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GIVING ROSE AROMATHERAPY (ROSA CENTIFOLIA) AGAINST THE DURATION OF THE BABY'S SLEEP AT THE AGE OF 0 – 28 DAYS

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ABSTRAK PEMBERIAN AROMATERAPI MAWAR (ROSA CENTIFOLIA) TERHADAP DURASI TIDUR BAYI PADA USIA 0 – 28 HARI

Sekitar 75% hormon pertumbuhan pada anak dikeluarkan saat tidur. Di Indonesia cukup banyak bayi yang mengalami masalah tidur, yaitu sekitar 44,2% bayi mengalami gangguan tidur seperti sering terbangun di malam hari, namun lebih dari 72% orang tua menganggap gangguan tidur pada bayi bukan suatu masalah atau hanya menganggapnya sebagai masalah. masalah kecil (Sekartini, 2012; Chandraini, 2021).
Berdasarkan data prasurvei dengan melihat data masalah durasi tidur bayi yang dilakukan di 2 Puskesmas Kabupaten Lampung Tengah yaitu di UPTD Puskesmas Bandar Jaya dan UPTD Puskesmas Poncowati ditemukan 12 bayi usia 0-28 hari mengalami gangguan tidur. di UPTD Puskesmas Bandar Jaya, sedangkan di Puskesmas Poncowati terdapat 20 bayi usia 0-28 hari mengalami kendala pemenuhan waktu tidur bayi yang ditandai dengan bayi rewel dan menangis, bayi tidak bisa tidur jika tidak digendong. ibu.
Penelitian ini untuk mengetahui pengaruh pemberian aromaterapi bunga mawar terhadap durasi tidur bayi usia 0-28 hari di Puskesmas Poncowati Lampung Tengah Tahun 2022.
Metode penelitian yang digunakan adalah kualitatif dengan instrumen penelitian angket, yaitu
jumlah sampel sebanyak 36 responden (bayi usia 0-28 hari) yang diambil dengan teknik purposive sampling, analisis data menggunakan uji t dengan pendekatan two group pretest posttest with control group design.
Hasil penelitian dengan adanya peningkatan rata-rata kualitas tidur bayi setelah dilahirkan
pemberian aromaterapi bunga mawar (Rosa Centifolia) di Puskesmas Poncowati Lampung Tengah pada tahun 2022 lebih tinggi 33,33% dibandingkan rata-rata peningkatan kualitas tidur bayi pada kelompok kontrol sebesar 29,17%. Dari uji t diperoleh nilai p sebesar 0,001 < α (0,05) yang berarti H0 ditolak dan Ha diterima yang berarti terdapat pengaruh antara kedua variabel.
Kesimpulannya terdapat pengaruh pemberian aromaterapi bunga mawar terhadap tidur
durasi bayi usia 0-28 hari. Oleh karena itu, disarankan agar penelitian ini dapat menjadi alternatif untuk mendapatkan kualitas tidur yang baik pada bayi usia 0-28 hari.

Kata Kunci : Bayi, Aromaterapi Mawar, Durasi Tidur.

ABSTRACT

Approximately 75% of growth hormone in children is excreted during sleep. In Indonesia, quite a lot of babies have sleep problems, which is around 44.2% of babies experience sleep disorders such as frequently waking up at night, but more than 72% of parents consider sleep disturbances in infants not a problem or only consider it a small problem (Sekartini , 2012; Chandraini, 2021).

Based on presurvey data by looking at data on baby sleep duration problems, which was carried out in 2 Puskesmas Kabupaten Lampung Tengah, namely at UPTD Puskesmas Bandar Jaya and UPTD Puskesmas Poncowati, it was found that 12 infants aged 0-28 days had problems sleeping at UPTD Puskesmas Bandar Jaya, while in In Poncowati Health Center, 20 babies aged 0-28 days had problems fulfilling the baby's sleep time, which was marked by fussy babies and crying, babies couldn't sleep if they weren't carried by their mothers.

