EFFECT OF TOUCH THERAPY ON THE GROWTH OF TODDLERS (AGED 1-3 YEARS) WITH GROWTH FALTERING

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ABSTRAK

Bayi dan balita diharapkan dapat tumbuh secara optimal, namun kenyataanya di negara berkembang angka kejadian masalah pertumbuhan bayi dan balita masih meningkat. Di wilayah kerja Puskesmas Wire tepatnya di desa Sambongrejo hingga bulan Februari 2014 prevelensi bayi dan balita dengan masalah pertumbuhan sebesar 9,89% dengan total 67 bayi dan balita. Dibutuhkan terapi tambahan untuk mengatasi masalah pertumbuhan, salah satunya stimulasi terapi sentuh. Tujuan penelitian ini adalah untuk mengetahui pengaruh terapi sentuh terhadap peningkatan pertumbuhan balita usia 1-3 tahun yang mengalami masalah pertumbuhan di wilayah kerja Puskesmas Wire Kabupaten Tuban. Metode desain penelitian kuasi eksperimental, one group pretest-posttest design. Sampelnya adalah balita berusia 1-3 tahun yang mengalami masalah pertumbuhan di Desa Sambongrejo tahun 2014 diambil secara total sampling dengan besar sampel 21 balita. Terapi sentuh diberikan oleh keluarganya selama 4 minggu dengan frekuensi ≥ 3 x/minggu dalam durasi ≥ 15 menit. Variabel bebas penelitian ini adalah terapi sentuh pada balita usia 1-3 tahun. Variabel terikat adalah pertumbuhan balita yang diukur sebelum dipijat dan 4 minggu setelah dipijat. Analisis data menggunakan uji t berpasangan dengan ~ = 0,05. Rata–rata peningkatan berat badan balita sebelum diberikan terapi sentuh yaitu 47,6 gram sedangkan setelah diberikan terapi sentuh yaitu 400 gram. Hasil uji t berpasangan menunjukkan signifikasi p = < 0,001. Terapi sentuh yang diberikan dengan frekuensi ≥ 3 x/minggu selama 4 minggu berpengaruh terhadap peningkatan pertumbuhan balita usia 1-3 tahun yang mengalami masalah pertumbuhan di wilayah kerja Puskesmas Wire Kabupaten Tuban. Tenaga kesehatan khususnya bidan dapat menjadikan terapi sentuh sebagai terapi tambahan untuk mengatasi masalah pertumbuhan balita. ***(FMI 2014;50:211-214)***

Kata kunci: *terapi sentuh, pertumbuhan, balita 1–3 tahun, berat badan, masalah pertumbuhan*

ABSTRACT

Infants and toddlers are expected to grow optimally, but in developing countries the incidence of infants and toddlers with growth faltering were increased year by year. In Sambongrejo village, under Wire Public Health Centre (PHC), growth faltering were found in 9.89% from the total of 67 babies and toddlers. Additional strategies are needed to overcome growth faltering, one of them is stimulation with touch therapy. The purpose of this study was to determine the effect of touch therapy on the growth of toddlers aged 1-3 years with growth faltering. This study had quasi-experimental research design, one group pretest-posttest design. Samples were 21 toddlers aged 1-3 years with growth faltering, taken by total sampling. Mothers were trained to give touch therapy to their babies. Touch therapy were given in ≥ 15 minutes, ≥ 3 x/week for 4 weeks. The independent variable is touch therapy in toddlers aged 1-3 years. The dependent variable is weight gain measured before and 4 weeks after intervention. A paired t test was used to compare the different of weight gain before and after intervention with ~ = 0.05. The results showed that average weight gain before touch therapy was 47.6 grams and after intervention was 400 grams. A paired t test showed that p = < 0.001. Touch therapy may enhanced weight gain in toddlers aged 1-3 years with growth faltering in Wire Public Health Centre (PHC), Tuban. The health worker should use touch therapy as additional strategies to overcome growth faltering in toddlers. ***(FMI 2014;50:211-214)***

Keywords: *touch therapy, growth, toddlers, weight gain, faltering*

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INTRODUCTION

Toddlers are children aged 0-60 months. At this time the child undergo a process of rapid growth and development, as well as very sensitive to the foundation of personality. Therefore, this period should be utilized as well as possible because this period will determine the quality of future human (Husaini 2000). Results PSG (Nutritional Status Monitoring) of East Java Health Office showed toddlers status in Tuban in 2012, namely, toddlers prevalence of malnutrition of 9.5%, 2.3% malnourished infants and toddlers Down Red Lines

0.96% of the total number of 87 483 children under five. In Puskesmas Wire Tuban until the month of February 2014 data obtained 4652 with 80 children under five have less weight to very less, 63 toddlers Down Red Line (BGM), and 324 children who did not gain weight. From these data it can be seen that the prevalence of children with growth problems of 10.04% with a total of 467 infants. In one Puskesmas Wire Sambongrejo precisely in the village until the month February 2014 the prevalence of infants and toddlers with a growth of 9.89% issues with a total of 67 babies and toddlers. This number is increasing from year to year and there are still many children who are at risk for growth problems that require serious attention. Although there have been several attempts of providing education/counseling on nutrition, education about parenting, provide assistance PMT recovery, growth monitoring of children on a regular basis, but can not solve the problem of growth in infants who experience growth problems.

