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## RESEARCH ARTICLE

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# Increase Weight Infant With Family Approach Through Massage Therapy

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## ABSTRACT

The positive effects of massage or touch on the growth process of children has long been known to mankind. Touch and massage given the mother is a form of communication that can build closeness with the baby's mother. This study aimed to find out the differences baby weight before and after the massage. The population in this study were infants aged 0-12 months by taking the sample using quota sampling technique with a sample of 30 infants. Quantitative Research Methods quasi non-randomized approach experiment with pre and posttest design with one group. The study was conducted at the health center region of South Tangerang. Analysis of the test data using an independent t-test, correlation, and linear regression analysis through methods best subset. The results obtained by the average age of the baby is 5.5 months, maternal age was 28 years and 3 months, most mothers do not work as many as 21 people, maternal weight was 52.8 kg, the mean difference in weight before and after massaged in the intervention group was 0.80 kg. In the analysis of infant massage multivariate unknown variables significantly to the increase in weight with P value = 0.0001. Confounding variable is the age of the baby and the mother worked with R 2 coefficient of determination (R square) = 0.546, meaning that the variable can explain variations baby massage the baby's weight at 54.6% and the rest is explained by other variables. Conclusion The increase in weight babies are massaged higher compared with not a massage, it is advisable for the mother can do massage continuously and invite family, especially her husband to come home do baby massage, and can be used as a midwife in implementing the program in the community practice.

**Keywords:** Baby massage, Baby weight

## INTRODUCTION

Babyhood is a critical period in its growth and development, as this period is the foundation of early life for infants. This period is called the golden age or the golden age of the brain development. According to Piaget's theory of infancy is a period of early cognitive development is the stage of motor sensory. Infants born already have a number of innate reflexes and encouragement to explore the environment. Reflex occurs when the baby receives stimulus or stimulation, because the baby is very sensitive to the environment and the stimulus provided<sup>(1)</sup>. Touch is one type of stimulation. It is proposed by Widyastuti and Widyani (2008) where the types of stimulation can be stimulation Visual, hearing, kinetic and touch. The touch stimulation that has been given by the community to her child is with touch and massage<sup>(2)</sup>.

Touch and massage in infants after birth can provide assurance of sustained body contact that can sustain a baby's sense of security<sup>(3)</sup>. Massage is the oldest known human touch therapy and the most popular. Massage is the art of health care and treatment practiced since Centuries ago. In fact, it is thought that this science has been known since the beginning of human beings created into the world, perhaps because massage is closely related to pregnancy and human birth<sup>(4)</sup>.

Research conducted by prof. T. Field & Scafidi (1986 & 1990) showed that in preterm infants (body weight 1,280 and 1,176 grams), who were massaged 3x15 minutes for 10 days, gained 20% - 47% more body weight than non-massage. Research in 1-3 month-old infants, who were massaged 15 minutes, 2 times a week for 6 weeks, gained more weight than not being massaged<sup>(3)</sup>. Furthermore, research conducted by Merineherta (2009) got the result there is influence of infant massage to baby weight age 3-6 month<sup>(5)</sup>, also research conducted by Pratiwi (2013), got infant massage effectiveness to development with value odds ratio equal to 11 times greater than babies who do not do massage<sup>(6)</sup>. The positive effect of massage or touch on the process of child growth has long been known to humans. However, scientific research on this subject has not been done.

**METHODS**

Table 1 shows the methods had been implemented in this research.

