

The Effect Of Baby Massage On Sleep Quality Of Babies Aged 3-6 Months In Posyandu In Rancabango Village, In The Working Area Of Cipanas Public Health Center, Garut

Cholisah Suralaga¹, Risza Choirunissa², Eneng Cahyawati³

^{1,2,3}Faculty of Health Science. Universitas Nasional Jakarta

Abstract

Background: Infancy is a golden period in infant growth and development, so it needs special attention. One of the factors that can affect a baby's development is sleep and rest. The stimulation given to babies can be through massage, which is the art of health care that can be done alone in a family environment. Gentle massage will help relax the muscles so that the baby is calm and sleeps soundly. Based on the preliminary study of the Cipanas Health Center, it was found that the number of babies who experienced sleep disorders was 31 babies or about 73.8% of the 42 babies.

Objective: To determine the effect of baby massage on sleep quality among infants aged 36 months in Rancabango Village Posyandu, Cipanas Health Center, Garut Regency.

Methodology: This study used a quasi-experimental study with a pretest-posttest one-group design. The population in this study was infants aged 3-6 months, with as many as 42 respondents. The sampling technique used total sampling. The instrument used is a questionnaire that has been tested for validity and reliability. Data analysis used the Wilcoxon test.

Results: The average quality of sleep for babies before being given baby massage was 66.21%, and the average rate of rest for babies after being given baby massage was 78.81%. The bivariate results showed a p-value of 0.000 < 0.05, meaning that infant massage affected the quality of baby sleep.

Conclusion: There was an effect of baby massage on the quality of sleep for infants aged 3-6 months.

Suggestion: It is hoped that health workers can develop promotion and education about baby massage to the community, especially parents, to improve the quality of baby sleep.

Keywords: Baby Massage, Sleep Quality

INTRODUCTION

Infancy is a golden period in the growth and development of babies, so it needs special attention (Farida, 2016). According to Vina (2010), one of the factors that can affect a baby's growth and development is sleep and rest (Herliyanti, 2020). Sleep is a physiological state in which common resting conditions are characterized by reduced body activity and decreased awareness of the surroundings (Widodo & Soetomenggolo, 2016). The movement of regenerating body cells and developing the brain reaches its peak when babies and toddlers are sleeping (Wong & Indraningsih, 2011). Babies' sleep patterns vary. However, newborn babies need much sleep. Every 3 hours, they will wake up to drink. According to Gelania (2014), a baby's growth and development can optimally achieve good sleep quality (HUTASUHUT, 2019). In Melbourne, Australia, Hiscock (2012) research reveals that 32% of mothers reported having repeated sleep problems in their babies. This research illustrates that there are still many sleep problems experienced by babies, which can persist or recur (Sinaga, 2020). In Indonesia, many babies have sleep problems. Namely, about 44.2% of babies have sleep disorders. According to Sekartini (2010), with 285 babies as research subjects (respondents), it is found that 51.3% of them have sleep disturbances. Furthermore, 42% of babies sleep less than 9 hours at night (Rangkuti, 2021), and at night, babies wake up more than three times with a wake-up time of more than one hour. Getting babies used to having enough sleep with a regular pattern can help babies achieve optimal growth and development (Permata, 2017).

One of the stimulations given to a baby can be done through massage, which can be performed individually in a family environment and is cheap, comfortable, and safe (Permata, 2017). 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 (Beauty, 2015). According to Roesli (2013), a soft touch for babies is a beautiful bond between babies and their parents (Nurmalasari & Nahariani, 2017).

RESEARCH METHODS

The research method used was Quasi-Experimental with one group pre-test – post-test design. The population of this study was all babies aged 3-6 months at the Integrated Health Center (Posyandu) in Rancabango Village, Tarogong Kaler Sub-district, Garut, with a total of 42 respondents in December 2020. The sampling technique used was total sampling.

RESULTS AND DISCUSSION

1.1 Frequency Distribution of Respondents Based on Sleep Quality before Massage

Sleep Quality	f	%
Poor (<70%)	21	50.0
Good (≥70%)	21	50.0
Total	42	100

The table above shows that (50%) respondents experienced poor sleep quality and (50%) respondents experienced good sleep quality.

