



INFLUENCE OF BABY MASSAGE KIT (BABY MASSAGE, MUSIC, AROMA THERAPY) ON BABY DEVELOPMENT at BIDAN'S PRIVATE PRACTICE IN PRUMNAS DISTRICT OF REJANG LEBONG DISTRICT

Yenni Puspita, Farida Esmianti

Poltekkes Kemenkes Bengkulu Midwifery Study Program Curup

Email: itazubir91@gmail.com

ABSTRACT	Keywords
Delays in motor skills interfere with children controlling the muscles of the arms, legs and hands. prevention with baby massage stimulation. The aim is to determine the effect of baby massage KIT (baby massage, music, aromatherapy) on toddler development. Quasi-experimental research design, pre-test and post-test design, control group. The population and sample were toddlers in the working area of the Perumnas Health Center, Rejang Lebong Regency, Bengkulu Province. The sampling technique is purposive sampling. The total sample is 42 respondents, the criteria for each group are 21 respondents. Questionnaire data collection tool. Collection of development data using the KPSP instrument. Data analysis used the Wilcoxon test and the Man Whitney test. The research results show the effect of baby massage KIT (baby massage, music, aroma therapy) on the growth and development of toddlers with a P value <0.05. Conclusion: There is an influence of baby massage KIT (baby massage, music, aromatherapy) on the growth and development of toddlers. Man Whitney test p value 0.000<0.05, the difference in the effect of baby massage equipment and conventional massage counseling on development.	<i>Baby massage, music, aromatherapy, development of toddlers</i>

INTRODUCTION

Future investments in the health and well-being of Indonesia's children will focus heavily on their growth and development and the problems of growth and development disorders in the future. Intensive investment in the health and well-being of children in Indonesia on child growth and development and problems of growth and development disorders (Child Health Profile, 2020).

The results of the examination of child growth and development in Indonesia in 2019 with an age range of 0-6 years with a total of 2,634 children found that the growth and development of children who were normal and in accordance with age was 53%, children whose development was

doubtful (requiring further examination) were 13%, and developmental deviations were 34% (IDAI, 2019). Deviations in child growth and development can occur during pregnancy and during development (Cahyani, et al, 2018).

The first three years of toddlerhood are the golden period of a child's physical, intellectual, mental and emotional growth. Toddler age occurs between 1 to 3 years. This age is a golden period in children because at this time children will very quickly learn new things. Successfully mastering developmental tasks at the toddler age requires a strong foundation during growth and requires guidance from others, especially parents.

Factors that affect growth are internal (genetic) and external (environmental) factors. Internal (genetic) factors are congenital and pathological factors, gender and race or ethnicity. While external factors (environment) are supporting factors that greatly determine the achievement of optimal genetic potential, which consists of prenatal environmental factors (still in the womb) and postnatal environmental factors (after birth). Supporting factors (postnatal) that greatly determine physical growth for their children are nutrition, health status, family economy and stimulation (Oktiawati, et al, 2017).

Development has 4 aspects of development namely, gross motor, fine motor, personal social, and language, child development problems such as motor delays. Delays in motor skills will interfere with the child's ability to control muscles in the arms, legs and hands. Developmental delays in children can be prevented by providing stimulation that can improve development in children. Parents' ability to fulfill basic needs and provide sensory-motor stimulus is absolutely necessary for the growth and development of toddlers. Stimulation plays a role in improving the growth and development of toddlers to develop optimally, to support other factors. Stimulation that is given continuously on a regular basis can stimulate the development of brain cells and strengthen the connections between nerves that have been formed (Haryanti, et al, 2018).

One form of stimulation that is commonly done is tactile stimulation in the form of massage, massage or touch is the most basic thing related to human skin to get a sense of security, comfort and love. Touch is the first thing felt by neonates even before neonates are born. Touch has a positive impact on the growth and development of neonates (Field, 2004).

Toddler massage has many benefits, including reducing stress behaviors in premature toddlers (Hernandes, Diego & Field, 2007). In addition, toddler massage is also useful for increasing bonding and attachment between mother and toddler (Sari, 2013), increasing body weight

(Daniati, 2010), and increasing the quantity of toddler sleep (Hayati, 2012).

One form of growth and development stimulation is with toddler massage, music, and aromatherapy. Baby massage kit is an additive form of growth and development stimulation is with toddler massage, music, and aromatherapy. baby massage kit, which is a tool in the form of an innovative toddler massage mat equipped with musical instruments and aromatherapy. Baby massage kit is made to facilitate health workers and mothers in providing growth and development stimulation and minimize the disturbance of delays in growth and development in toddlers.

Based on an initial survey conducted at the Prumnas Health Center of 74 toddlers. development of toddlers who are dubious as many as 35 toddlers (47.29%), deviant development as many as 3 toddlers (4.05%). there is no baby massage KIT service provided. The results of interviews that researchers get are 3 out of 5 mothers say they have done massage to their toddlers by a masseur.