This study was to determine the effect of giving rose aromatherapy on the sleep duration of infants aged 0-28 days at Poncowati Health Center in Lampung Tengah in 2022.

The research method was qualitative with questionnaire research instruments, the number of samples were 36 respondents (infants aged 0-28 days) taken by purposive sampling technique, data analysis using t test with a two group pretest posttest approach with control group design.

Result of the study with an increase in the average quality of baby sleep after being given rose aromatherapy (Rosa Centifolia) at the Poncowati Health Center, Lampung Tengah in 2022 was 33.33% higher than the average increase in infant sleep quality in the control group of 29.17%. From the t-test, the p value of 0.001 < α (0.05) means that H0 is rejected and Ha is accepted, which means that there is an influence between the two variables.

The conclusion is that there is an effect of giving rose aromatherapy on the sleep duration of infants aged 0-28 days. Therefore, it is suggested that this research can be an alternative to get good sleep quality for infants aged 0-28 days.

Keywords : Infant, Rose Aromatherapy, Sleep Duration

INTRODUCTION

Based on research conducted by The NICHD Early Child Care Research in America shows for babies less than 6 months old who experience sleep problems as much as 53% while for babies aged 15 months as much as 44% (PMcNamara et al; Susanti., Hety. 2020). Date in Indonesian is quite a lot of babies who experience sleep problems, which is around 44.2%. More than 72% of parents do not consider sleep disorders in infants to be a problem (Sitiatava, 2011; Susanti., Hety. 2020).

In Indonesia, out of 80 children aged less than 3 years, 41 of them or 51.3% experience sleep disorders. Based on research aimed at 385 respondents in five major cities in Indonesia, namely Jakarta, Bandung, Medan, Palembang, and Lampung, it was revealed that 44.2% experienced sleep disorders, namely nighttime sleep hours of less than 9 hours, nighttime awakenings more than 3 times and long awakenings of more than 1 hour (Roekistiningsih.et al. ; Susanti., Hety. 2020). In 2018, the Indonesian Ministry of Health said that babies aged 0-1 month need 14-18 hours of sleep per day, babies aged 1-18 months 12-14 hours per day and 18 months to the age of 3 years 1-12 hours per day.

Babies who have poor quality sleep if the baby has sleep disturbances at night, namely the baby's sleep is less than 9 hours, awakened more than 3 times and awakened for more than 1 hour. During sleep the baby looks constantly restless, cranky, crying and having trouble falling back to sleep. According to data on the prevalence in Indonesia around 10%, approximately 28 million of the total 238 million Indonesians suffer from sleep deprivation (Siregar, 2011; Chandraini, 2021). In Indonesia, quite a lot of babies experience sleep problems, namely around 44.2% of babies experience sleep disturbances such as waking up frequently at night, but more than 72% of parents consider sleep disturbances in babies not a problem or only consider it a minor problem (Sekartini, 2012; Chandraini, 2021).

Based on presurvey data by looking at data on the problem of baby sleep duration, which was carried out at 2 Puskesmas of Central Lampung Regency, namely at UPTD Puskesmas Bandar jaya and UPTD Puskesmas Poncowati, the results of 12 babies aged 0-28 days experienced problems when babies slept at UPTDPuskesmas Bandar Jaya, while at the Poncowati Health Center, 20 babies aged 0-28 days experienced problems fulfilling the baby's sleep time marked by a fussy baby, and crying, the baby could not sleep if not carried by the mother.

According to dr. Harvey Neil Karp.FAAP Sp.A (2020) states that the quality of the baby's sleep is said to be a night's sleep of more than 9 hours starting at 20.00 because at that time there is a baby growth hormone or Human Growth Hormone (HGH) that is secreted, is a hormone naturally produced by the Pituitary gland in the brain . this hormone serves to ensure that the child can grow and develop normally. This hormone is secreted when the child has entered the deep sleep phase (Stage IV).

