JKM (Jurnal Kebidanan Malahayati),Vol 9, No. 3. July 2023,
ISSN (Print) 2476-8944 ISSN (Online) 2579-762X, Hal 347-352

EFFECT MASSAGE ON BABY WEIGHT

Yanti Herawati[1], Desi Trisiani[2]

[1]Master of Midwifery Study Program, Dharma Husada College of Health Sciences
[2]Bachelor and Professional Midwifery Study Program, Bhakti Asih Polytechnic, Purwakarta

Korespondensi email: yantiherawati@stikesdhb.ac.id, trisianidesi@gmail.com

ABSTRAK MASSAGE PADA BERAT BADAN BAYI

Latar Belakang: Anak memiliki nilai yang sangat tinggi untuk keluarga dan bangsa, setiap orang tua mengharapkan anaknya dapat tumbuh dan berkembang secara optimal. Tercapainya pertumbuhan dan perkembangan yang optimal merupakan hasil interaksi berbagai faktor yang saling berkaitan, yaitu faktor genetik, lingkungan, perilaku, dan rangsangan atau stimulasi yang berguna. Berat badan merupakan ukuran antopometri yang terpenting dan paling sering digunakan terutama pada bayi. Pijat adalah kegiatan merangsang kemampuan semua aspek perkembangan dasar baduta yang meliputi stimulasi sentuh, gerak, urut, pendengaran dan penglihatan dengan mengutamakan rasa nyaman. Manfaat pijat bayi antara lain meningkatkan berat badan, membuat bayi semakin tenang, meningkatkan efektivitas istirahat (tidur bayi), meningkatkan pertumbuhan, memperbaiki konsentrasi bayi, meningkatkan produksi ASI, membantu meringankan ketidaknyamanan dalam pencernaan dan tekanan emosi dan memperkuat sistim kekebalan tubuh.

Tujuan: Tujuan Penelitian ini adalah untuk mengetahui pengaruh massage pada berat badan bayi di di Klinik Mom & Baby Spa PMB D.

Metode: Penelitian ini berjenis quasi experimental dengan rancangan pre-test dan post test with control group design menggunakan uji Independent t-test. Penelitian ini telah dilaksanakan di Klinik Mom & Baby Spa PMB D bulan April sampai September 2022. Total sample sebanyak 52 bayi, yaitu dipilih dari populasi berdasarkan pertimbangan Kriteria Inklusi yaitu bayi berumur 0-12 bulan, bayi sehat, bayi yang datang treatment teratur selama 3 bulan berturut-turut dengan kriteria inklusi, eksklusi dan Drop Out. Sampel yang digunakan sebanyak 26 bayi yang diberi massage dan 26 bayi yang tidak diberikan massage.Pengumpulan data menggunakan alat ukur timbangan bayi 20 kg jenis timbangan tidur yang telah diuji kalibrasi. Analisis data secara statistik Independent t-test. Penyajian data menggunakan tabel yang di jelaskan secara deskriptif.

Hasil: bahwa kenaikan berat badan bayi pada kelompok kontrol dan perlakuan didapatkan nilai P Value 0,013 yang artinya ada perbedaan signifikan berat badan pada bayi dilakukan masase dengan bayi yang tidak dilakukan masase. Rata-rata berat badan bayi yang dilakukan masase (10,71 gram) lebih tinggi jika dibandingkan dengan rata-rata berat badan bayi yang tidak dilakukan masase.

Kesimpulan: Berdasarkan tujuan penelitian, Di ketahui bahwa ada perbedaan kenaikan berat badan bayi sebelum dan sesudah diberikan massage pada kelompok perlakuan. Tetapi Tidak ada perbedaan kenaikan berat badan bayi sebelum dan sesudah diberikan pijat bayi pada kelompok kontrol.

Saran : Diharapkan bidan untuk memberikan pelayanan massage pada bayi dan memberikan penyuluhan serta mengajarkan mengenai teknik serta manfaat dari pijat bayi ini kepada para orang tua bayi agar dapat diaplikasikan sehingga membantu dalam meningkatkan berat badan bayi.

