

THE EFFECT OF PERFORMING BABY MASSAGE ON SLEEP QUALITY IN BABIES AGED 3-6 MONTHS AT AULIA'S HOME, PADANG CITY

Lira Dian Nofita¹, Reni Yusman², Yulia Netri³, Yanti⁴, Afrida Yelni⁵, Tika Kencana⁶

^{1,2,3,4,5,6} Program Studi Pendidikan Profesi Bidan, STIKES Senior, Medan, Indonesia
Email correspondence* :: liradiannofita@gmail.com

ABSTRAK : PENGARUH PELAKSANAAN *BABY MASSAGE* TERHADAP KUALITAS TIDUR PADA BAYI USIA 3-6 BULAN DI RUMAH AULIA, KOTA PADANG

Latar Belakang: Masa bayi dikenal adalah sebagai *golden period* atau masa emas yang sangat menentukan arah menuju pertumbuhan dan perkembangan seorang anak di masa selanjutnya, Berdasarkan data yang di dapatkan Di Indonesia cukup banyak bayi yang mengalami masalah tidur, yaitu sekitar 44,2% bayi mengalami gangguan tidur seperti sering terbangun di malam hari, Salah satu terapi non farmakologis untuk mengatasi masalah tidur bayi adalah *baby massage* Sedangkan dampak yang terjadi dari segi Psikologinya meliputi emosi bayi tidak stabil, cemas, tidak konsentrasi, kemampuan kognitif dan menggabungkan pengalamannya lebih rendah.

Tujuan: untuk Mengetahui Pengaruh pelaksanaan terapi *baby massage* terhadap Kualitas tidur bayi usia 3-6 bulan di rumah Aulia Kota Padang Tahun 2026

Metodologi: Metode penelitian ini menggunakan Pra-eksperimen dengan teknik *Purposive Sampling One grup Pretest-Post-Test*, Variabel yang diteliti yaitu Pelaksanaan terapi *baby massage* sebagai variabel independen dan kualitas tidur sebagai variabel dependen, Populasi pada penelitian ini adalah Seluruh ibu yang memiliki bayi usia 3-6 bulan yang berada di rumah Aulia Kota Padang tahun 2026 yang berjumlah Adalah 20 responden, sedangkan waktu penelitian selama ± 1 bulan tahun 2026.

Hasil Penelitian: Hasil penelitian diketahui bahwa sebelum di berikan terapi *Baby Massage* terhadap 20 responden (100%) semuanya yang mengalami gangguan kualitas tidur sedangkan Setelah diberikan intervensi 17 responden mengatakan bahwa lebih dari separoh adalah (85%) yang mengalami tidur baik dan kurang dari separoh yaitu 3 responden (15%) yang mengalami gangguan kualitas tidur kurang baik, Kesimpulan : Ada Pengaruh Pelaksanaan terapi *Baby Massage* Terhadap Kualitas Tidur Pada Bayi Usia 3-6 Bulan di rumah Aulia Kota Padang Tahun 2026.

Saran: saran Bagi bidan praktisi sebaiknya lebih meningkatkan lagi kemampuan dalam memberikan asuhan kebidanan secara komplementer yang berfokus pada pelayanan preventif yang salah satunya yaitu pelaksanaan Terapi *Baby Massage* untuk mengoptimalkan pertumbuhan dan perkembangan bayi nya dengan baik.

Kata Kunci : Pelaksanaan, Terapi *Baby Massage* , Kualitas tidur bayi.

ABSTRACT

Background: The infant period is known as the golden period, which is very crucial in determining the direction of a child's growth and development later on. Based on the data obtained, quite a lot of babies in Indonesia experience sleep problems, with around 44.2% of babies having sleep disorders such as frequently waking up at night. One non-pharmacological therapy to address baby sleep problems is baby massage. Meanwhile, the psychological impacts include unstable emotions, anxiety, lack of concentration, lower cognitive abilities, and difficulty integrating experiences. Objective: To find out the effect of implementing baby massage therapy on the sleep quality of babies aged 3-6 months at Baby Care Bdn Yanti, S.ST, Padang City, in 2026.

Purpose: to find out the effect of baby massage therapy on the sleep quality of babies aged 3-6 months at Aulia House in Padang City in 2026.

Methodology: This research used a pre-experimental method with purposive sampling and a one-group pretest-posttest design. The variables studied were the implementation of baby massage therapy as the independent variable and sleep quality as the dependent variable. The population in this study included all mothers with babies aged 3-6 months at Aulia House in Padang City in 2026, totaling 20 respondents, and the research was conducted over approximately 1 month in 2026. Purpose: to find out the effect of baby massage therapy on the sleep quality of babies aged 3-6 months at Aulia House in Padang City in 2026.

