

Massage Therapy, Mapping Of Mother's Knowledge And Their Effect On Baby Weight

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ABSTRACT

The government's target in reducing the prevalence of stunting aims to reduce the number of people who are not qualified, because it will have an impact on the country's economy. Phase 1 data collection method was carried out by distributing questionnaires to 40 mothers who gave birth in Langkat, Deli Serdang and Medan. In the second stage, data collection was carried out using a quasi-experimental design. The approach taken is a non-randomized pre and post test with control design. Respondents in the second stage were 20 infants aged 6-12 months. Based on massage therapy performed by mothers for very large babies, as many as 21 people (52.5%). Data analysis using Chi-Squared p value = $0.019 < (0.05)$, meaning that there is a significant relationship between mother's knowledge and massage therapy for babies. In the first month of massage, the baby's average weight increased by 49 grams, then there was an increase in the baby's weight again in the second month, namely an increase of 40 grams and in the 3rd month an increase in body weight of 94 grams. Weight gain in infants from 0 months - 3 months, then it can be seen that the weight gain in babies who are given massage is above the weight of babies who are not given massage.

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1. introduction

The problem of chronic malnutrition in the form of stunting or stunting in Asia reached 30.6% in 2007 [1]. Indonesia ranks 17th with the highest prevalence of stunting reaching 32.7% among 117 countries. The prevalence of stunting under five in Indonesia is higher than Vietnam (23%), Malaysia (17%) and Thailand (16%) [2]. In Indonesia, almost 9 million children under five are stunted, so babies who are stunted have low intelligence, are more susceptible to disease and can cause a decrease in productivity. As a result, stunting can inhibit economic growth, prolong and increase poverty [3]. This affects the success of the nation in providing the availability of quality human resources.

Law of the Republic of Indonesia number 17 of 2007 concerning Long-Term Development Plans (2005-2025) [4] states that development and improvement of nutrition is carried out across sectors including production, so that food consumption with balanced nutrition ensures its safety. This law shows that efforts to improve nutrition are a national issue. The Decree of the Minister of Health Number 900/MENKES/SK/VII/2002 concerning the Registration and Practice of Midwives states that midwives have the authority to unite infant development through early detection and stimulation of growth and development. One of the efforts that can be done to prevent stunting in infants is to provide stimulation in the form of infant massage therapy. According to Dasuki [5], baby massage can control weight gain by 9.44%. Baby massage is a touch therapy that has long been known to the public, which is useful in increasing the baby's immune system, increasing concentration, improving sleep quality and affection between parents and children and can increase milk production [6]. However, parents only understand that baby massage is performed on sick babies. Lack of proper information about baby massage in the community makes parents afraid to do baby massage [7].

This research is in line with the research roadmap of the Langkat Academy of Midwifery, which is included in the leading topic of midwifery research (maternal and infant health). The lead researcher has experience in infant health and stunting. This research is phase 2 according to the research roadmap. Based on the pre-study conducted in Langkat (2020 PDP study), it was found that 66.6% of mothers had understood about stunting, but they did not understand the causes and efforts to prevent stunting in infants. This is a problem that results in an increase in the number of unqualified human resources in the future. Coupled with the current Covid-19 pandemic situation, where the family economy is disrupted due to layoffs, the stay at home policy also increases the pregnancy rate. This phenomenon makes research on optimizing infant massage therapy to prevent stunting a research that must be carried out. This is in accordance with research conducted by Dasuki [5], that massage can be a stimulus for infant growth and development. This study will examine the problem of efforts to reduce stunting through massage. The specific purpose of this research is to get a large effect of optimizing the implementation of massage therapy on the prevention of stunting in infants, so that the results can later educate and assist the community in solving stunting problems during the Covid-19 pandemic. that massage can be a stimulus for baby's growth and development. This study will examine the problem of efforts to reduce stunting through massage. The specific purpose of this research is to get a large effect of optimizing the implementation of massage therapy on the prevention of stunting in infants, so that the results can later educate and assist the community in solving stunting problems during the Covid-19 pandemic. so that the results will be able to educate and

