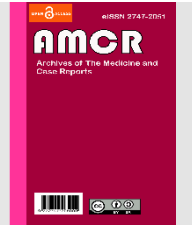




# Archives of The Medicine and Case Reports

Journal Homepage: <https://hmpublisher.com/index.php/AMCR>  
eISSN: 2747-2051



## The Effect of Massage for Babies Aged 3-6 Months on Sleep Duration at Posyandu Melati 3, Jatiluhur District, Purwakarta Regency, Indonesia

Triya Puspitarati<sup>1\*</sup>

<sup>1</sup>Politeknik Bhakti Asih, Purwakarta, Indonesia

### ARTICLE INFO

#### Keywords:

Age 3-6 months  
Baby massage  
Sleep duration

#### \*Corresponding author:

Triya Puspitarati

#### E-mail address:

[triypuspitarati@polbap.ac.id](mailto:triypuspitarati@polbap.ac.id)

The author has reviewed and approved the final version of the manuscript.

<https://doi.org/10.37275/amcr.v4i5.377>

### ABSTRACT

The gentle touch and affection given during massage can create a sense of security and positive connection between parent and baby. Massage can also help relieve physical discomfort your baby may be experiencing, such as bloating or teething. When babies feel better physically, they may sleep better. Baby massage can stimulate the baby's sensory system. This can help their sensory development and provide positive experiences related to touch and body feelings. This study aimed to determine the effect of massage for babies aged 3-6 months on sleep duration at Posyandu Melati 3, Jatiluhur District, Purwakarta Regency, Indonesia. This study is experimental research with a pre-post-test approach with control group and uses primary data, namely measuring the length of sleep of babies aged 3-6 months. A total of 30 research subjects took part in this study. In the intervention group, it was found that the majority of babies slept in the range of 14-16 hours, which is considered a normal duration. Meanwhile, the majority of the control group had a duration of less than 14 hours, which is classified as a short sleep duration. In conclusion, there is an effect of massage for babies aged 3-6 months on sleep duration at Posyandu Melati 3, Jatiluhur District, Purwakarta Regency, Indonesia.

### 1. Introduction

Sleep is very important for the development and health of babies. This is a very important time in a baby's life that has various benefits and plays an important role in their physical, mental, and emotional development. While babies sleep, their bodies focus on physical growth and repair. Important processes such as cell growth, tissue repair, and recovery from daily activities take place during sleep. This is very important in ensuring healthy growth. Sleep plays a big role in the development of a baby's brain. During sleep, the baby's brain works to process information, consolidate memories, and develop cognitive abilities. This is important for the baby's learning and thinking development. Sleep helps in the physical recovery and fitness of the baby. This can help reduce muscle

tension, relieve pain, and restore energy needed for daily activities. Sleep plays a role in regulating the baby's emotions and mood. Babies who sleep well tend to be happier, less fussy and have lower stress levels. It can also help in dealing with emotions and daily challenges. Adequate and quality sleep helps in strengthening the baby's immune system. This can help babies be more resistant to disease and infection. Sleep also helps in establishing an important daily routine for babies. A regular sleep routine helps babies feel secure and structured, which can help them feel comfortable and have a better time when they're awake. Adequate sleep is also important in supporting the baby's social growth. When babies sleep, they have the rest time needed to face the social activities and interactions around them while awake. Good sleep for



babies also provides support for parents. Parents who have babies who sleep well can feel more rested and better prepared to face baby care tasks. It is important to remember that babies' sleep needs vary depending on age and individual. Newborns can sleep up to 16-20 hours a day, while older babies (3-6 months) may need around 14-16 hours of sleep per day.<sup>1-3</sup>

Gentle baby massage can help babies feel more relaxed physically and psychologically. This can reduce tension in the baby's muscles and make him more comfortable. Babies who feel comfortable tend to sleep longer and sleep more soundly. A good massage can help improve the quality of your baby's sleep. Babies may experience deeper sleep phases and more comfortable sleep after receiving massage, which may result in longer sleep. Baby massage can be part of a good sleep routine. When babies get a massage before bed, it can be a signal that it's time to sleep. This helps the baby establish a more regular sleep pattern. When parents give their baby a massage, it is a good time to strengthen the emotional bond between parent and baby. The gentle touch and affection given during massage can create a sense of security and a positive connection between parent and baby. Massage can also help relieve physical discomfort your baby may be experiencing, such as bloating or teething. When babies feel better physically, they may sleep better. Baby massage can stimulate the baby's sensory system. This can help their sensory development and provide positive experiences related to touch and body feeling.<sup>4-6</sup> This study aimed to determine the effect of massage for babies aged 3-6 months on sleep duration at Posyandu Melati 3, Jatiluhur District, Purwakarta Regency, Indonesia.

