

APPLICATION OF FEEDING RULES AND TUI NA MASSAGE TO OVERCOME EATING DIFFICULTIES IN TODDLERS

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ABSTRACT: APPLICATION OF FEEDING RULES AND TUI NA MASSAGE TO OVERCOME EATING DIFFICULTIES IN TODDLERS

Background: Decreased appetite or difficulty eating in toddlers can have an impact on the growth and development stages because during this period nutrition is very much needed for daily activities. Symptoms of difficulty eating can occur in around 60.3% of toddlers aged 2-3 years so that to overcome this problem, structured eating rules are needed so that parents have guidance in feeding their children, in addition toddlers also need to get touch in the form of massage to facilitate digestion and blood circulation so that appetite increases and nutrient absorption in the body becomes more optimal.

Objective: Analyzing the application of feeding rules and tui na massage to eating difficulties in toddlers aged 2-3 years.

Methods: This type of research is Pre-experimental with a one group pretest posttest design, the target of this research is 15 toddlers who have difficulty eating, the instruments used are questionnaires and checklists, then the data is analyzed using the Wilcoxon test. Signed Rank Test.

Results: The nutritional status of toddlers who experience eating difficulties is on average in the normal category (80%), the application of feeding rules and tui na massage has a significant effect on reducing eating difficulties in toddlers with test results Wilcoxon Signed Rank Test obtained a Sig. value (2-tailed) of 0.001 which is smaller than 0.05, after being given treatment, eating difficulties in toddlers decreased by 80%.

Conclusion: Based on the research results, it can be concluded that the combination of optimal application of feeding rules by parents and tui na massage can be used as an alternative solution in overcoming eating difficulties in toddlers, because toddlers' meal schedules become more structured, helping to train proper eating regulation and helping toddlers become more relaxed and sleep better.

Keywords: Difficulty Eating, Feeding Rules, Tui Na Massage

ABSTRAK : PENERAPAN *FEEDING RULES* DAN PIJAT *TUI NA* UNTUK MENGATASI KESULITAN MAKAN PADA BALITA

Latar Belakang: Penurunan nafsu makan atau kesulitan makan pada balita dapat berdampak pada tahapan tumbuh kembang karena pada periode tersebut nutrisi sangat diperlukan untuk aktivitas sehari-hari. Gejala kesulitan makan dapat terjadi sekitar 60,3% pada balita usia 2 – 3 tahun sehingga untuk mengatasi permasalahan tersebut, perlu aturan makan terstruktur agar orangtua memiliki panduan dalam memberikan makan pada anak, selain itu balita juga perlu mendapatkan sentuhan dalam bentuk pijat agar memperlancar pencernaan dan peredaran darah agar nafsu makan meningkat dan serapan nutrisi dalam tubuh menjadi lebih optimal.

Tujuan: Menganalisis penerapan *feeding rules* dan pijat tui na terhadap kesulitan makan pada balita usia 2-3 tahun.

Metode: Jenis penelitian ini adalah *Pre-experimental* dengan rancangan *one group pretest posttest*, sasaran penelitian ini yaitu balita yang mengalami kesulitan makan sebanyak 15 orang, instrumen yang digunakan adalah kuesioner dan daftar tilik, kemudian data dianalisis menggunakan uji *Wilcoxon Signed Rank Test*.

Hasil: Status gizi balita yang mengalami kesulitan makan rata-rata dalam kategori normal (80%), penerapan *feeding rules* dan pijat tui na berpengaruh signifikan terhadap penurunan kesulitan makan pada balita

dengan hasil uji *Wilcoxon Signed Rank Test* diperoleh nilai *Sig. (2-tailed)* sebesar 0,001 lebih kecil dari 0,05, setelah diberikan perlakuan kesulitan makan pada balita mengalami penurunan sebesar 80%.

