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The relationship between baby massage and baby sleep quality at the Sion Clinic

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ABSTRACT

The aim of this research is to see the relationship between oil massage performed on babies and their sleep quality. The type of research carried out was quasi-experimental with a pretest posttest one group design approach. Research was proposed to determine the relationship between baby massage and the quality of baby sleep. The population in this study was all babies aged 0-6 months who received massage for 2 weeks. The sample used used a total sampling technique so that the number of respondents used was the same as the population, namely 30 samples. The research results obtained an average pre-test score or mean of 1.40, while for the post-test score the average sleep quality score was 2.57. Because the average sleep quality score on the pre-test is < that of the post-test, this means there is a difference in the average sleep quality of the pre-test and post-test. The table above shows that the significant number (0.000) is much lower than the significant standard of 0.05, meaning there is an influence of massage on the sleep quality of babies aged 1-6 months.

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1. Introduction

Sleep is one of the basic human needs, both for physical needs and mental needs. During sleep, the process of repairing the body's organs occurs (Azfar et al., 2020; Foster, 2020; Min et al., 2021). Babies who are only 2 months old generally need 14-18 hours of sleep every day. Babies sleep as a sort of adaptation to their surroundings. Babies often sleep for 16-20 hours every day shortly after birth. Infants start falling asleep more at nighttime than during the day when they reach the age of two months. Until the age of three months, newborn newborns would sleep 15-17 hours each day, with 8 hours for naps and 9 hours for night sleep. Sleeping hours decrease as the infant grows older. The amount of naps drops by roughly three times between the ages of three and six months (Bubu et al., 2020; Jiang, 2020). The total amount of sleep time for babies aged zero to six months ranges from 13-15 hours/day. In another review, six month old babies' sleep patterns began to appear similar to those of adults. About half of a baby's sleep time is spent in the light sleep stage. During light sleep, babies do most of the activity, such as moving, grunting and coughing. Many babies start waking up again in the middle of the night between the ages of 5 and 9 months, (Tim Promkes RSST - RSUP dr. Soeradji Tirtonegoro Klaten, 2023). Environmental variables, sickness, medicine, weariness, stress, and diet all have an impact on sleep quality

(K. K. P. Chang et al., 2020; Mnatzaganian et al., 2020; Nelson et al., 2022). The quality of a newborn's sleep influences his or her growth since a well-rested infant grows into a well-developed youngster. Babies that are generally busy and developing have plenty of time to sleep, (Tim Promkes RSST - RSUP dr. Soeradji Tirtonegoro Klaten, 2023).

According to World Health Organization (WHO) data released by the journal Pediatrics in 2012, over 33% of newborns suffered sleep issues. The government's efforts to combat sleep disorders are outlined in the Rules of the Minister of Health of the Republic of Indonesia No. 8 of 2014 concerning spayang health services, in which health services are delivered comprehensively through the integration of various types of traditional and modern health care through the use of water, massage, potions, aromas, and exercises. physical, color, music, and cuisine to deliver therapeutic benefits via the five senses in order to promote harmony between body, mind, and spirit, hence creating ideal health conditions (Knoop & Dillon, 1996; Ost & Hons, 2023; Rasweswe et al., 2021).

The results of the research concluded that the more often a baby is given a gentle massage in accordance with established procedures, it will make the baby sleep soundly and with quality in every sleep, and also when awake at night he will wake up for no more than 1 hour, and the baby will can continue to sleep comfortably without being fussy, the duration and length of massage is 30 minutes for each massage, 3 to 4 times a month. The frequency of baby massage has a significant effect on the sleep quality of children aged 3 to 6 months (Masrifah & Wieminatry, 2023; Rahayu, 2022; Setiawati et al., 2022).

There are several ways to overcome poor sleep quality in babies, one of which is by massaging the baby because baby massage makes the baby's body more relaxed and comfortable so that the baby will fall asleep more easily after a baby massage. Previous research says that babies who have previously had a massage can improve their sleep quality. Babies who sleep enough without waking up frequently will be fitter and less fussy the next day so the baby grows up to be healthy (Agustina et al., 2022; Prananingrum et al., 2017; Sulfianti et al., 2022).

2. Methods

The study was quasi-experimental in nature, utilizing a pretest-posttest one-group design method (S. J. Chang et al., 2022; Kurki et al., 2021; Romano et al., 2023). This study was conducted in a clinic. In this study, a questionnaire is used to gather data. The independent variable in this study is baby massage, while the dependent variable is sleep quality. A study was planned to examine the association between infant massage and baby sleep quality. This research included all babies aged 0-6 months who underwent massage for two weeks. The sample was drawn using a total sampling approach, with the same number of respondents as the population, namely 30 samples. The Sion Clinics in 2023 served as the site and time for the research. Filling out questionnaires (before and after test) was used to collect data. Parents of infants aged 0-6 months who got baby massage were given questionnaires. Respondents who satisfy the inclusion criteria will be given an informed consent form to complete, after which the infant will be massaged by the researcher using approved standard operating procedures (SOP). For two weeks, baby massage is performed.

