Jurnal Eduhealth
Volume 15, Number 04, 2024, DOI 10.54209/eduhealth.v15i04
ESSN 2808-4608 (Online)
https://ejournal.seaninstitute.or.id/index.php/healt

The Intervention Effect Of Effleurage Technique On Children WHO Experience Constipation

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Article Info
Keywords:
Child
Effleurage Technique
Constipation

ABSTRACT
Background: Constipation is a common digestive problem in children, often caused by dietary factors, lack of physical activity, or emotional stress. If left untreated, constipation can lead to discomfort, abdominal pain, and complications such as fecal impaction. Various management strategies are available, including dietary modifications, increased fluid intake, and physical interventions such as abdominal massage. One of the effective non-pharmacological approaches to managing constipation is the effleurage massage technique, a gentle stroking movement that stimulates intestinal peristalsis and promotes bowel movements. Aims: This study aimed to show the effectiveness of the application of effleurage techniques in children who experience constipation.Methods: The research design used was descriptive with a case study method approach. The case study subjects in this study were two children aged 3-6 years who experienced constipation. Results: This research showed that on the first day, both respondents were unable to defecate. On the second day, both respondents still had not defecated. However, on the third day, respondent 1 was able to defecate, with stool in the form of small, solid balls, while respondent 2 also defecated, with solid and brownish feces. These results indicate that the effleurage massage therapy technique was effective in relieving constipation.Conclusion: Effleurage massage techniques on the abdomen can increase intestinal peristalsis, leading to improved bowel movements and reduced symptoms of constipation. This technique can be considered as a safe, simple, and effective non-pharmacological intervention for managing constipation in children.

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INTRODUCTION

Constipation in children is a common condition that significantly impacts their health and quality of life. Constipation is a common problem among preschool children, affecting their physical health, emotional well-being, and overall quality of life. Studies have shown that functional constipation can occur in approximately 4% of preschool children, with a higher prevalence found in older children. This condition can cause significant distress, affecting social interactions, school performance, and general behavior (Tanjung et al., 2016). Therefore, effective management strategies are essential, especially non-pharmacological approaches that can be easily implemented at home. This condition is not only common,but

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also leads to increased healthcare utilization and higher costs. For example, children with constipation incur an average of $3,430 in medical costs per year, compared to $1,099 for those without constipation, indicating the economic burden associated with this condition (Choung et al., 2011). The pathophysiology of constipation in children is multifactorial. Factors such as dietary habits, physical activity levels, and psychological stress can contribute to the development and persistence of constipation. For example, children with a higher body mass index (BMI) are more likely to have treatment-resistant constipation, which may be due to dietary choices and a less active lifestyle (Misra & Liaw, 2021).

Additionally, children with chronic conditions, such as cancer, face additional challenges, as treatments such as chemotherapy can worsen constipation due to side effects (Belsky et al., 2021). In addition to direct gastrointestinal symptoms, constipation can also lead to secondary complications, such as urinary tract infections (UTIs). Research suggests that effective management of constipation can relieve associated UTI symptoms, suggesting a significant association between the two conditions (Imanzadeh et al., 2012). The psychological impact of constipation on children and their families is also important, as recurrent constipation can lead to stress, low self-esteem, and family conflict (Chang et al., 2013). The management of constipation often involves pharmacological treatment, which can have side effects and is not always effective for all patients. Therefore, there is a need for safer and non-invasive alternative approaches to address this problem.

The application of effleurage techniques in children with constipation has attracted attention due to its benefits in relieving gastrointestinal discomfort and promoting bowel movements. Results from a systematic review by Wegh et al., which highlighted that various non-pharmacological treatments, including massage therapy, can improve colonic motility and provide relief from functional constipation in children (Wegh et al., 2022). Stimulation of the parasympathetic nervous system through gentle abdominal manipulation is believed to play an important role in improving the digestive process and promoting regular bowel movements (Pramiati et al., 2020a).

However, although this technique shows potential benefits, further research is needed to assess its effectiveness in real-world situations and to understand how this technique can be integrated into clinical practice. Case study research can provide a deeper understanding of the experiences of children undergoing effleurage massage, the changes in their condition, and the impact of the technique on their quality of life. Therefore, this study aims to investigate the application of effleurage techniques in children with constipation, assess its effects on physical and psychological symptoms, and provide more solid evidence to support the use of this technique as part of a comprehensive approach to the management of constipation in children.

METHODS

The type of research used in this study is descriptive with a case study method approach. The case study subjects in this study were 2 children aged 3-6 years who experienced constipation. The form of massage technique given using the palm of the hand that provides gentle pressure on the abdomen, this massage technique is done by following the colon line.

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The application of this technique is carried out for 3 days with a frequency of 2 times a day, morning and evening, a duration of 15 minutes. In assessing children's constipation problems, it will be studied by looking at the patient's subjective and objective data. The presentation of data in this study is presented in a structured/narrative manner and accompanied by excerpts of verbal and nonverbal expressions from the case study subjects which are supporting data

RESULTS AND DISCUSSION

Results

Respondent 1

When the assessment was conducted, the mother of respondent 1 said that it was difficult to defecate and straining during defecation, her mother also said that her child's feces were hard, dry and the frequency of defecation decreased during the treatment period, when the patient's physical examination was carried out, the patient's stomach appeared enlarged, bloated, intestinal peristalsis was heard 4x/minute, abdominal distension was felt, appeared weak, composmentis consciousness, pulse 88x/minute, temperature 36.8oC, breathing 22 x/minute. After the application of effleurage massage techniques to the respondent for 3 days, it was applied twice a day at 08.00 and 16.00 WITA with a duration of 15 minutes, the results were obtained in table 1.

