THE EFFECT OF BABY MASSAGE ON THE SLEEP QUALITY OF BABIES AGED 3-6 MONTHS

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ABSTRACT

Good quality sleep is very important for everyone in improving physical and mental health. Because sound sleep is very important for growth, especially for babies. During sleep, the baby's brain growth reaches its peak. (Motors & Europe, 2016). Baby massage therapy is a method used to reduce and help sleep pattern disorders in babies aged 3-6 months. This type of research is descriptive using a case study approach model. The sample was two respondents who were given baby massage therapy for seven days. The parents of both respondents stated that they were quite familiar with baby massage but did not know about the theory of baby massage, had already done baby massage but did not know how to do baby massage. However, after being educated and taught, the parents of the two respondents were able to absorb the knowledge provided, so they understood the theory of baby massage and were able to practice how to do baby massage properly and correctly. The results of the research on the two respondents after being given baby massage were very effective and had particular benefits for improving the quality of sleep in children to overcome sleep pattern disorders and provide a sense of comfort to babies. From the results of this research, it was found that baby massage therapy is very effective in overcoming sleep pattern disorders to improve the quality of sleep in babies after application within seven days.

Keywords: baby massage; baby sleep quality; sleep pattern disorders

INTRODUCTION

Good sleep quality is very important for everyone in improving physical and mental health. Because good sleep is very important for growth, especially for babies. When sleeping, the baby's brain growth reaches its peak. (Motors & Europe, 2016). In general, newborns need to sleep almost all the time and after the age of 6 months, babies sleep about 13 hours per day. (Motors & Europe, 2016). Poor sleep quality in babies can cause several problems such as decreased immunity, impaired physical growth and impaired brain development in babies. (Geometry & Analysis, 2011). Based on WHO data listed in the journal Pediatrics, it was recorded that around 33% of babies experience sleep problems and sleep problems in babies do not always disappear when they are adults. Most children have normal sleep patterns, but 44.2% of children experience sleep problems during the infant period. Some experts say that sleep problems in infancy can continue into toddlerhood and school age (Kandi, 2018).

In Indonesia, quite a lot of babies experience sleep disorders, around 44.2% of babies often wake up at night. Currently, more than 72% of parents consider sleep disorders in babies not a problem and are considered normal. Sekartini's research obtained data that 51.3% of babies experience sleep disorders and 42% of their nighttime sleep hours are less than 9 hours and at night and wake up more than 3 times and wake up for more than one hour at night. Babies who do not have enough sleep hours, the next day often cry and are fussy (Mardiana and Martini, 2014:110). The prevalence of sleep problems with parental perceptions shows that parental awareness of children's sleep problems in Indonesia is still low. The need for sleep is not only seen from the aspect of quantity, but also its quality. With good quality sleep, the growth and development of

babies can be achieved optimally (Retnosari, Irwanto and Herawati, 2021). Experts have been able to scientifically prove what has long been known to humans, namely touch therapy and massage for babies have many benefits for physiological changes in babies, especially if done by the baby's mother herself. Several hospitals in the United States (US), China, the Philippines and Hong Kong, infant massage has been included in the infant health service system. Infant massage is believed to be one of the touch stimuli that can help optimize infant growth and development. Massage therapy for 30 minutes per day can reduce depression and anxiety. Their sleep is also more peaceful. Massage therapy for 15 minutes for six weeks in infants aged 1-6 months also increases alertness and reduces crying. This will be followed by increased sleep duration, improved psychological conditions, reduced stress hormone levels, and increased serotonin levels (Permata, 2017). Based on the background above, the purpose of this study is to analyze the effect of infant massage on the sleep quality of infants aged 3-6 months at Midwife Ratna Rismawati Mampang, South Jakarta.

METHOD

This type of research is descriptive with a case study approach model. A case study is a research design that includes an intensive study, for example one client, family, group, community, or institution. (Donsu, 2016). This type of research describes the effect of baby massage on the sleep quality of babies aged 3-6 months at Midwife Ratna Rismawati in 2024.