Kata Kunci :Kenaikan Berat Badan, Pijat Bayi

ABSTRACT

Background: Body weight is the most important and frequently used anthropometric measurement, especially in infants. Weighing is a crucial measurement in assessing infants or toddlers. There are many factors that hinder their development, preventing infants from reaching their genetic potential, including nutrition and stimulation (baby massage).

Objective: This research aimed to determine the effect of massage on infant weight gain at the Mom & Baby Spa PMB D Clinic.

Methods: This study used a quasi-experimental design with a pre-test and post-test with a control group design, using the Independent t-test. The study was conducted at the Mom & Baby Spa PMB D Clinic from April

to September 2022. The total sample consisted of 52 infants, selected from the population based on inclusion criteria, including infants aged 0-12 months, healthy infants, and infants who received regular treatment for 3 consecutive months with inclusion, exclusion, and dropout criteria. The sample used comprised 26 infants who received baby massage and 26 infants who did not receive baby massage. Data was collected using a 20 kg baby weighing scale, specifically a calibrated bed scale. Data analysis was performed using an Independent t-test, and data presentation was done using descriptive tables.

Results: The research showed that the increase in infant weight in the control and treatment groups had a P-value of 0.013, indicating a significant difference in weight gain between infants who received massages and those who did not. The average weight of infants who received baby massage (10.71 grams) was higher compared to the average weight of infants who did not receive massage.

Conclusion: There was a difference in infant weight gain before and after receiving baby massage in the treatment group. However, there was no difference in infant weight gain before and after receiving a baby massage in the control group.

Suggestions: It is recommended that midwives provide baby massage services for infants and provide education and instruction on the techniques and benefits of baby massage to parents to help improve infant weight gain.

Keywords: Infants, Body Weight, Massage

INTRODUCTION

Children hold significant value for both families and nations, and it is the aspiration of every parent to witness their children grow and develop optimally (Dasuki, 2018). The achievement of optimal growth and development is the result of the interaction of various interrelated factors, including genetic, environmental, behavioral, and beneficial stimuli or stimulation. Body weight is the most important anthropometric measurement and is commonly used, especially for infants (Febrikaharisma, 2013). Weighing is a crucial measurement in assessing infants or toddlers (Maryunani, 2020).

The Basic Health Research (Riset Kesehatan Dasar) conducted in 2018 by the Indonesian Ministry of Health stated that the prevalence of malnutrition among children aged 0-23 months in Indonesia was 3.8% for severe malnutrition (gizi buruk) and 11,4% for moderate malnutrition (gizi kurang). These findings were consistent with the results of the Nutritional Status Monitoring (PSG) conducted by the Ministry of Health in 2017, which reported a prevalence of 3,5% for severe malnutrition and 11.3% for moderate malnutrition among children aged 0-23 months. The province with the highest prevalence of severe malnutrition and moderate malnutrition in children aged 0-23 months in 2018 was Nusa Tenggara Timur, while the province with the lowest prevalence was West Java. According to data from the Ministry of Health in 2018, the prevalence of malnutrition based on weight-for-age in West Java was 2,50% for severe malnutrition and 8,10% for moderate malnutrition (Kemenkes RI, 2019).

The increase in cases of malnutrition in infants can be attributed to various factors, including inadequate nutrition for infants, lack of awareness among parents regarding breastfeeding practices, and poor environmental hygiene. These factors can have an impact on stunted growth in infants, including improper weight gain for their age. Therefore, it is crucial for healthcare providers to address this issue and take preventive measures to curb the prevalence of malnutrition, which can further lead to severe malnutrition. (Kemenkes, 2018).

The prevalence of low birth weight among females (11,2%) was higher than among males (9,2%). However, for birth weights ≥ 4000 grams, males (5,6%) had a higher prevalence compared to females (3,9%) (Kemenkes RI, 2019). According to data from the Bandung Health Office, the percentage of infants with low birth weight in 2020 was 5,50% (150 infants), indicating an increase compared to the previous year. In the same year, there were 3 cases of severe malnutrition and 194 cases of moderate malnutrition (2,01%) (Dinkes Jabar, 2020). The decrease in infant weight can be attributed to various factors, including inadequate and imbalanced nutrition intake, insufficient breastfeeding, health disorders, and the growth period (Lestari, 2021).