Table 1. Differences in constipation occurrences afterward treatment

Assessment After Therap	Postest		
	Day-1	Day-2	Day-3
Complaint of difficulty defecating	Yes	Yes	No
Abdominal distension	Yes	Yes	No
Bowel peristalsis	6 times/minute	7 times/minute	11 times/minute
Stool consistency	Hard	Hard	Hard

Respondent 2

During the initial assessment, the mother of Respondent 2 stated that her child had difficulty defecating. She also mentioned that the child's stool was slightly hard and that the child experienced discomfort in the abdomen. A physical examination revealed a firm and bloated abdomen, bowel sounds at 5 times per minute, a pulse rate of 89 beats per minute, a temperature of 37.1°C, and a respiratory rate of 22 breaths per minute. After applying the effleurage massage technique for three days—twice a day at 08:00 and 16:00 WITA, with a duration of 15 minutes per session—the results are presented in Table 2.

Table 2. Differences in constipation occurrences afterward treatment

Assessment After Therap	Posttest		
	Day-1	Day-2	Day-3
Complaint of difficulty defecating	Yes	Yes	No
Abdominal distension	Yes	Yes	No
Bowel peristalsis	5 times/minute	7 times/minute	10 times/minute
Stool consistency	Hard	Hard	Hard

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In addition to the results presented in Tables 1 and 2, further data were obtained regarding the condition of both respondents after the application of the effleurage massage technique. After three days of therapy, both Respondent 1 and Respondent 2 showed a reduction in constipation compared to the initial assessment before the therapy was applied.

The mother of Respondent 1 stated that her child was able to defecate, although the stool remained slightly hard and was passed in small, pellet-like shapes. Bowel peristalsis increased to 11 times per minute. Similarly, the mother of Respondent 2 reported that her child was also able to defecate, with stool that was slightly hard, solid, and brownish in color. Bowel peristalsis increased to 10 times per minute.

Discussion

Both respondents underwent effleurage massage therapy to address their constipation. Effleurage massage is a technique that involves using the palm of the hand to apply gentle pressure on the abdomen while following the shape of the colon. The researcher believes that performing gentle abdominal massage along the colon's path for three days, with a frequency of twice a day and a duration of 15 minutes per session, can serve as a non-pharmacological intervention for constipation.

Effleurage massage on the abdomen has been proven to stimulate gastrointestinal motility, which is essential for relieving constipation. Pramiati et al. demonstrated that this technique effectively enhances peristalsis the wave like muscle contractions that facilitate bowel movements thus providing relief from constipation in children. The gentle and rhythmic movements characteristic of effleurage massage not only promote physical relaxation but also activate the parasympathetic nervous system, which plays a crucial role in digestion (Pramiati et al., 2020). This is particularly beneficial for preschool children, who are more sensitive to the discomfort and stress associated with constipation.

In addition to its physiological benefits, effleurage massage on the abdomen is an affordable and easily implementable intervention. Caregivers can perform this technique at home, making it an accessible option for families seeking to manage their child's constipation without medication (Pramiati et al., 2020). These findings align with the research of Chang et al., which highlights the importance of a multidisciplinary approach in managing functional constipation, incorporating dietary modifications and behavioral strategies alongside non-invasive therapies such as massage (Chang et al., 2013).

Furthermore, the accessibility and safety of abdominal effleurage massage make it an attractive choice for families. Unlike pharmacological treatments, which may carry risks of side effects or dependency, abdominal massage is generally considered safe when performed correctly (Mohamed et al., 2023). This is particularly important in pediatric care, where the potential side effects of medications can be a concern

The effleurage technique, a form of abdominal massage, has demonstrated significant effectiveness in reducing constipation in children. Research indicates that this non-pharmacological intervention can lead to substantial improvements in bowel function, as evidenced by various studies focusing on different age groups and contexts. The following section details findings related to the effects of effleurage technique interventions on children experiencing constipation.

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A study conducted in Surabaya found that 80.6% of children reported relief from constipation after receiving abdominal massage using the effleurage technique, with a statistically significant p-value of 0.000 (Yobel & Kristiani, 2024). Another study highlighted that visceral manipulation, which shares principles with effleurage, significantly improved stool consistency and reduced the need for laxative medication in children with chronic functional constipation (Zakaryaei et al., 2024).

The integration of educational interventions alongside physical techniques such as effleurage has been shown to further enhance treatment outcomes. A nursing education program led to a 48.9% increase in bowel movement frequency among children (Faramarzian et al., 2021). Furthermore, pediatric medical massage has been validated as an effective therapy for infants, demonstrating the broader application of massage techniques in managing constipation (Saputri et al., 2024).

CONCLUSION

First, in terms of housing density, no significant influence was found between housing The application of the effleurage technique as a non-pharmacological intervention for preschool children with constipation has demonstrated potential effectiveness. Research shows that abdominal effleurage massage can enhance bowel peristalsis, leading to improved bowel movements and a reduction in constipation symptoms

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