires a high cost and is also limited in hospital availability. Even when the baby is at home, the baby still needs intervention that functions more or less the same as an incubator. Various efforts are made to minimize and overcome problems in LBW, one of which is by carrying out complementary therapy and development care, namely baby massage, music therapy, nesting and kangaroo method care.

Other research says that kangaroo care can increase the bond of affection between mother and baby, make it easier for babies to meet their nutritional needs, prevent infections, and shorten hospitalization periods, thereby reducing hospitalization costs (Nugraeny, 2019).

Several studies on the benefits of nesting have been conducted both domestically and internationally. Research by Saprudin et al. (2018) showed an increase in average body temperature, oxygen saturation, and pulse rate in low birth weight (LBW) infants after nesting. The study found differences in body temperature, oxygen saturation, and pulse rate in low birth weight infants, with p-values <0.05 for each.

However, in its implementation, it turns out that there are still several problems regarding the implementation of Kangaroo Care and Nesting Methods. Interviews conducted with 9 mothers stated that 3 mothers did not know how to use the method and were still afraid of feeling incapable of doing it, and 6 mothers still felt afraid to care for LBW babies independently. The factor of self-confidence is something that is very necessary, where self-confidence is an attitude or belief in one's own abilities so that in actions - actions can be carried out skillfully. Midwives have an important role in providing education to mothers in preparation for discharge planning to help mothers overcome anxiety, stress, and to increase mothers' knowledge and skills in caring for their babies.

Education is crucial for midwives when preparing mothers to learn how to care for their babies or when preparing for their babies' return. Mothers' skills in PMK and nesting can be improved through health education or through educational programs. Implementing health education activities requires methods and media to convey health messages, provide or improve health knowledge and attitudes among the target audience (Notoatmodjo, 2018).

Based on the description above, it is necessary to conduct research on Kangaroo and Nesting Method Care Education on Mothers' Skills in Caring for Low Birth Weight (LBW) Babies.

METHODS

The research begins with the preparation stage, research design, permit application, and data processing. The program stages begin with a study used to support the research, followed by observations to gather initial data. This stage involves observation using a checklist to determine mothers' skills in practicing LBW care. This research will be conducted using a quantitative approach. The design used in this study is*pre experiment* with *two group pre – post design*without a control group. The data collection technique used an observation sheet in the form of a questionnaire and SOPs for kangaroo and nesting care methods.The observation sheet is filled in according to the mother's skills in practicing kangaroo care and nesting methods on the observation sheet created by the researcher.. At the first meeting with the

respondents, they were given*pre test*This consisted of short questions and respondents were asked to perform kangaroo care and nesting methods, after which respondents were given education. On the second day, the post-test, the researchers asked mothers to perform PMK and nesting with minimal assistance, where respondents were asked to perform the steps themselves. Data were analyzed using*Wilcoxon test*to see the influence of education on mothers' skills in caring for low birth weight babies.

RESULT

Table 1 Distribution of Respondent Characteristics and Variables

Research result	Frequency (f)	Percentage (%)
Age		
< 20 years	6	20
20 – 35 years	16	53,3
>35 years	8	26,7
Education		
Elementary school	6	20
JUNIOR HIGH SCHOOL	10	33,3
Senior high school	8	26,7
University	6	20
Parity		
Primipara	14	46,7
Multipara	12	40
Grandmulti	4	13,3
Amount	30	100%

Based on table 1 It is known that of the 30 respondents, the majority were aged 20 – 35 years, namely 16 respondents (53.3%). Almost half of the respondents had a junior high school education level, namely 10 respondents (33.3%), and almost half of the respondents were primipara, namely 14 respondents (46.7%).

Table 2 Cross Tabulation Between Kangaroo Method Care Skills Variables Pre – Post Education

			PMK Education	
			Pretest	Posttest
Kangaroo care method skills	Enough (< 10)	Frequency	11	2
		%	73,3%	13,3%
	Good (10-16)	Frequency	4	13
		%	26,7%	86,7%
Total		Frequency	15	15
		%	100%	100%

Based on table 2 above, it shows the level of kangaroo care skills carried out by mothers with LBW babies before being given education. Most respondents, namely 11 respondents (73.3%), had sufficient kangaroo care skills. And after being given education, almost all respondents, namely 13 respondents (86.7%), had good kangaroo care skills.