Simpulan: Berdasarkan hasil penelitian dapat disimpulkan bahwa kombinasi penerapan *feeding rules* oleh orangtua secara optimal dan pijat tui na dapat dijadikan sebagai alternatif solusi dalam mengatasi kesulitan makan pada balita, karena jadwal makan balita menjadi lebih terstruktur, membantu melatih regulasi makan yang tepat dan membantu balita menjadi lebih rileks, serta tidur lebih nyenyak.

Kata Kunci: *Feeding Rules*, Kesulitan Makan, Pijat Tui Na

INTRODUCTION

Nutrition is a very important component to ensure the continuity of the growth and development process of toddlers, without adequate nutrition several problems will arise, one of which is malnutrition. Decreased appetite or difficulty eating can be a nutritional problem if not addressed properly, where in this period, toddlers are more active than when they were babies, in addition, in this period, toddlers begin to choose only the foods they like so parents need to make a strategy so that nutritional needs are still met (Cheerful & Arintasari, 2019).

Eating difficulties that are not addressed properly can have a negative impact on children's growth and development, such as inappropriate weight and height to malnutrition. Symptoms of eating difficulties in children can occur around 25% and will increase around 40-70% in toddlers, especially in the age range of 1-3 years, at this age children only eat foods they like. The proportion of eating difficulties in children in Indonesia reaches 60.3%, especially when children reach the age of 2-3 years (Saidah & Dewi, 2020).

According to the World Health Organization (WHO), around 149 million children under the age of five worldwide suffer from stunting or are short for their age due to chronic malnutrition. In addition, 45 million children suffer from wasting or are thin for their height caused by acute malnutrition and 35 million children are overweight or obese. Meanwhile, almost half of deaths of children under the age of five are caused by malnutrition (WHO, 2020). The results of the 2022 Indonesian Nutritional Status Study (SSGI) survey, the prevalence of stunting in Indonesia reached 21.6% and the prevalence in South Kalimantan was 24.6% which is the 14th highest out of 35 provinces in Indonesia. Meanwhile, the prevalence of malnutrition in toddlers aged 0-59 months in South Kalimantan in 2022 was 17.1%. In line with these data, based on Presidential Decree Number 72 of 2021, concerning the acceleration of stunting reduction, it is mandated that the stunting rate in Indonesia must be reduced from 27.67% (2019) to 14% in 2024. Meanwhile, data from the

Banjarmasin City Health Office, the number of toddlers weighed in 2022 was 44,407 people, toddlers who were malnourished were 558 people (1.3%), short toddlers were 1,344 people (3.0%), and thin toddlers were 558 people (1.3%) (Banjarmasin Health Office, 2023).

Malnutrition can have a negative impact on health, especially on the growth and development of children. Factors that influence the incidence of malnutrition include lack of nutritional intake, infectious diseases, lack of family food security, lack of parental knowledge related to parenting patterns, and lack of health services and environmental sanitation (Cheerful & Arintasari, 2019).

Efforts that can be made to overcome eating difficulties in children are by pharmacological and non-pharmacological methods. Pharmacological efforts such as giving multivitamins to increase appetite, supplements, milk, and other micronutrients and non-pharmacological efforts can be done by giving herbal drinks or jamu, massage, acupressure, and acupuncture (Kursani et al., 2020).

One of the massage techniques that can be done on children who have difficulty eating is Tui Na massage. Tui Na massage is a massage technique by facilitating digestion and blood circulation in the spleen, developed from acupuncture techniques without needles, this massage technique uses pressure on meridian points or energy flow lines of the body so that it is relatively easier to do compared to acupuncture. Tui Na massage is done with massage techniques (Petrissage or Nie), tapping (Tapotement or Da), gliding (Effleurage or Tui), friction, rotating, and vibrating certain points so that it will affect the body's energy (Wijayanti et al., 2019). In addition, efforts to improve the problem of eating in Chatoor children have sparked a basic rule for feeding called basic feeding rules. Basic feeding rules are structured feeding rules that include three aspects, namely schedule, environment, and feeding procedures. Basic feeding rules are used as recommendations for mothers in feeding children by the Indonesian Pediatrician Association (IDAI). By implementing basic feeding rules, children's growth becomes good and reduces the risk of growth

failure. (Ghinanda et al., 2022). Considering the problem of eating difficulties that can have an impact on nutritional problems, a solution is needed so that the problem can be handled properly, therefore it is necessary to conduct further analysis on the application of feeding rules and tui na massage in overcoming eating difficulties in toddlers.