With meihartati's research (2019) The Effect of Giving Rose Flower Aromatherapy (Rosa Centifolia) on The Sleep Duration of Infants Aged 0-28 days. The effect of Rose Aromatherapy on Baby Sleep Duration is known by wilcoxon test analysis. The results of the statistical analysis showed a p value of 0.004 (0.05) From the results of the data analysis, it can be concluded that there is a change in the duration of the baby's sleep before and after being given rose aromatherapy. Keyhanmehr (2019) Effects of Aromatherapy with Rosadamascena Essential Oil on Sleep Quality in Children. The results of aromatherapy on naps are insignificant (p: 0.059) but they look noticeable. There were no significant changes in child fatigue after aromatherapy (p<0.036) Our results were generally consistent with previous studies, which showed that aromatherapy was effective in sleep quality. The novelity of my research is to give an overview of the use of rose aromatherapy (Rosacentifolia) in vivo to newborns (infants) at the age of 0-28 days.

RESEARCH METHODS

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This type of research is quantitative. With the design, namely pre-experiment designs (pre-experiments) with the research plan used is an experimental quasy research design. Pseudo-experiments are research that is close to real experiments. This study aims to directly test the influence of a variable on other variables and test the hypothesis of a cause-and-effect relationship. (Sugiyono., 2017).

In this study using a two-group pretest postest with control group design, this design had two groups selected by purposive sampling. The population in this study was all infants aged 0-28 days who met the criteria for inclusion and exclusion of the study. There were 3 inclusion criteria in the respondents, namely babies aged 0-28 days, babies born normally, babies not experiencing pain or flu, and babies being treated at home.

Meanwhile, there are 2 exclusion criteria for respondents, namely the mother is not willing to sign the inform consent and is allergic to essential oil.

Some ways of giving aromatherapy are to add it to body care products for a calming sensation, with a mixture of rose therapy aromas as much as 100 ml (V6 young living) mixed with 20% pure essential oil, which is 3 ml and divided into 20 drops, then apply on the baby's glove cloth (2 left spread and 2 smears right) and also applied to the baby's clothes on the front of 2 spreads (young Living Assessment).

RESEARCH RESULTS

Characteristics of Respondents

It is known based on the characteristics of respondents at the UPTD Puskesmas Poncowati, Central Lampung Regency in 2022, the characteristics based on the maternal education category in the intervention group with the highest number are SMA 13 (72.2%) respondents while in the control group the highest number of SMA education is 10 (55.6%) respondents, maternal occupation by intervention group with the most number was maternal work as a household 8 (44.4%) respondents and in the control group with maternal employment as a housewife 10 (55.%) respondents

Table 1
Characteristics of Respondents

Maternal Characteristic	Intervension		Control	
	N	(%)	N	(%)
Education				
S1	3	16,7	1	5,6
SMA	13	72,2	10	55,6
SMP	2	11,1	5	27,8
D3	-	-	2	11,1
Work				
Laborer	2	11,1	-	-
IRT	8	44,4	10	55,6
PNS	2	11,1	2	11,1
Self Employed	6	33,3	6	33,3
Infant Age				
12	1	5,6	-	-
19	1	5,6	1	5,6
21	1	5,6	3	16,7
22	1	5,6	2	11,1
23	3	16,7	4	22,2
24	3	16,7	1	5,6
26	3	16,7	1	5,6
27	2	11,1	2	11,1
28	3	16,7	2	11,1
Gender				
L	10	55,6	10	55,6
P	8	44,4	8	44,4

Table 2
Results of Variable Normality Test after Treatment in Intervention Group and Control Group

Variable (Baby Sleep)	N	SD	P-Value (Shapiro Wilk)
Intervension	18	7,230	0,125
Control	18	4,156	0,095

Based on the research data, it is known that the value of Shapiro-wilk in the group after being given essential oil and the combination of rose aromatherapy in the intervention group was 0.125 and in the group of essential oil in the control group, which means that the value ≥ 0.05. Thus, it can be concluded that the data of the two groups in this study were normally distributed.

