

The Effect Of Tuina Massage And Infant Weight Gain

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Abstract. Tuina massage involves stimulating specific body points to address feeding difficulties in infants by enhancing blood circulation in the spleen and digestive system; it functions as a needle-free form of acupuncture. This technique can alleviate picky eating habits, thereby improving appetite and promoting weight gain. Tuina massage can be administered as early as the neonatal period. This study aimed to analyze the effect of Tuina massage on infant weight gain. A quantitative research method was employed using a quasi-experimental design a control group approach. The sample consisted of 30 infants 6–9 months, divided into an intervention group (n=15) and a control group (n=15). The results showed a weight gain of 0.03 kg in the control group compared to 0.51 kg in the intervention group. With a significance value of 0.001 ($p < 0.05$), the study demonstrates that tuina massage significant effect on infant weight gain.

Keywords: Tuina, massage, infant weight gain

INTRODUCTION

A toddler's body weight serves as a crucial health indicator reflecting their physical growth and development. Optimal growth during the preschool years can be assessed by comparing a toddler's weight against established growth curve standards. Nutritional status is linked to dietary habits; adopting good dietary practices improves a child's nutritional status. A healthy diet involves consuming high-quality foods specifically, a varied and nutritious diet in sufficient quantities, alongside the practice of proper eating habits (Salmadita, 2024)

Indonesian Nutritional Status Survey (SSGI), 2024 conducted by the Ministry of Health, the national prevalence of stunting in Indonesia dropped to 19.8%. In general, nutritional issues among toddlers in Indonesia encompass several key indicators, such as stunting (short stature), wasting (thinness), underweight, and overweight. Monitoring the nutritional status of infants in Indonesia is vital, as it directly impacts the quality of the nation's future generations and plays a key role in preventing chronic health issues like stunting. Regular nutritional status assessments are essential because a child's growth between the ages of 0 and 2 determines their long-term health and represents a critical period for optimizing their growth and development (Suchianti, 2023)

Tuina massage is one non-pharmacological method used to address nutritional deficiency issues. It is a massage technique that can help increase the body weight and appetite of toddlers. Tuina massage is effective in reducing picky eating behaviors. Following the massage, toddlers become relaxed and are able to rest effectively; consequently, upon waking, they possess sufficient energy for activities. Engaging in these activities stimulates hunger, thereby increasing their appetite (Widowati, 2020)

Several studies demonstrate the effectiveness of Tuina massage in increasing the weight of toddlers suffering from undernutrition or feeding difficulties. One study showed that the average weight of toddlers prior to Tuina massage was 10.6 kg, increasing to an average of 11.6 kg after the treatment (Astuti, 2024)

In the first few days after birth, infants may experience weight loss. Normal weight loss is approximately 5% of birth weight for formula-fed infants and 7–10% for breastfed infants. By two weeks of age, an infant's weight typically returns to or exceeds their birth weight. Infants aged 6–17 months should gain a minimum of 300 grams per month (Suryaningsih, 2022)

The results of the paired *t*-test revealed a significance value of 0.000 ($p < 0.05$), indicating a statistically significant difference in toddlers' body weight between the pre-intervention (pretest) and post-intervention (posttest) measurements following Tuina massage. These findings demonstrate that the Tuina massage intervention had a significant positive effect on improving toddlers' body weight (Rimbani, 2024)

A six-day study comparing Tuina massage and standard infant massage administered to toddlers showed an average ranking of 12.10 for the Tuina group and 8.90 for the infant massage group. While children in both groups gained weight, specifically 0.4 kg in the Tuina group and 1.1 kg in the infant massage group researchers considered these gains positive given the short six-day intervention period;

continuing the practice would likely lead to the weight gain desired by parents. Additionally, attention must be paid to the child's diet: mothers should avoid giving children unhealthy snacks (such as processed chips or junk food), prioritize home-cooked meals, and establish a routine of family meals (Haryanti, 2022).

An initial survey conducted in Tondomulyo Village involving observations and interviews with ten mothers of infants aged 6–9 months. Revealed the following: observations of Maternal and Child Health (KIA) records over a two-month period showed that six infants maintained a stable weight, three showed a downward trend in weight, and one showed an increase. Interviews with the mothers indicated that the six infants with stable weight had received massages from a traditional healer, the three with declining weight had never received a massage, and the infant who gained weight had received regular massages from a midwife.

Based on these findings, the researcher is interested in investigating the effect of Tuina massage on weight gain in infants aged 6–9 months in Tondomulyo Village.