RESEARCH METHODS

This research method uses Pre-experimental with one group pretest posttest design. The target of the study was all toddlers aged 2-3 years who experienced difficulty eating in the PMB Delima WM area in February and March 2023, totaling 15 people with the inclusion criteria being healthy toddlers who had never been massaged, while the exclusion criteria were toddlers who had digestive system abnormalities. The research instruments were a questionnaire to assess the level of difficulty eating in children, a checklist for feeding rules guidelines, and Tui Na massage SOP. The data collection stage began with identifying the difficulty eating of 15 toddlers before being given feeding rules and Tui Na massage treatment, then each toddler received Tui Na massage treatment 3 times in 1 week for a period of 35 days (12 massages), while feeding rules regarding the rules for feeding practices were applied every day for 35 days. After the implementation of the treatment for 35 days, measurements were taken again to assess the difficulty eating in toddlers, then the data were analyzed using the Wilcoxon Signed Rank Test.

RESEARCH RESULTS

The results of research on the application of feeding rules and Tui Na massage to overcome eating difficulties in toddlers can be seen in the following explanation:

Characteristics of Toddlers

The characteristics of toddlers who experience eating difficulties based on age, gender, and nutritional status can be seen in the following table:

Table 1
Characteristics of Toddlers Who Experience Eating Difficulties

Characteristics	N	%
Age		
2 years	7	46.7
3 years	8	53.3
Gender		
Man	7	46.7
Woman	8	53.3
Nutritional Status (BW/A)		
Very less weight	1	6.7
Underweight	2	13.3
Normal weight	10	66.7
Overweight	2	13.3
Nutritional Status (H/A)		
Very short	1	6.7
Short	1	6.7
Normal	12	80
Tall	1	6.7

Based on the identification results, data on the characteristics of toddlers who experience eating difficulties, both in terms of age and gender, on average almost 50% occur at the age of 2-3 years with male and female genders, while the characteristics of toddlers seen from nutritional status according to BB/A and TB/A average of 13-19% of toddlers experience nutritional problems, namely body weight and height below the normal category.

Toddler Feeding Difficulties

The results of the study on toddlers' eating difficulties before and after being given treatment are as follows:

Table 2
Toddlers' Eating Difficulties Before and After Treatment

Category	Pretest	Presentation	Posttest	Presentation
Difficulty Eating	15	100%	3	20%
No Difficulty Eating	0	0	12	80%

The results of the study showed that eating difficulties in toddlers before and after being given feeding rules and Tui Na massage treatment decreased, although there were still around 20% of toddlers who did not experience any changes in their eating difficulties.

Results of Analysis of Toddlers' Eating Difficulties Before and After Being Given Feeding Rules and Tui Na Massage

Normality Test Data on toddlers' eating difficulties can be seen in the following table:

Table 3
Data Normality Test

Shapiro Wilk Test	Posttest
Statistics	0.499
df (degrees of freedom)	15
Sig.	0,000

Test results normality data using Shapiro-Wilk obtained a significance value of less than 0.05.

These results prove that the data is not normally distributed so that the Paired Sample T-Test cannot be performed and is continued with non-parametric statistical analysis using the Wicoxon Signed Rank Test.

The results of the statistical test on toddlers' eating difficulties can be seen in the following table:

Table 4
Wilcoxon Test Results Before and After Treatment

		Ranks		
		N	Mean Rank	Sum of Ranks
Posttest – Pretest	Negative Ranks	0a	0.00	0.00
	Positive Ranks	12b	6.50	78.00
	Ties	3c		
	Total	15		

a. Posttest < Pretest

b. Posttest > Pretest

c. Posttest = Pretest

The test results showed that there were no posttest scores that were lower than the pretest, there were 12 respondents whose posttest scores

were higher than the pretest, and there were 3 respondents whose pretest and posttest scores were the same.

