# Differences In The Description Of Gestation Age Of Premature Babies Towards Body Increase In Nesting Implementationin RSUD. DR. SOEDIRMAN Kebumen

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**Keywords:**
*Gestational age;*
*premature baby; nesting.*

**Abstrak**

*Background: Premature babies with gestational age less than 37 weeks are born with organ immaturity that affects adaptation difficulties in extra-uterine life and is at risk of morbidity and mortality due to low birth weight. To support the ability of premature babies to adapt to their weaknesses, it is necessary to apply nesting to support infant development, facilitate the development of premature babies in the form of physiological and neurological conditions. experimental method with a comparative approach. Respondents in this study were 38 premature babies who were taken using accidental sampling. Data were collected using an observation sheet. Data analysis used chi square statistical test. Results: Based on the results of the study, most of the frequency of gestational age aged 29-34 weeks was 26 respondents (68.4%). %). And most of the frequency of baby body weight after the implementation of nesting mostly weighing less than 1500 grams as many as 23 respondents (60.5%). The results of the chi square analysis can be seen that the p value is 0.588. Conclusion: There is no significant difference in the picture of gestational age of premature babies to weight gain in the application of nesting in RSUD Dr. Sudirman Kebumen. Recommendation: It is hoped that the next researchers will be able to investigate the application of nesting with an equivalent gestational age.*

## 1. INTRODUCTION

Premature babies are babies born before the end of 37 weeks' gestation, regardless of birth weight [30]. The problem that most often occurs in premature babies is due to immaturity of the body's organs, so that it will have an impact on the physiological and biochemical conditions of the body that cause disturbances and end in death. The adaptation process in high-risk babies, namely babies born without regard to gestational age and body weight, are more likely to experience morbidity and mortality.

The prevalence of LBW according to WHO [11] is estimated to be 15% of all births in the world with a limit of 3.3% - 3.8% and is more common in developing countries or low socioeconomic conditions. Statistically, it shows that 90% of the incidence of LBW is found in developing countries and the mortality rate is 35 times higher

than in infants with birth weight of more than 2500 grams. This can occur and can be influenced by several factors such as the mother having a disease that is directly related to pregnancy, and the mother's age [11]

WHO data shows that Indonesia is ranked ninth in the world. The percentage of children aged 0-59 months with a birth weight of less than 2500 grams (LBW) in Indonesia is 6.9% of the 2019 target of 8% [1].

Several studies conducted to increase comfort in babies so that it will affect the weight gain in babies is the baby's ability to suck breast milk. The kangaroo method uses the principle that the baby is always in the mother's arms so as to increase the comfort of the baby and increase the baby's ability to reflex to suck the baby [1].

The form of nursing intervention besides the kangaroo method that can be done on LBW is nesting. Nesting is used to give the neonate the right position. Nesting is used as a buffer for the baby's sleeping position so that it remains in a flexed position, this is so that there is no drastic change in position in the baby which can result in the loss of a lot of energy from the neonate's body which is actually still very much needed for growth and development [10]. Based on data from Dr. Soedirman General Hospital, Kebumen, there were 62 LBW patients in 2016-2017, with 10 LBW babies dying, 44 with babies coming home weighing less than 2500 grams. About 80% of preterm and LBW babies used nesting. which is in the incubator or glass box.

The long-term objective of this study was to determine the effect of nesting application on increasing baby weight in low birth weight babies (LBW) at Dr. Sudirman Hospital, Kebumen with various gestational ages. The specific target to be achieved is to provide alternative solutions to the problem of babies with low birth weight so that the nesting method can be applied at home after returning from the hospital with an incubator, so that problems that usually arise in babies with low birth weight such as hypothermia, respiratory instability and pulse and weight that is difficult to gain, hopefully it can be overcome by the nesting method

## 2. METHOD

This type of research is a quantitative research which is a quasi-experimental research using a comparative approach. This research was conducted at RSUD Dr. Sudirman Kebumen in November 2018 - March 2019. The research sample used 38 respondents according to the inclusion criteria. Sampling using accidental sampling technique, namely in this technique each element has the same opportunity and opportunity to be selected as a sample according to the inclusion criteria. This research instrument uses the observation sheet before and after the nesting treatment and the observation sheet of nesting application. Data analysis used frequency distribution analysis for univariate and chi suare analysis

with 95% confidence level for bivariate.