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2. method

The research was conducted in Langkat Public Health Center, Deli Serdang and Medan. The study was conducted for 3 months. The research sample is a saturated sample, namely mothers who give birth. In the first stage, as many as 40 samples will be selected which are mothers who have done massage to babies, namely 40 people. The sample was selected using a purposive sampling technique, namely selecting women who deliberately fit the criteria. Data were collected using a questionnaire about the knowledge of infant massage including the understanding, understanding of the benefits, how to apply and its application. Next, the second stage is an analysis of the optimal massage method in preventing stunting. The sample at this stage is 20 toddlers consisting of body weight <500 grams to >

This study uses quantitative descriptive data with a quasi-experimental design. The approach used is non randomized pre and post test with control design. Collecting data for knowledge about infant massage to mothers using a questionnaire following the method [13]. Data collection for testing the optimization of the implementation of infant massage using a checklist taken from the baby massage book published by the International Association of Infant Massage [14]. This study uses primary data obtained directly from respondents who have babies aged 3-12 months. Baby massage classes are conducted face-to-face 5 times with a duration of 60 minutes for each meeting. The material presented was about the benefits of baby massage, the oil used, baby massage movements and the right time for massage. The statistical test used is the Mann Whitney Test. As well as validity and reliability testing was also carried out using SPSS ver 21.

3. Results and Analysis

In this study, the characteristics of patients who were careful from age, education and length of work were shown in table 1.

Table 1.
Frequency Distribution of Respondents doing Infant Therapy

Characteristics of Respondents	Frequency (P)	Percentage (%)	
age	< 20 Years	1	2.5
	21-30 Years	28	70.0
	>31 Years	11	27.5
education	SD	1	2.5
	junior high school	9	22.5
	senior High School	21	52.5
	Diploma	3	7.5
	Bachelor	6	15.0
Work	IRT	24	60.0
	civil servant	3	7.5
	Private employees	8	20.0
	entrepreneur	5	12.5

Based on table 1 above, it is known that the age of the largest respondents is 21-30 years, namely 28 people (70.0%), the education of the respondents is high school, the majority is 21 people (52.5%), the occupation of the largest household respondent is 24 people (60%).

1). Mapping Mother's Knowledge of Infant Massage Therapy

Based on the research, mother's knowledge of infant massage therapy can be seen in table 2. Based on table 2 above, it is known that mother's knowledge of infant massage therapy has less knowledge, namely 15 people (37.5%), adequate knowledge as many as 14 people (35, 0%), and the minority of mothers with good knowledge were 11 people (27.50%). Based on the results of the study, it was found that most of the mother's knowledge of massage therapy in infants who had knowledge of less than 15 people (37.5%). According to Notoadmodjo [15], the higher a person's knowledge, the easier it is to accept new things, on the other hand, if there is a lack of knowledge, it will be more difficult to act and act and knowledge is the result of knowledge obtained from the five individual senses such as the senses of sight, hearing, smell, touch, and taste of a particular object. Mother's knowledge in this study is that the mother is able to know things related to baby massage and the purpose of baby massage and so on.

In accordance with Kusbiantoro's research in a study entitled "Baby Massage Behavior Associated with Family Knowledge and Support" states that the level of mother's knowledge about massage is mostly 69.6% less knowledgeable and

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a small 4.3% have good knowledge about good massage, on average mothers have good knowledge as many as 24 people (60.0%) and sufficient knowledge as many as 16 people (40.0%). According to the researcher's assumption, maternal knowledge is considered good because there are many mothers who are interested and interested in doing massage on babies as therapy or traditional medicine.

Table 2.
Frequency Distribution of Mother's Knowledge about Infant Massage Therapy

knowledge	Frequency (P)	Percentage (%)
Well	11	27.5
enough	14	35.0
Not enough	15	37.5
Total	40	100.0

However, the results of this study differ from the research conducted by Yuniati [16] that the mother's knowledge about infant massage is very good and shows positive things shown by the mother's answer to the question about baby massage smoothly and confidently, understanding and understanding the benefits of baby massage to improve baby's weight, increase baby's growth, increase baby's immune system, make baby sleep more, increase parent and child love, and increase milk production.

