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EFFECTIVENESS OF TUI NA MASSAGE IN OVERCOMING EATING DIFFICULTIES IN STUNTING TODDLERS AGED 3-4 YEARS

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ABSTRAK : EFEKTIFITAS PIJAT TUI NA DALAM MENGATASI KESULITAN MAKAN PADA BALITA STUNTING USIA 3-4 TAHUN

Latar Belakang Stunting adalah kurangnya gizi kronis karena asupan gizi kurang dalam jangka waktu yang cukup lama kerena pemberian makanan yang tidak sesuai dengan kebutuhan gizi. Dampak stunting ini menyebabkan kemampuan akademis atau pendidikan anak terganggu. Dampak stunting ini juga yang akan mempengaruhi kualitas sumber daya manusia Prevalensi stunting bayi berusia di bawah lima tahun (balita) Indonesia pada 2015 sebesar 36,4%. Stunting tersebut berada di atas ambang yang ditetapkan WHO sebesar 20%. Prevalensi stunting balita Indonesia ini terbesar kedua di kawasan Asia Tenggara di bawah Laos yang mencapai 43,8%. **Tujuan** penelitian ini adalah untuk mengetahui "Efektifitas Pijat Tui Na dalam mengatasi kesulitan makan pada Balita Stunting Usia 3-4 Tahun di Wilayah Kerja Puskesmas Purwosari Metro Utara"
Metode penelitian kuantitatif dengan rancangan penelitian *quasi eksperimen* dengan *pretest-posttest with control group design*. *Pretest-posttest with control group design***.** Populasi dalam penelitian adalah seluruh balita stunting usia 3-4 tahun di Wilayah Kerja Puskesmas Purwosari Kota Metro sebanyak 32 orang. jumlah sampel diperlukan dalam penelitian ini berjumlah 30 sampel dan di tambah (10%) untuk proporsi drop out jadi jumlah keseluruhan responden sebanyak 32 responden. Dengan perbandingan 1:1 maka pada kelompok ekperimen sampel berjumlah 15 orang dan pada kelompok kontrol sampel berjumlah 15 orang. Pada kelompok kontrol yaitu tidak dilakukan pijat Tui Na pada balita stunting. Penelitian ini diawali dengan pemberian *pretest* sebelum dilakukan pijat Tui Na pada kelompok eksperimen menggunakan lembar observasi.analisa data univariate dan bivariate dengan Ttest.Hasil nilai rata-rata (mean) tingkat nafsu makan balita stunting pada kelompok intervensi *Pijat Tuina* sebesar 70,00 lebih baik dibanding sebelum dilakukan *Pijat Tuina* dengan nilai rata rata sebesar 48,88 Rata-rata tingkat nafsu makan balita pada kelompok kontrol tanpa pijat Tuina sebelum 51,66 dibandingkan setelah 56,66. Terdapat perbedaan rata-rata yang sangat signifikat pada balita stunting yang mendapatkan pijat Tui'na dengan nilai P_ value (0,000). Kesimpulan disimpulkan bahwa pijat Tuina efektif untuk mengatasi kesulitan makan balita stunting.Saran Pijat Tuina dapat dijadikan salah satu terapi untuk mengatasi kesulitan makan
Kata Kunci: Balita, Pijat Tuina, Stunting

ABSTRACT

Stunting is defined as chronic malnutrition resulting from inadequate nutrient intake over an extended period due to feeding practices that do not meet nutritional needs. Stunting impairs a child's academic performance and educational potential, and it ultimately affects the quality of human resources. In 2015, the prevalence of stunting among children under five (balita) in Indonesia was 36.4%, a figure exceeding the WHO threshold of 20%. This prevalence rate was the second-highest in Southeast Asia, trailing only Laos, which recorded a rate of 43.8%. The objective of this study was to determine the effectiveness of Tui Na massage in addressing feeding difficulties among stunted children aged 3–4 years within the working area of the Purwosari Community Health Center (Puskesmas) in North Metro.
This study employed a quantitative research method using a quasi-experimental design—specifically, a pretest-posttest design with a control group. The study population consisted of all 32 stunted children aged 3–4 years in the Purwosari Community Health Center working area. A sample size of 30 was required; however, a 10% allowance for potential dropouts brought the total number of respondents to 32. Using a 1:1 ratio, the experimental group comprised 15 children, and the control group comprised 15 children. Stunted children in the