Table 1. The summary of research methods

Type of research	Quasi-experimental (non-randomized experiment)
Design	Pre-Posttest with the control group design - The intervention group was given massage treatment from 1 <sup>st</sup> day 16 <sup>th</sup> day, the control group only at the 1 <sup>st</sup> day - On the 1 <sup>st</sup> day and the 17 <sup>th</sup> day the baby was taken their weight
Population	All babies around 1 <sup>st</sup> – 12 <sup>th</sup> month old at Health Centers in South Tangerang District
Sample	- Sample size: 30 for intervention group and 30 for control group, from Pondok Benda Health Center and Kampung Sawah Health Center - Sampling technique quota sampling
Data collection	Time of data collection: October 2016 Data collection technique: - Baby’s weight measurement
Data analysis	- T-test independent and dependent - Correlation test - Linear regression test

**RESULTS**

Table 2. Description of characteristics of respondents

Variable	Intervention group			Intervention control		
	mean	Min-Max	n	mean	Min-Max	n
Age of baby (month)	5.5	1.0-11.0	30	8.3	2.0-12.0	30
Age of mother (years)	28.3	19-51	30	32.6	26-42	30
Mother’s weight (kg)	52.8	38-72	30	49.8	38-58	30

Table 3. Description of baby’s weight

Variable	Intervention group						Control group					
	Mean	Min-max	SD	SE	P value	n	Mean	Min-Max	SD	SE	P-value	n
Baby’s weight (pre-test)	6.6	3.8-4.3	1.57	0.29	0.0001	30	7.11	3-10	1.63	0.29	0.305	30
Baby’s weight (post-test)	7.4	9.5-10	1.49	0.27		30	7.16					30

Table 4. Result of linear regression test for “baby’s weight” as dependent variable

Variable	P Value	Beta	R square	Constant
Baby weight	0.0001	0.767	0.564	6.789
Age of baby (month)	0.0001	0.303		

P-value = 0.0001 (<0.05), so it was concluded that massage can increase the baby’s weight.

**DISCUSSION**

The results showed that the average age of respondents in the intervention group was 5.5 months, the majority of maternal age in the intervention group was 28 years 3 months, then the maternal weight in the intervention group was 52.8 kg. Based on these results it can be concluded that the average age of infants is in the age group 1 - 6 months, where at that age the best food is breast milk alone. The average age of the mother is 28 years 3 months which is the best age to perform its reproductive function in breastfeeding. Most mothers do not work so have more time to do baby massage. In the multivariate test results obtained Coefficient determination  $R^2 = 0.564$ , meaning that baby massage variables can explain the baby's weight variation of 56.4% and the rest is explained by other variables. The value of p-value = 0.0001 means the equation of the regression line as a whole is significant. This means that there is a difference in body weight before and after a message.

The results of this study are in line with the research conducted by Merineherta (2009) to obtain the results of the influence of infant massage on the weight gain of infants aged 3-6 months<sup>(5)</sup>, as well as research conducted by Pratiwi (2013), obtained the effectiveness of infant massage against development with odds value ratio of 11 times greater than infants who do not do massage<sup>(6)</sup>.

Today, many parents, especially mothers who want to play a role in caring for their babies even though in general they only have a very limited time. Therefore the mother can spend to do massage for her baby. Mother is the closest parent to the baby, where the mother's massage to her baby is a gentle sweep of the affectionate braid. A Massage is a form of health care effort that is usually very liked. By doing the massage will open the opportunity for a mother to establish inner contact with her baby. Mothers who have done the massage on their babies will remember it as a very pleasant experience and proud of it.

Touch therapy and massage in infants have many benefits to the physiological changes of the baby let alone done by the baby's mother. Mother is the person closest to the baby, where the mother's massage to her baby is a gentle sweep of affection braid. Mother's skin is the earliest known skin by a baby<sup>(7)</sup>. Touch and massage in infants after birth can provide assurance of sustained body contact that can sustain a baby's sense of security<sup>(3)</sup>. The touch and massage provided by the mother is a form of communication that can build the mother's closeness to the baby by combining eye contact, smile, facial expression. If the stimulus is often given, then the relationship between mother and child affection will be stronger.

### CONCLUSION

Increased weight of infants who are massaged higher than those who do not, and recommended for mothers can do a continuous massage and invite families, especially husbands to take a baby massage at home, and can be one of the midwife programs in carrying out the home visit.

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