

THE EFFECT OF BABY MASSAGE ON SMOOTH BOWEL MOVEMENTS IN CONSTIPATED TODDLERS AGED 12-24 MONTHS

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ABSTRAK: PENGARUH PIJAT BAYI TERHADAP KELANCARAN BAB PADA BALITA KONSTIPASI USIA 12-24

Latar Belakang: Konstipasi adalah suatu gejala sulit buang air besar yang ditandai dengan konsistensi feses yang keras, ukuran besar, dan penurunan frekuensi buang air besar. Konstipasi sering ditemukan pada anak dengan prevalensi kejadian sebanyak 0,3%-8%. Pijat merupakan suatu gerakan manipulasi jaringan lunak di area seluruh tubuh untuk memberikan kenyamanan kesehatan, seperti relaksasi, peningkatan kualitas tidur, menurunkan kecemasan, atau manfaat pada bagian fisik tertentu. Pijat pada abdomen dipikirkan dapat mendorong feses dengan peningkatan tekanan intraabdominal. Tujuan Penelitian: Untuk Mengetahui pengaruh pemberian pijat bayi terhadap kelancaran BAB pada Balita konstipasi usia 12-24 bulan di PMB Feby Yulistia Bandar Lampung. Metode Penelitian: Penelitian ini menggunakan metode *Quasi-Eksperimental* dengan design penelitian *one group pretest-posttest design*. Responden pada penelitian ini adalah balita berusia 12 – 24 bulan sebanyak 30 bayi di PMB Feby Yulistia, S.Tr.Keb., S.KM Bandar Lampung. Teknik pengambilan sampel menggunakan *non probability sampling* yaitu sebanyak 30 responden menggunakan kuesioner *Bristol Chart*. Analisis bivariat menggunakan uji *Wilcoxon*. Hasil: Berdasarkan penelitian yang telah dilakukan menggunakan uji *Wilcoxon* didapatkan nilai rata-rata kelancaran BAB pada balita konstipasi sebelum diberikan pijat sebesar 1.90 dengan standar deviasi 0.305. Sedangkan nilai rata-rata kelancaran BAB pada balita konstipasi sesudah diberikan pijat sebesar 2.80 dengan standar deviasi 0.484. Analisis Bivariat mendapatkan bahwa nilai perbedaan rata-rata kelancaran BAB pada balita konstipasi sebelum dan sesudah diberikan pijat sebesar 0.9 dengan Uji *Wilcoxon* mendapatkan $p = 0,000$ yang berarti terdapat pengaruh bermakna dari terapi pijat bayi terhadap kelancaran BAB pada balita konstipasi usia 12-24 bulan di PMB Feby Yulistia Bandar Lampung. Kesimpulan: Ada pengaruh pijat bayi terhadap kelancaran BAB pada balita konstipasi usia 12-24 bulan di PMB Feby Yulistia tahun 2023 dengan nilai p -value sebesar 0,000 (<0.05). Saran: Dapat diberikan pijat bayi untuk kelancaran BAB pada balita konstipasi Usia 12-24 bulan.

Kata Kunci : Balita, Konstipasi, Pijat bayi

ABSTRACT

Background: Constipation is a symptom of difficult bowel movements characterized by hard stool consistency, large size, and decreased frequency of bowel movements. Constipation is often found in children with a prevalence of 0.3%-8%. Massage is a movement of soft tissue manipulation in areas throughout the body to provide health comfort, such as relaxation, improved sleep quality, decreased anxiety, or benefits to certain physical parts. Abdominal massage is thought to encourage stool with increased intraabdominal pressure. Research purposes: To find out the effect of giving baby massage on the smooth bowel movements in constipated toddlers aged 12-24 months at PMB Feby Yulistia Bandar Lampung. Research methods: This research uses the method *Quasi-Experimental* with research design *one group pretest-posttest design*. Respondents in this study were toddlers aged 12-24 months as many as 30 babies at PMB Feby Yulistia, S.Tr.Keb., S.KM Bandar Lampung. Sampling technique using *non probability sampling* ie as many as 30 respondents using a questionnaire *Bristol Chart*. Bivariate analysis using test *Wilcoxon*. Results: Based on the research that has been done using the test *Wilcoxon* obtained the average smoothness of defecation in constipated toddlers before being given a massage of 1.90 with a standard deviation of 0.305. Meanwhile, the average smoothness of bowel movements in toddlers with constipation after being given a massage is 2.80 with a standard deviation of 0.484. Bivariate analysis found that the average difference in the fluency of bowel movements in constipated toddlers before and after being given a massage was 0.9 with the Test *Wilcoxon* obtained $p = 0.000$, which means that there is a significant effect of infant massage therapy on bowel movements in constipated toddlers aged 12-24 months at PMB Feby Yulistia Bandar Lampung. Conclusion: There is an effect of baby massage on the smooth bowel movements of constipated toddlers aged 12-