## 3.RESULTS AND DISCUSSION

A. Univariate Analysis

3.1 Characteristics of Respondents Based on Age of Gestation

Table 3.1 Distribution of frequency characteristics based on gestational age in RSUD Dr. Sudirman Kebumen in 2019 (n = 38)

| Gestational Age | Frequency (f) | Precent age(%) |
|---|---|---|
| Extrem premature = 24-28 week | 3 | 7.9 |
| Very premature = 29-34 week | 26 | 68.4 |
| Moderat premature = 35-37 week | 9 | 23.7 |
| **Count** | **38** | **100.0** |

Based on table 3.1, it shows that of the 38 respondents, most of them are known to have gestational age aged 29-34 weeks as many as 26 respondents (68.4%).

Premature babies are babies born before the end of 37 weeks' gestation, regardless of birth weight [13]. Babies born with a very premature category of gestation are very risky for the continuation of the adaptation of the baby. The results of this study are in accordance with the theory [7], which states that the younger the gestational age, the greater the morbidity, mortality and the more premature or the smaller the gestational age at birth, the greater the difference with babies born at term, therefore gestational age is very influential. with the LBW incident.

In accordance with the characteristics of preterm infants gestational age less than 37 weeks [1] anatomy and physiology of immature organs, preterm babies tend to experience various problems. This should be anticipated and managed in the neonatal period. The problems that occur are hypothermia, hypoglycemia, intracranial bleeding, susceptibility to infection, hyperbilirubinemia, damage to skin integrity and respiratory distress syndrome (Pantiawati, 2010). Associated with this study to support the ability of premature babies to adapt to their weaknesses, it is necessary to apply nesting to support infant development, facilitate the development of premature babies in the form of physiological and neurological conditions [7].

3.2 Characteristics of Respondents Based on Body Weight

Table 3.2.1 Frequency distribution of characteristics based on infant weight before application of Kebumen nesting (n = 38)

| Baby's weight | Frequency (f) | Precentage (%) |
|---|---|---|
| 1500-2500 gram | 20 | 52.6 |
| less than 1500 grams | 18 | 47.4 |
| **Count** | 38 | 100.0 |

Based on table 3.2.1, it shows that of the 38 respondents, most of the distribution of the baby's weight before the implementation of nesting was as many as 20 respondents (52.6%) with a baby weight of 1500-2500 grams.

According to the category of low birth weight babies are babies born with birth weight less than 2500 grams regardless of gestation [1]. Premature babies generally have low birth weight, so it requires more effort to adjust to extrauterine life than babies who are full term. Premature babies also face threats to their survival due to organ maturation that has not been reached at birth. The prognosis for infants weighing more than 1800 grams is better than infants weighing between 1500 and 1800 grams [3]. This can affect the speed of development of the baby both physically and neurologically [5].

Table 3.2.2 Frequency distribution of characteristics based on infant weight after application of Kebumen nesting (n = 38)

| Baby's weight | Frequency (f) | Precentage (%) |
|---|---|---|
| 1500-2500 gram | 15 | 39.5 |
| less than 1500 grams | 23 | 60.5 |
| **Count** | **38** | **100.0** |

Based on table 3.2.2, it shows that of the 38 respondents, most of them had baby weight after the implementation of nesting weighing less than 1500 grams, 23 respondents (60.5%).

This shows that not all premature babies after being given nesting have a change in weight gain, but tend to decrease. The neonatal period is the first period of life outside the womb until the age of 28 days, where there is a very large change from intra-uterine to extra-uterine life, the striking difference between uterine and outer conditions makes the baby have to try hard to adapt to it [4].