1.2 Frequency Distribution of Respondents Based on Sleep Quality after Massage

Sleep Quality	f	%
Poor (<70%)	7	16.7
Good (≥70%)	35	83.3
Total	42	100

The table above shows that (16.7%) respondents experienced poor sleep quality, and (83.3%) respondents experienced good sleep quality.

1.3 Differences in Sleep Quality Scores Before and After Baby Massage

	mean	Std. Dev	p	N
Pre-Test	66.21	13.013	0.000	42
Post-Test	78.81	14.696		

Based on the table above, it is shown that the pre-test results have an average value of 66.21, meaning that respondents, on average, experienced poor sleep quality before being given a baby massage with a standard deviation of 13.013. Meanwhile, the post-test results have an average value of 78.81, meaning that respondents, on average, experienced good sleep quality after being given a baby massage with a standard deviation of 14.696. Thus, it can be concluded that baby massage affects the sleep quality of babies aged 3-6 months.

1.4 Sleep Quality of Babies Aged 3-6 Months before Baby Massage

Babies have sleep disorders if they sleep less than 9 hours at night, wake up more than three times with a wake-up time of more than 1 hour. Furthermore, they also seem fussy, crying, and having difficulty falling asleep (Nudest, 2020). The 3-6 months age is an excellent time to adjust sleep patterns considering that baby sleep will regularly decrease every month. It follows Dewi's (2010) argument that babies in the 3rd and 4th months are easy to regulate their drinking and sleeping schedules, while after six months, the subtle touch techniques used should be different (Putri, Wahyuni, & Maswan, 2021).

The results of research by Munlidian Sari (2017) entitled 'the effect of baby massage on the sleep quality of babies aged 3-6 months' show that the sleep quality of babies aged 3-6 months before being given a baby massage of most of the respondents was sufficient, with as many as 17 respondents (53.1%) (Sari, 2017).

The quality of a baby's sleep affects their physical development and attitude the next day. Researchers argue that the poor sleep quality in babies can lower their immune system, make them cry

easily and fussy also interfere with their growth and development. Given the importance of sleep for a baby's growth and development, the need for quality sleep must be met entirely, not adversely affecting their growth and development.

1.5 Sleep Quality for Babies Aged 3-6 Months after Baby Massage

Sleep plays an essential role in increasing babies' resistance to infection. If the rest is disturbed, the effectiveness of babies' immune systems can decrease, so they are easily aroused and become restless.

Sleep quality is a certain quality or physiological state—obtained during a person's sleep—which restores body processes that occur when the person wakes up. If the sleep quality is good, it means the physiology, in this case, the brain cells—for example, recover as before when they wake up (Susanti&Hety, 2020).

Researchers at the Carnegie Mellon University of Pennsylvania reveal that sleep quantity and quality affect people's becoming sick. (Cohen, Tyrrell, & Smith, 1993). The characteristics of a baby who gets enough sleep are that the baby will fall asleep easily at night, be fit when they wake up, not be fussy, and not need a nap that exceeds their needs according to their development. Baby's sleep quality and quantity affect physical growth and emotional development (Stellata, Yulihartini, Sari, LusiAndriani, &Heryati, 1707), (Kalsum, 2021). Babies whose muscles are stimulated by massage will feel comfortable, sleepy. They seem to be sleeping soundly and not fussy, which indicates that they feel calm after the massage. When a baby sleeps (gets enough quality sleep), they will be fit when they wake up. It becomes a factor that supports concentration and brain work (Khasanah, Maryatun, &Imamah, 2020).

According to Roesli (2013), a baby massage is a massage that is performed through the smooth strokes on the surface of the skin—it is the manipulation of tissues or organs of the body which aims to produce an effect on the nerves, muscles, and respiratory system—and to facilitate blood circulation (Wulan&Marfu'ah, 2021).

A baby massage is done 15-30 minutes using oil, and it will make the baby sleep more soundly and increase alertness. It is because massage can change brain waves. This change occurs by decreasing alpha waves and increasing beta and theta waves, which can be proven by the use of EEG (electroencephalogram) (Roesli, 2013) (Rohmawati, 2018).