Univariate Analysis Results

Based on table 3 above, it can be seen from the number of 18 respondents of the study conducted with the results of the average value of the quality of the baby's sleep duration before being given rose aromatherapy (Rosa Centifolia) at the UPTD Puskesmas Poncowati, Central Lampung Regency in 2022 with a mean of 58.33, standard deviation value of 7,327 minimum value of 25 signs of symptoms of fussy babies and experiencing sleep disorders and a maximum score of 75 signs of symptoms of fussy babies and experiencing adequate sleep.

Meanwhile, the average value after being given rose aromatherapy (Rosa Centifolia) with a mean of 84.72, a standard deviation value of 11,037 and a minimum score of 75 signs of baby symptoms are fussy and experience adequate sleep quality and a maximum of 100 signs of symptoms of babies not fussing and sleeping well.

Table 3
The Average Duration of Baby's Sleep Before and After Being Given Rose Aromatherapy (Rosa Centifolia) in the Intervention Group at uptd Puskesmas Poncowati, Central Lampung Regency in 2022

Baby Sleep	Mean	SD	Min	Max	N
Before intervension	58,33	7,327	25	75	18
After intervension	84,72	11,037	50	100	

Table 4
Average Improvement of Baby Sleep Duration Before and After Being Given Rose Flower Aromatherapy (Rosa Centifolia) in the Intervention Group at UPTD Puskesmas Poncowati, Central Lampung Regency in 2022

Baby Sleep	Mean	SD	Min	Max	N
Quality Improvement	33,33	4,156	25	75	18

The average improvement in the quality of sleep of infants in the intervention group increased by 33.33% with an increase in the signs that the baby was not fussy and the quality of the baby's sleep became good.

Table 5
The Average Duration of Baby's Sleep Before and After Being Given Essential Oil in the Control Group at uptd Puskesmas Poncowati, Central Lampung Regency in 2022

Baby Sleep	Mean	SD	Min	Max	N
Before Control	48,61	17,971	25	75	
After Control	63,89	12,230	25	75	18

Based on table 5 above, it can be seen the average value of the quality of the baby's sleep duration in the control group at the UPTD Puskesmas Poncowati, Lampung Tengah Regency in 2022 with a mean of 48.61 and a standard deviation value of 17,971 minimum score of 25 signs of symptoms of fussy babies and experiencing sleep disorders and a maximum score of 75 signs of symptoms of fussy babies and getting enough sleep.

Meanwhile, the average value of the baby's sleep quality after the control group with a mean of 63.89 standard deviation values of 12,230 scores of at least 25 signs of symptoms of fussy babies and experiencing sleep disorders and a maximum of 75

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signs of symptoms of fussy babies and getting enough sleep.

Table 6
Average Improvement in the Quality of Baby's Sleep Duration Before and After Being Given Essential Oil Aromatherapy in the Control Group at uptd Puskesmas Poncowati, Central Lampung Regency in 2022

Baby Sleep	Mean	SD	Min	Max	N
Peningkatan	29,17	7,230	25	50	18

The average improvement in the sleep quality of babies in the control group increased by 29.17% with an increase in the signs that the baby was not fussy and the quality of the baby's sleep became sufficient.

Bivariate Analysis Results

Based on table 7, it can be seen that the results of research that has been carried out to determine the relationship between giving rose aromatherapy (rosa centifolia) (intervention group) and essential oil (control group) to the sleep duration of babies aged 0-28 days at the UPTD Puskesmas Poncowati, Lampung Tengah Regency in 2022 with the results of the t test, the mean value in the group given aromatherapy for roses was 33.33 standard deviation values of 4.156 and the mean value for the group that was only given essential oil was 63.89 and the standard deviation value was 7.230. The result of a p value of 0.001< α (0.05) means that H0 is rejected and Ha is accepted, which means that there is a meaningful relationship between the two variables.