24 months at PMB Feby Yulistia in 2023 with a p-value of 0.000 (<0.05). Suggestion: Baby massage can be given to smooth bowel movements in constipated toddlers aged 12-24 months.

Keywords : Constipation, baby massage, Toddlers

INTRODUCTION

One indicator of infant and toddler health is the pattern of defecation. Defecation or defecation (defecation) is a process of evacuation of feces from the rectum, the contents of which are materials that are no longer used by the body and must be removed from the body. In normal children, the consistency of stool and frequency of defecation can vary. Breastfed babies may experience defecation after each breastfeeding or only once in 7-10 days. Formula-fed infants and older children may experience bowel movements every 2-3 days (Heryani, 2019).

Constipation is the inability to evacuate stool perfectly which is reflected in 3 aspects, namely: reduced frequency of visits than usual, harder stools than before and palpation of the abdomen palpated fecal masses (schibala). Constipation is a slowness or difficulty in defecation that occurs in 2 weeks or more and is enough to make the patient suffer. Constipation is a serious problem for newborns. If left untreated, it can cause intestinal blockage that requires surgery (Heryani, 2019).

Constipation is a digestive disorder characterized by difficulty or decreased frequency of bowel movements, frequency less than 3 times a week. Constipation in children usually begins with pain when defecating, so the child begins to hold back defecation to avoid the pain. When holding back bowel movements continues, the desire to defecate will begin to disappear, which will result in a buildup of feces so that it can cause feces to harden (Heryani, 2019). The accumulation of feces for a long time in the rectum will result in reduced peristalsis activity that pushes feces out, causing more stool retention. This will result in reduced rectal sensory ability (Heryani, 2019).

Treatment of constipation is carried out with pharmacological and non-pharmacological therapies. Massage therapy is part of non-pharmacological therapy. Massage therapy has been known to the public since ancient times, before the existence of drugs. Several studies that have been conducted previously show that there are many positive influences of massage, namely improving the immune system, relaxing the child's body, overcoming sleep difficulties, improving the growth and development process, preventing digestive disorders, launching bowel movements, improving the work of the respiratory, digestive and circulatory

systems (Suarsyaf, et al, 2015). In cases of constipation, the administration of massage therapy can accelerate the transit time of the colon so as to increase the frequency of bowel movements (Lamas, et al, 2010).

The prevalence of constipation in children is estimated at 0.3%-8%. This is in accordance with a retrospective study research by Leoning Baucke in 2015 obtained 2.9% prevalence of constipation in children to 1 year old and increased in the second year, which is around 10.1%. Prevalence data in Indonesia recorded 73.2% of children experiencing digestive problems, namely constipation and diarrhea. Research conducted by Setiawan 2016 states that 48% of babies experience chronic constipation. (Setiawan, 2016).

The impact of constipation itself includes abdominal pain, down or loss of appetite, fussiness, nausea and vomiting, weight loss, fecal stains on children's underwear, straining to pass feces that can cause small tears in the lining of the anal mucosa (anal fissure) and bleeding, and constipation increases the risk of urinary tract infections (UTIs) (Heryani, 2019).

Based on research conducted by Kristina Lamas, Lars Lindholm, Hans Steenlund, Birgitta Engstrom, and Catrine Jacobsson in 2009 entitled Effect of abdominal massage in management of constipation-A randomized controlled trial explains that massage therapy can reduce gastrointestinal symptoms, especially symptoms associated with constipation. In a study conducted by Hani suarsyaf and Dyah Wulan in 2015 entitled The Effect of Massage Therapy on Constipation explained that abdominal massage therapy can reduce constipation symptoms compared to pharmacological therapy. Baby massage can speed up the work of the colon, so the frequency of bowel movements increases.

