

The Effect of Massage Therapy in Overcoming Constipation in Infants Aged 7-12 Months

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ABSTRACT

Constipation is a problem that often occurs in children and is a burden worldwide because of its increasing prevalence, the prevalence is estimated at 0.3% -8%. The prevalence of constipation in children up to 1 year of age reaches 2.9% and increases in the second year by about 10.1%. Massage as an alternative medicine is one of the constipation therapies. This study aims to determine the effect of massage therapy on constipation in infants aged 7-12 months at the Arrabih Pratama Clinic Pekanbaru. This type of research is quantitative with a Quasi Experiment design using a pretest and posttest. The population and sample of this study were babies aged 7-12 months who experienced constipation who visited the Arrabih Pratama Clinic Pekanbaru in July-December 2020, totaling 24 people. The type of data in this study is primary data, with univariate, bivariate data analysis, the hypothesis test used is the independent T test (paired sample test). The results obtained showed that there was an effect of massage therapy in overcoming constipation for infants aged 7-12 months before and after massage therapy, there was a significant difference in constipation for infants aged 7-12 months between the intervention group and the control group. It is hoped that health workers, especially midwives as providers of maternal and child health services, are expected to socialize the provision of massage therapy in dealing with children's complaints before administering pharmacological therapy.

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1. Introduction

Constipation is a condition where feces (feces) are retained in the large intestine for a long time due to difficulty in expelling. This occurs due to the absence of peristalsis in the large intestine, which triggers irregular bowel movements and a feeling of discomfort in the stomach (1). In the community it is known as constipation, which is a condition that is difficult or unable to defecate, stool (stool) is hard, the feeling of incomplete bowel movements (there is a feeling of wanting to defecate but cannot pass it), or rarely defecating. Constipation is a problem with defecation patterns (2).

The pattern of defecation is an indicator of the health of infants and children, including the frequency of defecation, stool consistency, and stool color. Defecation patterns form and change as the baby grows older due to maturity of the digestive tract and changes in diet. The pattern of infant defecation at 7–12 months is transitional. In this age range, there is a pattern of defecation with a varying frequency from 1-2 times per day to 2-3 times per week. Consistency from liquid to mushy. The color of the stool is generally yellow and brown. Disruption of defecation patterns in this age range can cause constipation functional and chronic diarrhea later in life. Changes in dietary patterns are one of the main causes of the high incidence of constipation (3).

The constipation process usually starts when the baby starts getting complementary foods with breast milk (MP ASI) from the age of 6 months. For babies who have received MP ASI, one of the causes of constipation is solid food. When introducing solid food as a complementary diet for babies 6–9 months, there will be changes in the frequency and texture of the baby's stool. Generally, solid food causes a solid textured baby stool. Solid food can indeed be a good intake, but at the same time it can cause the baby to experience constipation (4).

Constipation is a problem that often occurs in children and is a burden worldwide because of its increasing prevalence. its prevalence is estimated at 0.3% to 8%. The prevalence of constipation in children up to 1 year of age reaches 2.9% and increases in the second year, which is around 10.1%. A total of 97% of cases of constipation in children are caused by functional constipation with the same incidence between boys and girls (5).

The incidence of constipation tended to be the same in both sexes at 13 years of age; and the peak incidence at toilet training age (approx. 2–3 years). The prevalence tends to be high in Asia and America. Data in the United States about 10% of children and adolescents suffer from chronic

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constipation. In Taiwan, nearly one third of primary school children suffer from constipation, in Hong Kong and South Korea the prevalence reaches 12-28%, Sri Lanka 7-15% of school children suffer from constipation. Various factors such as diet, psychological, socio-cultural and political can increase the risk of children experiencing constipation (5).

Complaints of constipation are often the reason parents bring their children to seek treatment. Complaints related to constipation were found in 3% of children attending primary care centers and 25% seeing gastroenterologists. Constipation therapy is getting used to regular bowel movements by means of behavior modification, dietary fiber, laxatives, and psychological approaches. Handling constipation can be done by giving the baby adequate fiber intake. Fiber is a very effective first aid medium when the baby is constipated due to feces that are too hard or digestion is not smooth. Massage (massage) as an alternative medicine is one of the therapies for constipation (1).

Massage (Massage) is a form of touch therapy that serves as an important treatment technique. Massage therapy has been done since ancient times before the existence of drugs. Massage (massage) is a movement of manipulation of soft tissues in areas throughout the body to provide health comfort, such as relaxation, improving sleep quality, reducing anxiety, or providing benefits to certain physical parts. Massage provides benefits for constipation by stimulating peristalsis and decreasing colonic transit time, thereby increasing the frequency of bowel movements (6).

2. Method

This research is a quantitative study with a Quasi Experiment design using a pretest and posttest (7), by observing twice, namely before and after treatment. This research was conducted at the Arrabih Pratama Clinic Pekanbaru on July 4 to December 10, 2020. The population and sample of this study were babies aged 7-12 months with constipation who visited the Arrabih Pratama Clinic Pekanbaru, totaling 24 people. The type of data in this study is primary data, with univariate and bivariate data analysis, The hypothesis test used is the independent T test (Paired sample test) (7).