RESULT AND DISCUSSION

This researcher explains and explains the data and research results obtained directly from the effect of baby massage on the sleep quality of babies aged 3-6 months at Midwife Ratna Rismawati Mampang, South Jakarta on June 10 to June 16, 2024 with 2 respondents. Midwife Ratna Rismawati is located on the outskirts of South Jakarta, precisely on Jl. Bangka II Gg. V No.18, RT.6 / RW.2, Pela Mampang, Kec. Mampang Prpt., South Jakarta City, Special Capital Region of Jakarta 12720. The service facilities offered by Midwife Ratna Rismawati include Health Counseling, Childbirth, Family Planning Counseling, Family Planning Services (IUD, AKBK, Injections, and Pills), Immunization (mother and child), and Baby Massage. This study uses a qualitative method with observation techniques and direct interviews with parents of respondents to collect data on the effect of baby massage aged 3-6 months.

Assessment

First Respondent (An. M, 6 months) Based on the results of the assessment that has been carried out on the assessment on June 10, 2024, the first respondent named An M who is the first child of one sibling of female gender, the names of the baby's parents are Mr. A aged 37 years and Mrs. I aged 35 years. The respondent's nutritional pattern is that there is no disturbance. The respondent's sleep pattern is a nap of approximately 2 hours and at night approximately 9 hours. The respondent's elimination pattern for urination was not disturbed, while for defecation, the respondent's parents said it felt like it was not smooth because the respondent often defecated once every 2 days.

The pattern of An. M's daily activities is that he has started to lie face down often, lift his head, bite his hands or feet, play with toys given by his parents, and has started to lift his buttocks to prepare to sit. Meanwhile, the objective data obtained is that the respondent's general condition is good. The respondent's awareness is compos mentis. The respondent looks active and often fussy.

The respondent's vital signs are Temperature: 37.1 degrees Celsius, pulse: 116x / minute, and breathing: 30x / minute. Based on the interview results, it was found that the respondent's parents already knew about baby massage but did not know about the theory of baby massage. The respondent's parents said that they had done baby massage but did not know how to do baby massage. After being given counseling to the respondent's parents, both in absorbing the knowledge that had been given so that in understanding the theory of baby massage and how to do baby massage, the respondent's parents understood it.

Second Respondent (An. G, 6 months) Based on the results of the assessment that has been carried out on the assessment on June 10, 2024, the second respondent was named An. M who is the second child of two male siblings, the names of the baby's parents are Mr. S aged 38 years and Mrs. K aged 36 years. The residential address is Jalan Bangka RT. 007 RW. 002. Subjective data are the initials An. M, date of birth November 17, 2023, male, Muslim, no previous medical history and family medical history. The main complaint is that An. M's parents said that the respondent's sleep quality was not satisfied because he often woke up at night, the respondent's parents said that if at night he sleeps at night with the room lights on. The respondent's nutritional pattern is good. The respondent's sleep pattern is a nap for approximately 2-3 hours and at night for approximately 10 hours. The respondent's elimination pattern for urinating and defecating is not disturbed. An.'s activity pattern. G daily, namely has started to often lie on his stomach, lift his head, bite his hands or feet, talk, play toys given by his parents, and has started to lift his buttocks to prepare to sit. Meanwhile, the objective data obtained were that the respondent's general condition was good. Respondent's awareness was compos mentis. Respondents appeared active. Respondents' vital signs were Temperature: 36.8 degrees Celsius, pulse: 122x/minute, and breathing: 32x/minute. Based on the interview results, it was obtained that the respondent's parents already knew about baby massage but did not know about the theory of baby massage. The respondent's parents said that they had done baby massage but did not know how to do baby massage. After being given counseling to the respondent's parents, both in absorbing the knowledge that had been given so that in understanding the theory of baby massage and how to do baby massage, the respondent's parents understood it.

