



THE EFFECT OF BABY MASSAGE ON INCREASING BODY WEIGHT IN INFANTS AGED 2-5 MONTHS AT GRIYA SEHAT INDONESIA

Francisco Septiana, Dwi Lukmawati, Angelina Van Costa Fernandes, Neta Ayu Andera
Stikes Ganesha Husada, Kediri

Article info	ABSTRACT
<p>Corresponding Author:</p> <p>Dwi Lukmawati dwi_lukmawati@stikesgane.shahusada.ac.id Stikes Ganesha Husada Kediri</p>	<p><i>Baby massage</i> is tactile stimulation and has become an ancient tradition that has been studied through research on neonatal sciences, neurologists, child psychology, and several health sciences. Massage or touch on the baby provides benefits that make the baby feel calm, improve the quality of baby's sleep, teach the baby early about body parts and stimulate the baby's appetite. This study aims to determine the effect of giving baby massage on increasing body weight in infants aged 2-5 months in Griya Sehat Indonesia. The method used is <i>Pre experimental</i> with a <i>one group pretest posttest design</i>. The population in this study was all infants aged 2-5 months in Griya Sehat Indonesia, a total of 35 babies taken by <i>purposive sampling technique</i>. The data analysis used in this study was the <i>Wilcoxon Test</i>. Results: Before the <i>baby massage</i>, most of the respondents gained weight, which was as many as 15 respondents (57.7%). After <i>baby massage</i>, almost all of the respondents gained weight, namely as many as 23 respondents (88.4%). And a small percentage of respondents did not gain weight, which was as many as 3 respondents (11.6%). Conclusion: There is an effect of <i>giving baby massage</i> on the weight gain of babies aged 2-5 months in Di Griya Sehat Indonesia</p> <p>Keywords: <i>Baby Massage, Weight gain, Baby 2-5 Months</i></p>
<p>This article distributed under the terms of the Creative Commons Attribution-Share Alike 4.0 International License (https://creativecommons.org/licenses/by-sa/4.0/)</p>	

INTRODUCTION.

Infancy is the golden *age* as well as the critical period of development of a baby at the age of 0-12 months. It is said to be a golden age because this period is short and cannot be repeated. It is said to be a critical period because at this time babies are very sensitive to the environment and need good nutritional intake and stimulation for their growth and development (Ministry of Health, 2017).

Weight gain in infants is related to the concept of weight gain and development. Weight gain means physical changes and increases in the size of body parts of a different individual that the individual has to adapt to the environment (Ardiana. D, 2013). Massage

or touch on babies provides benefits, namely making babies feel calm, improving the quality of baby's sleep, teaching babies from an early age about body parts and stimulating the baby's appetite (Julianti, 2018).

Based on a preliminary study conducted at Di Griya Sehat Indonesia, it was found that the average number of babies aged 2-5 months who were carried out by baby massage on March 5-24, 2023, was 35 babies. Based on a brief interview with Griya Sehat midwives, it is known that from 35 mothers who had babies aged 2-5 months, it was found that 11 (45%) mothers did not understand what the benefits were and how to do baby massage techniques correctly. This is because the mother has never received socialization about baby massage from health workers, so the mother feels afraid and does not know the technique of doing baby massage independently and correctly. While 24 (55%) other mothers already understand the benefits of baby massage.

Based on research conducted by Suntin in 2020 on the Effect of Massage on Infants on Infant Weight Gain, it showed that there were significant changes in infant weight gain between groups of babies who were massaged with no massage. Furthermore, in a study conducted by Bunga, et al in 2020 about baby massage can stimulate weight gain in infants showing the influence of increasing baby weight after massage.

Judging from the problem of baby weight that does not increase well enough and the lack of knowledge of mothers about the importance of stimulating baby growth using baby massage, researchers are interested in conducting research on "the effect of *giving baby massage* on the weight gain of infants aged 2-5 months in Griya Sehat Indonesia"

RESEARCH METHODS

The research method used was *pre-experimental* with a *one group pretest posttest* design to determine the effect of *baby massage* on the weight gain of infants aged 2-5 months in Griya Sehat Indonesia. This research will be conducted on March 5-24, 2023.