2) Relationship Between Knowledge and Infant Massage Therapy

Table 3 shows that the mother's knowledge about good baby massage therapy was 11 people (27.5%), where 8 people (20%) did well with baby massage therapy and the rest did 3 people bad massage therapy (7, 5%). Mother's knowledge about infant massage therapy is sufficient as much as 14 people (35%), where mothers do baby massage therapy well as many as 8 people (20%) and the rest do massage therapy less as much as 6 people (15%). While the knowledge of mothers about infant massage therapy is lacking as many as 15 people (37.5%), where mothers do baby massage therapy less well as many as 12 people (30%) and the rest do massage therapy well as many as 3 people (7, 5%). The results of statistical tests are known that the value of $p = 0.019 < (0.05)$ then the hypothesis accepted. This means that there is a significant relationship between mother's knowledge and infant massage therapy.

Table 3.
The Relationship Between Knowledge and Infant Massage Therapy

knowledge	Baby Massage Therapy				Total		P
	Well		Not good		Score		
	n	%	n	%	n	%	
Well	8	20.0	3	7.5	11	27.5	0.019
enough	8	20.0	6	15.0	14	35.0	
Not enough	3	7.5	12	30.0	15	37.5	
Total	19	47.5	21	52.5	40	100	

From the results of the study obtained knowledge that mothers about massage therapy for babies are good as many as 11 people (27.5%), mothers doing massage therapy for babies well as many as 8 people (20%) and mothers who are enough as many as 14 people (35%), most of the mothers also did baby massage therapy well as many as 8 people (20%). While the knowledge of mothers about infant massage therapy was lacking as many as 15 people (37.5%), doing baby massage therapy less well as many as 12 people (30%). The results of statistical tests are known that the value of $p = 0.019 < (0.05)$ then the hypothesis accepted. This means that there is a significant relationship between mother's knowledge and infant massage therapy.

Behavior based on knowledge, awareness and positive attitude will lead to good behavior. Meanwhile, those that are not based on knowledge and conscious behavior, then the behavior will not last long. Massage is done because of a reaction to a certain stimulus, namely knowledge as a stimulus and as a reaction to baby massage. Mothers who have high enough knowledge about baby massage believe that baby massage is a good start for the baby's development, so mothers tend to do baby massage. On the other hand, mothers who are less knowledgeable tend not to want to carry out baby massage. This can be caused by the mother not understanding baby massage, both the steps for massage movements and the benefits that can have a positive impact on the baby's growth and development.

According to Dewi's statement [14] that the formation of a new behavior, starting in the cognitive domain, in the sense that the subject knows the stimulus in the form of material or object, giving rise to new knowledge on the subject and will cause an inner response in the form of the attitude of the known subject and the object. fully aware that triggers a further response, namely in the form of action (action) in connection with a known stimulus. The results of this study stated that there was no relationship between mother's knowledge about infant massage and infant massage behavior. Therefore, it is hoped that it is important for the health workers of the Pamulang Health Center, South Tangerang to provide more information and motivation about baby massage so that by having good knowledge about baby massage, mothers have the

desire to do baby massage. In the end, this knowledge will become a strong basis for growing behavior (action).

3) Effect of Baby Massage on Stunting

The results showed that there was a difference in body weight between infants who were given massage and those who were not given massage. Table 4 shows the number of babies weighing between 500 grams and above 1000 grams. At the beginning of the measurement of the baby's weight, there are 2 babies who will be given treatment who weigh <500 grams, 5 people who weigh between 500-1000 grams and there are 3 babies whose weight is >1000 grams. As for babies who were not given massage, 3 people weighing <500 grams, 4 people weighing 500-1000 grams and 3 people weighing >1000 grams. However, after the 3rd month of getting massage, there was no baby who weighed <500 grams, the baby's weight was > 1000 grams get the addition of 7 people. However, for babies who were not given massage treatment, there was also a change in the number of babies weighing <500 grams to 2 people and >1000 grams to 5 people.