3. Results and Discussion

Tabel 1.
Frequency Distribution of Respondent Characteristics

Characteristics	Frequency (n)	Percentage (%)
Gender		
Male	17	56,7
Female	13	43,3
Work		
Private Employees	2	6,7
Government Employees	4	13,3
Housewife	24	80
Education		

SMP	2	6,7
SMA	24	80
College	4	13,3

Based on the table above, it shows the results of the data based on the gender of the baby, 17 respondents or 56.7% of the baby was male. Meanwhile, 13 respondents or 43.3% of the babies were female. Meanwhile, information was obtained that the education of the baby's mother was 2 respondents or 6.7% of the respondents had a junior high school education. Respondents with a minimum of junior high school education were 2 respondents or 6.7%. Respondents with a high school education were 24 respondents or 80% and 4 respondents or 13.3% had tertiary education. The occupation of the mothers of the respondents who worked as private employees was 2 respondents or 6.7%. Respondents who worked as housewives were 24 respondents or 80%.

Table 2.
Sleep quality of babies aged 0-6 months before and after baby massage

Category	Before doing a baby massage		After the baby massage	
	N	%	N	%
Good	2	6,6	17	56,7
Enough	8	26,7	13	43,3
Not enough	20	66,7	0	0
Total	30	100	30	100

According to table 2, the sleep quality of newborns aged 1-6 months before to baby massage was bad for two respondents (6.7%), sufficient for eight respondents (26.7%), and acceptable for three respondents (6.7%). Table 2 demonstrates that the sleep quality of newborns aged 1-6 months following baby massage was adequate, with 13 respondents (43.3%) reporting adequate sleep quality and 17 respondents (56.7%) reporting good sleep quality.

Table 3.
Baby Sleep Quality

Sleep Quality	P-value
Pre-test Post-test	0,000

According to the table previously, the median score for the pre-test or mean was 1.40, whereas the average score for sleep quality for the post-test was 2.57. Because the median sleep quality score on the pre-test is lower than the post-test, there is a difference in the pre-test and post-test average sleep quality. The table above reveals that a significant number (0.000) is significantly lower than the significance level of 0.05, indicating that massage has an effect on the sleep quality of newborns aged 1-6 months.

Discussion

In this study, the test results above showed that there was an increase in the quality of sleep in babies who had been given baby massage. This was supported by the median result before the massage, a 1.40 for 30 babies who had baby massage, but the median outcomes were reached after the treatment. Specifically, 2.57. Before the infant massage, two respondents (6.7%) reported bad sleep quality, eight respondents (26.7%) reported sufficient sleep quality, and three respondents (6.7%) reported good sleep quality. Table 2 demonstrates that the sleep quality of newborns aged 1-6 months following baby massage was adequate, with 13 respondents (43.3%) reporting adequate sleep quality and 17 respondents (56.7%) reporting good sleep quality.

The p-value in this study was 0.000, indicating that there is a link between infant massage and sleep quality. The findings of this study are consistent with those of Asnita Sinaga et al. Before the massage, the babies were fussy, had trouble sleeping, frequently woke up at night, and the average sleep quality

of the respondents was 11 hours/day. After the massage, there were significant differences in that the baby becomes relaxed, fit when he wakes up and is not fussy, overcomes stomach aches, and there is an affectionate bond between the mother and baby, and the average sleep quality increased from 11 hours/day to 15 hours. With the results of the paired T-test p=0.000, it is smaller than p=0.05, where there is an influence between baby massage on the sleep quality of babies aged 0-6 months, (Sinaga et al., 2022).

The baby's gentle massage touch helps reduce the child's muscle tension to create a feeling of comfort and relaxation. Apart from that, a longer sleep time triggers the release of oxytocin and endorphins when massaging the baby. Endorphins are hormones to relieve pain and eliminate discomfort, while the hormone Oxytocin reduces stress in the brain so that the baby becomes calm and the comfort and quality of sleep increases, (Handayani et al., 2015). Baby massage can raise serotonin levels, which results in the production of melatonin, which impacts sleep and leads to longer and more peaceful sleep at night. Serotonin also improves the ability of receptor cells to bind steroids (the hormone adrenaline, an anxiety hormone). This technique induces a drop in adrenalin hormone (stress hormone) levels, making newborns who receive massage look calmer and less irritable, (Roesli, 2013).

4. Conclusion

The median result for the pre-test or mean in this study was 1.40, whereas the average score for the post-test score for sleep quality was 2.57. Because the median sleep quality score on the pre-test is lower than the post-test, there is a difference in the pre-test and post-test average sleep quality. The table above reveals that a significant number (0.000) is significantly lower than the significance level of 0.05, indicating that massage has an effect on the sleep quality of newborns aged 1-6 months.

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