THE EFFECTIVENESS OF BABY MASSAGE AGAINST APPETITE IN TODDLER NUTRITION LESS 1-3 YEARS OF AGE IN WORK AREAS THE HEALTH GROUNDS SIDOARJO

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Abstract

A decrease appetite can result in unintentional weight loss. This may cause children suffering of malnutrition. The neglect of this conditions will develop malnutrition even worst. One of touch therapy or massage can increase the baby's appetite is baby massage that done regularly, good, and correct technique. The purpose of this study to find out the effectiveness of baby massage to the appetite of malnutrition baby age 1-3 years old in posyandu balita Taman sidoarjo. This study use Pre-Experiment design with One-group pre-post test approach with population of all mothers and her baby who have problem of appetite age 1-3 years, with amount 14 pairs of respondents. Samples were taken by Non probability sampling with Total sampling technique. Questionnaire is an instrument in this study. After data collecting, then it is processed by editing, coding, processing, cleaning, and tabulating. Data were analyzed statistically by SPSS-Version 21 with Wilcoxon Signed Rank Test with α = 0,05. Study results obtained, group of pre experiments got category of low appetite and post experiments got category of sufficient appetite. With ρ value = 0.005 value α = 0.05 means ρ <α then H₀ is rejected H₁ accepted. Baby massage effective to increase the appetite of malnutrition baby under five. It is expected that mothers routinely perform baby massage (baby massage) every day with a one-time frequency to increase appetite and nutritional status of children.

Keywords: Baby Massage, Appetite, Malnutrition

INTRODUCTION

Children ages 1-3 years have eating habits tend to be passive, generally a problemeating occurs at the age of 1 year. The most frequent causes are loss of appetite, eating disorders followed (Early Aminati. 2013; Prihandini. 2015) toddler nutritional needs will not be met if toddlers are having problems loss of appetite (Nurjannah, 2012 in Roslesmana n. & Noor z., 2014). As many in the community that the toddler had less appetite like, do not want to eat the rice, while eating sometimes does not run out, the frequency of irregular eating, prefer to drink milk instead of rice, too imposing to spend food, variety of food that is less qualified PUGS, in addition also began choosing their preferred food, often favoring one type of food only on a specificperiod. So feared Toddler Nutrition less.

Research conducted by Roslesmana n. & Noor z., 2014, on 5 April 2014 until May 19, 2014. Obtained results on highfrequency massage group an increase in children who have a good appetite that is as much as 44.44% (P = 0.0001). Group low frequency massage going decline in children who are having good appetite that is as much as 16.7% (P = 0.952). Based on the results of the survey pendahulan conducted a researcher on November 27, 2016 until 11 January in Sidoarjo and Garden Village Clinics in Neighborhood parks, son of Posyandu with the technical interview on midwife clinic and mothers who have a toddler nutrition less appetite issues with age of 1-3 years. Obtained results of total whole toddler aged 1-3 years totalling 210 toddlers, by looking at the card-old toddler KMS 1-3 years on the vellow line is the category of nutrition less as much as 14 toddler. By asking 3 questions to the parents of a toddler, toddler 14 results obtained do not appetite.

Factors that affect appetite, internal factors: such as the hypothalamus, and peptidehormones, digestive tract, terjangkitnya children with the infection of the worm and habits (Khairunnisa, 2012).

While external factors: which cause a decrease in appetite in children such as forms that are not of interest, parental error in presenting the variety of food, or because the children have started active by playing like a Todler children ages (1-3 years), eating patterns, such as frequency and episodes of eating, the selection will be low or high-fat food, the energy content of food consumed, the suitability of a diet, dietary diversity consumed (Ambarwati & Marnia. 2015: Khairunnisa. 2012). Mentioned that massaging the small regularly may provide benefits to influence the stimulation of nerves and skin as well as producing the hormones that influence in increasing appetite the small, such as insulin and gastrin hormone thatplays an important role in the process of absorption of food. In infants who massaged, the second production of this hormone is increased so that the absorption of food and appetite increases. Appetite increases later will make her weight increased. Increased appetite is also coupled with an increase in the activity of the vagus nerve(tenth neural brain)/nerve Wanderer (the brain's nervous system that works for the neck area down to the chest and the abdominal cavity) in moving the Peristaltic cells (the cells in the digestive tract that move in the digestive tract) to push food into the entire digestion. Thus, faster baby hungry or want to eat because of the pencernaannya the more smoothly. Of course when the baby massage (baby massage) is done properly and with the right techniques (Subakti & Anggraini, 2008; Yahya n., 2011; Prasetyono, 2013; Syaukani, 2015; Gelenia MCC, 2014).