Table 7
The Relationship Between Giving Rose Flower Aromatherapy (Rosa Centifolia) (Intervention Group) And Essential Oil (Control Group) To Sleep Duration Of Infants Aged 0-28 Days At UPTD Puskesmas Poncowati, Central Lampung Regency in 2022

Baby Sleep	Value	Mean	SD	P-value*	CI 95%
Intervension	18	33,33	4,156	0,001	2,056-7,176
Control	18	29,17	7,230		2,026-7,186

DISCUSSION

Characteristics of Respondents

It is known based on the characteristics of respondents at the UPTD Puskesmas Poncowati, Lampung Tengah Regency in 2022, the characteristics based on the maternal education category in the intervention group with the highest number are SMA 13 (72.2%) respondents while in the control group the highest number of high school education 10 (55.6%) respondents, maternal work based on the intervention group with the most number was the work of mothers as households 8 (44.4%) respondents and in the control group with maternal work as housewives 10 (55.%) respondents. Meanwhile, the characteristics were based on the age of the infants in the intervention group as a whole aged 22-28 days, and for the control group aged 21, 23 and 27-28 days. For gender in the intervention group the most were male sex 10 (55.6%) respondents, and the most control group was male sex 10 (55.6%) respondents.

The age factor also affects the improvement of the baby's sleep quality. The older the baby gets, the quality of sleep the baby decreases. Babies at the age of 4-6 months the number of naps is decreasing, In babies aged 6 months the sleep pattern begins to appear similar to that of adults. In line with the theory proposed by Oktaviano (2017) Sleep disorders in infants and children not only result in growth problems, but are also thought to be closely related to child development problems, especially emotional, psychic and cognitive.

Hirshkowitz et al., suggest sleep duration for healthy individuals, among others: sleep duration for neonates aged 0-3 months 14-17 hours, infants aged 4-11 months 12-15 hours, toddlers aged 1-2 years 11-14 hours, preschool age children aged 3-5 years between 10-13 hours, school-age children 6-13 years 9-11 hours, adolescents 14-17 years 8-10 hours.

In his opinion, it is not only the baby factor that can affect the quality of the baby's sleep, but parental characteristic factors such as education and work also affect the baby's sleep quality. A safe and comfortable state of the environment for a person can accelerate the occurrence of sleep processes.

The environment in which the baby sleeps has an important effect on the quality of the baby's sleep. The atmosphere of the room that makes the baby feel comfortable to sleep by adjusting the lighting, ventilation, color arrangement, temperature, and also the state of the crib. Good parental knowledge will improve the quality of development of the baby. Parental education is one of the important factors for the development of children.

This is because the level of parental knowledge can affect parents' knowledge of the information they will receive, especially regarding good childcare methods (Oktaviano, 2017). In line with the research conducted by Uryati, S., & Oktavianto, E. (2020). The relationship of sleep quality with the development of babies aged 3-10 months. The results of the statistical test showed a p value = 0.001 (p value < 0.05).

The quality of sleep for children was good for 15 babies (41.7%) and the quality of sleep was poor for 21 babies (58.3). The normal child development was 19 babies (52.8%) and the suspects were 17 babies (47.2%). Babies with good sleep quality tend to have normal development, and vice versa.

The conclusion in this study is that there is a relationship between sleep quality and the development of infants aged 3-10 months. In the opinion of researchers of maternal characteristics which include education and work related to the fulfillment of the baby's health, mothers who have higher education will continue to seek information related to the fulfillment of the baby's sleep needs, likewise, work also has a close effect, mothers who have heavy jobs will tend to have difficulty controlling their baby's sleep, in contrast to mothers who do not have heavy jobs or are assisted by their husbands and families, mothers will focus on the growth and development of their babies.

As for the characteristics of babies, researchers argue that gender is one of the factors that can affect the growth and development of babies. At a certain age males and females are very different in size of growth, speed of growth, physical proportions and others. Physical and motor growth differs between males and females. Boys are more active than girls.

In conellan's research (2020) suggested that male babies are more likely to move (move around) compared to female babies. The faster motor development of male babies is caused by the higher testosterone hormone in male babies compared to female babies so that girls are more happy with calm and comfortable activities.

