

The Relationship Between Baby Massage and The Sleep Quality of Babies Aged 3-6 Months at Pmb Midwifery Dian Armiati, A.Md.Keb Karangrejo Gempol District Pasuruan 2023

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ABSTRACT

Infancy is a golden period and this period cannot be repeated because this period comes very quickly, it is also called a critical period because babies are very sensitive to their environment, need proper nutrition and good stimulation to support their growth and development. At this time, the baby's brain is still developing. Babies are fragile individuals and require some adjustment. Babies experience difficulties in the adjustment process affecting their development and causing unpredictable behavior, the most fatal consequence of which is death. The sense of touch is very important in a baby's early life to help him adapt to his environment. Baby massage is an activity suitable for babies that helps improve the quality of sleep in babies, motor development in babies and fine motor skills in babies. At PMB Dian Armiati A.Md.Keb, Karangrejo Village, Gempol District, there are several independent practice places for midwives (PMB) but not all PMBs carry out baby massage which is carried out by midwives, namely at PMB Dian Armiati A.Md.Keb, Karangrejo Village, Gempol District. To determine the relationship between the influence of baby massage on the quality of baby sleep in PMB Dian Armiati A.Md.Keb, Karangrejo Village, Gempol District. With a cross sectional research design using the Wilcxon test method. This research is quantitative using an analytical survey method where researchers try to explore how and why health phenomena occur the 30 respondents, it was found that before the baby massage was carried out, the majority of sleep quality was in the poor category, 18 babies (60%), after the baby massage, the sleep quality was in the good category, 20 babies (66.7%), so it can be concluded There is a relationship between baby massage and the quality of baby sleep.

Keywords: *Baby sleep quality, Baby massage*

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INTRODUCTION

Newborns (BBL) are those aged 0 to 28 days. To survive well, BBL needs to undergo physiological changes in the form of maturation, adaptation (moving from intrauterine to extrauterine life), and tolerance to BBL (Herman, 2020). Infancy is a golden period and this period cannot be repeated because this period comes very quickly, also called the critical

period because babies are very sensitive to their environment, need proper nutrition and good stimulation to support their growth and development to support the development process. At this time, the baby's brain is still developing. Babies are fragile individuals and need some adjustments. Babies have difficulty in the adjustment process, affect their development and cause unpredictable behavior, even the most fatal result is death. The sense of touch is very important in a baby's early life to help him adapt to his environment. Baby massage is a suitable activity for babies that helps improve sleep quality in infants, motor development in infants and fine motor skills in infants. Tactile stimulation in infants affects positive psychosocial development. (Kusumastuti, Tamtomo, & Salimo, 2016; Nasution, Nuraidah, & Imelda, 2021; Noorbaya, Mayangsari, & Saidah, 2020). The quality of a baby's sleep affects the growth and development of the baby. While the baby sleeps, brain cells repair and produce growth hormone. Sleep has a huge impact on mental, emotional, physical, and immune system. Sleepy babies are more prone to intellectual disabilities such as difficulty concentrating, poor memory, and loss of creativity. They feel very anxious and have difficulty developing independence and confidence. The quality of the baby's sleep reflects the way the baby sleeps, comfortably and his sleep patterns. One of the problems that mothers often face is that their babies lack sleep. (Febriani, & Munawarah, 2022; Ifalahma & Cahyani, 2019; Yulianti, 2017).

Based on WHO (*World Health Organization*) data in 2018 listed in the journal *pediatrics*, that about 33% of babies experience sleep problems. In Indonesia, there are quite a lot of sleep problems in infants, namely there are 44.2% of babies experiencing sleep disorders are often awakened at night. In East Java, there are 572,634 infants in Pasuruan regency, 85.1% lack sleep (Pasuruan Health Office, 2021). In PMB Dian Armiati A.Md.Keb Karangrejo Village, Gempol District consists of several midwives independent practice places (PMB) but not all PMB do baby massage carried out by midwives, namely at PMB Dian Armiati A.Md.Keb Karangrejo Village, Gempol District.

Given the importance of sleep time for the development of the baby, the need for sleep must be really met so as not to adversely affect its development. One way that can be done to meet the needs of baby growth and development, massage techniques. Baby massage is a slow and gentle rubbing motion on the baby's entire body starting from the baby's legs, stomach, chest, face, hands and back. Baby massage is a form of tactile stimulation. The palpable excitatory is the most important in development. The sensation of touch is the most developed sensory at birth. The benefits of baby massage are to give a comfortable feeling to the baby. When the baby sleeps, the brain's neurons are repaired and about 75% of growth hormone is produced. Babies sleep an average of 60% of the time. The pattern of sleep-wake cycles is evident at 3-6 months of age, when the proportion of nighttime sleepers begins to increase. During infancy, neurons do not grow fully, resulting in nerve development, the formation of synapses, etc. Takes longer to sleep. Necessary for neurodevelopment, synapses, etc., a baby's brain grows three times larger than it was at birth, or 80% of an adult's brain in the first year, and this condition only occurs once in a lifetime. (Abdullah, & Haisah, 2022; Ifalahma & Cahyani, 2019; Kusumastuti, 2019).