As health workers especially in the nurses are expected to help parents in improving the health status of a toddler less appetite so expect health improvements can occur later on toddlers. Should nurses can provide information and appropriate referralsto parents so that interested to do baby massage (baby massage) to his son in the daily life and routine of doing so. There is such a

phenomenon that caught the attention of researchers and researchers interested in conducting research on "the effectiveness of Massage Baby (Baby Massage) against appetite in Toddler Nutrition Less 1-3 Years of age In work-area Clinics Sidoarjo Garden".

RESEARCH METHODS

The design of this research using preresearch-circling approach One-group prepost test design. Entire population of mothers and toddlers who are having problems less nutrition appetite ages 1-3 years at the Neighborhood garden at Toddler Posyandu working area Clinics Garden Sidoarjo as much as 14 pairs of the respondent. The sample in this research done using probability sampling methods with the Total sampling techniques. The independent variable in this study are Baby Massage (BabyMassage). The dependent variable in this study is the appetite. The instrument usedwas a questionnaire sheet. Statistical tests using test of Wilcoxon Signed Rank Test with significance value $\alpha = 0.05$.

RESEARCH RESULTS

- 1. Univariate Data
- a. The distribution of respondents based on gender

Broadly speaking, nutritional needs are determined by age, gender, BB, and TB. Between the intake of nutrients and its expenditure there has to be a balance so that a good nutritional status is obtained. (Rusilanti, Dahlia, & Yulianti., 2015).

Table 5.1 distribution of respondents frequency massage baby (baby massage) based on gender at the Posyandu Toddler Garden work-area Clinics Garden Sidoarjo in 2017

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No.	Sex	frequency	Percentage
		(F)	(%)
1.	Women	9	64,3
2.	Male	5	35,7
	The number of	14	100

Source: Primary data, February 2017

Based on table 5.1 shows that of the 14 respondents most (64.3%) femalesex.

b. Distribution of respondents based on the age of toddlers

Table 5.2 frequency distribution of respondents massage baby (baby massage) based on age at Posyandu Toddlers Garden Sidoarjo Sidoarjo Taman Clinics working area in 2017

No.	The age of	Frequency	Percentage	
		(F)	(%)	
1.	17-21 month	1	7,1	
2.	22-24 month	3	21,4	
3.	25-30 month	4	28,6	
4.	31-36 month	6	42,9	
Т	The number of	14	100	

Source: Primary data, February 2017

Based on table 5.2 shows that almost half of respondents from 12 (42.9%) aged 31-36 months.

c. Distribution of respondents based on weight

Table 5.3 frequency distribution of respondents massage baby (baby massage) based on weight at Posyandu Toddlers Garden work-area Clinics Garden Sidoarjo in 2017

	The age of	BB/U	Freque	Percent
No.	(month) &	(kg)	ncy (F)	age (%)
	Sex			
	Women			
1.	17-21	10,0-10,9	9	64,3
2.	22-24	11,1-11,5	0	0
3.	25-30	11,7-12,7	0	0
4.	31-36	12,9-13,9	0	0
	Male			
5.	17-21	10,7-11,5	5	35,7
6.	22-24	11,8-12,2	0	0
7.	25-30	12,4-13,3	0	0
8.	31-36	13,5-14,3	0	0
	The number	of	14	100

Source: Primary data, February 2017

Based on table 5.3 shows that of the 14 respondents that almost all women-sex (64.3%) has a weight of 10.0-10.9 kg. Of the 14 respondents that the male sex is almost half (35.7%) have a weight 10.7-11.5 kg.

d. distribution of respondents based on height

Table 5.4 frequency distribution of respondents massage baby (baby massage) according to the height at the Posyandu Toddlers Garden work-area Clinics Garden Sidoarjo in 2017

