THE EFFECT OF INFANT MASSAGE ON INFANT WEIGHT GAIN AT MAHANUM CLINIC

Yaumil Fauziah[1*], Annisa Namirah Nasution[1], Yulia Fatma Nasution[1], Novvi Karlina[1]
[1]Prodi Sarjana Kebidanan, Sekolah Tinggi Ilmu Kesehatan Flora, Medan, Indonesia.
***Corresponding author:**
yaumil.fauziah9@gmail.com

Abstract

Infant massage is a method of massaging a baby using gentle, slow movements throughout their body, including the feet, stomach, chest, face, hands, and back. This massage is a form of stimulation. Tactile stimulation is the most important type of stimulation for a baby's growth and development. The sense of touch is the most developed sense from birth. Infant massage is also one of the simplest ways to improve a baby's health, which can be done at home. If left untreated, it can impair growth or lead to malnutrition. One way to address growth problems is through massage therapy. Massage therapy can stimulate the vagus nerve, increase levels of the enzymes gastrin and insulin. Increased levels of these two enzymes improve nutrient absorption, make babies feel hungry more quickly and increase their appetite, ultimately leading to weight gain. The purpose of this study was to determine the effect of infant massage on infant weight gain. This study used a pre-experimental design with a one-group pretest-posttest design. The study was conducted at the Mahanum Clinic. The sample consisted of 20 infants aged 6 to 24 months. The sampling technique used was total sampling. The results showed that the average infant weight before massage was 4.00 kg with a standard deviation of 0.75, and the average infant weight after massage was 5.80 kg with a standard deviation of 0.78. The statistical test results showed a p-value of 0.001 ($p < 0.05$), indicating a significant increase in infant weight after massage.

Keyword: Effect 1; Infant Massage 2; Infant Weight Gain. 3.

INTRODUCTION

Infant massage has long been recognized as an important method for supporting healthy development and growth in children. This traditional touch therapy has been shown to provide a variety of benefits, from promoting weight gain and better sleep patterns to strengthening emotional bonds and reducing the risk of infection.

Factors contributing to malnutrition include inadequate nutrition, parents' lack of understanding of breastfeeding, and unhealthy environmental conditions. Steps that can be taken to help babies achieve their ideal weight include providing adequate nutrition and regular infant massage. Infant massage combines elements of touch, eye contact, attention, movement, and affection. Using a variety of techniques, this massage involves gently and slowly rubbing and stroking different areas of the body in sequence. Massage can be performed with or without the use of oils, such as mineral oil, olive oil, or other vegetable oils.

Recognizing the importance of infant massage in ultimately supporting the holistic well-being of infants and young children, this study investigated the impact of massage therapy on the development of children under 2 years of age.

RESEARCH METHODS

This type of research uses a pre-experimental approach, with a one-group pretest-posttest design. The characteristic of this type is that it demonstrates cause-and-effect relationships through the involvement of a single group of subjects. This group of subjects is observed before the intervention and then again after the intervention

RESEARCH RESULTS

Table 1. Frequency Distribution of Infant weight before massage Infant weight after massage

Variable	N	Mean	Std. Deviation	P value
Infant weight before massage	20	4.00	0.75	0.001
Infant weight after massage	20	5.80	0.78	0.001

Table 1 shows that the average infant weight before the massage was 4.00 kg with a standard deviation of 0.75, while after the massage, the average weight increased to 5.80 kg with a standard deviation of 0.78. The statistical test results obtained a p-value of 0.001 ($p < 0.05$), indicating a significant difference between infant weight before and after massage. This means that infant massage effectively increases infant weight.

DISCUSSION

The findings of this study revealed that infant massage significantly increased infant weight, with the mean body weight rising from 4.00 kg before massage to 5.80 kg after massage ($p = 0.001$). This result indicates that infant massage effectively promotes weight gain in infants aged 6–24 months. The improvement in body weight may be attributed to the physiological benefits of massage, including stimulation of the vagus nerve, enhancement of gastrointestinal motility, and increased secretion of digestive hormones such as gastrin and insulin, which together improve nutrient absorption and metabolism.

The results of this study are consistent with several previous studies. Atika et al. (2024) reported that infant massage significantly improved weight gain among low birth weight infants, showing better growth outcomes compared to infants who did not receive massage. Similarly, Pratiwi et al. (2024) found that preterm infants who received daily massage gained significantly more weight than those in the control group, suggesting that massage provides both physiological and behavioral benefits that support growth.

In another study, Suryani et al. (2023) demonstrated that infants aged 1–6 months who received massage therapy in community settings experienced a significant increase in weight ($p = 0.000$). Ramadhani et al. (2024) also confirmed a significant relationship between the frequency of infant massage and weight gain in infants aged 6–18 months, emphasizing that consistency and parental involvement are key factors influencing effectiveness.