Methodology: This research used a pre-experimental method with purposive sampling and a one-group pretest-posttest design. The variables studied were the implementation of baby massage therapy as the independent variable and sleep quality as the dependent variable. The population in this study included all mothers with babies aged 3-6 months at Aulia House in Padang City in 2026, totaling 20 respondents, and the research was conducted over approximately 1 month in 2026.

Conclusion: There is an effect of implementing Baby Massage therapy on the sleep quality of babies aged 3-6 months at Baby Care Bdn Yanti, S.ST, Padang City in 2026.

Suggestion: For practicing midwives, it's better to further improve their skills in providing complementary midwifery care that focuses on preventive services, one of which is carrying out Baby Massage Therapy to optimize the baby's growth and development properly.

Keywords: Implementation, Baby Massage Therapy, Baby's sleep quality.

INTRODUCTION

The infancy period is known as the golden period, which is very crucial in determining the direction of a child's growth and development later on. One of the factors that greatly affects a baby's growth and development is rest and sleep quality (Kamalia et al., 2022).

Sleep is a way for babies to adapt to their environment. However, another problem that occurs is when babies have a very hard time sleeping at night, and if not handled properly, it can lead to behavioral issues, developmental delays, and even brain problems (Ismael, 2022).

One way to meet this need is through baby massage. Babies who are massaged can sleep soundly, and when they wake up, their concentration is much better (Roesli, 2023). In fact, many mothers are still reluctant to massage their babies regularly, especially in the early days after birth. This is because they are afraid of massaging their baby incorrectly, their baby's body is still fragile, and they don't know the proper massage techniques (Anggraini, 2020).

Baby sleep patterns vary a lot, but newborns need more sleep. Every three hours, a baby will wake up to feed. As they get older, their sleep needs decrease. Babies will sleep at night and stay awake during the day. By six months, babies might take a short nap in the morning, stay awake during the day, and sleep soundly at night until they wake up near dawn to feed. A baby who sleeps for five or six hours but wakes up looking refreshed indicates good sleep quality. Babies who sleep enough without frequently waking up are more energetic and less fussy. Therefore, it's important to maintain good sleep quality for babies. Babies who experience poor sleep quality may continue to have sleep issues later, especially during growth periods, Santi Enidya (2012).

Sleep problems in babies are a common issue that parents often face, but if not handled

properly, they can negatively affect a baby's behavior, physical growth and development, and even brain function (Ismael, 2010). Long-lasting sleep disturbances can disrupt the body's homeostasis, weaken the immune system, cause irritability (being fussy), worsen emotional regulation, and hinder the production of growth hormone, which is mainly released while the baby is in deep sleep.

If this condition keeps happening, the baby might experience delays in motor development, memory problems, and behavioral issues later on. That's why meeting a baby's sleep needs should be a top priority in both nursing practice and baby care. One safe, easy-to-do, and effective non-drug way to help improve a baby's sleep quality is baby massage. Nowadays, various therapies have been developed, both drug-based and non-drug. One non-drug therapy to tackle baby sleep problems is baby massage (Istikhomah, 2020).

Based on data obtained from Health Law number 36 of 2009, it states that baby massage is a traditional health service that falls under the skill category. According to Ministry of Health Regulation number 1109 of 2007, baby massage can be categorized as a complementary-alternative treatment to stimulate a baby's growth and development.

Baby massage is part of a way to help babies grow and develop optimally. Baby massage involves touch after birth and can provide consistent body contact that helps maintain a comfortable feeling for the baby. Touch therapy, especially massage for babies, can produce beneficial physiological changes. On the psychological side, issues can include less stable emotions, anxiety, lack of concentration, and lower cognitive abilities and experience integration. Babies who have sleep disturbances may continue to experience similar issues in the future, especially during their growth and development (Besedovsky et al., 2012).

The practice of baby massage in developed countries has been widely studied to reveal its benefits. Mothers in developed countries have started to feel the great benefits of baby massage, so it is considered important in baby care, in addition to exclusive breastfeeding and immunization. (Irayani, F. 2022).

A study conducted by Hiscock (2020) in Melbourne, Australia, found that 32% of mothers reported recurring sleep problems in their children. The study showed that many infants still experience sleep problems, and these issues can persist or happen again (Hiscock et al., 2002).