Therapeutic touch is one technique that can be given to address the growing problems in children (Nursalam et al 2005). Touch therapy has been known since the first was believed to be effective as a method of overcoming the problem of growth. Here are some of the scientific evidence, namely, research and Field et al (1986) showed that in children who massaged increased vagal tone (brain nerve 10th) that causes increased levels of enzymes the absorption of food to make children become hungry faster. Studies in children who massaged 15 minutes 2x a week for 6 weeks gained more weight gain than the control. This study aims to determine the differences in the increase in the growth of children before and after touch therapy as well as to analyze the effect of touch therapy to the increased growth of children aged 1-3 years who are having problems growing in Puskesmas Wire Tuban.

MATERIALS AND METHODS

The design study is a quasi experimental design with one group pretest-posttest design. This study was conducted in Puskesmas Wire Tuban is in the village of Sambongrejo in April-May 2014. The respondents are children aged 1-3 years who have problems of growth in 2014, amounting to 21 toddlers. Due to the limited number of infants and considered homogeneous and there is inclusion and exclusion criteria then in sampling research conducted with total sampling. Criteria for inclusion in this study were 1-year-old children with normal birth weight, experiencing growth problems that are in the red tape and yellow ribbon KMS, toddler treated by the biological mother, the mother is willing and touch therapy training, entering the study. Exclusion criteria in this study were sick infants during the intervention period, toddlers obesity, have congenital abnormalities, toddlers and families move house or go over the study period, the mother does not do massage on infants over 2 x/week.

The research instrument used in this study include a data collection sheet, steelyard, KMS (Card Towards Healthy) toddlers and checklist implementation of touch therapy. Sheet data collectors are used to record the general data, characteristics of mothers and infants. The independent variable in this study is a touch therapy in children aged 1-3 years were given a minimum of 15 minutes/massage, 3x a week for 4 weeks. The dependent variable in this study is that the growth indicator of growth (weight) on infant massage measured before and 4 weeks after a massage.

Data collection is done in several stages. The first phase, to get the data of children aged 1-3 years with growth problems in Puskesmas Wire Tuban. Then, identify children belonging to the inclusion and exclusion criteria. The second phase, to get the measurement data one month prior infant growth by looking at KMS. The third phase, obtaining measurement data growth (weight) in children (pre-test). The fourth stage, providing training in the mother toddler touch therapy. The fifth stage, giving informed consent as a pre-condition has been approved touch therapy. The sixth stage, provide a checklist on mothers as proof he had done touch therapy during the study. The seventh stage, the implementation of touch therapy performed by the mother/family alone for 4 weeks with frequency ≥ 3x/week in ≥ 15 minutes/massage. Currently the research stage, there are some posyandu officers who came home every day to monitor the implementation of the respondents touch therapy by respondents. The eighth stage, getting the growth measurement data (weight) in infants after touch therapy for 4 weeks (post-test). Descriptive analysis is used to look at the frequency distribution and percentage of children under five and maternal characteristics. Bivariate analysis using paired t test to see the difference in the measurement of growth (weight) before being given therapy toddler touch (weight before therapy is given less weight touch one month earlier) and the measurement of growth (weight) after touch therapy (weight after touch therapy reduced body weight before being given a touch therapy).

RESULTS

We obtained 21 toddlers who meet the inclusion and exclusion criteria in this study. Table 1 shows the highest toddler with female sex is 16 infants (76%), the

order of the child to one that is 13 infants (61%), and toddlers aged 13-23 months with 11 infants (52%).

Table 1. Distribution of frequency characteristics of toddlers

Characteristic		Frequency (n)	Percentage (%)
Sex	Male	5	24
	Female	16	76
Birth sequence	First Child	13	61
	Second Child	6	29
	Third Child	2	10
Age	12 months	4	19
	13 – 23 months	11	52
	24 – 35 months	6	29

Table 2. Distribution of the frequency characteristics of the mother

Characteristic		Frequency (n)	Percentage (%)
Mother's age	< 20 years	2	10
	20 – 30 years	12	57
	30 – 40 years	7	33
Mother's education	Elementary	11	52
	Junior High	8	38
	Senior High	2	10
Mother's occupation	Farmer	2	10
	Unemployment	19	90