The population in this study is all infants aged 2-5 months in Griya Sehat Indonesia on March 5-23, 2023. The sampling technique in this study used *purposive sampling* techniques. The dependent variable in the study was weight gain and the independent variable in the study was *baby massage*. This study used respondent identity sheets, scales with grams (gr) that have been calibrated. Identity sheets are used to record respondents' identity data. Centimeter meter as a means of measuring the baby's body length. Baby scales that have been calibrated as a baby weight measurement tool.

RESEARCH RESULTS

Characteristics of Respondents

Table 1 Age frequency distribution of respondents who participated *in Baby Massage* at Griya sehat Indonesia

Age	Frequency	Percent (%)
2-3 months	19	73,1
4-5 months	7	26,9
Total	26	100

Based on table 1 above, it shows that most of the respondents aged 2-3 months are as many as 19 respondents (73.1%).

Table 2 Gender frequency distribution of respondents who participated *in Baby Massage* at Griya sehat Indonesia

Gender	Frequency	Percent (%)
Go to the	13	50
Woman	13	50
Total	26	100

Based on table 2 above, it shows that half of the respondents are male, namely 13 respondents (50%) and half of the respondents are female, namely as many as 13 respondents (50%).

Table 3 Frequency distribution of nutritional intake of respondents who participated *in Baby Massage* at Griya Sehat Indonesia

Nutritional Intake	Frequency	Percent (%)
About	19	73,1
Sufor	1	3,8
Asi & Sufor	6	23,1
Total	26	100

Based on table 4.3 above, it shows that most of the respondents have nutritional intake in the form of breast milk, which is as many as 19 respondents (73.1%).

Custom Data

Table 4 Distribution of frequency of weight gain before *Baby Massage* at Griya Sehat Indonesia

Weight gain	Frequency	Presentase (%)
There's Weight Gain	15	57,7
No Weight gain	11	42,3
Total	26	100

Based on Table 4 shows that before baby massage was done , most of the respondents experienced weight gain, which was as many as 15 respondents (57.7%).

Table 5 Distribution of frequency of weight gain after *Baby Massage* at Griya Sehat Indonesia

Weight gain	Frequency	Presentase (%)
There's Weight Gain	23	88,4
No Weight gain	3	11,6
Total	26	100

Based on Table 5 shows that after baby *massage* almost all of the respondents experienced weight gain, which was as many as 23 respondents (88.4%).

Table 6 cross-tabulation of weight gain after *Baby Massage* at Griya Sehat Indonesia

	Criterion				Total	
	There's Weight Gain		None Weight gain		Σ	%
	Σ	%	Σ	%		
Pre Test	15	57,7	11	42,3	26	100
Post Test	23	88,4	3	11,6	26	100

Based on table 6 above shows respondent data on weight gain before and after giving *baby massage treatment*. Obtained before giving *baby massage* treatment as many as 15 respondents (57.7%) the results of the value of weight gain. Before giving *baby massage* treatment, 11 respondents (42.3%) obtained no weight gain. Then after giving *baby massage* treatment as many as 23 respondents (88.4%) the results of the value experienced weight gain. After giving *baby massage* treatment, 3 respondents (11.6%) found no weight gain.

Bivariate Analysis

Table 7 Analysis results using the Wilcoxon Test
Test Statisticsb

	post test - pre test
Z	-4.164a
Asymp. Sig. (2-tailed)	.000

- a. Based on negative ranks.
- b. Wilcoxon Signed Ranks Test

Based on the taking of the Wilcoxon Test is an Asymp Sig value < 0.05 then H0 is rejected and H1 is accepted. Based on the output of the Statistical Test known to Asymp. Sig (2-tailed) is worth 0.000. Since the value of 0.000 is less than 0.05, H1 is accepted. This means that there is an influence of *baby massage* on the weight gain of babies aged 2-5 months at Griya Sehat Indonesia.