Table 5
Test Results Wilcoxon Before and After Treatment

Test Statistics	
Posttest – Pretest	
Z	-3.464b
Asymp. Sig. (2-tailed)	0.001

a. Wilcoxon Signed Ranks Test

b. Based on negative ratings.

The results of the Wilcoxon Signed Rank Test analysis showed that the Sig. (2-tailed) value of 0.001 was smaller than 0.05. So there is a significant difference between the results of the pretest and posttest values, so it can be concluded that Tui Na massage and the application of feeding rules are effective in overcoming eating difficulties in toddlers.

DISCUSSION

Characteristics of Toddlers

The results of the study showed that Most of the respondents were 3 years old, namely 8 (53.3%) and respondents aged 2 years were 7 (46.7%). According to Asih (2018), eating difficulties are often experienced by toddlers, especially those aged 2-3

years who are called the jag food age, namely children only eat foods they like or even have difficulty eating, this is in line with Beautris' research in Wright, et.al., (2007), which stated that there were 24% of respondents in New Zealand who said that their children had difficulty eating at the age of 2 years and 18% of them continued to have difficulty eating until the age of 4 years. As for gender Most toddlers are girls, namely 8 (53.3%), this is not in line with the research of Fitriani and Nurhidayati (2016), which stated that in general the activities between male and female toddlers are different. Each activity requires energy, the more activities are done, the more energy is needed. The nutritional status of toddlers based on BB/U before the intervention showed that most of them had

normal weight, namely 10 (66.7%), very low weight as much as 1 (6.7%), underweight as much as 2 (13.3%), and overweight as much as 1 (6.7%), while after the intervention there was an increase in nutritional status based on BB/U, namely normal weight as much as 12 (80%), overweight as much as 2 (13.3%), and very low weight as much as 1 (6.7%). The cause of toddlers experiencing malnutrition is because toddlers experience very rapid growth and development, in addition, toddlers also usually have difficulty eating and do not get nutritional intake according to their needs both in quality and quantity. (Kursani et al., 2020). Tui Na massage uses massage techniques on body points to increase appetite that focuses on massage points to normalize the digestive system and body metabolism located in the feet, hands, and back. Tui Na massage helps strengthen points on the stomach and spleen so that the resulting effect increases appetite which will affect weight gain and nutritional status. (Cheerful & Arintasari, 2019). The nutritional status of toddlers based on height/age before intervention showed that most of them were normal height, namely 12 (80%), very short category was 1 (6.7%), short category was 1 (6.7%), and tall category was 1 (6.7%). While after intervention, the nutritional status based on height/age showed that it remained the same, this was because changes in height could not be evaluated briefly where at the age of 1-3 years ideally monitoring was carried out at least every 3 months. Growth hormone that affects bone growth in infants can be stimulated through infant massage therapy which causes serotonin to be excreted, in infant massage physiology it is also said that serotonin excreted by the nervous system in the hypothalamus will increase the secretion of growth hormone which will ultimately increase infant growth including bones (Rosalina, 2015).

Toddlers' Eating Difficulties Before and After Tui Na Massage and Implementation of Feeding Rules

Based on the research results, it shows that during the pretest, all respondents, namely 15 (100%) had difficulty eating. The results of this study are in line with the results of the study Love (2018), which states that before the massage, 72.22% had difficulty eating and this is in line with research The Last Supper (2020), which states that before the massage 100% of toddlers had difficulty eating, in addition to the mother's inaccuracy in the procedure for feeding will cause problems or difficulties in feeding. Giving Tui Na Massage and applying feeding rules to eating difficulties in

toddlers after the intervention was given, it was known that 12 toddlers (80%) did not experience eating difficulties and 3 toddlers (20%) still had difficulty eating. Massage activities will affect the mechanism of food absorption, children who receive massage experience increased vagus nerve tone which causes increased levels of gastrin and insulin absorption enzymes, thus, food absorption will be better (Munjidah & Anggraini, 2019). Difficulty eating, apart from being influenced by the 10th brain nerve, is also influenced by the adrenaline hormone which can reduce stress so that toddlers get hungry easily and have a better appetite. Apart from that, difficulty eating is also influenced by wrong feeding practices so that children cannot understand their hunger.