Table 3. Measurement of toddlers growth

Status	*Pre*		*Post*	
	n	%	n	%
Increase	7	33	20	95
Decrease	14	67	1	5

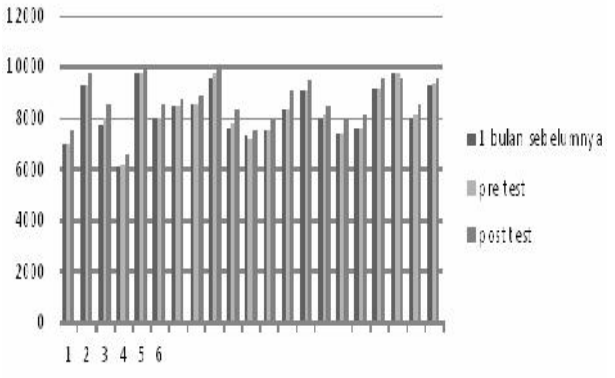

Figure 1 Measurement of toddlers growth

Table 4 Based on ribbon's color of the KMS

Ribbon's color	*Pre*		*Post*	
	n	%	n	%
Red	6	29	2	10
Yellow	15	71	4	19
Green	0	0	15	71
Total	21	100	21	100

From Figure 2 and Table 3 it can be seen that the measurement of growth (weight) infants before therapy is given weight one touch than the previous month most infants with weight status did not rise in the amount of 14 infants (67%). Meanwhile, growth measurements (weight) after touch therapy compared weight before touch therapy that is most in infants with weight status rise in the amount of 20 infants (95%)

Table 4 shows the ribbon color based on KMS, before most children are given therapeutic touch is the yellow ribbon that 15 infants (71%), while after the touch therapy most toddlers are in the green color band of 15 infants (71%).

Table 5. Distribution of massage frequency

Category		Frequency (n)	Percentage (%)
Frequency of massage average	2-3 x/weeks	5	24
	>3 x/weeks	16	76

From Table 5 it can be seen that according to the average frequency of massage are almost entirely the mother doing the massage ≥ 3x/week ie 16 mothers (76%).

Table 6. Results of paired t test the effect of therapeutic touch to the increased growth of children aged 1-3 years

Category	Weight increasingly				Average (g)	p
	< 200 g		≥ 200 g			
	n	%	n	%		
Pre (n=21)	18	85.71	3	14.29	47.6	<
Post (n=21)	1	4.76	20	95.24	400	0.001

DISCUSSION

Based on the statistical test result obtained by paired t test of significance (p) = < 0.001 with a significance level α = 0.05 as shown in Table 4, it can be said to have a significant research hypothesis or H1 accepted

which means there are significant touch therapy to the increased growth of children aged 1-3 years who have received growing problem on the level of 95 percent. The results showed no difference in growth (weight) children aged 1-3 years who have growth problems before and after touch therapy for 4 weeks in Puskesmas Wire Tuban.

This is consistent with earlier studies by several experts, research conducted by Field et al (1986) showed that in 20 preterm infants (weight in 1280 and 1176 grams), which is massaged 3 x 15 minutes during 10 days, experienced a weight gain per day 20% - 47% more than non-massaged. Research conducted by Dewi et al (2011) in infants aged 0-3 months, which is massaged 15 minutes, 2 times a week gained more weight gain than usual. Moreover, according to experts the other 856 babies are massaged regularly increased vagal tone (the brain's neurons to-10). Therefore, the touch will cause increased levels of gastrin uptake enzymes and insulin. So that absorption of the nutrients to be better and your child feel hungry faster and more frequent feeding.

From Table 6 it can be seen toddlers weight gain before being given a touch therapy obtained weight gain < 200 grams/month ie 18 toddlers and weight gain between ≥ 200 grams/month ie 3 toddlers. While weight gain toddler after touch therapy for 4 weeks gained weight gain < 200 grams/month ie one toddler and weight gain between ≥ 200 grams/month ie 20 toddlers. We also see that the average weight gain toddler before being given treatment that is 47.6 grams while the touch after touch therapy for 4 weeks in the amount of 400 grams. Where the results after this intervention is very satisfying because it can achieve the desired target that is consistent with the theory of Minimum Increased Weight in children aged 12-60 months weight gain of at least 200 grams/month. So enough to prove that therapeutic touch can be used as an alternative to help improve growth path in infants.

In this research can also be seen there is an underweight children do not go up, two toddlers is still in the red color band (BGM) and four children were in the yellow tape after touch therapy. This is probably caused by the order or position of the child in the family. The third infant is the first child. In accordance with the theory that in general, the first child or single often have problems on growth due to new parents adapt to his new family that lacks confidence in caring for children and also the absence of stimulation were performed siblings (Hidayat 2008). This is true because when the researchers asked the biological mother, the mother replied that she did not believe in themselves and are afraid to massage their children, so that massage is not done routinely.

Limitations of this study is on the instrument used. Instruments in this study using KMS (Card Towards Healthy) that it is still less accurate than when using NCHS standards. In addition, researchers are limited in taking the sample studied. Besides the emergence of confounding variables/confounding. The food provided by each parent to toddlers obviously very different. And it can create confusion on the measurement results of growth. When weighing not determined whether toddlers should eat beforehand or do not eat beforehand. Researchers also did not examine any food provided by parents to children every day. Researchers examine just how big an increase in appetite toddlers than before given a touch therapy that will ultimately affect the growth of children.

CONCLUSION

Touch therapy increased growth of children aged 1-3 years who have growth problems.

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