DISCUSSION

Weight Gain before *Baby Massage Treatment* at Griya Sehat Indonesia

Based on data obtained from the results of research using observation sheets, before baby massage was carried out, most of the respondents experienced weight gain as much as 15 respondents (57.7%). And almost half of the respondents did not gain weight, namely as many as 11 respondents (42.3%).

Weight Faltering is insufficient weight gain, meaning below the average of the minimum weight gain each month. The minimum weight gain of children each month varies. There are 2 causes of *weight faltering*, namely less input or increased output. Less input is assumed with intake, for example babies who are still exclusively breastfed must ensure breast milk or the quality of breast milk is lacking. Increased output is usually in children with certain infections or with congenital abnormalities.

Weight faltering *disorders* usually occur at the age of 3-4 months, because at that age is a crucial age where weight gain is not good, especially in babies with exclusive and non-exclusive breastfeeding. As parents, you must be aware of the incidence of *weight faltering* in children, especially at the age of less than 1 year to always monitor regularly, meaning that every month you have to weigh yourself, measure body length and head circumference, then evaluate the results of the monitor every month. Growth can be known through KMS (Kartu Menuju Sehat) charts to measure and weigh baby growth based on gender, age, body circumference, head and so on.

According to dr. Novitria Dwinanda, Sp.A(K) (2021) *Weight faltering* is the entrance to all growth disorders, meaning that if you cannot detect a child's weight gain, you cannot *intervene* correctly. If this condition continues continuously and is not treated, it can have an impact on malnutrition (malnutrition), *stunting*, microcephaly (abnormal brain growth due to malnutrition). This condition is dangerous because after the age of 2, the brain cannot be corrected or repaired.

Weight Gain after Baby *Massage Treatment* at Griya Sehat Indonesia

The results showed that after baby *massage*, almost all of the respondents gained weight as much as 23 respondents (88.4%). The increase in baby weight is certainly influenced by the provision of *baby massage* that is given correctly and routinely. Giving *baby massage* treatment to respondents was carried out for 10-15 minutes every week for 2x a week within 4 weeks. Baby weight weighing is done before the baby is given baby massage treatment *and further weighing is done once a week after giving baby massage every week so that the results of the baby's weight gain can be known if there is an increase.*

Researchers assume that the occurrence of weight gain in infants given *baby massage* treatment is caused by stimulation made through touch. This is in line with the theory put forward by Rusli (2016) which says that by massaging the baby can stimulate the activity of the vagus nerve, where this nerve (the 10th brain nerve) will cause increased levels of gastrin and insulin absorption enzymes, so that the absorption of food will be better and intestinal peristalsis and gastric emptying increase so that it can stimulate the baby's appetite. Then there is an increase in *Beta Neurochemicals* and *Growth Hormone production*.

It can be concluded that there is an influence after giving *baby massage* on weight gain in infants aged 0-12 months. After this research, it is expected to increase the knowledge of mothers then mothers can provide *baby massage stimulation* to their babies independently, correctly and routinely.

Analysis of the Effect of *Baby Massage* on Infant Weight Gain Age 2-5 Months at Griya Sehat Indonesia

From the results of the *Wilcoxon test* , sig = 0.000 (table 4.7) means that there is an effect of *baby massage* on weight gain in infants aged 2-5 months at Griya Sehat Indonesia. According to Rini Sekartin, Pediatrician from the Faculty of Medicine, University of Indonesia, massage in infants can stimulate motor, help the sleep process, reduce anxiety and complaints. There is an increase in food substances in the digestive tract and develop the child's mentality, making body temperature more stable and able to increase the hormones gastrin and insulin which play a role in food absorption so that the baby's weight rises faster (Sutrianto, 2018).