Based on the above phenomenon, researchers are very interested in carrying out research to pursue this baby massage with the title "The Effect of Baby Massage on the Smoothness of Defecation in Constipation Toddlers aged 12-24 months at PMB Feby Yulistia Bandar Lampung".

RESEARCH METHODS

This type of research uses quantitative research with a quasi-experimental research design with a One Group pre-post test design approach. The

respondents in this study were toddlers aged 12-24 months as many as 30 babies at PMB Feby Yulistia, S.Tr.Keb., S.KM Bandar Lampung. The sampling technique uses non-probability sampling, which is as many as 30 respondents using the Bristol Chart questionnaire. The variable in this study was about the effect of infant massage on smooth bowel movements in constipated toddlers aged 12-24 months. The intervention given is a full body massage performed for 15-30 minutes. Data analysis is done with the help of a computer program (SPSS). Univariate analysis is performed to determine the frequency distribution. Bivariate analysis using the Wilcoxon test.

RESEARCH RESULTS

Table 1
Frequency Distribution of Respondents Smooth Defecation in Constipation Toddlers Age 12-24 Months Before Giving Baby Massage at PMB Feby Yulistia

Characteristic	Total (N)	Percentage (%)
Age 12-14 months	14	46,7
14-17 months	8	26,7
18-20 months	4	13,3
21-24 months	4	13,3
Gender:		
Male	13	43,3
Female	17	56,7
Types of Food		
Instant Food	16	53,3
Make Your Own Food	14	46,7
Total Fluid Intake per day		
<1150 cc	19	63,3
>1300 cc	11	36,7

Based on table 1 above, it explains that from 30 respondents, the majority of respondents aged 12-14 months there are 14 people (46.7%), based on gender, the majority of respondents are female, there are 17 people (56.7%), based on the type of food, the majority of respondents eat instant food, there are 16 people (53.3%), and based on the amount of fluid intake per day, the majority of respondents <1150cc, there are 19 people (63.3%).

Bivariate Analysis

Table 4
Differences in fecal types aged 12-24 months before and after baby massage at PMB Feby Yulistia

Category	Mean	SD	Selisih	p-value
Smooth defecation before massage	1,90	0,305	0,9	0,000
Smooth bowel movements after massage	2,80	0,484		

Based on table 4 above, it shows that there is a change in the type of feces with an average value of 0.9. The results of the Wilcoxon test obtained a p-value of 0.000 (<0.05) meaning that there is a significant difference between before and after baby massage, so it can be concluded that there is an

effect of infant massage on smooth bowel movements in constipated toddlers aged 12-24 months.

Univariate Analysis

Table 2
Distribution of Smooth Defecation in Constipation Toddlers Aged 12-24 Months Before Giving Baby Massage at PMB Feby Yulistia

Category	N	Mean	SD	Min-Max
Pretest	30	1,90	0,305	1 – 2

Based on Table 2 shows that before giving baby massage, the average type of feces smooth defecation in toddlers is constipated with a value of 1.90 (SD + 0.305) and a min-max value of 1-2.

Table 3
Distribution of Smooth Defecation in Constipation Toddlers Aged 12-24 Months After Giving Baby Massage at PMB Feby Yulistia

Category	N	Mean	SD	Min-Max
(Posttest)	30	2,80	0,484	1 – 3

Based on Table 3 shows that after giving baby massage, the average type of feces smooth defecation in toddlers is constipated with a value of 2.80 (SD + 0.484) and a min-max value of 1-3.

DISCUSSION

Univariate Analysis

Based on the results of research that has been conducted shows that before giving baby massage, the average type of feces smooth defecation in toddlers Constipation with a value of 1.90 (SD + 0.305) and a min-max value of 1-2. Meanwhile, after giving baby massage, the average type of feces smooth defecation in toddlers is constipated with a value of 2.80 (SD + 0.484) and a min-max value of 1-3. The results showed that baby massage was able to facilitate bowel movements in constipated toddlers, where toddlers showed changes in the type of feces, babies were not fussy, babies did not have difficulty defecating.