METHODS

Quantitative study was conducted using a quasi-experimental design with a parallel control group. This design enabled the comparison of outcomes between two independent groups: an intervention group that received Tuina massage and a control group that received routine care. The study examined the effect of Tuina massage as the independent variable on infant weight gain as the dependent variable. The study sample comprised 30 infants aged 6–9 months, equally allocated to the intervention group ($n = 15$) and the control group ($n = 15$).

RESULTS AND DISCUSSION

Table 1. Increase in baby weight

Category	Control Average BB	Intervention Average BB
Pretest	7.72	8.08
Posttest	7.75	8.59
BB increase	0.03	0.51

Based on Table 1, the results of the data normality test show the sig value. $0.053 > 0.005$, then it is stated that the data is not normally distributed so the test used is t test.

Tabel 2. Weight gain

Independent Samples Test									
		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower Upper
Weight gain	Equal variances assumed	.365	.553	-4.113	18	.001	-.84000	.20423	-1.26908 -41092
	Equal variances not assumed			-4.113	16.371	.001	-.84000	.20423	-1.27216 -40784

Based on table 1, the results of the The significance value was found to be $0.001 (< 0.05)$, indicating a difference in the effect of Tuina massage on infant weight gain.

Tuina massage is a therapeutic modality of Traditional Chinese Medicine (TCM) that involves manual manipulation of soft tissues and stimulation of specific acupoints and meridians using techniques such as pushing, pressing, kneading, rubbing, and rolling. It is intended to improve the flow of Qi and blood, regulate organ function, relieve muscle tension, and promote overall health and recovery (Ningsih, 2023)

Tuina massage may positively influence appetite regulation. Stimulation of digestive-related acupoints has been reported to increase the secretion of gastrointestinal hormones, including gastrin and insulin, both of which are involved in digestive activity and nutrient metabolism. Enhanced digestive hormone activity may increase hunger sensations, encourage more frequent feeding, and subsequently improve daily caloric intake. Increased energy consumption, together with improved nutrient utilization,

provides a biological basis for the greater weight gain observed in infants receiving tuina massage (Noflidaputri, 2020)

The therapeutic effects of Tuina are also likely associated with improvements in circulation and autonomic nervous system regulation. Gentle manual manipulation enhances peripheral blood circulation and tissue oxygenation, supporting metabolic processes essential for growth. In addition, massage therapy has been shown to promote parasympathetic dominance while reducing sympathetic activity, creating a more relaxed physiological state. This relaxation may improve sleep quality, reduce energy expenditure related to stress responses, and optimize the allocation of energy toward growth and development (Bimantoro, 2020)

During the growth period, infant weight gain is categorized into two phases; specifically, from 0 to 6 months, male infants gain approximately 140–200 grams per week and reach double their birth weight by the end of the sixth month, while female infants gain approximately 100–150 grams per week and also reach double their birth weight by the end of the sixth month (Putri, 2025)

Monitoring the growth of children under five is a necessary component of the Minimum Service Standards (SPM) that must be implemented across all regions. Data on community nutritional status is essential for assessing the scale of nutritional issues in a specific area, serving as a foundation for planning and implementing activities including stakeholder interventions and for evaluating performance (Duri, 2025)

Happy Marthalena (2019) on the effect of massage on feeding difficulties in one-year-old infants. In a sample of 15 infants, all of whom initially experienced feeding difficulties post-massage results showed that 2 infants (13.3%) still had feeding difficulties, while 13 infants (86.7%) no longer did (Simanungkalit, 2019)

Research findings (Retno Wulan, 2025) indicate that Tuina massage is effective in increasing infant appetite, with a value of $0.000 < 0.05$. In this study, the massage was administered for six consecutive days at the same acupoints.

CONCLUSION

This study demonstrates that tuina massage has a positive effect on infant weight gain, as indicated by the statistical analysis showing a significant difference before and after the intervention ($p = 0.001$). The findings support the research objective by confirming that Tuina massage can serve as an effective complementary intervention to promote healthy infant growth. The observed improvement in weight gain may be attributed to the stimulation of digestive-related acupoints, which enhances gastrointestinal hormone secretion, improves appetite and nutrient utilization, and optimizes metabolic processes. Furthermore, the beneficial effects of Tuina massage on peripheral circulation, autonomic nervous system regulation, and relaxation may contribute to more efficient energy utilization for growth and development. Considering the importance of adequate weight gain as an indicator of infant nutritional status and healthy development, Tuina massage has the potential to be incorporated as a safe, non-pharmacological complementary approach in infant health services to support growth monitoring and nutritional interventions.

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