Babies who have difficulty sleeping or often wake up from sleep because they feel not full. Therefore, meet the baby's food and drink needs before going to bed. If his physical needs are met, your child no longer wakes up often in the middle of the night. Any illness that causes pain, physical discomfort can cause sleep problems. sustainable so as to maintain a feeling of security in the baby. Lack of sleep in infants can have a negative impact on the physical and cognitive development of babies which is an indicator of health development, especially the ability to think about the future as an adult. The increase in the length of sleep of the baby during massage is caused by the increased activity of neurons produced during massage, when the ability of receptor cells to increase glucocorticode increases and levels of the hormone adrenaline (cortisol hormone) decreases, so that the baby in sleep feels relaxed, more comfortable and calm. (Kusumastuti et al., 2016; Nurhudariani, Ratnasari, Sonhaji, & Febrianti, 2021; Suralaga, Choirunissa, & Cahyawati, 2022).

METHOD

This research is quantitative using analytical survey methods where research tries to explore how and why health phenomena occur. Then do a correlation to find out the relationship of one variable with another. With a *cross-sectional* research design where researchers measure data on independent variables and dependent variables only once at a time (Nursalam, 2017).

Frequency distribution of the relationship of baby massage with the quality of infant sleep

Table. Frequency distribution of the relationship of baby massage with the quality of infant sleep

Sleep Quality Baby before Baby massage	Quality of Baby Sleep After Baby Massage								p value
	Good		Enough		Less		Total		
	f	%	f	%	f	%	f	%	
Good	5	16,7	0	0	0	0	5	16,7	0,000
Enough	5	16,7	2	6,6	0	0	7	23,3	
Less	9	30	7	23,3	2	6,6	18	60,0	
Sum	19	63,4	9	30	2	6,6	30	100	

Based on the cross-tabulation table, it shows that the majority of sleep quality of infants aged 3-6 months before and after baby massage is 9 respondents (30%).

Based on the data above and according to the statistical test Paired Sample Test with the help of the SPSS 16 program at the level of 5% error, calculations were carried out to determine whether there was an influence between variables, namely independent variables and dependent variables. The result of the calculation of p value is $0.000 < \alpha (0.05)$. This shows that H_a accepted that there is an effect of baby massage on the sleep quality of

infants aged 3-6 months at PMB Dian Armiami, A.Md.Keb, Karangrejo Village, Gempol District, Pasuruan Regency in 2023.

DISCUSSION

1. Sleep Quality of Baby Age 3-6 Months before Baby Massage

Based on table 4.4 shows that the quality of sleep of infants aged 3-6 months before baby massage is carried out, most of the respondents sleep quality is less at 18 respondents (60). In the opinion of researchers, poor sleep quality in infants can make the immune system low, children cry easily, fuss and can interfere with the baby's growth during growth. Given the importance of sleep time for the development of the baby, the need for sleep must be really met so as not to adversely affect its development.

According to Saputra (2012), inadequate sleep and poor sleep quality can result in impaired physiological and psychological balance. Physiological impacts include decreased daily activities, fatigue, weakness, *poor neuromuscular* coordination, slow healing process and decreased endurance. While the psychological impact includes more unstable emotions, anxiety, lack of concentration, cognitive abilities and combining experiences lower. Babies who experience sleep disorders will experience the same disturbance in the later period, especially during growth. Factors that affect sleep quality are sufficient due to age and health status.

According to researchers, the age of 3-6 months is where the baby after the age of 3 months when the baby's physique is no longer too weak to be massaged. Because babies spend a lot of time sleeping, at the age of 3-6 months is a good time to regulate their sleep patterns considering the amount of sleep the baby will decrease regularly every month. This is according to the opinion of Dewi (2010) babies in the 3rd and 4th months are easy to manage their drinking and sleeping schedules, while after 6 months the fine touch technique carried out is different. Based on table 4.3, it shows that all respondents, namely 30 babies, their health status is healthy, as many as 26 babies (86.7%). According to researchers, this shows that babies who are categorized as adequate sleep quality are sleeping at least 9-11 hours at night, as well as babies in healthy physical condition or are not sick, because babies with unhealthy conditions will worsen the baby's condition if baby massage is done. This is in accordance with the opinion of Wahyuni (2011) Babies who sleep enough without waking up often will be fitter and not easily fussy. Babies are said to experience sleep disturbances if at night sleep less than 9 hours, wake up more than 3 times and wake up more than 1 hour.