According to the theory of Rukiyah and Yulianti (2010) states that the causes of constipation are the natural tendency of longer bowel movements, poor nutrition, some drugs that cause constipation, bad bowel habits, lack of fluid intake, lack of physical activity, the presence of conditions that cause pain, forced toilet training, sometimes constipation occurs due to sexual abuse.

Strengthened by research conducted by Parasita, Niluh Ayu, et al (2021) Based on the results of the study, 12 respondents (100%) respondents experienced constipation with fecal types 1 and 2 before baby massage.

In the opinion of researchers, constipation in toddlers can cause low body resistance, decreased or decreased appetite, fussiness, nausea and vomiting, weight loss, and can cause small tears in the mucosa and bleeding when toddlers strain. Therefore, parents are expected to always pay attention to whether the child has the characteristics of constipation or is experiencing constipation.

The results of this research are in line with the theory of Muzal and Endyarni (2016) which states that massage on the body is believed to stimulate local blood circulation. Blood vessels in the area of the body being massaged will experience dilation and blood flow in the area massaged increases. Based on this theory, it is assumed that by stimulating blood circulation, it can launch blood circulation to the digestive organs.

Baby massage as touch therapy has many positive benefits that can support the baby and his development and can be a complementary therapy in babies with constipation. Baby massage has benefits to launch the baby's digestive system and help to relax so that the baby feels fussy and not fussy. (Bennett, Underdown, and Barlow 2013).

Massage can stimulate the nervous system and hormones. Massage is a tactile stimulation on the surface of the skin and stimulates the surrounding innervation. Nerve cells will work to

provide information to the brain, so that the brain can instruct the enzyme ODC (Ornithin Decarboxylase) to increase its production. These enzymes work to be a guide for cell and tissue growth. The growth of cells and tissues is useful for repairing digestive conditions damaged by the invasion of microorganisms. (Surano, 2011).

This is in line with research conducted by Parasita, Niluh Ayu, et al (2021) the results showed that most after the massage of babies experienced changes in fecal type to type 3, which was 10 respondents (83.4%).

Baby massage therapy has been shown to have an effect on babies who are constipated. According to Underdown in from Warwick Medical School, the Institute of Education and the University of Warwick Coventry states that massage on infants and toddlers can improve their physical health and mental endurance. (Xu et al. 2014).

Based on the research that has been done, researchers argue that there are changes before and after massage in constipation toddlers because baby massage has benefits to launch the baby's digestive system and help to relax so that the baby feels fussy and not fussy.

Bivariate Analysis

Based on the results of research that has been done shows that there is a change in the type of feces with an average value of 0.9. The results of the Wilcoxon test obtained a p-value of 0.000 (<0.05) meaning that there is a significant difference between before and after baby massage, so it can be concluded that there is an effect of infant massage on smooth bowel movements in constipated toddlers aged 12-24 months. The results showed that baby massage was able to facilitate bowel movements in constipated toddlers, where toddlers showed changes in the type of feces, babies were not fussy, babies did not have difficulty defecating.

According to Hani suarsyaf and Dyah Wulan in 2015 with the title The Effect of Massage Therapy on Constipation explained that abdominal massage therapy can reduce constipation symptoms compared to pharmacological therapy. Baby massage can speed up the work of the colon, so the frequency of bowel movements increases. After baby massage, the study found a change in the type of stool to type 3 as many as 25 respondents (73.3%).

According to Ferius (2008) massage therapy has been carried out since ancient times before the existence of drugs. Several studies on massage have been conducted and it has been found that massage therapy has a good impact associated with conditions and diseases in children. Among the

benefits of massage therapy is blood circulation, healing, and growth.

Based on the research that has been done, researchers think babies who are given massage can stimulate the nervous system and hormones. Massage is a tactile stimulation on the surface of the skin and stimulates the surrounding innervation. Nerve cells will work to provide information to the brain, so that the brain can instruct the enzyme ODC (Ornithin Decarboxylase) to increase its production. These enzymes work to be a guide for cell and tissue growth. The growth of cells and tissues is useful for repairing digestive conditions damaged by the invasion of microorganisms. Launch the baby's digestive system and help to relax so that the baby feels comfortable and not fussy.