No.	The age of (month) & Sex	TB/U (cm)	Freque ncy (F)	Percent age (%)
	Women			
1.	17-21	79,7-83,7	4	28,6
2.	22-24	84,6-6,4	2	14,3
3.	25-30	86,6-90,7	0	Ó
4.	31-36	91,4-95,1	3	21,4
	Male			
5.	17-21	81,2-85,1	3	21,4
6.	22-24	86,0-87,8	0	0
7.	25-30	88,0-91,9	0	0
8.	31-36	92,7-96,1	2	14,3
	The number	of	14	100

Source: Primary data, February 2017

Based on table 5.4 show that of the 14 respondents that almost half of women-sex (28.6%) have a height 79,7-83,7 cm. Of the 14 respondents-sex male fraction (21.4%) have a height 81.2-85,1 cm.

e. Distribution of respondents based on the number of children

Table 5.5 Distribution frequency of infant massage respondents (baby massage) based on the number of children in the Work Area Garden Toddler Posyandu Health Grounds Sidoarjo in 2017

No.	The number of children	Frequency (F)	Percentage (%)
1.	1	7	50,0
2.	2	3	21,4
3.	3	3	21,4
4.	7	1	7,1
T	he number of	14	100

Source: Primary data, February 2017

Based on table 5.5 shows that half of the 14 respondents (50%) have 1 child and a fraction (21.4%) have children 2-3.

- 2. Data Bivariat
- a. The frequency distribution of appetite a toddler before the massage done baby (baby massage) (pre-test).

Table 5.6 frequency distribution of nutritional toddler appetite less age 1-3 years before the massage done baby (baby massage) (pre-test) at Posyandu Toddler Village Garden work-area Clinics Garden Sidoarjo in 2017

No.	Appetite Toddler	Frequency	Percentage
		(F)	(%)
1.	Good	0	0
2.	Enough	0	0
3.	Less	14	100

The number of	14	100
Source: Primary data, Ju	ni 2017	

Based on table 5.6 shows that of the 14 respondents prior to massage the baby (baby massage) entirely (100%) within the category of appetite is less.

b. Frequency distribution of appetite toddlers after a massage done baby (baby massage) (post-test).

Table 5.7 Distribution frequency of appetite less nutritional toddler ages 1-3 years after the massage done baby (baby massage) (post-test) at Posyandu Toddler Village Garden work-area Clinics Garden Sidoarjo in 2017

No.	Appetite Toddler	Frequency	Percentage
		(F)	(%)
1.	Good	0	0
2.	Enough	8	57,1
3.	Less	6	42,9
	The number of	14	100

Source: Primary data, Juni 2017

Based on table 5.7 indicates that of the 14 respondents after a baby massage (baby massage) most (57.1%) experienced an increase in appetite in the category is enough.

c. Distribution of the effectiveness of massage baby (baby massage) to increased appetite toddlers.

Table 5.8 Distribution the effectiveness of massage baby (baby massage) to increased appetite less nutritional toddler ages 1-3 years at Posyandu Toddler Village Garden workarea Clinics Garden Sidoarjo in 2017

D 1	Appetite Toddler					- Total		
Baby Massage	Go	ood	Er	ough	L	ess	. 1	Hai
massage	n	%	n	%	n	%	n	%
Pre-Test	0	0	0	0	14	100	14	100
Post-Test	0	0	8	57,1	6	42,9	14	100
<i>Wilcoxon Sign Rank Test</i> ρ = 0,005								

Source: Primary data, June 2017

Description:

n : Frequency % : percentage

Based on table 5.8 shows that of the 14 respondents prior to massage the baby (baby massage) is obtained entirely (100%) of the respondents experienced problems less appetite, after a baby massage (baby massage) obtained from the

14 respondents most (57.1%) experienced an increase in appetite in the category of appetite enough, almost half (42.9%) still remain in the category of less appetite and none (0%) experienced an increase in appetite in the category either.

Based on the results of a test of Wilcoxon Signed Rank Test in the intervention group in the get the value of $\rho=0.005$ and value $\alpha=0.05$ means ρ H_0 is rejected then $\alpha < H_1$ is accepted which means baby massage (baby massage) is effective in improving appetite in Toddler Nutrition less at Posyandu Toddler Village Garden work-area Clinics Garden Sidoarjo.