Data Analysis First Respondent (An. M, 6 months)

Table 1. First Respondent Data Analysis

That Responde	an Data Anarysis	
Data	Problem	Etiology
Subjective Data:	Sleep Pattern Disorders	Environmental
Respondent's parents said:		Barriers
 An. M's sleep quality is less than satisfactory 		(Lighting)
when sleeping at night		
• Easily wakes up at night and is fussy when awake		
• An. M sleeps with the bedroom light on at night		
Objective Data:		
 General condition is good 		
 Consciousness is compos mentis. 		
 Appears active and often fussy. 		
• Vital signs are Temperature: 37.1 degrees Celsius,		
pulse: 116x/minute, and respiration: 30x/minute.		

Second Respondent (An. G, 6 months)

Table 2. Second Respondent Data Analysis

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Data	Problem	Etiology	
Subjective Data:	Sleep Pattern Disorders	Environmental	
• Respondent's parents said Sleep quality is not		Barriers	
satisfied because he often wakes up at night, if at		(Lighting)	
night he sleeps with the bedroom light on.			
Objective Data:			
 General condition is good 			
 Consciousness is compos mentis. 			
Appears active.			
• Vital signs are Temperature: 36.8 degrees Celsius,			
pulse: 122x/minute, and respiration: 32x/minute.			

Nursing Diagnosis Determination

Based on the results of the study of the two respondents that have been carried out on the data analysis obtained the same diagnosis with different problems An. M and An. G have different causes, namely:

An. M is a sleep pattern disorder related to environmental barriers (lighting). So the diagnosis obtained is a sleep pattern disorder related to environmental barriers (lighting) according to the SDKI (Indonesian Nursing Diagnosis Standard) book with code D.0055.

An. G is a sleep pattern disorder related to environmental barriers. So the diagnosis obtained is a sleep pattern disorder related to environmental barriers according to the SDKI (Indonesian Nursing Diagnosis Standard) book with code D.0055. Nursing Intervention Based on the nursing diagnosis that has been obtained, the nursing plan carried out by the researcher is to provide a comfortable environment and provide baby massage with the aim of helping to improve the quality of sleep of respondents and provide comfort to respondents, with the criteria for the results of increased sleep quality and respondents seem to feel comfortable. Researchers performed baby massage to help improve the quality of respondents' sleep which was done once a day for seven days with a time of approximately 10-15 minutes. Nursing Implementation Researchers performed baby massage on both respondents to help improve the quality of respondents' sleep which was done once a day for seven days with a time of approximately 10-15 minutes. The following is a table of observations from respondents after massage on the quality of baby sleep. First respondent (An. M, 6 months) Based on the results of the study or the results of the implementation on June 10 to June 16, 2024, the results of the observations can be seen in the table below, a decrease in symptoms of sleep pattern disorders was obtained without the help of drugs but by performing baby massage and providing a comfortable environment for seven days. The results of the first respondent, namely sleep quality of more than 10 hours can be felt on the third day, waking up no more than one hour and can be felt on the fifth day, and waking up no longer fussy or crying can be felt on the sixth day. The following is a table of observations from respondents after massage on sleep quality, namely:

Table 3.

Pagults of Observation of Sleep Quality on First Respondents

	Results of O	oservation of Sleep Quali	ity on First Responden	its
		Sleep Quality		
Day	Date	Sleep > 10 hours	Wake up > 1 hour	Wake up
				fussy/crying
Monday	10 June 2024	Approximately 8.5 hours	Yes, woke up about 1	Yes, fussy and
			hour	crying
Tuesday	11 June 2024	Approximately 8-9 hours	Yes, woke up about	Not fussy and not
			1-1.5 hours	crying
Wednesday	12 June 2024	Approximately 10 hours	Yes, woke up about	Crying, not fussy
-			1-1.5 hours	
Thursday	13 June 2024	Approximately 10 hours	Yes, woke up about 1	Not fussy and not
			hour	crying
Friday	14 June 2024	Approximately 10-11	Not woken up	Crying, not fussy
-		hours	_	
Saturday	15 June 2024	Approximately 10-11	Not woken up	Not fussy and not
•		hours	-	crying
Sunday	16 June 2024	Approximately 12-13	Not woken up	Not fussy and not
-		hours	-	crying

Meanwhile, in the pattern of daily activities of An. M, namely, he has started to lie down often, lift his head, bite his hands or feet, play with toys given by his parents, and has started to lift his buttocks to prepare to sit. The following is a table of An. M's daily activities, namely:

Table 4.
Daily Activities of the First Respondent

	2 will 11 will the 2 more 1 more respondent
Time	Activities
06.00 - 06.30	Wake up and drink breast milk
06.30 - 07.40	Play, babble, bite hands or feet, and lie on stomach, lift head and buttocks
07.40 - 08.10	Complementary food (baby porridge)
08.10 - 08.20	Bathing
08.20 - 10.00	Playing, snacking, and taught to sit
10.00 - 11.00	Sleeping
11.00 - 11.45	Drinking breast milk
11.45 - 13.30	Playing and exercising muscles helps wake up from sleep by gently pulling both hands
13.30 - 14.30	Complementary food (baby porridge)
14.30 - 16.00	Playing
16.00 - 16.20	Bathing
16.20 - 17.00	Snacking and drinking breast milk
17.00 - 19.30	Talk to, recite the Quran, etc.
19.30 - 20.00	Complementary food (baby porridge)
20.00 - 21.00	Taught to sit alone
21.00 - 06.00	Sleeping, but often wakes up at night for about 1 to 1.5 hours and is fussy

Second respondent (An. G, 6 months)

Based on the results of the study or the results of the implementation on June 10 to June 16, 2024 from the results of the observation can be seen in the table below obtained a decrease in symptoms of sleep pattern disorders without the help of drugs but by doing baby massage and providing a comfortable environment for seven days. The results of the first respondent, namely sleep quality of more than 10 hours can be felt on the first day, waking up for no more than one hour can be felt on the first day, and waking up is no longer fussy or crying can be felt on the first day but on the third day the second respondent woke up crying, the respondent's parents said they woke up

because the diapers used were full so that the respondent became uncomfortable. The following is a table of observations from respondents after massage on sleep quality, namely:

Table 5.

Results of Observations on Sleep Quality for the Second Respondent

	results of Observ	ations on bicep Quanty	ioi the become ix	европает
			Sleep Quality	
Day	Date	Sleep > 10 hours	Wake up > 1	Wake up
			hour	fussy/crying
Monday	10 June 2024	Approximately 10-11	Not woken up	Not fussy and not
•		hours		crying
Tuesday	11 June 2024	Approximately 10-11	Not woken up	Not fussy and not
•		hours	•	crying
Wednesday	12 June 2024	Approximately 11-12	Not woken up	Crying, not fussy
•		hours	•	
Thursday	13 June 2024	Approximately 10-11	Not woken up	Not fussy and not
		hours		crying
Friday	14 June 2024	Approximately 12-13	Not woken up	Not fussy and not
-		hours	_	crying
Saturday	15 June 2024	Approximately 12-13	Not woken up	Not fussy and not
•		hours	•	crying
Sunday	16 June 2024	Approximately 12-13	Not woken up	Not fussy and not
		hours		crying

Meanwhile, An. G's daily activity pattern is that he has started to lie down often, lift his head, bite his hands or feet, talk, play with toys given by his parents, and has started to lift his buttocks to prepare to sit. The following is a table of An. G's daily activities, namely:

Table 6.
Daily Activities of the Second Respondent

Time	Activities
05.15 - 06.00	Wake up and play
06.00 - 06.30	Morning walk while lying in the stroller
06.30 - 07.00	MPASI (baby porridge)
07.00 - 07.30	Bathing
07.30 - 09.00	Playing, snacking, babbling, biting hands or feet, lying on the stomach, lifting the
	head and buttocks, and taught to sit
09.00 - 11.00	Sleeping
11.00 - 12.15	Drinking breast milk, snacking
12.15 - 13.15	Playing, exercising muscles, blowing bubbles, and being curious about the things
	around him
13.15 – 14.30	MPASI (baby porridge)
14.30 – 15.30	Sleeping
15.30 - 16.30	Playing
16.30 - 17.00	Bathing
17.00 - 18.30	Talk to, reciting the Koran, etc.
18.30 - 20.00	MPASI (baby porridge)
20.00 - 20.30	Taught to sit alone and introduced to safe things
20.30 - 05.15	Sleeping