Based on the data obtained, quite a lot of babies in Indonesia experience sleep problems, with around 44.2% of babies having sleep disturbances such as waking up frequently at night. According to Sekartini (2010), from a total of 285 baby respondents, the data showed that 51.3% of babies experienced sleep disturbances, 42% of babies slept less than 9 hours at night, and at night babies woke up more than 3 times with wakefulness lasting more than an hour.

The 2025 Padang City Health Office Profile states that out of 17,799 babies targeted in 2024, 15,825 received health services, or 88.9%. This achievement has increased from the previous year (83.2%). The coverage of standard baby health services should reach 100%, but the achievement has not yet met the target. This may be due to limitations in the services provided to babies, such as offering evidence-based midwifery care like baby massage.

The phenomenon happening in the field shows that sleep disturbances in babies are still often found and remain a main complaint of parents. According to research by Handayani and Maryatun, many babies experience sleep disturbances, such as frequently waking up at night, before being given baby massage interventions. This condition shows that baby sleep problems are still a health issue that needs attention. Simple and effective interventions are very much needed to address this problem. Baby massage is one solution that can be widely applied. This method doesn't require high costs and is easy to do.

Therefore, this intervention is very relevant to be developed. Based on the background above, the researcher is interested in conducting a study titled "The Effect of Baby Massage Therapy on Sleep Quality in Babies Aged 3-6 Months at Aulia Home, Padang City, in 2026."

RESEARCH METHODS

This research method uses a pre-experiment with purposive sampling and a one-group pretest-posttest design. First, a pre-test is given. This design involves a single group of subjects measured before and after receiving an intervention without a comparison group, allowing researchers to assess changes that occur due to the treatment given. The research instrument for the independent variable uses Standard Operating Procedures (SOP) for baby massage techniques as a guide for conducting the intervention so that the massage procedure is done systematically, safely, and consistently on each subject.

Meanwhile, to measure the dependent variable of baby sleep quality, a questionnaire sheet that has been prepared based on indicators was used. Baby sleep quality is categorized as poor if the total sleep hours are less than 9 hours at night, with waking frequency ≥ 3 times and awake duration ≥ 1 hour. It is categorized as good if the baby's total sleep hours are ≥ 9 hours at night, waking frequency is < 3 times, and awake duration is < 1 hour. The instrument used in this study is a questionnaire (Kandi, 2018).

The population in this study includes all mothers who have babies aged 3-6 months living at Aulia House in Padang City in 2026, totaling 20 babies. The practice schedule is open every day, and the study is conducted for about a month. The sample criteria include inclusion criteria, which are having babies aged 3-6 months and healthy babies, while the exclusion criteria are babies aged 0-3 months and sick babies (fever). These criteria determine whether or not a sample can be used (Hidayat, 2024).

DISCUSSION

This research was conducted at Aulia's house in Padang City in 2026 for about 1 month. The study was carried out on 20 babies aged 3-6 months who met the inclusion criteria. The research was conducted following health protocols, including wearing masks and washing hands. Respondents were scheduled at different times to avoid prolonged contact with each other. Before the baby massage was carried out, the parents filled out a pretest questionnaire, gave informed consent, and answered questions related to the baby's sleep quality. The results of this study can be seen in the following table.

Pre-Test and Post-Test Scores after Baby Massage

	N		Rank Sum	of Ranks
Post test-Pre test	Negative Ranks	0 a	,00	,00
	Positive Ranks	10 b	3,00	30,00
	Ties	10 b		

a. PostTest < PreTest

b. PostTest > PreTest

c. PostTest = PreTest

Shows the changes in pretest and posttest scores after the treatment or baby massage. Negative Ranks with an N value of 0 means there were no samples that experienced a decrease in scores from the pretest to the posttest. Positive Ranks with an N value of 10 means that 10 samples experienced an increase in scores from the pretest to the posttest. Meanwhile, N in Ties being 10 means that there were 10 samples with the same scores in both the pretest and the posttest.

Table 1
Frequency Distribution of Respondents Based on Age of Babies at at Aulia's Home, Padang City, in 2026

Description	Frequency	Percent
3-4	12	60
5-6	8	40

Based on Table 1 above, out of 20 respondents, it shows that more than half of the babies are between 3-4 months old. 12 respondents (60%) were in the month category, and 8 respondents (40%) were aged 5-6 months.

Table 2
Frequency Distribution of Respondents Based on Baby's Gender at Aulia's Home, Padang City, 2026

Description	Frequency	Percent
Man	14	70
Woman	6	30

Based on the table 2 above, it shows that out of 20 respondents, more than half are male, with 14 respondents (70%), and less than half are female, with 6 respondents (30%).

