



THE EFFECT OF THE COMBINATION OF BABY MASSAGE AND BACH'S CLASSICAL MUSIC ON THE QUALITY OF BABY'S SLEEP AND SPEECH DEVELOPMENT IN BABIES AGED 6-10 MONTHS IN MOTHER'S SCHOOL

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ABSTRACT

Infancy is a golden period for a child's growth and development so it needs special attention. One of the factors that influences a baby's growth and development is sleep and rest. Sleep is a form of adaptation for babies to their environment. Sleep is the main priority for babies, because this is when neuro-brain repair occurs and approximately 75% of the growth hormone is produced by the baby into its environment. The aim is to determine the effect of the combination of baby massage and Bach's classical music on the quality of baby's sleep and speech development in babies aged 6- 10 Months at Mother's School. The research method used was quasi-experimental with one group pre-test-posttest design. The population in this study was all babies aged 6- 10 months of 30 people using a total sample of 30 babies. Data is collected using questionnaires and data analysis is done with univariate and bivariate analysis. Analysis results based on pairs of samples showed a p value of 0.037

Keywords: baby massage; bach classical music; baby sleep quality

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INTRODUCTION

Based on 2019 WHO (World Health Organization) data in the journal *Pediatrics*, it was recorded that around 40% of babies experience sleep problems. Research conducted by Hiscock in Melbourne, Australia, found that 32% of mothers reported repeated occurrences of sleep problems in their babies (Dewi, 2020). In Indonesia, quite a lot of babies experience sleep problems, namely around 44.2% of babies experience sleep disorders such as frequently waking up at night. Baby massage has long been practiced almost throughout the world, including in Indonesia and has been passed down from generation to generation (Prasetyono, 2021). Baby massage is very important in the growth and development of children, because children's brain growth is very rapid so it requires special attention. Baby massage also stimulates the release of endorphins which can reduce pain so that the baby becomes calm and reduces the frequency of crying. Thus, baby massage also improves the quality and quantity of sleep (Prasetyono, 2021).

According to research by Dewi et al (2020) entitled *The Effect of Baby Massage on the Sleep Quality of Babies Aged 6-12 Months at Roemah Mini Baby Kids and Mom Care Siak*, the results showed that the sleep quality of babies aged 6-12 months was found after the massage to be done at night. more than 9 hours and wakes up less than 3 times a night, wakes up less

than 1 hour when he wakes up looking fresh. Based on the initial survey conducted at Emak's School in the last two months, there were 30 babies aged 6-10 months. Starting in November, based on a survey of 10 babies, it was discovered that 7 babies aged 6-10 months experienced sleep disorders in babies and speech development in babies. Meanwhile, 3 babies aged 6-10 months did not experience sleep disorder. The purpose of this research is to find out the impact of a combination of baby massage and Bach classical music on baby sleeping and speech development in babies aged 6 to 10 months at maternity school.

METHOD

This type of research uses experimental research, The research method used was quasi-experimental with one group pre-test-posttest design. The population in this study was all babies aged 6-10 months of 30 people using a total sample of 30 babies. . Retrieval techniques use editing, coding, data entry, tabulating and analyzing techniques.. Data is collected using questionnaires and data analysis is done with univariate and bivariate analysis.

RESULTS

Table 1.

Frequency Distribution of Sleep Quality and Speech Development Before the Combination of Baby Massage and Bach Classical Music in Babies Aged 6-10 Months at Mother's School.

Characteristics	f	%
Sleep Quality:		
Good	4	13,3
Enough	17	56,7
Not enough	9	30
Total	30	100
Speech Development:		
Good	6	20
Enough	14	46
Not enough	10	33,3
Total	30	100

Table 1 above, it can be explained that the results of research on the sleep quality of babies before massage and classical Bach music showed that the majority had adequate sleep quality, 17 people (56.7%) and the minority had good sleep quality, 4 people (13.3%). Based on speech development, 14 people (46.7%) found a fair majority and 6 people (20%) had a good minority.

Table 2.