2. Sleep Quality of Baby Age 3-6 Months after Baby Massage

Based on table 4.5 shows that most of the sleep quality of infants aged 3-6 months after baby *massage* experienced good sleep quality, which was 20 respondents (66.7%). According to researchers, sleep plays an important role in increasing the baby's resistance to infection, if the sleep is disturbed, the effectiveness of the baby's immune system can decrease so that the baby is easily aroused and restless. This is according to Sekartini's opinion (2012) The quality and quantity of baby's sleep affects not only physical

development, but also emotional development. Babies who sleep enough without waking up are fitter and not easily fussy the next day. According to researchers, babies aged 6 months are easier to manage their sleep schedule, so that babies sleep quality and classified as having good sleep quality. Therefore, the need for sleep in infants according to their age needs attention from the family so that later the baby can achieve optimal growth and development. This is according to Anggraini's opinion (2010) Infants aged 3-6 months need approximately 16.5 hours of sleep per day. Type III sleep is expected to fall asleep quite soundly, relax once, muscle tone disappears completely after the baby massage action is expected to stage IV sleep type. The characteristic is the most restful sleep, without dreams and difficult to wake up, takes several minutes to respond, breathing patterns and heart rate are regular, in babies there is a lot of sweating.

In Anggraini's opinion (2006) Babies whose muscles are stimulated by massage or massage will be comfortable and sleepy. Most babies will sleep for a long time once the massage is done. In addition to long, the baby seems to sleep soundly and is not fussy as before, this shows that the baby feels calm after the massage. When the baby sleeps, then when he wakes up will become fit so that it becomes a factor that supports the concentration and work of the baby's brain. Baby massage is done 15-30 minutes using oil. *Baby massage* can make babies sleep more soundly so as to increase intelligence.

According to researchers, the baby's health status is categorized as good, indicating a healthy baby and good sleep quality will promote normal baby growth. In addition, babies with good sleep quality because they have got baby massage so that babies with reflexes will sleep soundly and babies are not easily sick because they sleep long enough so that babies are not easily disturbed at night and when they wake up in the morning show the condition of a fit and cheerful baby.

3. The relationship between Baby Massage and baby's sleep quality Age 3-6 months

Based on table 4.4 shows that the quality of sleep of infants aged 3-6 months before baby massage is done most of the respondents *are less at 18 respondents (60%), the quality of sleep of babies aged 3-6 months after baby massage* is mostly from respondents is good at 20 respondents (66.7%). Based on the results of the data above and according to the results of the *statistical test Paired Sample T test* obtained a significant number or probability value (0.000) much lower than the significant standard of 0.05 or ($p <$) then H_0 data was rejected and H_a was accepted which means there is an Effect of Baby Massage on the Sleep Quality of Infants aged 3-6 months at PMB Dian Armiati A.Md.Keb Karangrejo Village, Gempol District, Pasuruan Regency in 2023. α

Given the importance of sleep time for baby's development, his sleep needs must be fully met so as not to adversely affect his development. One way that can be used to meet these needs is with *baby massage*. Babies who are massaged will be able to sleep soundly, while when they wake up, their concentration power will be fuller. One of the non-pharmacological therapies to overcome baby sleep problems is *baby massage*. *Baby Massage* is one type of stimulation that will stimulate the development of the structure and function of the work of cells in the brain (Riksani, 2014). A gentle massage will help relax

the muscles so that the baby calms down and sleeps well. Gentle touch in babies is a means of a beautiful bond between babies and their parents. (Anggraini, 2009).

Babies who are massaged for approximately 15 minutes will feel more relaxed, sleep more soundly, their development and growth are also getting better (Marta, 2014). In accordance with observers (Field, 2010) as quoted by Hull, molecular virologist from England, in a paper entitled *touch therapy: Science confirms instinct*, says massage therapy 30 minutes per day can reduce depression and anxiety. His sleep is getting calmer, increasing alertness, and crying is reduced, besides that this is also evidenced in research reported in London in 1998. This study reveals that babies who sleep a lot, their brain development will be optimal. Research from *Queensland*, Australia, also revealed that *baby massage* does not only affect the physical condition of children. The study showed that *baby massage* can also improve the performance of the child's brain so as to make it smarter (Schoefer Y et al, 2010).

CONCLUSION

Based on the results and discussion of research on the relationship between baby massage and sleep quality of infants aged 3-6 months, it can be concluded that:

- a) Sleep quality of infants aged 3-6 months at PMB Dian Armiati, A.Md.Keb, Karangrejo Village, Gempol District, Pasuruan Regency in 2023, before baby massage is carried out, the majority of sleep quality in the category is less than 18 babies (60%).
- b) Sleep quality of infants aged 3-6 months at PMB Dian Armiati, A.Md.Keb, Karangrejo Village, Gempol District, Pasuruan Regency in 2023, after baby massage, the majority of sleep quality in the good category was 20 babies (66.7%).
- c) There is a relationship between Baby Massage and the sleep quality of babies aged 3-6 months at PMB Dian Armiati, A.Md.Keb, Karangrejo Village, Gempol District, Pasuruan Regency in 2023 with a probability value (0.000) much lower than the significant standard of 0.05 or ($p < \alpha$).

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