Table 4.
Number of babies weighing <500 grams to >1000 grams who were given massage and non-massage for 2 months

month	Massage			Non Massage		
	<500gram	500 - 1000 grams	> 1000 grams	<500gram	500 - 1000 grams	> 1000 grams
0th month	2	5	3	3	4	3
1st month	2	4	4	3	4	3
2nd month	1	4	5	3	3	4
3rd month	0	3	7	2	3	5

Table 5 shows the distribution of the baby's average weight gain each month. Based on, it shows that the average weight of massaged and unmassaged babies is 739 grams and 725 grams (respectively). In the first month of massage, the baby's average weight increased by 49 grams, then there was an increase in the baby's weight again in the second month, namely an increase of 40 grams and in the 3rd month an increase in body weight of 94 grams. Meanwhile, infants who were not given massage did not experience a change in body weight from 0 months to the first month. The increase in body weight occurred in the 2nd and 3rd months which was 19 grams and 49 grams (respectively). However, this weight gain was considered insignificant ($p>0.05$).

Table 5.
Distribution of Average Baby Weight Gain Each month

month	Massage (grams)		Non Massage (grams)	
	Average	Min - Max	Average	Min - Max
0th month	739	480 - 1200	725	485 - 1100
1st month	788	481 - 1201	725	485 - 1100
2nd month	828	486 - 1205	744	490 - 1110
3rd month	922	500 - 1208	785	492 - 1115

*Min = minimum; Max = max

Figure 1 shows the trend of baby's weight gain for 3 months. Based on the picture, it can be seen that the weight gain in infants from 0 months - 3 months, then it can be seen that the weight gain in babies who are given massage is above the weight of babies who are not given massage.



Figure 1. Trends in Baby Weight Gain

Massage is done to reduce pain, provide a sense of comfort, reduce stress, improve digestive function, increase body weight, increase immunity and brain development [16]. The results of this study are in line with Cooke's [17], which states that 34 researchers from various countries showed that infant massage performed on infants in the first 6 months was associated with efforts to improve mental, physical, and social health. Furthermore, weight gain also showed a consistent increase, including for premature infants.

According to Juwita [18] and Jabriale [19] showed that there was a significant effect on increasing the weight of premature babies. Various genetic or environmental factors that affect the growth and development of children since prenatal, perinatal and postnatal. Natural touch on the baby is an act of massage that is carried out regularly and in accordance with baby massage techniques and procedures. Massage therapy can have a positive physical effect, namely

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increasing the baby's weight and increasing breast milk. The presence of tactile stimulation, and the warmth that is carried out during massage will trigger the production of oxytocin in the body whose effect is the stimulation of anabolic processes and digestive processes resulting in an increase in body weight [16]. Babies become hungry, often feed so that milk production increases, According to Evi & Kaban [20], it is necessary to provide proper training and massage techniques to babies so that mothers have more confidence and can reduce injuries to babies. This training can be carried out during the covid-19 pandemic by providing training in stages such as 5 people per session with a safe distance between mothers, then carried out according to the guidelines set by the HR Training Center. The difference in the results of this study with the results of previous studies is caused by several factors such as: 1. Differences in research methods, 2. Population taken, 3. Variables that affect compounding samples, and do not consider the food intake given.

4. Conclusion

Based on the results of the study it can be said that Based on the characteristics that the age of the respondents, which amounted to 21-30 years, was 28 people (70.0%), the education of the respondents was high school, the majority were 21 people (52.5%), the occupation of the largest household was 24 people (60%). Based on the mother's knowledge about massage therapy in infants who have less knowledge as many as 15 people (37.5%). Based on the mother's attitude towards massage therapy in infants from a negative view, as many as 22 people (55%). Based on massage therapy performed by mothers for very large babies, as many as 21 people (52.5%). Data analysis using Chi-Squared p value = $0.019 < (0.05)$, then the hypothesis accepted. This means that there is a significant relationship between mother's knowledge and massage therapy for babies. However, there was an insignificant increase in the weight of infants who were massaged and not massaged for 3 months. In the first month of massage, the baby's average weight increased by 49 grams, then there was an increase in the baby's weight again in the second month, namely an increase of 40 grams and in the 3rd month an increase in body weight of 94 grams.

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