Massage your toddler with a traditional healer or masseuse when feverish, sick, fussy and when not feeling well with a traditional masseuse they trust. The purpose of the study was to determine the effect of *baby massage kit* on the development of toddlers in the Prumnas Health Center Working Area in 2023. Research Question: What is the effect of *baby massage kit* on the development of toddlers?

METHOD

This research includes quantitative research where the research design used is *Quasi Experimental design*, with *pre test and post test design with control group*, which is a research design that aims to test the cause and effect relationship. In this study, a *baby massage kit* will be conducted on the development of toddlers in the working area of Perumnas Health Center, Rejang Lebong Regency.

The population in this study were toddlers in the working area of Perumnas Health Center, Rejang lebong Regency, Bengkulu Province. The sample in this study

were toddlers in the working area of Perumnas Health Center, Rejang Lebong Regency, Bengkulu Province. Inclusion criteria are: Toddlers, healthy condition, no congenital heart defects, no open wounds. Parents are willing for their children to be used as respondents. Exclusion criteria are At the time of the intervention, the toddler was in a fever, At the time of the intervention, the respondent moved residence, Toddlers with KPSP results in accordance with their developmental age. The sampling technique was purposive *sampling*. Calculating the sample size to calculate the proportion with a degree of accuracy at a statistically meaningful level (significance). The sample size is: 21 respondents per group, then the number of samples needed is: 42 respondents consisting of 21 respondents for the intervention group and 21 control respondents.

Data collection tools in this study used a questionnaire to determine the characteristics of respondents' parents. Developmental data collection using the

	Group	N	Mean Rank	Sum of Ranks	Nilai p
Posttest	baby massage Kit	21	28.74	603.50	0.00
	conventional massage counseling	21	14.26	299.50	
	Total	42			
		2			

KPSP instrument. Data analysis was carried out with the help of computerization. Univariate analysis was conducted to determine the frequency distribution of development before and after baby massage kit. Bivariate analysis, data normality test was conducted using the Shapiro Wilk test formula. Data is said to be normally distributed if the p value is > 0.05 . The results of the normality test were found to be not normally distributed, so a parametric statistical test was carried out, namely Mann-Whitney

RESULTS

Respondent Characteristics

Univariate Analysis.

This analysis was conducted to determine the frequency distribution of development in toddlers before and after the *baby massage*

Characteristics	Group			
	baby massage Kit		Conventional massage Counseling	
	n	%	n	%
Before Intervention				
As per	0	00,0	0	0,00
Doubtful	19	90,5	18	85,7
Deviate	2	9,5	3	14,3
After Intervention				
As per	18	85,7	5	23,8
Doubtful	3	14,3	15	71,4
Deviate	0	00,0	1	4,8

kit in the Prumnas Health Center working area.

Table 1. Frequency distribution of development in toddlers before and after the *baby massage kit* in the Prumnas Health Center working area

Based on Table 1 above shows that the characteristics of development in toddlers aged 1-3 years before treatment (*pretest*) in the *baby massage Kit* group, most (90.5%) experienced dubious development and a small proportion (9.5%) deviated. After treatment (*posttest*) most (85.7%) experienced appropriate development and some experienced questionable development (14.3%). The characteristics of development in toddlers in the control group before treatment (*pretest*) in the *counseling* group of *confrontational massage*, namely most ((85.7%) of toddlers experienced dubious development, and a small portion (14.3%) of toddlers experienced deviant development. After treatment (*posttest*), a small proportion (23.8%) of toddlers experienced appropriate development, and most (71.4%) toddlers experienced dubious development. and a small proportion (4.8%) of toddlers experienced deviant development.

Tabel 2 Average development in toddlers aged 1-3 years before and after the *baby massage kit* in the Prumnas Health Center working

Based on Table 2, it can be seen that the average development of toddlers *before* being given the intervention of *baby massage Kit* 7.24 standard deviation

Group	n	Mean	Min	Max	SD
<i>baby massage Kit</i>					
Before	21	7.24	6	8	.700
After	21	9.24	8	10	.700
<i>Conventional massage counseling</i>					
Before	21	7.33	6	8	.730
After	21	8.05	6	10	1.024

.700 and the average, Development after being given the intervention of *baby massage Kit* with a 9.24 standard deviation of .700. In the conventional massage counseling group, the average development of toddlers before being given the intervention of conventional massage counseling was 7.33, the standard deviation of .730 and the average development of toddlers after being given the intervention of conventional massage counseling was 8.05, standard deviation 1.024

Bivariate Analysis Normality Test

Data normality test was conducted before the bivariate test in the *baby massage kit* group and the conventional massage counseling group to determine the data analysis test to be used. The results of the normality test with *Shapiro Wilk* can be seen in the table below.