## 2. Methods

This study is experimental research with a pre-post-test approach with the control group and uses primary data, namely measuring the length of sleep of babies aged 3-6 months. A total of 30 research subjects participated in this study, where the research subjects met the inclusion criteria. The inclusion criteria for this study were babies aged 3-6 months who were born normally in Melati 3, Jatiluhur District, Purwakarta Regency, Indonesia. Research subjects were then grouped into intervention and control groups. Assessment of the baby's sleep duration is done by measuring the length of time the baby sleeps in hours. Sleep duration < 14 hours is classified as short duration sleep, sleep duration 14-16 hours is classified as normal duration sleep, and sleep duration more than 16 hours is classified as long duration sleep. Data analysis was carried out using SPSS version 25 software. Univariate and bivariate analyses were carried out in this study. Univariate analysis was carried out to present the frequency distribution of each test variable, and bivariate analysis was carried out to determine the relationship between the test variables, with a p-value <0.05.

## 3. Results and Discussion

Table 1 presents a comparison of the frequency of breastfeeding duration for babies aged 3-6 months between groups. In the intervention group, it was found that the majority of babies slept in the range of 14-16 hours, which is considered a normal duration. Meanwhile, the majority of the control group had a duration of less than 14 hours, which is classified as a short sleep duration.

Table 1. Comparison of frequency distribution of duration of breastfeeding between groups.

Variable	Intervention group	Control group
	Frequency	Frequency
Short < 14 hours	2	8
Normal 14-16 hours	8	5
Long > 16 hours	5	2
Total	15	15



Baby massage can stimulate the parasympathetic nervous system, which is the part of the autonomic nervous system responsible for the body's response to relaxation and recovery. When the parasympathetic nervous system is active, the body tends to be in a relaxed state, and this can have a positive impact on the baby's sleep duration. Gentle and slow massage can help reduce the level of stress that the baby may be experiencing. Babies often feel stress related to various stimuli or environmental changes, and massage can help relieve this stress. A good massage can help relieve muscle tension and increase the baby's sense of comfort. When babies feel comfortable, they are more likely to sleep longer and sleep more soundly. Gentle massage can help increase blood circulation, which in turn can help in supplying oxygen and nutrients throughout the baby's body. This can help the body function more efficiently, including better sleep processes. Certain massage movements, such as a gentle tummy massage, can stimulate the baby's digestive system. This can help with problems such as bloating and indigestion, which may disrupt your baby's sleep. Apart from the physical benefits, baby massage also provides an opportunity for parents and babies to connect emotionally. This positive interaction can create a strong bond between parent and baby, which also contributes to the baby's sense of comfort and calm.<sup>7-9</sup>

The gentle massage and relaxation provided during a massage session can help the baby enter a deeper phase of sleep. Deeper sleep phases tend to be more beneficial for the baby's physical recovery and brain development. Babies often wake up in the middle of the night because of discomfort or disturbance. Massage that relieves muscle tension or physical discomfort can help reduce the chance of your baby waking up in the middle of the night. When babies wake up in the middle of the night, a gentle massage can help them go back to sleep more quickly. This allows for uninterrupted sleep so that the baby feels fresher when they wake up in the morning. As

mentioned previously, massage can stimulate the parasympathetic nervous system, which produces the body's response to relaxation. This can make the baby feel more calm and peaceful, which is an excellent condition for quality sleep. Massage can also help reduce stress and anxiety that babies may experience, which can disrupt the quality of their sleep. When babies feel calmer, they tend to sleep better.<sup>10-12</sup>