DISCUSSION

1. Appetite prior to massage the baby (baby massage)

Based on the results of the research shows that massage is performed before the baby (baby massage), from counting score obtained appetite Toddler Nutrition less at Posyandu Toddler Village Garden Sidoarjo (100%) within the category of appetite isless. Based on the actual state of the toddler nutrition lacking almost entirely also experience appetite problems, where the toddler is hard packed, unbalanced diet and more choosing their food so that the needs of its nutrition value less fulfilled. To avoid children lack one or more nutrients, then attempted to give a more varied types of food and enough value to its nutrition value. The selection of the kinds of foods children should also note the quality and resource use in the body, considering the food is totally dependent on the toddler was given by his parents. In accordance with the opinion of a theory that the nutritional needs of toddlers would not be fulfilled if the experiencing toddlers are difficulties eating. Difficulty eating at one of the children affected by the loss of appetite. At the age of toddlers usually older becomes difficult to eat because the increase of their activity such as playing and ran so thatthey become lazy to eat (Nurjannah, 2012). In line with the above theory, that age 1-3

years are classified as passive consumers where food is consumed depends on the mother presented so that very large role of determining the mother in balancednutritious food. At this age, the child's curiosity so high that the mother should be able to utilize this opportunity to introduce makananan which vary in flavor, color, and texture. Good nutrition is urgently needed because of ongoing brain growth and usually the child more vulnerable to infectious disease and malnutrition at this age(Ummushofiyya, 2013).

Based on table 5.1 of the 14 respondents most (64.3%)-sex women and nearly half of the male sex (35.7%). So most of the sex of the babies who underwent the appetite less are women. In general activity between a baby boy and baby girl is different. Each activity requires energy, more and more activities are being performed more and more energy. In terms of nutritional status of the sexes very influential for toddlers which if toddlers are having an appetite less consumption of food substances needed by the body is not equivalent to the energy released. In accordance with previous studies that gender also influence on nutritional needs, the need for nutrients is also different between men and women, especially in adulthood. This difference is mainly caused by a network of constituent bodies and the type of activity (Sulistyoningsih, 2011).

Based on the characteristics of table 5.2 shows that almost half of respondents from 12 (42.9%) aged 31-36 months. In terms of the age of the child, the child's nutritional needs are different than adults because a toddler growth and development occurred very quickly, the child's appetite is dependent also with activities and health conditions (Ummushofiyya, 2013). Seen in terms of nutritional status, the age factor is also very important in determining the nutritional status. Error determining the age will cause nutritional status of interpretation to be wrong (Santoso, 2009).

The above statement is in line with the results research conducted by (Welasasih b. d. and r.Wirjatmadi B, 2010) at this age a lot of life changes that occur, including dietary changes from the former ASI shifted toward solid food, several toddlers started havingdifficulty eating, while the toddler had started to interact with the environment is not healthy. According to (team Idea Cookbook, 2014) age can also dijuganakan to determine food for toddlers, ages 12 months: the form (the more dense, so the baby is learning to use her new teeth to chew and smoothes the food that went into his mouth, gradually give the food more than the previous stage. For ages: month 12-18 form (serve food to taste, simple and as attractive as possible, in order to attract attention and mouth-watering meals, children's appetite can fluctuate from day to day. To the age of 18-36 months: now children have started to know and enjoy a variety of flavors, colors and shapes of food, feeding small between two meals became more important to support rapid growth and offset its activities increasingly many and varied.

Based on table 5.3 show that of the 14 respondents that almost all women-sex (64.3%) has a weight of 10.0-10.9 kg. Of the 14 respondents that the male sex is almost half (35.7%) have a weight 10.7-11.5 kg. At the time of the infant-toddler, weight can be in use in order to see the rate of growth of physical or nutritional status due tonoticeable changes in a short time which gives an overview of nutritional status now. If the review of KMS each toddler of the 14 respondents all in category nutrition less (below the yellow line). With the decline of appetite can impact weight loss was not intentional (Vorvick, 2010 in Khairunnisa, 2012). Based on that, the situation there is still no weight toddlers who have not been in accordance with the age. The opinion above in accordance with (the Ministry of health of INDONESIA, 2011) standardw/U boys aged 17-21 months was