Special Data Respondent Characteristics Based on Sleep Quality Before Receiving Baby Massage Therapy

Table 3
Frequency Distribution of Respondents Based on Sleep Quality Before Receiving Baby Massage Therapy

Description	Frequency	Percent
Sleep Quality Not good	20	100

Based on Table 3 above, out of 20 respondents, it shows that all infant respondents experienced sleep quality disturbances before receiving baby massage, meaning all 20 babies, which is 100%.

Characteristics of Respondents Based on Sleep Quality After Baby Massage

Table 4
Frequency Distribution of Respondents Based on Sleep Quality After Baby Massage Sleep Quality Before Baby Massage

Description	Frequency	Percent
Less	3	15
Good	17	85

Based on Table 4 above, out of 20 respondents, it shows that more than half of the respondents who were given Qur'an murottal therapy had good sleep quality, which amounted to 17 babies (85%), and less than half, 3 babies (15%), experienced sleep quality disturbances after Baby Massage

CONCLUSION

Identifying Sleep Quality Before Giving Baby Massage Therapy to Babies Aged 3-6 Months (Pre-Test)

Discussion on Identifying Sleep Quality Before Being Given Baby Massage Therapy in 3-6 Month Old Infants (Pre-Test) Based on Table 3 above, out of 20 respondents, all 20 babies (100%) experienced sleep quality disturbances. These disturbances were indicated by frequent waking, short sleep duration, and discomfort while sleeping. This data shows that most babies do not yet have a stable sleep pattern. This situation indicates a need for intervention to improve infants' sleep quality optimally. (Prawirohardjo, S. 2014).

A baby who has good quality sleep is one that meets three out of five criteria for good sleep quality, which are: sleeping at night for ≥ 9 hours, waking up at night ≤ 3 times, being awake at night for ≤ 1 hour, not needing excessive naps, and being alert and cheerful when waking up in the morning (Kandi, 2018).

Monitoring unwanted reactions like side effects or sleep disturbances in babies can be noticed early through changes in behavior, wake-up patterns, and physical condition. Babies usually have trouble sleeping if they get less than 9 hours of sleep at night, wake up more than 3 times for long periods, and show intense signs of fussiness. Noticing these signs is really important because poor sleep quality can raise cortisol (stress) levels, which can hinder your little one's optimal growth and development.

This baby massage is done by a midwife who has a training certificate, using a massage technique in this study that involves gently massaging the baby's entire body, from the toes, lower limbs, buttocks, stomach, chest, back, to the face, with baby oil for a duration of 30 minutes Has longer sleep time compared to babies who are massaged for 15 minutes

This study only used 1 treatment group unlike previous research that used 2 comparison groups: babies who were massaged for 15 minutes and babies who were massaged for 30 minutes. Since it has been proven that a longer massage duration gives a longer sleep duration, the researcher chose the longer massage duration of 30 minutes.

Sleep disturbances in babies are a common problem many parents experience, but if not handled properly, they can have a negative impact on the baby's behavior, physical growth, and even brain function (Ismael, 2010). Long-lasting sleep disturbances can disrupt the body's homeostasis, lower immunity, cause irritability (being fussy), worsen emotional regulation, and hinder the production of growth hormone, which is mainly released when the baby sleeps soundly.

According to (Roesli, 2020), it is stated that improving the quality or duration of a baby's sleep through baby massage is due to an increase in serotonin secretion that occurs during the massage. Serotonin is a major neurotransmitter involved in the formation of sleep by suppressing the activity of the reticular activating system and other brain activities. Melatonin plays a role in sleep and helps make sleep longer and deeper at night. This is because melatonin is produced more in the dark when the light entering the eyes decreases.

Menurut (Iglowstein et al., 2003), seseorang yang dapat tidur dengan kualitas dan kuantitas yang cukup akan dapat tenang karena tidur lebih maksimal dan diyakini dapat menjaga kesehatan mental dan emosional, fisiologis, dan kesehatan. Jika kualitas tidurnya bagus berarti fisiologis tubuh dalam sel otak akan pulih kembali, seperti sAccording to Iglowstein et al. (2003), a person who can sleep with enough quality and quantity will be able to feel calm because their sleep is more restful and is believed to help maintain mental, emotional, physiological, and overall health. If the sleep quality is good, it means the body's physiology in the brain cells will recover, just like every time you wake up. Babies who sleep well, without waking up often, will be more refreshed and less fussy when they wake. Good sleep quality in babies not only affects their intelligence and brain development but also influences their behavior when they wake up (Sadeh, 2007). Meanwhile, babies who experience poor sleep quality will have affected growth and development (Beebe et al., 2008).