The most common problem of low birth weight (LBW) results from immaturity (immaturity) of the organ systems, which results in complex physiological changes in the body [1]. The physiological changes in the body include changes in the respiratory, circulation, thermoregulation, acid-base balance, innervation, hemoptics, gastrointestinal, integumentary, endocrine, musculoskeletal, and elimination systems.

Neonatal organ immaturity is a very weak muscle tone structure, so that it will affect this motor control ability to tend to be in an extended position, whereas the best position for babies is flexion because it can help reduce metabolism in the body [1]. Due to the adaptation process in the gastrointestinal system and nutrition, such as poor reflex suction and swallowing, especially before 34 weeks, decreased intestinal motility, digestion and absorption of fat-soluble vitamins are less, and LBW is very susceptible to deficiencies and disorders of the balance of various nutrients, making it easy suffer permanent damage in physical and mental growth [5].

B. Bivariate Analysis

3.3 Description of Age Difference of Gestation Premature Against Babies Increase in Baby Weight In Application of Nesting in Ruang Melati RSUD Dr. Soedirman Kebumen

**Table 3.3 Differences in the Age of Premature Infant Gestation Against Baby Weight Gain in the Application of Nesting in RSUD. Dr. Sudirman Kebumen (n = 38).**

| | | | Post Nesting | | | Asymp. Sig. (2-tailed) |
|---|---|---|---|---|---|---|
| | | | Weight 1500-2500 grams | Weight less than 1500 grams | Count | |
| Age of Gestation | Extrem premature = 24-28 week | Count | 1 | 2 | 3 | |
| | Very premature = 29-34 week | Count | 9 | 17 | 26 | 0,528 |
| | Moderat premature = 35-37 week | Count | 5 | 4 | 9 | |
| | Total | | 15 | 23 | 38 | |

Based on the analysis, it is known that the Asymp value. Sig. (2-tailed) of 0.528, because of Asymp. Sig 0.588> 0.05, then according to the basis for decision making in the Chi Square test, it can be concluded that Ho is accepted. The rejection of Ha implies that there is no significant difference in gestational age of premature babies to weight gain in the application of nesting.

The rejection of Ha implies that there is no significant difference in gestational age of premature babies to weight gain in the application of nesting. In connection with the extra-uterine adaptation process carried out by babies with low birth weight, it will try hard to make this adaptation. LBW due to organ immaturity and lack of body fat tissue can cause various physiological changes including changes in the respiratory, circulatory, thermoregulation, acid-base balance, innervation, hemoptics, gastrointestinal, integumentary, endocrine, musculoskeletal, and elimination systems. This can affect the speed of development of the baby both physically and neurologically [3]. This is not in line with a study conducted by [8] conducting a study on "Effect of Nesting on Posture Discomfort and Psychological Parameters of Low Birth Weight Infants". Poulose explained that 60 samples of LBW; 30 samples in the experimental group and 30 samples in the control group. Using a pre and post test experimental research design, nesting was given for 9 hours per day for 5 days. The study explained that posture, comfort, and physiological parameters (axillary temperature, pulse, and respiration) showed a significant value, namely t = 12.64, which means that the study proved that nesting in LBW was effective in improving growth, demonstrating comfort, and stabilizing physiological parameters, namely temperature. axillary, pulse, and respiration LBW.

According to the researcher's analysis, the results of this study did not describe the difference in gestational age between preterm infants and the increase in infant body weight with the application of nesting because the majority of the initial weight of infants was mostly in the very extreme premature category, with a gestational age range of 29-34 weeks as many as 26 respondents (68, 4%), with most of the baby's birth weight less than 1500 grams as many as 23 respondents (60.5%), where with a very low baby weight it takes great effort to adapt to the extrauterine life that these babies have to do. The level of maturity of the function of the neonatal organ systems is a requirement to adapt to life outside the womb. Diseases that occur in premature babies are related to the gestational age when the baby is born. The younger the gestational age, the less perfect the organs are. The anatomy and physiology of immature organs, premature babies tend to have varied problems [7].

CONCLUSION

There was no significant difference in the picture of gestational age of preterm infants with the increase in body weight in the application of nesting.

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