10.7-11.5 kg, 22-24 months of age was 11.8-12.2kg, aged 25-30 months is 12.4-13.3 kg, aged 31-36 months is 13.5-14.3 kg. While the standard w/U girls aged 17-21 months is 10.0-10.9 kg, 22-24 months of age is 11.1-11.5 kg, 25-30 months of age was 11.7-12.7 kg, aged 31-36 months was 12.9-13.9kg. The category threshold less nutritional status (Z-Score)-3 SD up to 2 Child uptowhich the nutritional intake of growth and development stunted than children who get enough nutrient intake. For example, growth include height, weight, low fives (h.r. Hasdiana, Sandu Siyoto & Nurwijayanti, 2014).

Based on table 5.4 show that of the 14 respondents that almost half of women-sex (28.6%) have a height-79,7 83,7 cm. Of the 14 respondents-sex male fraction (21.4%) have a height 81.2-85,1 cm. Height can be used to determine whether the children are skinny, normal, or fat. If toddlers consume only staple food will affect its growth. This is because the appetite is concerned with some aspects of eating patterns such as the frequency and size of the episode packed, the selection will be low or high-fat food, the energy content of food consumed, the diversity of food consumed, the suitability of a diet, the diversity of daily food and consumption (Finlayson et al., n.d. in Khairunnisa, 2012). The pattern of eating less that is when children eat a distraction among the dining are just a kind of foodstuffs only (Zainul Arifin,. 2015). Threshold TB/U is (Z-Score)-2 SD up to 2 SD. Based on field there are still toddlers who do not fit his high age. To see these developments could use Anthropometry height based on age. In accordance with the opinion of the (Ministry of health of INDONESIA, 2011) standard TB/U boys aged 17-21 months was 81.2-85,1 cm, age 22-24 months is 86,0-87.8 cm, age 25-30 was 88,0-91.9 cm, age 31-36 months is 92,7-96,1 cm. While standard TB/U girls aged 17-21 months was 79,7-83,7 cm, age 22-24 months was 86.4-84,6 cm, age 2530 is 86,6-90.7 cm, age 31-36 months was 91.4-95,1 cm.

Based on table 5.5 shows that half of the 14 respondents (50%) had a number of children 1st and only a small fraction (21.4%) have children 2-3. On the study of factors that no relationship aspects influenced the number of children with less appetite and nutritional status of infants that is, the average of the 14 respondents have children but have trouble < 3 appetite less and had less nutrition. Parenting the mother lacking in fulfillment of food will result in child nutritional status is declining. The dish is a type of food that is served to eat. Here the role of parents must decide what his son should be eating (Ruslianti. Dahlia, Pearls. Yulianti, Yeni. 2015). previous research results obtained, the number of families is important variable in analyzing nutrition, because the number of children in the household affect the resources available (Olii, 2010). However in the research (Karundeng, b. R Ismanto, a. Y, Kundre, Rina, 2015) in the know no relationship of number of children with nutritional status toddlers, this indicates that there are other factors that affect the nutritional status of the toddlers. Phenomena that occurred in the study that is still found the number of children the nutritional status 3 years < less. Research (Devi, 2010) factors affecting nutritional status i.e. age children and the number of family members.

2. Your appetite after a massage done baby (baby massage)

The results of research on the nutritional toddler appetite less age 1-3 years shows an increase in appetite after a baby massage (baby massage). Based on table 5.7 indicates that of the 14 respondents most (57.1%) experienced an increase in appetite in the category and (42.9%) still remain in the category of appetite is less. An increase in appetite due to such efforts of the mother to do baby massage (baby massage) to his son so that mothers are motivated to do it regularly.