Table 3 Cross Tabulation Between Variables of Care Skills of the Pre-Post Education Nesting Method

				Nesting Method Education	
				Pretest	Posttest
Nesting care skills	method	Enough (< 7)	Frequency	9	3
			%	60%	20%
		Good (7-10)	Frequency	6	12
			%	40%	80%
Total			Frequency	15	15
			%	100%	100%

Based on table 3 above, it shows that the level of nesting method care skills carried out by mothers with LBW babies before being given education. Most respondents, namely 9 respondents (40%), had sufficient nesting method care skills. And after being given education, almost all respondents, namely 12 respondents (80%), had good nesting method care skills.

Analysis of Research Statistical Test Results

Skills of mothers with low birth weight babies in kangaroo care method	*p-value*	Mean Rank	Sum of Rank	WITH
	0,005	4,50	36,00	- 2,828

The results of statistical tests on the level of kangaroo care method skills after being given education using*Wilcoxon test* signed rank test. Obtained score *p – value*= 0.005 ≤ α 0.05, so statistically HI is accepted and HO is rejected, which means there is an influence of education about kangaroo method care on mothers' skills in caring for LBW.

The skills of mothers with LBW in Nesting method care	*p-value*	Mean Rank	Sum of Rank	WITH
	0,014	3,50	21.00	- 2,449

The results of statistical tests on the level of nesting method care skills after being given education using*Wilcoxon test* signed rank test. Obtained score *p – value*= 0.014 ≤ α 0.05, so statistically HI is accepted and HO is rejected, which means there is an influence of education about Nesting method care on mothers' skills for LBW care.

DISCUSSION

a. Kangaroo care skills for mothers with low birth weight (LBW) babies before education is carried out

Based on the results of research conducted on 15 respondents of mothers with low birth weight babies, it was shown that before being given education, almost all of them had sufficient kangaroo care skills, namely 11 respondents (73.3%). According to Islamiyati (2022), factors influencing a person's skills include knowledge, age, and experience. Experience strengthens a person's ability to perform an action (kangaroo care skills) and enables them to perform subsequent actions better.

The results are almost the same as the research (merdekawati, 2017) which stated that mothers who have premature babies do not have good knowledge about the kangaroo method of care, where it was found that 8 respondents (66.7%) had low knowledge before being taught the kangaroo method. The knowledge is still minimal about the kangaroo method of care that mothers of LBW babies have because they have not previously received information about it.

Based on the description above, researchers believe that kangaroo care for low birth

weight babies lacks the necessary skills. Therefore, education for mothers is needed to improve the skills of mothers of low birth weight babies. This education should cover what kangaroo care is, how to perform it, and provide examples of how to perform it. It is hoped that mothers of low birth weight babies will develop these skills after receiving this education.

b. Kangaroo care skills for mothers with low birth weight (LBW) babies after education

The results of a study conducted on 15 respondents showed that after being given education, the majority showed good kangaroo method care skills, amounting to 13 respondents (86.7%). This change in skill level is caused by the provision of information in Health Education, in which there is a learning process. The learning process according to (Notoatmodjo, 2020), can be interpreted as a process to increase knowledge, understanding, and skills that can be obtained from experience or conducting studies (teaching and learning process). This is also in line with the objectives of Health counseling put forward (Notoatmodjo, 2020), namely improving community behavior in the Health midwife, achieving behavioral changes, individuals, families and the Community as the main targets of Health counseling in fostering healthy behavior and a healthy environment and playing an active role in efforts to improve optimal health levels.

From the description above, the researcher concluded that the increase in skill levels indicates that health education or education significantly influences the level of respondents' skills in carrying out kangaroo care methods, because after receiving education and information, respondents became more knowledgeable and understood how to do it. This means that respondents have been able to receive the information provided.

c. Care skills using the nesting method for mothers with low birth weight (LBW) babies before education is carried out

The results of the study, conducted on 15 respondents, showed that before being given education, the majority demonstrated adequate kangaroo care skills, namely 9 respondents (60%). The high number of respondents who still had adequate skills in nesting care during the pretest was because the respondents had never heard of or seen pictures of nesting care. And the majority of mothers of babies with low birth weight babies were not yet able to perform nesting care.