The age of respondents who dominated in this study were babies with 6 months of age, namely 11 babies. Age is one of the factors that can affect the growth and development of babies. This is because the greatest growth and development speed is during the fetus / period in the womb, infancy and adolesensity / adolescence. The motor development of the baby gets better with increasing age due to the maturity of the functions of the body and its muscles. This is in line with research that shows that there is a meaningful relationship between the age of the baby and the motor ability of the baby.

Univariate Analysis

The Average Quality of The Baby's Sleep Duration Before and After Being Given Rose Aromatherapy (Rosa Centifolia) At UPTD Puskesmas Poncowati, Central Lampung Regency in 2022

It is known from the number of 18 respondents of the study conducted with the results of the average value of the quality of the baby's sleep duration before being given rose flower aromatherapy (Rosa Centifolia) at the UPTD Puskesmas Poncowati, Lampung Tengah Regency in 2022 with a mean of 58.33, a standard deviation value of 7,327 minimum values of 25 signs of symptoms of fussy babies and experiencing sleep disorders and a maximum score of 75 signs of symptoms of fussy babies and experiencing adequate sleep.

Meanwhile, the average value after being given rose aromatherapy (Rosa Centifolia) with a mean of 84.72, a standard deviation value of 11,037 and a minimum score of 75 signs of baby symptoms are not fussy and the quality of sleep is sufficient and a maximum of 100 signs of symptoms of babies are not fussy and sleep quality is good. In the rose aromatherapy intervention group, there was a significant improvement in the quality of the baby's sleep by 33.33%.

According to dr. Harvey Neil Karp.FAAP Sp.A (2020) states that the quality of the baby's sleep is said to be good if the night's sleep of more than 9 hours starts at 20.00 because at that time there is a baby growth hormone or Human Growth Hormone (HGH) that is secreted, which is a hormone naturally produced by the Pituitary gland in the brain. This hormone serves to ensure that the child can grow and develop normally. This hormone is secreted when the child has entered the deep sleep phase (Stage IV).

According to Perry and Potter (2006 & Hidayat, 2008; Meihartati, 2019) there are several factors that affect the baby's sleep, including, the environment such as a safe and comfortable environment. A person's baby can speed up the

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occurrence of the sleep process, Bed arrangements such as babies should be placed to sleep by parents, because sleeping with parents provides several benefits, namely it can facilitate breastfeeding and can provide a quick response when the baby cries and allows the mother to more easily predict the danger in case of a breath stop, Physical exercise such as fatigue due to high physical activity can require more sleep to maintain the balance of energy that has been expended, the provision of aromatherapy will help meet the baby's sleep needs because by giving aromatherapy will make the baby feel calm and relaxed, Nutrition such as breastfeeding before going to bed will make sleep calmer, Diseases such as pain, physical discomfort, respiratory, digestive disorders, etc.

In line with the theory put forward by Aisyah (2016) Aromatherapy is a therapy by using essential oils whose extracts and chemical elements are taken intact, one type is rose aromatherapy, rose aromatherapy has properties as an anti-depressant, lowering blood pressure, as well as being able to overcome insomnia, migrants, nervous tension, stress, and sadness, rose aromatherapy with the main content of inhaled linanool will be interpreted by various neuron cells and delivered to the limbic system and hypothalamus to be processed in the form of electrical impulses. In theory, if relaxation therapy can be implemented properly (rose aromatherapy) then blood pressure can decrease (Kenia, 2013' Damanik, 2015).

In line with related research conducted by Meihartati (2019) The Effect of Giving Rose Flower Aromatherapy (Rosa Centifolia) on the Sleep Duration of Babies Aged 0 – 28 days. Aromatherapy half of the respondents had their sleep duration normalized, namely 5 babies (50%) and half of respondents 5 babies (50%) less than normal sleep duration before giving Aromatherapy, after aromatherapy the duration of sleep became above normal.