Types of food consumption determine a child's nutritional status, said to be the food of good quality if the daily menus provide a menu of nutritious composition, balanced and varied in accordance with their needs. Broadly speaking, nutritional needs are determined by age, gender, activity, BB, and TB. Between the intake of nutrients and its expenditure there has to be a balance so that a good nutritional status is obtained. (Rusilanti, Dahlia, & Yulianti., 2015). The more often the frequency of touch or massage, it will be the closer did the emotional relationship between mother and baby. However, the opposite is not only a mother can do baby massage, but dads, grandmothers, or grandfathers could also be involved (Kusbiantoro, Dadang. 2013). With the touch of a massage on the muscle tissue, blood circulation can be more smoothly and ultimately can maximize the organ function, where the intestinal motility with massage then will be increased and will improve the absorption of food substances by the body and increases the appetite (Roesli, 2005 in research Roslesmana, Nyoman & Noor Zulkhah 2014). In accordance with the (Finlayson et al., Khairunnisa, 2012) appetite related to some aspects of eating patterns such as the frequency and size of the episode packed, the selection will be low or high-fat food, the energy content of food consumed, the diversity of food consumed, the suitability of a diet, and the diversity of daily food consumption. In accordance with previous studies conducted by (Zainul Arifin,. 2015) on a balanced meal or good i.e. If the frequency of eating 3 times a day or more and food food interludes between the food and the amount and type of food is plenty nutritious balanced diet. the pattern of eating enough i.e. when children eat food interludes between meals, the amount of the medium, the type of food that is nutritionally balanced. While the diet is less i.e. when children eat less than 3 times a day and eating food dining only among same-sex interlude foodstuffs only.

3. The effectiveness of massage baby (baby massage) against appetite

Based on the results of a test of Wilcoxon Signed Rank Test in the get the value of $\rho = 0.005$ and value $\alpha = 0.05$ means ρ H0 is rejected then α < H1 is accepted which means baby massage (baby massage) is effective in improving appetite in Toddler Nutrition less at Posyandu Toddler Village Garden workarea Clinics Garden Sidoarjo. Previous research asserts that massage the baby (baby massage) effect on appetite. There has been no previous researchers who are conducting research on infant massage (baby massage) on Toddler Nutrition less aged 1-3 years and has trouble appetite. Previous studies more done on respondents who only have less appetite problems with age 0-24 months and in quite a long time i.e. during 6 months. In this study researchers just did it for 1 week with 4 times the massage. Thus, the results obtained is not how effective and its increase is not too significant.

This research proved by I Nyoman Roslesmana & Zulkhah Noor where mafsu ate children aged 6-24 months before massaged differ significantly with the child's appetite after a massage, that child's appetite is getting better. An increase in the number of children who have a good appetite and decline the number of children who experience a decrease in appetite. This research method using quasi-experiment with the approach of non-randomized one group pretest-posttest design IE to know are there any baby massage influences appetite towards children aged under two years by comparing the baby before being given treatment (pre) and after being given the treatment (post). Baby massage is carried out for 6 weeks, with supervised by cadres who have been trained in advance. These changes are evidenced by the analysis using the Wilcoxon test has the value significance of 0.0001 (< 0.05).

SUMMARY AND ADVICE

A. Conclusions

From the results conducted by the researcher, so researchers can infer a few things as follows.

- 1. On the toddler nutrition less before the massage done baby (baby massage) is entirely 100% experience problems appetite in the category less.
- 2. On Toddler Nutrition less after a baby massage (baby massage) mostly 57.1% experienced an increase in appetite that is in the category quite a while, almost half of 42.9% still in the category fixed category less.
- 3. Massage the baby (baby massage) effective against an increasing appetite on Toddler Nutrition less.

B. Suggestions

1. For health workers and mothers

Health workers are expected to follow the training of infant massage (baby massage) and got a special certificate. Can study it more thoroughly for intervensikan as well as the need for socializing more about infant massage (baby massage) on society especially in the mother. So mother motivated to do it regularly each day with a frequency of one time.

2. For subsequent researchers

This research can be developed more broadly, so that for subsequent researchers expected to be researching more about the benefits of baby massage (baby massage) in infants or toddlers who experience constipation and can increase the number of samples as well as samples from the initial grouping of course with strict supervision-related interventions.

3. For educational institutions

This research is expected to be made into new insights for students of nursing and the pendidiknya. Can be used as input in the planning of the implementation and evaluation of courses related to maternal and child health in particular on infant massage (baby massage).

4. For health centers

The results of this research can be used as references for health centers and

income can be used as evidence of information about the benefits and importance of infant massage (baby massage). Baby massage (baby massage) can be used as a program of innovation in improving the nutritional status of the toddlers.

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