According to researchers, a baby's health status is considered good if it shows a healthy baby with good sleep quality. Besides, babies with good sleep quality after being given a baby massage will sleep soundly and not get sick quickly—and when they wake up in the morning, they will show fit and cheerful conditions.

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

A baby massage is the oldest and the most popular touch therapy known to humans. Babies who are massaged for approximately 15 minutes will feel more relaxed and sleep more soundly—besides, their growth and development are also getting better(Widyastuti, 2021).

This research is in line with the study conducted by Shofa (2017)at the Health Polyclinic inPurworejo Village, Bonang DemakSub-district that based on the analysis of the effect of baby massage on baby's sleep quality using the Wilcoxon test, the test results obtained p-value of 0.000(Shofa & Widyarto, 2017).

Furthermore, this research is also supported by several previous research, namely research by Matalia (2016) that there is an effect of baby massage on the sleep quality of babies aged 3-6 months in the working area of East Denpasar Public Health Center II (Sinaga, 2020). Next, Pangestika (2016) research results also show an increase in sleep patterns in the intervention group, which was greater than in the control group ($x = 53$ minutes, $SD = 7.26$ versus $x = 27$ minutes $SD = 9.24$).

It follows Roesli's (2013) argument that massage can increase serotonin levels, producing melatonin that plays a role in sleep and makes sleeping more prolonged and more profound at night. Serotonin will also increase the capacity of receptor cells that function to bind glucocorticoids (adrenaline, a stress hormone). This process causes a decrease in adrenaline hormone levels (stress hormone) so that babies who are given massage treatment will be calmer and less fussy. Massage also increases the mechanism of food absorption by the Vagus nerve so that the baby's appetite also increases (Krisnanto & Natalia, 2019).

According to researchers, a baby massage is excellent and essential to do considering the importance of sleep time for a baby's growth and development; thus, quality sleep must be met entirely without adversely affecting their growth and development.

CONCLUSION

Twenty-one respondents (50%) experienced poor sleep quality, 35 respondents (83.3%) experienced good quality after a baby massage. Furthermore, a baby massage affects the sleep quality of babies aged 3-6 months in the Integrated Health Center (Posyandu) in Rancabango village, in the working area of Cipanas Public Health Center, Garut 2021, with a p-value of 0.000.

REFERENCE

- Beauty, W. P. (2015). Hubungan Frekuensi Pijat Bayi Dengan Kualitas Tidur Bayi Umur 6-12 Bulan Di Desa Pringsurat Kecamatan Pringsurat Kabupaten Temanggung. *JURNAL GIZI DAN KESEHATAN*, 7(14), 153-160.
- Cohen, S., Tyrrell, D. A., & Smith, A. P. (1993). Adverse life events, perceived stress, negative affect, and susceptibility to the common cold: *Journal of personality and social psychology*, 64(1), 131.
- Farida, A. (2016). Urgensi perkembangan motorik kasar pada perkembangan anak usia dini. *Jurnal Raudhah*, 4(2).
- Herliyanti, P. (2020). PENGARUH PIJAT BAYI TERHADAP KUALITAS TIDUR PADA BAYI USIA 0-6 BULAN. Poltekkes Kemenkes Kendari.
- HUTASUHUT, A. S. (2019). PENGARUH PIJAT BAYI TERHADAP PERTUMBUHAN (BERAT BADAN) BAYI USIA 1-3 BULAN DI WILAYAH KERJA PUSKESMAS PEMATANG PASIR KOTA TANJUNG BALAI TAHUN 2018.
- Kalsum, U. (2021). PENGARUH KOMBINASI PIJAT BAYI DAN ESENSIAL OIL LAVENDER TERHADAP KUALITAS TIDUR BAYI 6-12 BULAN DI PUSTU TONAAN BURNEH BANGKALAN. Stikes Ngudia Husada Madura.