3. Research Results and Discussion

3.1 Research result

a. Univariate Analysis

Table 1
Frequency distribution of constipation for infants aged 7-12 months before and after massage therapy

Constipation	N	Mean	Std. Deviation	Minimum	Maximum
Before being given massage therapy	12	13.00	3,133	8	18
After being given massage therapy	12	2.00	0.739	1	3

Based on table 1. above, it is known that constipation in infants aged 7-12 months before being given massage therapy the average value of constipation is 13.00. Constipation for infants aged 7-12 months after being given massage therapy the average value of constipation was 2.00.

b. Bivariate Analysis

Table 2
The Effect of Massage Therapy in Overcoming Constipation in Infants aged 7-12 Months Before and After Giving Massage Therapy

Constipation	N	Mean	Std. Deviation	p-value
Before being given massage therapy	12	13.00	3,133	0,000
After being given massage therapy	12	2.00	0.739	

Based on table 2 above, the results of statistical tests show the effect of giving massage therapy in overcoming constipation for infants aged 7-12 months before and after being given massage therapy because the p-value = 0.000 $< \alpha = 0.05$, so there is an effect of giving therapy massage in overcoming constipation in infants aged 7-12 months before and after being given massage therapy or it can be said that massage therapy is effective in overcoming constipation in infants. It can also be seen that the comparison of the average value of constipation before being given massage therapy is 13.00 and has decreased in the average value after being given massage therapy, which is 2.00 because the smaller the value, the better.

Table 3

Differences in the mean constipation of infants aged 7-12 months between the intervention group and the control group

Constipation	N	Mean	Std. Deviation	p-value
Do massage therapy	12	2.00	0.739	
There is no massage therapy	12	4.42	1,240	0,000

Based on table 3 above, it is found that there is a difference in constipation among infants aged 7-12 months between the intervention group and the control group where the $p\text{-value} = 0.00 < \alpha = 0.05$, which means that there is a significant difference. The mean constipation of infants aged 7-12 months in the intervention group was 2.00 with a standard deviation of 0.739, and in the control group had a mean reduction in constipation for infants aged 7-12 months of 4.42 with a standard deviation of 1.240. The analysis showed that there was a significant difference between the group who received massage therapy and the group that did not receive massage therapy.

3.2 Discussion

a. Effect of massage therapy in dealing with constipation for infants aged 7-12 months before and after massage therapy is given

Based on the analysis that has been carried out, the results obtained indicate the effect of giving massage therapy in overcoming constipation for infants aged 7-12 months before and after being given massage therapy, the $p\text{-value} = 0.000 < \alpha = 0.05$. In the comparison, the average value of constipation before being given massage therapy was 13.00 and decreased in the average value after being given massage therapy, namely 2.00 because the smaller the value, the better.

Massage(massage) becomes an inseparable part of human life. Massage is an external therapy that is very effective and reliable for the treatment of various diseases. Massage is useful in relieving gastrointestinal discomfort or discomfort, emotional distress and increasing the baby's appetite (8). Massage can stimulate peristalsis, decrease colonic transit time, increase the frequency of bowel movements in constipated patients, and reduce discomfort during bowel movements (1).

The results of this study are in line with the research conducted by (9) entitled "The Effectiveness of Pediatric Massage on the Frequency of Defecation in Infants aged 6-9 Months at Mom and Abi Baby Spa Malang Regency in 2016". The results showed that the T test ($t\text{ count} = 2.984$) and the value of Eta Squared to determine the effectiveness of infant massage was 0.28 which proved that infant massage had great effectiveness on the frequency of defecating in infants who were constipated.

The results of this study prove that massage therapy is effective in overcoming constipation. Massage therapy is given 2 x 15 minutes a day in the morning and evening for 3 days for babies who are constipated can make the digestive system more comfortable and move more smoothly.

b. Differences in the mean constipation of infants aged 7-12 months between the intervention group and the control group

Based on the analysis that has been carried out, the results obtained indicate a significant difference in constipation among infants aged 7-12 months between the intervention group and the control group where the $p\text{-value} = 0.00 < \alpha = 0.05$. The mean constipation of infants aged 7-12 months in the intervention group was 2.00 with a standard deviation of 0.739, and in the control group had a mean reduction in constipation for infants aged 7-12 months of 4.42 with a standard deviation of 1.240.

Constipation can generally be treated with fiber-rich foods, such as whole grains, fruits and vegetables. However, consuming large amounts of fiber-rich foods suddenly can cause stomach upset and bloating. In addition, babies who are familiar with complementary foods sometimes experience difficulty eating, so that the nutritional intake that must be given to treat constipation is not optimal (2).

Massage is the oldest and most popular touch therapy known to man. Massage includes the art of health care and medicine that has been practiced for a long time. Massage can reduce constipation through several different mechanisms, among others, by stimulating the parasympathetic nervous system so that it can reduce tension in the abdominal muscles, increase motility in the digestive system, increase secretion in the intestinal system and have an effect on sphincter relaxation (9).

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The results of this study are in line with the research conducted by (10) entitled "The Effect of Abdominal Massage on the Incidence of Constipation in Children with Cancer Undergoing Chemotherapy at Tangerang District Hospital in 2019". The results showed there was a significant difference in constipation scores between the control group and the intervention group, meaning that the implementation of abdominal massage had an impact on reducing constipation in children with cancer who underwent chemotherapy (pvalue = 0.000; $\alpha = 0.05$).

The results of this study prove that massage therapy is more effective than other therapies. Massage therapy also has no side effects, besides that there are many benefits obtained from massage including: increasing appetite, improving sleep quality as well as being a treatment for disease.

4. Conclusion

Based on the study, it can be concluded that there is an effect of massage therapy in overcoming constipation for infants aged 7-12 months before and after massage therapy, there is a significant difference in constipation for infants aged 7-12 months between the intervention group and the control group and massage therapy is more effective than other therapies for treating infant constipation. Therefore, it is hoped that health workers, especially midwives as providers of maternal and child health services, are expected to socialize the provision of massage therapy in overcoming children's complaints before administering pharmacological therapy. In this case, IBI as a professional organization is expected to recruit midwives to take massage training as mandatory training for midwives such as APN Training, CTU Training, and others.

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