Many factors hinder optimal development, preventing infants from reaching their genetic potential. Some of these factors include nutrition and stimulation (such as baby massage) (Sulung and Gayatri, 2015). Massage is the oldest form of touch therapy known to humans and is widely practiced as an art of healthcare and treatment that

 DOI 10.33024, http://ejurnalmalahayati.ac.id/index.php/kebidanan

has been utilized for centuries, particularly about pregnancy and the birthing process (Lee, 2019). One of the most important indicators in assessing infant growth is by evaluating their body weight (Astriana & Suryani, 2017). Body weight is the most important anthropometric measurement used to assess infant health in all age groups (Soetjiningsih, 2017).

Touch therapy or massage is a technique that combines the physical benefits of human touch with emotional benefits, such as bonding (Pratyahara & Dayu, 2012). Massage activity creates a connection between the child and the parent. A massage is a well-known form of touch therapy, but it is still not commonly practiced by parents of toddlers (Marni, 2019). Baby massage is an expression of love and affection between parents and their children through the power of touch, which has extraordinary effects (Julisia, 2021). Touch is an expression of parental love toward their child (Marni, 2019). Through touch, both parents and children can experience a sense of comfort (Elya, 2018).

Touch and massage on infants provide continuous body contact that helps maintain a sense of security in the baby (Dasuki, 2018). When conducting baby massage, it offers numerous benefits that parents, particularly mothers, should be aware of (Carolin, 2020). Massage or touch for babies provides benefits such as calming the baby, improving sleep quality, teaching the baby about different parts of their body, and stimulating the baby's appetite (Julianti, 2018). Modern health science has scientifically proven that touch therapy and massage for infants have many benefits, especially when performed by the parents themselves (Adamson, 2013). A study comparing baby spa and baby massage on the growth and development of infants aged 6-12 months found that the mean weight difference after the baby massage was 9.020 grams, while after the baby spa, it was 10,580 grams, with a p-value of 0,002 < 0,05 (Jayatmi & Fatima, 2021).

The study conducted by Lee (2019) used a quasi-experimental method with a non-randomized pretest-posttest with a control group design to determine infant massage frequency's effect on growth and development. The research findings indicated a significant difference in weight before and after the massage intervention, with a reported p-value of 0,000 (<0.05), indicating a significant difference in weight before and after the massage intervention.5

This study aimed to investigate further infant massage's effect on weight gain in infants.

RESEARCH METHODS

The research design used in this study was quasi-experimental with a pre-test and post-test with a control group design, aiming to determine the effect of infant baby massage on weight gain in infants.

The population in this study consisted of infants who visited the Mom & Baby Spa PMB D Clinic from April to September 2022, with a total population of 65 infants. The sample size used in this study was 52 infants, with 26 infants receiving baby massage and 26 infants not receiving baby massage. The sample was selected using purposive sampling, a sampling method that considered specific criteria to determine the desired sample size (Sugiyono, 2018). The sample was selected based on inclusion criteria, including infants aged 0-12 months, healthy infants, and infants who received regular treatment for 3 consecutive months. The exclusion criteria were sick infants and infants who did not attend regular monthly visits, while the drop-out criteria included infants who attended regular visits but were sick during the examination.

The research variables were something used as characteristics, attributes, or measurements that were possessed or obtained by the research unit regarding a specific conceptual understanding. In this study, two independent variables (massage for infants) and one dependent variable (infant weight gain for infants aged 0-12 months) were used.

The study was conducted from April to September 2022, and the research was carried out at the Mom & Baby Spa PMB D Clinic. Data collection involved using a calibrated bed scale, which was a 20 kg baby weighing scale that had been tested for calibration, to measure the respondents' weight. The researcher also designed a weight observation sheet to record the infants' weight. The process of weighing the infants took place during their first visit before they were massaged. Subsequently, the infants received the massage treatment, and the mothers were taught and guided on how to perform the massage intervention based on the instructed techniques. The infants' weight was measured again during their second and third visits. Once the data were collected, they were described according to the observed weight changes. Furthermore, the data were tabulated, and frequency distribution tables were created for interpretation.