- Khasanah, M. S., Maryatun, M., & Imamah, I. N. (2020). PENGARUH PEMBERIAN PIJAT BAYI TERHADAP KUALITAS TIDUR DAN FREKUENSI MENYUSU PADA BAYI USIA 3-6 BULAN DI WILAYAH KERJA PUSKESMAS GAMBIRSARI. UNIVERSITAS AIYSIYAH SURAKARTA.
- Krisnanto, P. D., & Natalia, L. (2019). The Effectiveness Of Baby Swimming And Baby Massage In Improving Baby Weight. Paper presented at the Proceeding International Conference.
- Nurmalasari, D. I., & Nahariani, P. (2017). PENGARUH PIJAT BAYI DENGAN KUALITAS TIDUR BAYI USIA 3-6 BULAN DI DESA BANDUNG KECAMATAN DIWEK KABUPATEN JOMBANG: The Effect Of Baby's Massage With The Sleep Quality Of Baby As Old As E 3-6 Months At Bandung Village, Diwek Sub District, In Jombang District Year 2016. *Jurnal Ilmiah Kebidanan (Scientific Journal of Midwifery)*, 3(1), 77-83.
- Permata, A. (2017). Pengaruh Pijat Bayi Terhadap Peningkatan Lama Tidur Malam Pada Bayi 3-6 Bulan. *Jurnal Kesehatan Al-Irsyad*, 37-45.
- Putri, D. J., Wahyuni, I. G. A. P. S., & Maswan, M. (2021). Pengaruh Buku Saku Pijat Bayi Terhadap Keterampilan Ibu Dan Kualitas Tidur Bayi Umur 3-6 Bulan. *Jurnal Midwifery Update (MU)*, 3(2).
- Rangkuti, S. (2021). Pengaruh Pendidikan Kesehatan Pijat Bayi terhadap Kualitas Tidur Bayi Usia 0-6 Bulan di BPM Dewi Suyanti Tahun 2020. *Jurnal Kesehatan Masyarakat (JURKESMAS)*, 1(1), 34-42.
- Rohmawati, F. (2018). PENGARUH BABY MASSAGE TERHADAP KUALITAS TIDUR BAYI USIA 3-12 BULAN Di Ponkesdes Desa Grogol, Kecamatan Diwek, Kabupaten Jombang. STIKES Insan Cendekia Medika Jombang.
- Sari, D. M. (2017). PENGARUH BABY MASSAGE TERHADAP KUALITAS TIDUR BAYI USIA 3-6 BULAN (Di BPM Ny. Farochah SST, Kecamatan Jombang, Kabupaten Jombang). STIKES Insan Cendekia Medika Jombang.
- Shofa, M. J., & Widarto, W. O. (2017). Effective production control in the automotive industry: MRP vs. demand-driven MRP. Paper presented at the AIP Conference Proceedings.
- Sinaga, A. (2020). Pengaruh Pijat Bayi terhadap Kualitas Tidur Bayi Usia 0-6 Bulan di BPM Pera Kecamatan Medan Tuntungan Tahun 2019. *Excellent Midwifery Journal*, 3(1), 27-31.
- Stellata, A. G., Yulihartini, D., Sari, I. P., Lusi Andriani, S., & Heryati, K. (1707). THE EFFECTIVENESS OF SWEETBAE TO INFLUENCE THE QUANTITY OF BABY SLEEP. *PROCEEDING BOOK*, 8(1074), 6.
- Susanti, I. Y., & Hety, D. S. (2020). Pemenuhan Gizi dengan Kualitas Tidur pada Bayi Usia 6-9 Bulan di Puskesmas Bangsal Kabupaten Mojokerto. *Journal for Quality in Women's Health*, 3(2), 153-158.
- Widodo, D. P., & Soetomenggolo, T. S. (2016). Perkembangan normal tidur pada anak dan kelainannya. *Sari Pediatri*, 2(3), 139-145.
- Widyastuti, N. R. (2021). GAMBARAN KUALITAS TIDUR BAYI SETELAH DILAKUKAN PIJAT BAYI USIA 0-12 BULAN DI PUSKESMAS JAYAPURA UTARA. *Healthy Papua-Jurnal keperawatan dan Kesehatan*, 4(2), 233-237.
- Wong, M. F., & Indraningsih, E. (2011). Smart Puntur: Penebar PLUS+.
- Wulan, R., & Marfu'ah, S. (2021). Pengaruh Komunikasi Terapeutik Bidan dalam Melakukan Pijat Bayi terhadap Kepuasan Keluarga Pasien. *Jurnal Ilmiah Permas: Jurnal Ilmiah STIKES Kendal*, 11(3), 517-522.