Nursing Evaluation

First respondent (An. M, 6 months)

Based on the results of the interview or evaluation on June 16, 2024 on the last day of the study, the parents of the first respondent said that An. M experienced better sleep after being given a

baby massage after approximately one week. The parents of the first respondent said that An. M before being given a baby massage felt like he was not satisfied with his bowel movements so that he often defecated once every two days, but after this baby massage, An. M experienced a change in bowel movements, namely once a day. The parents of the respondent said that this baby massage was very helpful in providing better sleep quality and providing comfort for the respondent. The parents of the respondent said that they would do this baby massage to help the respondent's sleep quality even though the study was no longer being conducted.

Second respondent (An. G, 6 months) Based on the results of the interview or evaluation on June 16, 2024 on the last day of the study, the parents of the second respondent said that An. G experienced better sleep after being given a baby massage after approximately one week. Respondents' parents said that this baby massage is very helpful in providing better sleep quality and providing comfort for respondents. Respondents' parents said they would do this baby massage to help respondents' sleep quality even though the research has not been done.

Based on the results of the research conducted, data was obtained from the results of interviews with parents, on average, the parents of respondents An. M and An. G in this study were both quite familiar with baby massage but had never tried to do it. Based on the results of the intervention after the massage, it was found that both patients experienced an increase in sleep quality, this explains that baby massage has a significant effect on sleep quality, there are other benefits that are felt including after the baby is massaged the baby is fit when waking up, not fussy, improving the baby's sleep quality, helping the baby's growth and development process, increasing the bond of affection and increasing knowledge for the baby's mother so that they can do baby massage on the baby. Significant differences before and after baby massage can also be seen from the sleep quality observation sheet that was distributed, where after baby massage was done on average on the seventh day after baby massage was done there was a change in sleep quality in babies aged 3-6 months in Ratna Rismawati Mampang South Jakarta.

Baby massage is very beneficial for stimulating the growth and development of babies. Massage is done with love and affection and paying attention to the baby's needs so that it will produce extraordinary effects. Through the touch of massage on muscle tissue, blood circulation can be increased so that it improves the functions of body organs properly. Baby massage will provide continuous stimulation to the body, providing a sense of security and comfort to the baby. The stimulation and training given to babies will affect special functions including motor skills, speech and intelligence. Babies become relaxed, comfortable, calm, gain weight and sleep soundly so that they are able to stimulate their growth and development (Jonathan, 2018).

In infancy, several changes occur, the sleep-wake cycle pattern is only clearly visible at the age of 3-6 months and at this age the quality of the baby's sleep can be measured, namely the proportion of sleep is more at night. The sleep patterns of babies over six months of age begin to look similar to those of adults (Ubaya, 2017). The prevalence of sleep disorders varies depending on the type of disorder and the definition used. Night waking is defined as waking up and crying 1 or more times between midnight and 5:00 a.m., at least 4 nights a week or 4 weeks a month. Approximately 25% of sleep disorders occur in babies between the ages of 6 months and 12 months, this prevalence becomes 50% in breastfed babies (Ismael, 2017).

Experts have been able to scientifically prove what humans have long known, namely that touch therapy and massage in babies have many benefits for physiological changes in babies, especially when done by the baby's mother herself. Several hospitals in the United States (US), China, the Philippines and Hong Kong, baby massage has been included in the baby's health care system. Baby massage is believed to be one of the touch stimuli that can help optimize baby growth and development. The results of this study are also in line with previous research conducted by Sri (2022) which showed that baby massage has a good effect on the sleep quality of babies aged 3-6 months after baby massage at the Sri Midwife Practice in 2022, all of them became good, namely 100%. Based on the results of the study on the two respondents, it can be concluded that baby massage.

CONCLUSION

Based on the results of a case study that aims to describe the application of infant massage in overcoming sleep pattern disorders in the sleep quality of infants aged 3-6 months, it can be concluded that in infant massage in 7 days with the application of one in one day, several conclusions were obtained that infant massage is one alternative that can be used to improve sleep quality in infants if done optimally.

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