control group did not receive Tui Na massage. The study began with a pretest using an observation sheet administered to the experimental group prior to the Tui Na massage intervention. Data analysis involved both univariate and bivariate methods, utilizing the t-test.
The results showed that the mean appetite score for stunted children in the Tui Na massage intervention group was 70.00, representing an improvement over the pre-intervention mean of 48.88. In the control group (without Tui Na massage), the mean appetite score was 51.66 before the observation period and 56.66 after. There was a highly significant difference observed in stunted toddlers who received Tuina massage (p-value = 0.000).
It is concluded that Tuina massage is effective in addressing feeding difficulties in stunted toddlers.
Recommendation: Tuina massage can be utilized as a therapy to address feeding difficulties.
Keywords: Toddlers, Tuina massage, Stunting

INTRODUCTION

Stunting is a condition of malnutrition related to past nutritional inadequacy, so it is included in chronic nutritional problems. Stunting is measured as nutritional status by considering the height or length, age, and gender of the toddler. The habit of not measuring the height or length of toddlers in the community makes it difficult to recognize the incidence of stunting. This makes stunting one of the focuses of the target for improving nutrition in the world until 2025.

The impact of stunting disrupts children's academic or educational abilities. The impact of stunting will also affect the quality of Indonesia's human resources which has the potential to cause economic losses. Stunting causes a decrease in adult height which is related to a decrease in economic productivity of 1.4%. Stunting also causes a decrease in productivity of 2-3% each year (Achadi et al., 2020).

The prevalence of stunting in infants under five years of age (toddlers) in Indonesia in 2015 was 36.4%. This means that more than a third or around 8.8 million toddlers experience nutritional problems where their height is below the standard for their age. The stunting is above the threshold set by WHO at 20%. The prevalence of stunting in Indonesian toddlers is the second largest in Southeast Asia after Laos which reached 43.8%. However, based on the 2017 Nutritional Status Monitoring (PSG), toddlers who experience stunting were recorded at 26.6%. This figure consists of 9.8% in the very short category and 19.8% in the short category. Children who experience stunting are mostly caused by lack of food intake, repeated infectious diseases that cause increased metabolism and reduced appetite (Yenni Puspita, 2015), reduced appetite will cause irregular eating patterns and children only want to eat the food they like or food jog, this condition if it lasts for a long time will cause developmental and growth disorders in toddlers (Afian L. et al. 2003). The results of the 2023 health profile research, nationally the prevalence of underweight and underweight in toddlers in Lampung Province is 4.0% (Ministry of Home Affairs, 2023). based on nutritional monitoring data from the Metro City Health Service, the Purwosari Health Center work area has a stunting incidence of 5.7% of toddlers experiencing stunting (Andrianti et al., 2022). The results of the pre-survey conducted by the researcher obtained 32 toddlers who experienced stunting in the work area of the Purwosari Metro Utara Health Center"