CONCLUSION

There is an effect of baby massage on smooth defecation in constipated toddlers aged 12-24 months at PMB Feby Yulistia Bandar Lampung in 2023 (p-value $0.00 < 0.05$)

SUGGESTION

It is expected to be able to add information and education to disseminate the experience gained, especially infant massage therapy on the smooth defecation in toddlers aged 12-24 months so that it can be information for mothers who have toddlers.

REFERENCES

- Heryani, Rani. (2019). *Asuhan Kebidanan Neonatus, Bayi, Balita dan Anak Pra Sekolah*. Jakarta: TIM
- Hidayat, A.A.A., (2014). *Metode Penelitian Kebidanan dan Teknik Analisis Data (Edisi 2)*. Jakarta: Salemba Medika
- Parasita, N. A., Ika. A. D., Wira, D. (2021). *Pengaruh Pijat Bayi Sebagai Terapi Komplementer Terhadap Konstipasi Pada Bayi Usia 6-12 Bulan*. Media Husada Journal Of Nursing Science. Vol 2 (No.1). 33-39
- Suarsyaf. (2015). *Pengaruh Pijat Bayi Terhadap Konstipasi The Effect Of Massage Therapy For Constipation* (Vol. 4). Lampung
- Profil Kesehatan Provinsi Lampung. (2021). *Tren Angka Kematian Neonatal, Bayi, dan Balita*.
- Sadiman dan Islamiyati. (2019). *Efektifitas Pijat Bayi Terhadap Peningkatan Berat Badan, Lama*

Waktu Tidur dan Kelancaran BAB. Journal Kesehatan Metro Sai Wawai. Vol 12 (No. 2). 9-16

- Alfiyanti D., Amin S., Harvina S. P. (2022). *Aplikasi Baby Massage Pada Asuhan Keperawatan Bayi Sehat untuk Meningkatkan Kualitas Tidur dan Kelancaran Buang Air Besar*. Holistic Nursing Care Approach. Vol 2 (No. 1). 2808-2095
- Wang X, Yin J. *Complementary and Alternative Therapies for Chronic Constipation*. Evidence Based CAM. 2015; 2015(1): 1-11.
- Xu, Xiao Hu et al. 2014. "A Randomized Controlled Trial of Acupuncture to Treat Functional Constipation: Design and Protocol." BMC Complementary and Alternative Medicine 14(1): 423.
- Zeevenhooven, Judith, Ilan J.N. Koppen, and Marc A. Benninga. 2017. "The New Rome IV Criteria for Functional Gastrointestinal Disorders in Infants and Toddlers." Pediatric Gastroenterology, Hepatology and Nutrition 20(1): 1-13
- Suranto A. *Pijat Anak*. Jakarta: Penebar Swadaya Grup; 2011.
- Harvey S, et al. Arch Dis Child Educ Pract Ed 2022;0:1-5. doi:10.1136/archdischild-2022-324513
- Kadim, Muzal, and Bernie Endyarni. 2016. "Manfaat Terapi Pijat Pada Konstipasi Kronis Anak." Sari Pediatri 12(5): 342.
- Ferius S, Efar P, Mansur S, Gunardi H. *Pengaruh Pijat Bayi Menggunakan Minyak Mineral atau Minyak Kelapa terhadap Kenaikan Berat Badan pada Neonatus Aterm*. Sari Pediatri. 2008; 10(4):219-24.
- Hapsari, Wuri Widyani, dan Nurul Farah Nabilah. (2021). *Perancangan Desain Karakter Feses Sebagai Maskot Promosi Kesehatan Pencernaan Anak*. Reka Makna: Jurnal Komunikasi Visual
- Liu Z. *Mechanism of Abdominal Massage for Difficult Defecation in a Patient with Myelopathy*. J Neurol. 2005;252(10): 1280-82.
- Prananingrum, R., Dewi, P. D. K., Ida, U. (2017). *Panduan Pijat Bayi*. Surakarta: Yuma Pustaka