Receiving educational information is a process to create knowledge, attitudes and skills. This is obtained gradually which causes a person to adopt the new information they receive. Knowledge or cognitive is a very important domain in shaping a person's actions (Pratiwi, 2020).

Researchers assume that one of the factors for success in caring for low birth weight (LBW) babies, apart from knowledge, is that the mother must be skilled in caring for the baby.

d. Nursing skills using the nesting method for mothers with low birth weight (LBW) babies after education

The results of the research conducted on 15 respondents showed that after being given education, almost all of them showed good Nesting method care skills, namely 12 respondents (80%). This shows that there was an increase in nesting method skills after being given education.

According to (Sari, 2019) previous research stated that the nesting method showed an increase in average body temperature, oxygen saturation and pulse rate in low birth weight babies after using nesting, which can prevent hypothermia as a treatment method for low birth weight babies.

Researchers believe that there is an increase in mothers' skills in carrying out nesting care after being given education, where mothers become more confident and able to carry out nesting methods independently without experiencing difficulties.

e. The influence of kangaroo care education on mothers' skills in caring for low birth

weight (LBW) babies

The effect of kangaroo care education has been subjected to statistical tests.*Wilcoxon*at the level of significance for kangaroo method care α (< 0.05) with the value (p) obtained being 0,005 because the value (p) is smaller than (α), then Ho is rejected and Hi is accepted, which means there is a significant influence between education about kangaroo care methods on mothers' skills in caring for low birth weight babies.

The results of the study (Mardiah et al., 2019) showed that the level of knowledge and skill level of mothers regarding the care of LBW babies had a significant value (0.000), so it can be concluded that there was a significant increase in the level of knowledge and skill level of mothers after being given education on basic care of LBW babies.

Researchers believe that there is an influence between maternal skills and LBW before and after being given education about the Kangaroo Method of Care. This proves that providing education using leaflets and demonstrations can improve maternal skills in caring for LBW babies.

f. The influence of Nesting method of care education on mothers' skills in caring for low birth weight (LBW) babies

The effect of nesting care education has been subjected to statistical tests.*Wilcoxon* at the level of significance for nesting treatment α (< 0.05) with the value (p) obtained being 0,014 because the value (p) is smaller than (α), then Ho is rejected and Hi is accepted, which means there is a significant influence between education about nesting care and the mother's skills in caring for low birth weight babies.

Education can demonstrate a family's readiness to care for a baby. Therefore, education should be implemented to improve mothers' knowledge and skills in caring for low-birth-weight babies at home. Information from the media carries strong suggestive messages, providing an effective basis for assessing outcomes, leading to the development of specific skills (Damayanti, 2019).

From the description above, the researcher believes that there is an influence of nesting care education on mothers' skills in caring for low birth weight babies, where mothers or respondents after being given education understand more about carrying out nesting care, the hope is that mothers with low birth weight babies can provide the best care for their babies and increase the life expectancy of babies with low birth weight.

CONCLUSION

1. Most respondents had skills regarding kangaroo method care in the sufficient category, namely 11 respondents (73.3%) before being given education.
2. Almost all respondents had skills regarding kangaroo method care in the good category, namely 13 respondents (86.7) after being given education.
3. Most respondents had skills regarding Nesting method care in the sufficient category, namely 9 respondents (60%) before being given education.
4. Almost all respondents had skills regarding Nesting method care in the good category, namely 12 respondents (80%) after being given education.
5. Based on statistical tests using the test*wilcoxon*results obtained*p* = 0,005 < 0,05 eye H_0rejected and H1 accepted, which means there is an influence between education about kangaroo care methods on the skills of mothers in caring for low birth weight babies.
6. Based on statistical tests using the test*Wilcoxon* get results*p*= 0.014 < 0.05 then Ho is

rejected Hi is accepted which means there is an influence between nesting education on the mother's skills in caring for low birth weight babies.

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