The Effect Of Baby Massage Modification On The Frequency Of Defecation In babies Aged 1-6 Months.

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Abstract. Background ; Management to resolve constipation in infants is with exercise and regular physical activity , one of that by baby massage. The purpose of massage is to train the muscles that regulate defecation, improve bowel movements, reduce transit time and help the fases pass through the anus. The purpose of this study was to determine the effect of baby massage modification on the frequency of defecation in infants aged 1-6 months.

Methods ; This research is quantitative research with quasi experiment design. The approach used is randomized pre and post test with control group design. Place of this research in Area of Puskesmas Gang Kelor Bogor City. It is planned from February to October 2016. The study sample is babies aged 1-6 months who meet inclusion criteria (n = 33 respondents / groups). Sampling was done by purposive sampling technique. Data was analyzed using t-dependent test and Wilcoxon test to see difference of average of defecation before and after treatment, and t-independent test to know the effect of massage modification to defecation frequency.

Result ; The results showed that there was an increase in the frequency of defecation in the intervention group after a 7-day massage (p <0.005) and there was a significant difference in the frequency of defecation in the intervention group with the control group (p <0.005).

Conclusion ; there are significant increases and differences in the frequency of defecation in infants who receive a modified massage. Expected massage modification can continue to be given to all infants, especially those have difficulty defecation.

Introduction

Defecation is one of human activity who must be passed on their life everyday. Defecation pattern in a baby still have a problem. Especially for constipation. It's begin from a baby who consume formula milk. Yuanita doing some research and she said that a baby who consume formula milk have 3 times constipations risk it will be different with a baby who consume BREAST MILK.[1] The way for that probles is exercise and do physical activity regularly. Penatalaksanaan untuk mengatasi. The purpose for this exercise is for muscles training who leads the defecation, a better intestines movement, reduce the stopover time and helping the feces past the anus[2.] Physical activity for smoothen teh defecate for a baby in 0-6 month is with baby massage in alimentary canal. The research results by Sayyedrasooli are the baby who get a massage have more regular defecantion frequency than a baby who not get a massage.[3] The same research doing by Lin and Moghadam said that a massage will work up the defecation frequency in a hyperbilirubin baby so it will reduce the bilirubin levels in a bloods.[4,5] Research from Chen proves that a newborn baby who get a massage will decrease a risk from hyperbilirubin because a massage will be stimulating the output of meconium in 24hours.[6]

A baby massage for smoothing a digestion will involve an organ activity like descending colon, sigmoid, rectum and internal, external anal sphincter, and some nerve fibers. The purpose of the massage is for stimulatin a function of the digestion and the removal. Do the massage is for mass movement. So based on that study it must have an effort for smoothing mass movement and upgrading a

nerve defecation stimulation. Based on lilterature review has been found 3 part focus a massage who can help mass movement and upgrading a nerve defecation stimulation which are a massage at small intestine area, a movement at colon and rectum area. Based on that background, so the researchers get interested for doing some research with the title "The Effect Of Baby Massage Modification On The Frequency Of Defecation In Babies Aged 1-6 Months"

Methods

This research is a quantitative research with *quasi eksperimental* design. This research is closing with non randomized design *randomized pre and post test with control group design*, which is by giving an intervention with a massage modification and then looked by the effect grom defecation frequency in babies aged 1-6 months, the results can compered with control group, which is a group who not do the baby massage. The research do in Puskesmas Gang Kelor Kota Bogor on March–September 2016 with 33 example in every group .

There are have primer data and sekunder data. Collected primer data is using a papper observation or checklist a massage modification doing by respondent.

The baby's parents are given knowledge about the basic concept of massage is a massage practice modifications and baby. subsequently parents will do the modification to the massage her baby with the guidance of researchers for 14 days. Massage is performed twice (morning, afternoon) with a duration of 10-15 seconds. The baby's parents will be given a sheet of ceklist to document the activity and frequency of modification defekasi massage per day.

In the control group, the data collection procedure is done through a pretest and posttest with no massage. The application of the principle of fairness in the control group is to provide a massage when you finish retrieving the data.

Results and Discussion

Research results on the present in the table below

1. Characteristiscs of respondents

Based on the results of observation for the second subject group obtained the results as presented below:

Table. 1
Characteristics of the subject

Characteristics	Intervention Group n=33	Control Group n=33
Baby age		
1-3 months	19	19
4-6 months	14	14
Age of mother		
<20 years old	2	2
20years old-35 years old	28	28
>35years old	3	3
Mother's Job		
Work	3	6
Not Working	30	27
Mother's parity		
1	7	10
≥2	26	23
Mother's education		
No School		
ES	5	4
JHS	10	7
SHS	13	18
D3	5	4

Based on table 1 characteristics of most research respondents aged baby 1-3 months. Most moms age i.e. 20 – 35 years, most of the mothers are not working, the parity of ≥ 2 and most mothers with high school education.

2. Description of the frequency of the Defecation

The description of the frequency of defekasi in infants aged 1-6 months grouped by research objectives with the following:

Table 2
Frequency average Defecation Per week in the baby 1-6 Months

Baby Age (months)	Intervention		Control	
	Before	After	Before	After
1 – 3	10	12	6	6
4 – 6	4	6,04	3,93	4,29

Based on table 2 increased frequency defekasi be more often found in the intervention group, both on the 1-3 month age range age 4-6 months.