After Tui Na massage and the application of feeding rules, there were still 3 (20%) toddlers who still had difficulty eating, this was due to other factors such as the way of serving, the taste of the food, the menu and variety of food that toddlers did not like, and feeding rules that had not been implemented optimally, in addition, other factors that caused toddlers to still have difficulty eating were that the average respondent gave the same answer between the pretest and posttest about the duration of the child's meal for more than 30 minutes in the sense that the previous feeding practice method could not be changed so that even though Tui Na massage and the application of feeding rules were carried out, it still could not overcome eating difficulties. The results of the Wilcoxon Signed Rank Test obtained a p value of 0.001 which can be concluded that H_a is accepted, meaning that Tui Na massage and the application of feeding rules are effective in overcoming eating difficulties in toddlers aged 2-3 years at PMB Delima WM. Before Tui Na massage and the application of feeding rules, 100% of respondents had difficulty eating, but with Tui Na massage activities and the application of feeding rules, the appetite of toddlers aged 2-3 years improved.

The most common cause of eating difficulties in toddlers is due to impaired spleen and digestive function, so that food that enters the stomach is not immediately digested, complaints conveyed by parents on this problem are that children often spit out food, close their mouths when fed, push food away, and the stomach feels full so that it reduces appetite or even no appetite at all. This massage will smooth blood circulation to the spleen and digestion so that it increases toddlers' appetite and helps overcome eating difficulties. The results of this study are in line with research The Last Supper (2020), which stated that there was a decrease in symptoms of difficulty eating before and after Tui Na

massage with $p=0.007$, and this result was also supported by research The Last Supper (2020) , which states that feeding rules have an effect on overcoming eating difficulties in the picky eater and selective eater categories. This is also in line with research Anggraheny (2023), which states that there is a relationship between the application of feeding rules and the occurrence of eating difficulties in children aged 24-36 months.

Kursani, et al (2020), explained that Tui Na massage is a massage performed using gliding massage techniques (Effleurage or Tui), massaging (Petrissage or Nie), tapping (Tapotement or Da), friction, pulling, rotating, shaking, and vibrating certain points so that it will affect the body's energy flow by holding and pressing the body on certain parts of the body. This Tui Na massage is a more specific massage technique to overcome eating difficulties in toddlers by improving blood circulation in the spleen and digestion, through a modification of needle-free acupuncture, this technique uses pressure on the body's meridian points or energy flow lines so that it is relatively easier to do. The feeding rules function to create a structured meal schedule and help children to train their internal eating regulation through four aspects of the correct way to feed, namely (1) on time, (2) quantity and quality of food, (3) hygienic preparation and presentation, and (4) feeding according to the child's developmental stages. the role and benefits of the combination of Tui Na massage and the application of feeding rules have a significant effect on changing eating difficulties in toddlers. The results of this study can provide information to mothers who have toddlers that the effects of massage and the benefits of feeding rules, in addition to being able to overcome eating difficulties, can also help children become more relaxed and sleep better.

CONCLUSION

Eating difficulties in toddlers aged 2-3 years are a problem often experienced by parents because at that age toddlers are only interested in consuming foods they like, if this continues for a long time it can affect the growth stage so that it is necessary to provide treatment such as Tui Na massage and the implementation of proper feeding rules. The results of the study prove that Tui Na massage and the implementation of feeding rules have a significant effect on changes in eating difficulties in toddlers, with the implementation of these two treatments can stimulate appetite in toddlers so that eating difficulties can be overcome

properly, toddlers become calmer, and help sleep better.

SUGGESTION

It is hoped that the results of this study can be a solution for parents who experience problems with eating difficulties in toddlers and increase parental motivation in implementing good and proper eating rules so that eating difficulties do not occur in toddlers.

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