Everything when waking up. Babies who sleep well, without waking up often, will feel more refreshed and be less fussy when they wake up. Good sleep quality in babies not only affects their intelligence and brain development but also impacts their mood after waking up (Sadeh, 2007). Meanwhile, babies who experience poor sleep quality can have their growth and development affected (Beebe et al., 2008).

Identification of Sleep Quality After Baby Massage Therapy in Infants Aged 3-6 Months (Post-Test)

Based on the table 4 above, out of 20 respondents, it shows that the infants who received Quranic murottal therapy had good sleep quality, with more than half being 17 respondents (85%) and less than half, which is 3 infants (15%), experiencing sleep quality disturbances after Baby Massage.

Baby massage is part of the way to take care of a baby so they grow and develop optimally. Baby massage is a touch after birth and can provide continuous body contact that helps maintain a comfortable feeling for the baby. Touch therapy, especially massage for babies, can lead to beneficial physiological changes.

The psychological impacts include more unstable emotions, anxiety, lack of concentration, and lower cognitive ability to integrate experiences. Babies who experience sleep disturbances will face similar issues later on, especially during their growth and development (Besedovsky et al., 2012).

Improved sleep quality is also seen in the comfort and stability of the baby's sleep, which gets better after intervention. This is supported by research from Lin et al., showing that baby massage increases comfort and reduces stress. Babies become calmer, wake up less often, and are not fussy when they wake. This shows that the effects of baby massage are holistic. The changes also impact the baby's activity, making them more active and responsive. These findings reinforce that the benefits of baby massage are not just limited to sleep duration (Prasetyono, 2009).

Analysis of the Effect of Baby Massage on Sleep Quality of Babies Aged 3-6 Months

Based on table 5, the statistical test results show that all respondents had sleep quality problems before the intervention, affecting 20 respondents (100%). After the intervention, 17 babies reported that more than half (85%) experienced good sleep, while less than half, which is 3 babies (15%), still had sleep quality problems after receiving baby massage.

Babies' sleep patterns vary a lot, but newborns need more sleep. Every three hours, a baby will wake up to feed. As they get older, their sleep needs gradually decrease. Babies will sleep at night and stay awake during the day. By around six months old, babies will take a short nap in the morning, stay awake during the day, and sleep soundly at night until just before dawn when they wake up to feed. A baby who sleeps for five or six hours but looks refreshed upon waking indicates good sleep quality.

Babies who get enough sleep without waking up often are more energetic and less fussy. That's why it's important to maintain good sleep quality. Babies who experience sleep problems may continue to have similar issues later on, especially during growth periods.

Baby massage should ideally be done by a physiotherapist or midwife who has received training, but parents should also know and practice it so they can give their baby a massage anytime, which helps strengthen the bond between mother and baby.

Baby massage can be started as soon as the baby is born. The sooner the massage begins, the more benefits the baby will get. In fact, massage can be done every day from birth until the baby is around 6–7 months old. The best times to massage a baby are in the morning, when both parents and the baby are ready to start the day, and in the evening, before bedtime. This is really good for

helps babies sleep more soundly and comfortably. (Roesli, 2023)

Based on the conclusions of this study titled 'The Effect of Baby Massage on Sleep Quality of Infants Aged 3-6 Months at Aulia Home, Padang City in 2026,' before receiving Baby Massage therapy, all 20 infant respondents (100%) experienced sleep quality issues. After the intervention, 17 respondents reported that more than half (85%) had good sleep, while less than half, 3 respondents (15%), still experienced poor sleep quality. After undergoing Baby Massage therapy, the statistical test results showed a p-value of $0.001 < 0.05$, which means there is a difference in respondents before and after the intervention. Therefore, H_0 is rejected and H_1 is accepted, concluding that there is an effect of Baby Massage Therapy on the sleep quality of infants aged 3-6 months at Aulia Home, Padang City in 2026.

SUGGESTIONS

For mothers who have babies, it is recommended to massage the baby as often as possible because babies often get tired from activities they do, such as when they can lie on their stomachs, sit, or crawl. This helps ensure the baby gets good quality sleep. For practicing midwives, it is suggested to further improve their skills in providing complementary midwifery care, focusing on preventive services, one of which is Baby Massage Therapy, to help optimize the baby's growth and development.

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