Furthermore, Karim et al. (2025) observed that infant massage interventions resulted in a strong positive correlation ($r = 0.993$) between massage and weight gain in infants aged 0–12 months in Central Sulawesi, Indonesia. They suggested that massage stimulates both physical and emotional bonding, which reduces stress hormones such as cortisol and facilitates healthy growth.

Although most studies reported significant effects, Rahmadani et al. (2024) noted that some interventions failed to produce statistically significant differences, possibly due to variations in massage duration, frequency, infant age, and baseline nutritional status. This highlights the need for further controlled studies to establish standardized massage protocols for optimal outcomes.

Overall, the results of the present study align with the growing body of evidence that infant massage is a simple, safe, and effective non-pharmacological intervention to promote weight gain in infants. It can be recommended as part of routine infant care programs, especially in areas where growth faltering or undernutrition remains prevalent.

CONCLUSION

The results of this study indicate that infant massage has a significant effect on increasing infant weight. The average infant weight increased from 4.00 kg before massage to 5.80 kg after massage, with a p-value of 0.001 ($p < 0.05$). This finding suggests that infant massage can be used as a supportive intervention to promote healthy weight gain in infants aged 6–24 months.

REFERENCES

Atika, D., Djuari, L., Manaf, H. A. G., Sabrina, A. M., Ismanhendra, N. A., Soediono, M. R., Bachtiar, D. A., Yuliana, S. K., Razaan, M. F., & Karim, Y. A. (2024). The Influence of Infant Massage to Weight Gains in Low Birth Weight (LBW) Infant: A Systematic Review. Journal of Community Medicine and Public Health Research, 5(1), 112–120.

Anggarini, I. A., Andriani, R., Purwanti, C., & Susanti, L. (2020, July). The effect of infant massage on infant weight gain. In *1st International Conference on Science, Health, Economics, Education and Technology (ICoSHEET 2019)* (pp. 403-406). Atlantis Press.

Field, T., Diego, M., & Hernandez-Reif, M. (2010). Preterm infant massage therapy research: a review. *Infant behavior and development*, *33*(2), 115-124.

Lee, H. K. (2006). The effects of infant massage on weight, height, and mother-infant interaction. *Journal of Korean academy of nursing*, *36*(8), 1331-1339.

Guzzetta, A., D'ACUNTO, M. G., Carotenuto, M., Berardi, N., Bancale, A., Biagioni, E., ... & Cioni, G. (2011). The effects of preterm infant massage on brain electrical activity. *Developmental Medicine & Child Neurology*, *53*, 46-51.

Pratiwi, T. A., Yusnanda, F., Susanti, N., & Ilawati, S. (2024). The Effectiveness of Infant Massage on Weight Gain of Preterm Infants. International Journal of Public Health Excellence, 4(1), 112–118.

Mrljak, R., Arnsteg Danielsson, A., Hedov, G., & Garmy, P. (2022). Effects of infant massage: a systematic review. *International journal of environmental research and public health*, *19*(11), 6378.

Suryani, N., Fitriani, D., & Rahmawati, L. (2023). The Influence of Infant Massage on Weight Gain in Babies Aged 1–6 Months. International Journal of Nursing and Midwifery Science (IJNMS), 7(2A), 1–5.

Ramadhani, R., Yusuf, H., & Nurul, S. (2024). The Relationship Between the Frequency of Infant Massage and the Increase in Body Weight of Infants Aged 6–18 Months at Ralla Community Health Center, Barru Regency. International Journal of Health Science, 5(3), 245–252.

Karim, Y. A., & Bachtiar, D. A. (2025). The Effect of Massage on Weight Gain in Infants in the Working Area of Puskesmas Kandis. Healthy Tadulako Journal, 11(1), 37–44.

Pados, B. F., & McGlothen-Bell, K. (2019). Benefits of infant massage for infants and parents in the NICU. *Nursing for women's health*, *23*(3), 265-271.

Rahmadani, L., Wulandari, R., & Ahmad, F. (2024). Effect of Infant Massage on Weight Gain in Infants at Banjarbaru Health Center, South Kalimantan. Journal of Physical Therapy, 5(2), 48–55.

Ramadhani, S. F., Ilmiah, W. S., & Alfitri, R. (2025). The Effect of Baby Massage on the Increase in Weight of Babies Aged 3–12 Months. *Health Dynamics*, *2*(6), 256-261.

Mrljak, R., Arnsteg Danielsson, A., Hedov, G., & Garmy, P. (2022). Effects of infant massage: a systematic review. *International journal of environmental research and public health*, *19*(11), 6378.

Nursalam. 2013. Konsep dan Penerapan Metodologi Penelitian Ilmu Keperawatan : Pedoman Skripsi, Tesis dan Instrumen Penelitian. Jakarta : Salemba Medika