The collected data were analyzed using SPSS for Windows 23. Firstly, parametric assumptions were assessed using the Shapiro-Wilk

test. Secondly, after the test results indicated that the research data followed a normal distribution, the homogeneity of variance was examined using Levene's test. Subsequently, once the assumptions were met, the analysis was conducted using the Independent sample t-test.

RESULTS AND DISCUSSION

From Table 1, the mean weight of infants in the control group at the third visit was found to be (9.480 ± 1.943) Meanwhile, the mean weight of infants in the treatment group at the third visit was (10.715 ± 1.459).

Table 1
Mean Weight of Infants Who Received Baby Massage and Did Not Receive Baby Massage

Group	n	Mean ± SD
Infant Weight of Control Weight	26	9.480 ± 1.943
Infant Weight of Treatment Group	26	10.715 ± 1.459

Table 2
The Effect of Baby Massage on Infant Weight

Group	n	*P Value*
Infant Weight of Control Weight	26	0.013
Infant Weight of Treatment Group	26	

Based on Table 2, the research findings show that there was a significant difference in infant weight gain between the control and treatment groups, with a P-value of 0,013. The Levene's test result yielded a significant value of 0,130, indicating acceptance of the null hypothesis (homogeneity of variances between groups). Since the variances were homogeneous, the t-test was conducted assuming equal variances, with a significance level of 0,013, indicating acceptance of the alternative hypothesis (there is a significant difference in weight gain between infants who received massage and those who did not). The average weight of infants who received massage was 10,71 grams higher compared to the average weight of infants who did not receive massage. The weight difference between the treatment group (massage group) and the control group (non-massage group) was 1.2346 grams.

DISCUSSION

Many mothers were often unsure about how to increase their baby's weight. When they looked at other babies, they might have thought that their baby needed to gain more weight. The baby's weight could be observed through the growth chart (Kartu Menuju Sehat/KMS), where mothers could track the weight gain but also the height of the baby. If the weight curve remained within the light green to dark green range, it indicated that the weight gain was still normal. If there were no issues with the baby's weight, adding more weight was unnecessary.

The normal weight gain experienced by babies could be effected by several factors identified by the research participants. All babies received appropriate nutrition according to their age, namely exclusive breastfeeding. Other contributing factors included the baby's overall health and metabolism function, which were still functioning well.

Theoretically, babies do have varying weights based on their age (Fauziah, 2018). The increase in a baby's weight is influenced by various internal and external factors (Ningsih, 2014). Therefore, each baby will have a different weight depending on these factors (Soetjiningsih, 2016). During specific periods, there may be periods of acceleration or deceleration, as well as variations in the growth rate among different organs (Moersintowati et al., 2022).

The process of growth is primarily assessed through regular anthropometric measurements. Normal babies follow a steady growth curve (Triana, 2012). Deviation from the normal growth curve serves as an indicator of abnormalities due to illness, hormonal issues, or malnutrition (Hassan, 2002). The significant weight gain observed in the participants can be attributed to the influence of baby massage, both during Mom & Baby Spa visits and through massages performed by mothers whom the researchers taught.

The study conducted by Dewi (2011) demonstrated that baby massage has an effect on the weight gain of full-term infants who received daily massages for 4 weeks. The median weight gain in the massage group was 1230 grams compared to 830 grams in the control group.

 DOI 10.33024, http://ejurnalmalahayati.ac.id/index.php/kebidanan

Similarly, a study conducted by Yuliana, Suharto, and Handayani (2013) on infants aged 3-5 months showed that regular massages for 4 weeks resulted in higher weight gain compared to infants who did not receive massages. This can be attributed to reduced stress hormones in infants, which leads to increased breastfeeding and, subsequently, increased breast milk production and weight gain.

In theory, it can be explained that the innervation of the digestive tract is autonomic. Through baby massage, where the mother provides gentle touch accompanied by light pressure on the baby, the nerve endings on the skin surface react to the touch (Sukarja, 2012). Subsequently, these nerves send messages to the brain through the neural tissue in the spinal cord. This process can stimulate the peripheral sensory nerve receptors, especially pressure receptors (Guyton, 2012). This stimulation activates the parasympathetic nervous system. The parasympathetic nerve supply is conveyed to and from the abdomen through the vagus nerve (Roesli, 2016). The administration of baby massage can stimulate the vagus nerve, which is the tenth cranial nerve that regulates the functions of organs in the body, including the chest and abdomen. Stimulation of the vagus nerve (parasympathetic nerve) will stimulate the stomach to release the hormone gastrin.