Table 3
results of analysis of the difference of frequency Defecation In the intervention group

Group	N	Median (Minimum-Maximum)	P*
Defecation Frequency Before Intervention	3 3	6(2-18)	0,000
Defecation Frequency After Intervention	3 3	7(2-22)	

*Wilcoxon Test

On table 3 obtained an increase in the frequency of defekasi in the intervention group at the time before and after the intervention. It brings increased by a median of 6 (2-18) to 7 (2-22). From the analysis results by using wilcoxon test obtained results there is a significant increase in frekuesni defekasi between before and after the intervention the intervention with a value of P 0000 (P < 0,005)

Table 4 results of the analysis of the difference in the frequency of defecation in the control group

Control Group	n	Average	P*
Defecation Frequency Before	33	5,06 (2,36)	0,503
Defecation Frequency After	33	5,18 (2,36)	

*T Couple Test

In table 4 it is known there is no difference in the frequency of defekasi in the control group at the time before and after. It brings the average frequency defekasi 5.06 (2.36) when before and 5.18 (2.36) after. From the analysis results by using the paired t test obtained results there were no significant differences between the defekasi frequency before and after in the control group with a value of P 0.503 (P > 0,005).

Table 5
results of Analyst Defecation Frequency Differences In the intervention group and the control

Group	N	Average	P*
Intervention Group	33	9,25 (5,05)	0,000
Control Group	33	5,18(2,37)	

*No Couple T Test

In table 5 are obtained difference frequency defekasi in the intervention group and the control group. The average values obtained at 9.25 (5.05) in the intervention group and the mean value of 5.18 (2.37) in the control group. From the analysis results by using the paired t test not didapatkaan result there is significant influence the frequency of defekasi in the intervention group and the control group with a value of P 0000 (P < 0,005)

Discussion

1. Characteristics of the subject

Characteristics of respondents in this research as seen from a variety of factors, namely the age of baby, mother's age, occupation and educational parity, mother mother.

Infant age range in accordance with the criteria for inclusion in the study that is Moon 1-6. The results showed that babies in the age group 1-3 months defekasi has a frequency that is more often that is 10-12 times/week, compared at 4-6 months age group i.e. 4-6 times/week. Age plays against a decline in the frequency of defekasi, this is an indication of the increasingly matangnya the capacity of the "water-conserving" on the intestine. Mechanism of passive and active absropsi permeability of the intestines of neonatal turned increasingly mature since newborn[7]

Several studies find that time stopped fases in the appropriate meaningfully improved cerna with increasing age. Time stopped at the age of 1-3 Moon fases IE 8.5 hours while at age 4-6 months to 16 hours. At the conclusion stated that the frequency of defekasi is associated with an increase in transit time of food in channel cerna (intestinal transit time).

The respondents in this research is infants who consume formula milk and did not receive any additional food. Afzal and Thomson are researching on konstipaasi in children found that babies who get the fases infant formulas contain mineral and fat more several times and

fewer carbohydrates and calcium-containing fatty acid soaps. This condition is related to consistency fases, so that the baby gets milk formula has fases more dense compared to who got BREAST MILK.[8]

Supported by research conducted Croffie baby getting milk formula have significantly larger fases and dense compared to the babies who get breast milk. This movement causes the fases density fases in the large intestine and colon become slower and so the sewers will more often found in infants who consume formula milk.[8]

2. The influence of Infant Massage Modifications Against the frequency Defecation

Based on the research results obtained results that massage baby modification effect significantly to frequency defekasi baby age 1 – 6 months (< 0,005. In line with research conducted on the influence of Chen's massage baby with neonatal jaundice on getting results that the levels of bilirubin was down significantly on the 4th day after massage along with the frequency of meningkatknya defekasi where fases helps bring out the bilirubin in the baby's body.[6]

Massage on the research done in the area of the abdomen and the sacrum which is part of the digestive system. The massage follows the movement of the channel cerna, from the stomach to the anus. The massage is expected to improve the work of autonomous nerve, namely the nerves responsible for the continuity of smooth muscle, such as working the muscles in the intestines. Autonomic nervous stimulate the release of hormones that help the absorption of food, thus indirectly massage can improve the digestive system. The organs involved in the massage this is a colonic desenden, sigmoid, rectum, sphincter ani internus and eksternus, as well as some nerve fibers.

In order to be effective in raises defekasi, then the massage area was undertaken the sacrum which is done with the middle part of the buttocks to wipe baby. Movement clockwise with gentle pressure. Massage stimulates the nervous system causing the rectum and intrinsic relaxation of internal sphincter ani, which is perceived as a desire to defekasi. External sphincter ani then becomes relaxation and fases issued following the colon via the anus Peristaltic[10]

This massage is a physiological cause reflex stimulation defekasi parasympathetic sacral segments involving the medulla spinalis. When the nerve endings in the rectum is stimulated, the first transmitted signals into the medulla spinalis and then back to the colon reflex desenden, sigmoid, rectum and anus through a sympathetic nerve fibers in the pelvikus. Signal-signal a parasympathetic Peristaltic waves amplify this highly and sphincter ani internus merelaksasikan also. In the end change the defekasi intrinsic mienterik the reflex of a weak attempt at being a process of defekasi a strong and effective in emptying the colon along the way from fleksura splenikus colon up to the anus. 11 based on the discussion and the results of the findings of other researchers that has been generated, it can be a reason for doing the baby massages on a regular basis in order to maintain the health of the baby. Baby massage is evident Moreover cheap, easy, and it has been wont to do in Indonesia so that is nothing new for culture in Indonesia.

Conclusion

Based on the results of the analysis and discussion as well as its relationship with research purposes, then it can be inferred that there is a significant influence of related defekasi frequency 1-6 months of age in infants who have been getting the massage treatment modifications

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