RESEARCH METHODS

This type of research is quantitative research with a quasi-experimental research design with a pretest-posttest with control group design. Pretest-posttest with control group design, namely the researcher divided two groups into an experimental group and a control group. In the experimental group, treatment was given in the form of Tui Na massage on stunted toddlers. In the control group, Tui Na massage was not given to stunted toddlers. This study began with a pretest before Tui Na massage was given to the experimental group using an observation sheet. Then the researcher performed Tui Na massage and then the researcher gave a posttest. In the control group, the researcher only conducted a pretest and posttest without any intervention. This research design was used to determine the effect of Tui Na Massage on stunted toddlers aged 3-4 years by giving direct massage Tui Na Massage. The population in the study were all stunted toddlers aged 3-4 years in the Purwosari Metro City Health Center Work Area, totaling 32 people. the number of samples required in this study was 30 samples and added (10%) for the drop out proportion so the total number of respondents was 32 respondents. With a ratio of 1:1, the experimental group had 16 samples and the control group had 16 samples. The sampling technique for this study was total sampling, which is

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a sampling method based on certain considerations made by the researcher himself based on previously known population characteristics or properties (Notoatmodjo, 2018). Inclusion criteria: Toddlers aged 3-4 years. Toddlers diagnosed with stunting (TB and BB minus 2 from the WHO Multicenter Growth Reference standard, Z-score value less than 2 SD, body shorter than the Reference standard, BB does not increase or tends to decrease). Stunting toddlers who do not experience complications. Toddlers who have parental consent

Exclusion criteria: Toddlers with serious health problems. Toddlers with a history of injury. Toddlers with oil allergies. Toddlers who undergo intensive treatment

Univariate analysis to see the frequency distribution of research variables and bivariate analysis with the Shapiro Wilk test.

RESEARCH RESULT

Univariate Analysis

This analysis aims to describe the frequency distribution of each research variable using proportion measures.

Table 1
Distribution by Gender of Toddlers

Sex	N	%
Male	22	73,33
Female	10	26,67

Based on table 1 above, we can conclude that the majority of toddlers are male, namely 73.33% (22 toddlers).

Table 2
Distribution based on mother's age of toddlers

Mother's Age	N	%
< 25 tahun	6	18,75
25 -35 tahun	19	59,38
35 tahun	7	21,87

Based on table 2 above, we can conclude that the majority of mothers of toddlers are aged 25-35 years, namely 59.38% (19 mothers).

Bivariate Analysis

Before conducting bivariate analysis, the data obtained was tested for normality using the Shapiro Wilk test, which can be seen in the following table:

Table 3
Data Normalization Test (Shapiro Wilk) in the Tuina massage group before and after the intervention.

Group	*Df*	*P Value*
	Before	
Pijat Tuina	16	0,021
Tanpa pijat Tuina	16	0,077
	After	
Pijat Tui'na	16	0,027
Tanpa pijat Tui'na	16	0,453

Based on table 3 above, the results of the research variable normality test show that all variables have a significance value greater than 0.05 (ρvalue> 0.05), so it can be concluded that the data is normally distributed.

Table 4
Difference in average appetite before and after Tui'na massage and without Tui'na massage in stunted toddlers with eating difficulties

Kelompok	N	Mean	Selisih mean	SD	*P _Value*
Pijat Tui'na					
before	16	48,88	21,1	16,046	0,000
after	16	70,00		12,366	
Tanpa Pijat Tui'na					
before	16	51,66	5	14,562	0,046
after	16	56,66		14,142	

Based on table 4 above, it shows that the average value (mean) of the appetite level of stunted toddlers in the Tuina Massage intervention group was 70.00, better than before Tuina Massage with an average value of 48.88. The average appetite level of toddlers in the control group without

Tuina massage before was 51.66 compared to after 56.66. There was a very significant difference in the average in stunted toddlers who received Tui'na massage with a P_ value (0.000)

Tabel 5
Corelasi dan signifikansi pre dan post *pijat Tuina* dan *Tanpa pijat Tui.na*

Group	N	Correlation	Sign [a]
Pre Pijat Tui'na Post Pijat Tui'na	16	0,503	0,033 *
Pre Tanpa pijat Tui'na Post Tanpa pijat Tui'na	16	0,765	0,000*

Based on table 5 above, it shows a correlation of 0.503 > 0.033 in the Tui'na massage intervention group. The correlation value is greater than the sig. value.