Frequency Distribution of Sleep Quality and Speech Development After a Combination of Baby Massage and Bach Classical Music in Babies Aged 6-10 Months at Mother's School.

Karakteristik	f	%
Sleep Quality:		
Good	11	36,7
Enough	15	50
Not enough	4	13,3
Speech Development:		
Good	18	60
Enough	9	30
Not enough	3	10

Table 2 above, it can be explained that the results of research on the quality of baby sleep after massage and classical Bach music showed that the majority had sufficient sleep quality, 15 people (50%) and the minority had poor sleep quality, 4 people (13.3%). Based on speech development, it was found that a good majority was 18 people (60%) and a poor minority was 3 people (10%).

Table 3.
Normality Test of the Effect of Combining Baby Massage and Bach's Classical Music on Baby Sleep Quality and Speech Development in Babies Aged 6-10 Months at Mother's School.

		Sleep Quality	Speech development
N		30	30
Normal Parameters a,b	Mean	,0000000	,0000000
	Std. Deviation	1,02395208	1,07057985
MostExtreme Differences	Absolute	,147	,135
	Positive	,147	,135
	Negative	-,089	-,116
Test Statistic		,147	,135
Asymp.Sig.(2-tailed)		,097 ^c	,168 ^c

Table 3. SPSS output, it is known that the significant Asymp Sig (2-tailed) value for sleep quality is $0.097 > 0.05$ and speech development $0.168 > 0.05$. So in accordance with the basis for decision making in the Kolmogorov - Smirnov normality test above, it can be concluded that the data is normally distributed. Thus, the normality requirements in the regression model have been fulfilled.

Table 4.
Effect of the combination of baby massage and classical Bach music on sleep quality and speech development in babies aged 6-10 months at mother's school.

Variabel	Mean	SD	SE	N	P Value
Pret sleep quality- Post Sleep quality	1,400	1,003	0,183	30	0,037
Pret Speech development- PostDevelopment talk	1,633	0,850	0,155	30	0,000

Based on table 3.4 above, the pre-test and post-test sleep quality means 1.400, the standard deviation is 1.003, the standard error is 0.183, with a p value of 0.037, while the pre-test and post-test speech development means 1.633, the standard error is 0.850, the standard error is 0.155 with a p value of 0.000. . The results of the analysis based on the Paried Samples Test showed a p value of $0.037 < \alpha (0.05)$, so that there was an influence of baby massage and classical Bach music on sleep quality and speech development in babies aged 6-10 months.

DISCUSSION

Quality of baby sleep and speech development of babies aged 6-10 months before combining baby massage with classical Bach music

Based on research on the sleep quality of babies before massage and classical Bach music, it was found that the majority had adequate sleep quality, 17 people (56.7%) and the minority had good sleep quality, 4 people (13.3%). Based on speech development, 14 people (46.7%) found a fair majority and 6 people (20%) had a good minority. The results of this research are

in line with Pratiwi's (2021) research: The quality of baby sleep before massage was 31.4% poor and 60.0% sufficient quality out of 35 respondents (Pratiwi 2021). Meanwhile, according to research by Dewi et al (2020), the quality of baby's sleep before massage is 50% poor quality and 40% adequate quality (Dewi et al 2020). According to research by Widiani et al (2019), speech development in the experimental group had an average value of 49.06%, while in the control group it was 48.41% (Widiani et al, 2019). This research is in line with researcher Ningsetiowati (2018). Speech development in children in the experimental group had a score of less than 0% and a sufficient score of 60%, while in the control group it had a score of less than 0% and enough 80% with a total of 5 respondents (Ningsetiowati 2018).