Hormone gastrin stimulates the release of insulin, hydrochloric acid, pepsinogen, pancreatic enzymes, and mucus, increases the flow of bile from the liver, and stimulates gastric motility. Gastrin hormone also facilitates receptive relaxation of the stomach (temporary relaxation), allowing the stomach to expand its volume easily without increased pressure.

Baby massage is a good way for parents to communicate and bond with their baby. The increase in baby weight through baby massage needs to be a concern for both parents and healthcare providers, as it plays a role in the nutritional status by influencing growth patterns and development in infants and toddlers. Baby massage can be done independently, allowing parents to do it themselves.

Many parents, especially mothers, want to be involved in caring for their babies, even though they often have limited time. Therefore, mothers can allocate some time to massage their babies. Mothers are the closest caregivers to their babies. Baby massage is a popular form of healthcare that provides mothers with an opportunity to establish an emotional connection with their babies. Mothers who massage their babies cherish it as a highly enjoyable experience in caring for their little ones.

CONCLUSION

Based on the research findings, it can be concluded that there was a difference in weight gain in infants before and after receiving massage in the treatment group, but there was no difference in weight gain in infants before and after receiving baby massage in the control group.

SUGGESTIONS

The provision of baby massage can significantly help in increasing infant weight compared to not receiving massage. Therefore, it is recommended for midwives to provide massage services for infants and provide counseling and education on the techniques and benefits of baby massage to parents so that they can apply them effectively and assist in improving infant weight gain.

REFERENCES

Adamson, S. (2013). Teaching Baby Massage to New Parents. Complementary Therapy in Nursing and Midwifery. 2, 151-159.

Astriana, A., & Suryani, I. L. (2017). Pengaruh Pijat Bayi Terhadap Peningkatan Berat Badan Pada Bayi Di Bps Masnoni Teluk Betung Utara Kota Bandar Lampung.Holistik Jurnal kesehatan, 11(2), 72-76

Carolin, B. T., Syamsiah, S. S., & Khasri, M. M. (2020). Pijat bayi dapat meningkatkan berat badan bayi. Jurnal Kebidanan Malahayati, 6(3), 383-387.

Dasuki, Mohammad Shoim. (2018). Pengaruh Pijat Bayi terhadap Kenaikan Berat Badan Bayi Ayu Widya Ningsih, MTS Darmawan, Titik Kuntari. Perbandingan Pengetahuan Umur 4 Bulan. Tesis Program Studi Ilmu Kesehatan Masyarakat Minat Gizi dan Kesehatan. UGM, Yogyakarta.

Dewi, N. N. (2011). Pengaruh Stimulasi Pijat Bayi Terhadap Peningkatan Berat Badan Pada Bayi Lahir Cukup Bulan. (Doctoral dissertation, Universitas Gadjah Mada).

Dinkes Jabar. (2020). melalui www. diskes.jabarprov.go.id,.

Elya, D., Ridwan, M., & Anggraeni, Y. (2018). Efektifitas Pijat Bayi terhadap Peningkatan Berat Badan pada Bayi Usia 0 – 3 Bulan. Jurnal Kesehatan Metro Sai Wawai, 11(1), 15-19.

Fauziah, A., & Wijayanti, H. N. (2018). Pengaruh Pijat Bayi terhadap Kenaikan Berat Badan dan Kualitas Tidur Bayi di Puskesmas Jetis

Yogyakarta. PLACENTUM Jurnal Ilmiah Kesehatan Dan Aplikasinya, 6(2).

Febrikaharisma, M. H., & Probosari, E. (2013). Hubungan Antara TB/U dengan Fungsi Motorik Anak Usia 2-4 Tahun (Doctoral dissertation, Diponegoro University).

Guyton AC. (2012). Buku ajar fisiologi kedokteran. Edisi ke-11. Jakarta: EGC.