DISCUSSION

Difficulty eating in children is a problem that is often faced during growth and development, various causal factors such as boredom with the menu, disliked texture, preferred taste, these conditions require mothers to learn a lot about food variations for toddlers, variations in shape and taste. According to Judarwanto (2004), difficulty eating is characterized by the behavior of vomiting food in the child's mouth, eating for a long time, not wanting to put food in the mouth, throwing away food and pushing away the mouthful and some parents state that the child does not want to be given food. Preschool children can realize that they are not completely dependent on their surroundings, children demand autonomy for themselves such as refusing when given food. Toddlers have a high curiosity and they are interested in fulfilling many things with their curiosity, so they are busy exploring the environment around them. According to Wardlaw and Hampl (2007), because the busyness of exploring their environment sometimes distracts children from their food. In addition, children are also The most common cause of difficulty eating in toddlers is due to impaired spleen and digestive function. So that the food that enters the stomach is not immediately digested, which results in food stagnation in the digestive tract, complaints conveyed by parents on this problem are that children often vomit, feel nauseous when fed, and the stomach feels full so that it reduces appetite or even no appetite at all. Tui'na massage is one of the non-pharmacological therapies that can be used to overcome difficulty eating in children and toddlers, this massage will smooth blood circulation to the spleen and digestive system, this is supported by research supported by research conducted by Zhen Huan Liu and Li ting Cen in Guangzhou in 2009 stated that Tui na massage has a positive effect on the development of nerves and blood circulation in infants. Similar research was also conducted by Joko Widodo et al (2012) found that acupressure at certain meridian points can smooth blood flow to the digestive tract. This Tui Na massage is done with a gliding massage technique (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 body parts. This Tui Na massage is a more specific massage technique to overcome eating difficulties in toddlers by facilitating blood circulation in the spleen and digestion, through a modification of needle-free acupuncture, this technique uses a pressure technique on the body's meridian points or energy flow lines so that it is relatively easier to do than acupuncture (Sukanta, 2010)

In this study, it showed the average value (mean) of the appetite level of stunted toddlers in the Tuina Massage intervention group of 70.00 better than before Tuina Massage with an average value of 48.88 The average appetite level of toddlers in the control group without Tuina massage before 51.66 compared to after 56.66. There is a very significant average difference in stunted toddlers who receive Tui'na massage with a P_ value (0.000). This is in line with Beautris's research (2007) which states that there are 24% of respondents in New Zealand who said their children had difficulty eating at the age of 2 years and 18% of them continued until the age of 4 years. This is also in accordance with the theory that difficulty eating is often experienced by children, especially in the age range of 1-3 years which is also called the food jag age, namely children only eat foods they like or even have difficulty eating (Afiani L. Ika et al., 2003). It is categorized as difficulty eating/decreased appetite if the mother answers the

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questionnaire with more than 2 signs/indicators of difficulty eating. Some indicators of eating difficulties in toddlers are: difficulty chewing, sucking, swallowing, vomiting or spitting out food that has entered the mouth, playing with food or eating for a long time, not wanting to put food in the mouth at all or closing the mouth tightly, spitting out or spilling food, pushing away the mouthful, not liking many variations of food, and unusual eating habits. (Widodo, 2012).

CONCLUSION

From the results of the study, it can be concluded that Tuina massage is effective in overcoming eating difficulties in stunted toddlers as seen from the average value (mean) of the appetite level of stunted toddlers in the Tuina Massage intervention group of 70.00, better than before Tuina Massage with an average value of 48.88. The average level of appetite of toddlers in the control group without Tuina massage before was 51.66 compared to after 56.66. There was a very significant difference in the average in stunted toddlers who received Tui'na massage with a P_ value (0.000)

SUGGESTIONS

Tuina massage can be applied as one of the therapies to overcome eating difficulties in stunted toddlers.

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