Table 3 Normality of data (*Shapiro- Wilk*) in the *baby massage kit* and conventional massage counseling groups before and after the intervention area in 2023

Group		Df	p-value ^a
<i>baby massage kit</i>	Before	21	0.001*
<i>Baby Massage</i>		21	0.001*
<i>Conventional massage counseling</i>	After	21	0.000*
<i>Conventional massage counseling</i>		21	0.007*

*) Level of sign $p < 0.05$

Based on Table .3 above, it can be explained that the normality test using the *Shapiro Wilk test* (sample < 50), the data is not normally distributed so that the test performed is the *Wilcoxon Signed Rank Test*

Tabel 4. Differences before and after *baby massage Kit* development in toddlers aged 1-3 years in the working area of the Prumnas Health Center.

Based on table 4. above, it can be concluded that in the *baby massage Kit* group the gross motor development of toddlers with p value

Group	N	Mean	SD	<i>p-value</i>
<i>baby massage Kit</i>				
Before	21	7.24	.700	0.000*
After	21	9.24	.700	
<i>Conventional massage counselin</i>				
Before	18	7.28	.730	0.001*
After	18	8.89	1.024	

= 0.000 (< 0.05). In the *conventional massage counseling* group, the gross motor development of toddlers with a p value = 0.001 (< 0.05).

Table 5 Differences in the effect of the *baby massage kit* on the development of toddlers aged 1-3 years

Based on Table 5, it is found that the statistical results, namely the man whitney test, obtained a p value of 0.000 < 0.05 , this means that there is a different influence between the *baby massage kit* on gross motor development in toddlers 1-3 years in the Prumnas Health Center work area.

DISCUSSION

The effect of *baby massage Kit* on development in toddlers aged 1-3 years in the working area of the Prumnas Health Center Based on the results of research before the *baby massage Kit* and *conventional massage counseling* in the working area of the Prumnas Health Center in 2023, out of 74 toddlers 1-3 years found toddlers with dubious development as many as 37 toddlers and there were 5 toddlers with deviant development. The results showed that children's development increased after the *baby massage kit* intervention, seen from the average development after the intervention was higher than before the intervention. In addition, judging from the statistical data shows that the *baby massage kit* has an effect on the development of toddlers indicated by the p value of 0.000 ($p < 0.05$). Based on the results of research and theory, there is no gap between the results of research in which states that there is a relationship between *baby massage kits* and gross motor development with a p value = 0.004 < 0.05 . According to Dewi (2013) in order to grow and develop optimally adequate nutrition and affection are needed, nutrition in toddlers. Age 1-3 years can be obtained from the provision of Asi and masi, besides that toddlers also need proper stimulation, because children who get a lot of stimulation will develop faster than those who are less or even do not get stimulation. one with a massage kit. Baby massage kit is an addition to the form of stimulation of growth and development is with toddler massage, music, and aromatherapy. baby massage kit, which is a tool in the form of an innovative toddler massage mat equipped with musical instruments and aromatherapy. Baby massage kit is made to facilitate health workers and mothers in providing growth and development stimulation and minimize the disturbance of delays in growth and development in toddlers.

This is in accordance with the research of Nurlaila (2014) which shows that the provision of stimulation by mothers can improve child development with a p value of $p = 0.04$. The study concluded that the provision of stimulation by mothers

56.7% of respondents provided good stimulation, while for the development of respondents according to 81.7%.

Stimulation of *baby massage Kit* is one way that can help toddlers improve development through massaging activities, of course creating a relationship of affection (Galeria, 2014). There is a good effect from the combination of the three therapies,

This is in line with the results of research put forward by Budi (2015) showing that *baby massage Kit* is more proven that toddlers do baby massage Kit treatment responsiveness and brain and brain work power will be better so that

toddlers experience an increase in motor development both gross and fine. massage to launch blood circulation, listening to music and inhaling aromatherapy for increased relaxation in infants. According to Colliver's research¹¹ in a clinical trial found that listening to music can reduce stress as measured by a decrease in plasma cortisol levels and lymphocytes, both of which are associated with stress. Similarly, research by Toda and Morimoto¹² on the effects of lavender and peppermint aroma, the findings state that peppermint aroma can relieve stress as evidenced by salivary cortisol statistically significantly decreased compared to lavender aroma which did not change. Observations during the study that during the massage using the baby massage kit in the treatment group showed that most of the babies fell asleep before the massage was completed. When massaged, the baby will feel a gentle massage while listening to lute music and inhaling peppermint aromatherapy so that the baby can feel the body becomes more relaxed when compared to the conventional massage group which is done only massage. In this study, the use of a baby massage kit that has a combination of massage, music, and aromatherapy proved to be very beneficial for stimulating growth and development in toddlers aged 1-3 years. Observations during the study that during the massage using the *baby massage kit* in the treatment group showed that most babies fell asleep before the massage was completed. When massaged, the baby will feel a soft massage while listening to lute music and

inhaling aromatherapy so that the baby can feel the body becomes more relaxed when compared to the conventional massage counseling group which is done massage only.

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CONCLUSIONS

There is an effect of baby massage kit using on the development of toddlers p value of $0.000 < 0.05$