The experimental group given baby massage consisted of 23 respondents (88.4%) who experienced weight gain and 3 respondents (11.6%) who did not gain weight. Babies who experience weight gain are known to get the average baby intake in the form of breast milk & SUFOR. Then those who do not experience an increase in body weight babies get nutritional intake in the form of breast milk. This certainly affects the baby's digestive system that has not been able to digest properly nutrients in the form of complementary foods that are not in accordance with the baby's nutritional needs so that the baby's growth does not become optimal. In addition, mothers do not breastfeed or breastfeed their babies every 2-3 hours, this certainly affects the process of meeting the baby's nutritional needs. As already explained that there are several factors that can affect weight gain in infants including nutrition, environmental culture, health status, stimulation, socioeconomic status and food culture has a considerable responsibility for the baby's health status. However, specifically this study proves that giving baby massage can help optimize the growth of babies with an increase in baby weight (Yuniati, 2017).

The results of this study show that the provision of *baby* massage treatment is very effective and able to provide enormous benefits for the weight gain of infants aged 0-12 months, seen from the significant changes between pre-test and post-test of baby *massage*.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion :

Based on the results of research, analysis and discussion on "The Effect of *Baby Massage* on Weight Gain of Babies Aged 2-5 Months in Griya Sehat Indonesia, it can: Concluded Before the *baby massage* was done, most of the respondents gained weight, which was as many as 15 respondents (57.7%). After *baby massage*, almost all of the respondents gained weight, namely as many as 23 respondents (88.4%). There is an effect of *giving baby massage* on the weight gain of infants aged 2-5 months at Griya Sehat Indonesia with Sig (0.000) < α (0.05).

Suggestion

Health workers, especially midwives, researchers hope that this study can be used as a guideline in providing obstetric care to infants professionally, providing health education to infant mothers for infant health care and preventing other infant

health problems that can affect the growth and development of infants through massage techniques in infants.

BIBLIOGRAPHY

- Bunga, dkk. (2020). *Pijat Bayi dapat Menstimulus Peningkatan Berat Badan pada Bayi*. Jurnal Ilmiah Kebidanan Indonesia, 10 (02), 28-33.
- Dana, P. (2022). *Pengaruh Baby Massage Terhadap Pertumbuhan Pada Bayi Usia 3-5 Bulan Di Wilayah Kerja Puskesmas Jalan Gedang Kota Bengkulu Tahun 2022*. Jurnal Skripsi. Politeknik Kesehatan Bengkulu.
- Khairunnisa. (2021). *Pengaruh Pemberian Stimulasi Pijat Bayi Terhadap Berat Badan Pada Bayi*. Jurnal Skripsi. Politeknik Kemenkes Bengkulu.
- Nopalina, dkk. (2022). *Pengaruh Pijat Bayi terhadap Peningkatan Berat Badan pada Bayi Umur 0-6 Bulan*. Indonesian Health Issue, 1 (1), 83-89.
- Septalina, A. (2018). *Pengaruh Pijat Bayi Terhadap Pertumbuhan (Berat Badan) Bayi Usia 1-3 Bulan Di Wilayah Kerja Puskesmas Pematang Pasir Kota Tanjung Balai*. Jurnal Skripsi. Politeknik Kesehatan Kemenkes RI.
- Sudiarti, P. E., Ariesta, M., & Zurrahmi, Z. R. (2022). *Pengaruh Pijat Bayi Terhadap Kenaikan Berat Badan Anak Usia 0-12 Bulan Di Desa Ridan Permai Tahun 2021*. Jurnal Ners, 6(1), 61-66.
- Suntin. (2020). *Pengaruh Pemijatan pada Bayi terhadap Kenaikan Berat Badan Bayi*. Media Keperawatan. Politeknik Kesehatan Makassar. 11 (2), 54-58.
- Yunianti. (2018). *Pengaruh Pijat Bayi Terhadap Peningkatan Berat Badan Bayi Pada Bayi Umur 1-6 Bulan Di Wilayah Kerja Puskesmas Lalowaru Kecamatan Konawe Selatan*. Jurnal Skripsi. Politeknik Kementerian Kesehatan Kendari.