Quality of baby sleep and speech development in babies aged 6-10 months after a combination of baby massage with classical Bach music Based on research on the quality after massage and classical Bach music, it was found that the majority had adequate sleep quality, 15 people (50%) and the minority had poor sleep quality, 4 people (13.3%). Based on speech development, it was found that a good majority was 18 people (60%) and a poor minority was 3 people (10%). The results of this research are in line with Pratiwi's (2021) research: The quality of baby sleep after massage was found to be good sleep quality of 57.1% and 37.1% of 35 respondents (Pratiwi 2021). Meanwhile, according to research by Dewi et al (2020), the quality of baby's sleep after massage was good quality as much as 100% of the 30 respondents (Dewi et al 2020). According to the researchers, the importance of sleep time as the development of the baby grows, then the amount of sleep in the baby must be met so as not to adversely affect its development. One way to meet these needs is with a combination of baby massage and Bach classical music. Babies who are massaged will be able to sleep well, while at waking up, their concentration will be more full, and babies given classical Bach music will improve the baby's speech development in good categories.

The effect of a combination of baby massage and classical Bach music on sleep quality and speech development in babies aged 6-10 months at Emak School.

The results of the research on the effect of a combination of baby massage and classical Bach music on sleep quality and speech development can be seen that the pretest and posttest sleep quality mean 1.400, standard deviation 1.003, standard error 0.183, with a p value of 0.037, while speech development pretest and posttest mean 1.633, standard deviation 0.850, standard error 0.155 with p value 0.000. The results of the analysis based on the Paired Samples Test showed a p value of $0.037 < \alpha (0.05)$, so that there was an influence of baby massage and classical Bach music on sleep quality and speech development in babies aged 6-10 months at Emak School. According to Dewi et al (2020) Sleep is a form of baby's adaptation to their environment. During sleep, 75% of the baby's growth hormone is released. Sleep has a huge effect on mental, emotional and physical health (Dewi et al, 2020). Meanwhile, according to Tang (2018), sleep and rest are one of the factors that influence a child's growth and development because when a baby is asleep, three times more growth hormone is secreted than when the baby is awake (Tang, 2018).

Speech development and sleep patterns are vital for baby growth. Speaking is when one makes a significant voice to convey a message to another. The cognitive (thinking) and social development of the child is involved in speech. Children need to learn a variety of skills in order to speak correctly, like speaking correctly. (Etikawati, 2020). After the massage, the baby falls asleep because the brain waves can change. These changes are shown by electroencephalography (EEG) with a decrease in alpha waves and an increase in beta and theta waves. Average values before and after the massage showed the impact of the massage on the quality of baby sleep. The quality of the baby's sleep before the massage averaged

4,3235, and after it averaged 5,3382. Massage improves the quality of baby sleep (Nasution et al., 2021).

Apart from sleep patterns, speech development is also very important for a baby's growth. Speaking is the activity of making meaningful sounds with the aim of conveying a message to other people. Talking cannot be separated from children's cognitive (thinking) and social development. In order to speak correctly, children are required to learn several aspects of ability such as the ability to pronounce words correctly (Etikawati, 2020). The results of this research are in line with research conducted by Khadijah (2021) on the Effect of Baby Massage on the Sleep Quality of Babies Aged 6-10 Months at the Kassi-Kassi Makassar Community Health Center. The results of the Wilcoxon test showed a p value of 0.000 that H_0 was rejected and H_a was accepted, which means there is an influence. Baby massage on baby sleep quality. According to researchers' assumptions, there is an influence of the combination of baby massage and classical Bach music on the quality of baby sleep and speech development, that massage in babies can increase levels of the hormone serotonin which will produce melatonin which plays a role in sleep and makes sleep longer and deeper. Meanwhile, Bach's classical music provides benefits, one of which is improving babies' cognitive, language and social-emotional abilities.

CONCLUSION

Before carrying out the combination of baby massage, the results showed that the majority of the baby's sleep quality was 17 respondents with a percentage (56.7%) getting the adequate category and the majority of speech development was 14 respondents with a percentage (46.7%) getting sufficient speech development. After carrying out the combination of baby massage, the results showed that the majority of the baby's sleep quality was 15 respondents with a percentage (50.0%) getting adequate massage and the speech development of the majority 18 respondents with a percentage (60.0%) getting good speech development. Based on the results of the analysis, there were significant differences. The results of the analysis based on the Paired Samples Test showed a p value of $0.037 < \alpha (0.05)$, so that there was an influence of baby massage and classical Bach music on sleep quality and speech development in babies aged 6-10 months.

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