Gentle, caring touch during massage creates positive physical contact between parent and baby. It is a way to communicate parents' love and care for their baby. Massage can help babies feel safe and comfortable. When babies feel safe with their parents, they tend to form trust and healthy relationships more easily. When parents respond gently to their baby's needs during massage, it teaches babies that they can trust their parents to respond well to their needs. This is an important foundation for the development of healthy emotional bonds. Touch during massage stimulates various senses in babies, such as the sense of touch and the feeling of the body. It aids in babies' sensory development and helps them feel more connected to the world around them. Babies tend to respond positively to parental touch and attention. Affectionate massage can increase babies' responsiveness, meaning they are more likely to smile, laugh, and interact with their parents. A massage session is a time specifically dedicated to interacting with the baby. This is a moment that not only provides physical benefits but also provides a feeling of exclusivity and attention that is very valuable.<sup>13-15</sup>

#### **4. Conclusion**

There is an effect of massage for babies aged 3-6 months on sleep duration at Posyandu Melati 3, Jatiluhur District, Purwakarta Regency, Indonesia.

#### **5. References**

1. Field T, Diego M, Hernandez-Reif M. Preterm infant massage therapy research: A review. *Infant Behavior and Development*. 2010; 33(2):



- 115-24.
2. Ferber SG, Laudon M, Kuint J, Weller A, Zisapel N. Massage therapy improves behavior in neonates born to HIV-positive mothers. *Infant Behavior and Development*. 2002; 25(1): 25-9.
  3. Onozawa K, Glover V, Adams D, Modi N, Kumar RC. Infant massage improves mother–infant interaction for mothers with postnatal depression. *Journal of Affective Disorders*. 2001; 63(1-3): 201-7.
  4. Shoemark H, Hanson-Abromeit D. The effects of massage on sleep quality in infants: A systematic review. *Infant Mental Health Journal*. 2020; 41(1): 63-75.
  5. Wang LL, Chen CM, Huang YC. Effects of infant massage on jaundiced neonates undergoing phototherapy. *Journal of Nursing Research*. 2015; 23(4): 289-96.
  6. White-Traut RC, Schwartz D, McFarlin B, Kogan JN, Lahman MK. Light-enhanced massage therapy for preterm infants: A randomized controlled trial. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*. 2009; 38(3): 223-9.
  7. Sankaranarayanan K, Mondkar JA, Chauhan MM, Mascarenhas BM, Mainkar AR, Salvi RY. Oil massage in neonates: An open randomized controlled study of coconut versus mineral oil. *Indian Pediatrics*. 2005; 42(9): 877-84.
  8. Kim YS, Seo YJ. Effects of infant massage on sleep quality of newborns. *Journal of Korean Academy of Nursing*. 2019; 49(5): 536-45.
  9. Liu SH, Chang YH. The effects of infant massage on weight, height, and sleep patterns among neonates. *Asian Nursing Research*. 2018; 12(2): 105-9.
  10. Field T, Diego M, Hernandez-Reif M, Dieter JNA, Kumar AM, Schanberg S, et al. Insulin and insulin-like growth factor-1 increased in preterm neonates following massage therapy. *Journal of Developmental & Behavioral Pediatrics*. 2008; 29(6): 463-6.
  11. Ferber SG, Kuint J, Weller A, Feldman R, Dollberg S, Arbel E, et al. Massage therapy by mothers and trained professionals enhances weight gain in preterm infants. *Early Human Development*. 2002; 67(1-2): 37-45.
  12. Kulkarni A, Kaushik JS, Gupta P, Sharma H, Agrawal RK, Bansal A. Massage and touch therapy in neonates: the current evidence. *Indian Pediatrics*, 47(9), 771-776.
  13. Van Puyvelde, M., & Gorissen, A. S. (2019). The efficacy of infant massage in promoting weight gain, improved sleep, and quality of life in low birth weight infants. *The Journal of Perinatal & Neonatal Nursing*. 2010; 33(2): 115-22.
  14. Moyer-Mileur LJ, Haley S, Slater H, Beachy J. Massage improves growth quality by decreasing body fat deposition in male preterm infants. *The Journal of Pediatrics*. 1998; 132(3): 550-4.
  15. Ang JY, Lua JL, Mathur A, Thomas R, Asmar BI, Savasan S, et al. A randomized placebo-controlled trial of massage therapy on the immune system of preterm infants. *Pediatrics*. 2012; 130(6): e1549-e58.