Guyton, A.C. and Hall, J.E. (2006) Textbook of Medical Physiology 11th Edition. Amsterdam: Elsevier Saunders.

Hassan, dkk. (2002). Buku Kuliah 1 Ilmu Kesehatan Anak. Jakarta: Infomedika.

Jayatmi, I., & Fatimah, J. (2021). Pengaruh Baby Spa dan Baby Massage Terhadap Tumbuh Kembang Bayi. Jurnal Kebidanan dan Keperawatan Aisyiyah. https://doi.org/10.31101/jkk.1125

Julianti., (2018)., Rahasia Baby Spa, Rumah Sehat Bunda, Depok, p; 14-21.

Julisia, G., & Wulandari, S. R. (2021). Gambaran Tingkat Pengetahuan Ibu Tentang Pijat Bayi di Dusun Pandes 2 Wonokromo Pleret Bantul. Jurnal Kesehatan Samodra Ilmu, 12(2), 187-195.

Kemenkes RI. (2018). Data dan Informasi Profil Kesehatan Indonesia, Kementerian Kesehatan Republik Indonesia, Jakarta.

Kemenkes RI. (2019). Profil Kesehatan Indonesia. Jakarta: Kementrian Kesehatan RI.

Kemenkes RI.(2019). Buku Kesehatan Ibu dan Anak. Jakarta: Kementerian Kesehatan RI

Lee, H.K. (2019). The effects of infant massage on weight, height, and mother-infant interaction. Journal of Korean Academy of Nursing, 36(8),1331-1339.

Lestari, K. P., Nurbadlina, F. R., Wagiyo, & Jauhar, M. (2021). The effectiveness of baby massage in increasing infant's body weight. Journal of Public Health Research, 10(1_suppl), jphr-2021.

Marni, M. (2019). Pengaruh pijat bayi terhadap peningkatan berat badan pada bayi. Jurnal Kebidanan Indonesia, 10(1), 12-18.

Maryunani, A. (2020). Ilmu Kesehatan Anak dalam Kebidanan. Jakarta : CV. Trans Info Medika.

Moersintowati, B., Nerendra., Sularyo, T. S., Soetjiningsih., Suyitno, H., Ranuh, I. G. N. G., & Wiradisuria, S. (2022). Buku ajar I tumbuh kembang anak dan remaja ed.1. Jakarta: Sagung Seto.

Ningsih D. (2014). Pengaruh berat badanbayi usia 0-6 bulan yang diberi terapi pijat sesuai sop dan tidak sesuai sop di PuskesmasBanyuputih tahun 2014 [tesis]. Malang:Universitas Brawijaya.

Pratyahara, Dayu. (2012). The Miracle of Touch For Your Baby. Keajaiban Terapi Sentuh Untuk Bayi Anda. Javalitera. Yogjakarta

Roesli, U. (2016). Pedoman Pijat Bayi, Jakarta: Trubus Angriwidya.

Soetjiningsih. (2016). Tumbuh Kembang Anak,Surabaya: EGC.

Sugiyono. (2018). Metode Penelitian Kuantitatif, Kualitatif, R & D. Bandung: CV. Alfabeta.

Sukarja NIM. (2012). Pengaruh pijat bayi terhadap peningkatan berat badan bayi usia 3-6 bulan di wilayah kerja puskesmas II denpasar timur [disertasi]. Denpasar: Universitas Udayana; 2012.

Sulung, N. dan Gayatri, A. (2015). Efektivitas Massage Baby Terhadap Peningkatan Berat Badan Bayi Usia 3-4 Bulan Di BPS Bunda Kecamatan Mandiangin Koto Selayan Bukittinggi Tahun 2014. Menara Ilmu. Volume 9. Nomor 57.

Triana, K Y., Sukarja, M., Utami, K. (2012). Pengaruh Pijat Bayi Terhadap Peningkatan Berat Badan Bayi Usia 3-6 Bulan di Wilayah Kerja Puskesmas II Denpasar Timur

Yuliana, A., Suharto, A., & Handayani, T.E. (2013). Perbedaan berat badan bayi usia 3-5 bulan yang diipijat dan tidak dipijat. Diunduh dari : http://suaraforikes.webs.com/volume4%20nomor4.pdf#page=46 .