According to researchers, sleep quality is a state of sleep that an individual undergoes to produce freshness and fitness when awakened. Sleep quality includes quantitative aspects of sleep, such as sleep duration, sleep latency as well as subjective aspects of sleep. Sleep quality is the ability of each person to maintain a state of sleep and to get a good/ restful stage of REM and NREM sleep.

Rose aromatherapy is one of the aromatherapy that contains linalol and graniol substances and is active when used through inhalation / inhalation which can be useful in increasing alertness, calming, anti-anxiety, stress management, and sleep disorders. So that rose aromatherapy is a non-pharmacological therapy that can overcome the problem of sleep disorders or insomnia and improve sleep quality by giving rose aromatherapy.

Duration Before and After Being Given Essential Oil in the Control Group at uptd Puskesmas Poncowati, Central Lampung Regency in 2022

Based on table 3, it is known that the average value of the quality of the baby's sleep duration in the control group at the UPTD Puskesmas Poncowati, Lampung Tengah Regency in 2022 with a mean of 48.61 and a standard deviation value of 17,971 scores of at least 25 signs of symptoms of fussy babies and experiencing sleep disorders and a maximum score of 75 signs of symptoms of fussy babies and getting enough sleep.

Meanwhile, the average value of the baby's sleep quality after the control group with a mean of 63.89, the standard deviation value of 12,230 scores of at least 25 signs of symptoms of fussy babies and experiencing sleep disorders and a maximum of 75 signs of symptoms of fussy babies and getting enough sleep. The increase in the control group was 29.17% better than the situation before the administration of essential oil.

The quality of the baby's sleep not only affects the physical development, but also the behavior of the baby the next day. Babies who sleep enough without waking up often will be fitter and not easily fussy. Babies are said to have sleep disturbances if at night their sleep is less than 9 hours, awakened more than 3 times and the length of awakening is more than 1 hour. During sleep the baby looks always cranky, crying and having trouble falling back to sleep (Rohmawati, 2018).

The quality of the baby's sleep greatly affects the growth of the baby. Sleeping babies experience improved brain cells and growth hormone production, therefore, the quality of the baby's sleep needs to be maintained. The quality of the baby's sleep can be seen from the way he sleeps, sleep comfort and sleep patterns. Babies who sleep enough without waking up often, are fitter and not easily fussy the next day.

In line with the results of previous research Keyhanmehr (2019) Effects of Aromatherapy with Rosadamascena Essential Oils on Sleep Quality in Children. The results of aromatherapy on naps are insignificant (p: 0.059) but they look noticeable. There were no significant changes in child fatigue after aromatherapy ($p<0.036$) Our results were generally consistent with previous studies, which showed that aromatherapy was effective in sleep quality.

Based on research conducted by The NICHD Early Child Care Research in America shows for babies less than 6 months old who experience sleep problems as much as 53% while for babies aged 15 months as much as 44% (Susanti, I. Y.; Hety, 2020). Data in Indonesia is quite a lot of babies who experience sleep problems, which is around 44.2%. More than 72% of parents do not consider sleep disorders in infants to be a problem (Susanti, I. Y.; Hety, 2020).

According to researchers if a baby has problems with sleep it can have an effect on physical development, but also the baby's behavior the next day. Babies who sleep enough without waking up often will be fitter and not easily fussy. Babies are said to have sleep disturbances if at night their sleep is less than 9 hours, awakened more than 3 times and the length of awakening is more than 1 hour. During sleep the baby looks always cranky, crying and having trouble falling back to sleep.

Bivariate Analysis

The Effect of Giving Rose Flower Aromatherapy (Rosa Centifolia) on the Sleep Duration of Babies Aged 0-28 Days at uptd Puskesmas Poncowati, Central Lampung Regency in 2022

It is known that the results of research that has been carried out to determine the relationship between giving aromatherapy of rose flowers (rosa centifolia) (intervention group) and essential oil (control group) to the sleep duration of babies aged 0-28 days at the UPTD Puskesmas Poncowati, Central Lampung Regency in 2022 with the results of the t test obtained the value of the mean in the group given rose aromatherapy was 33.33 the standard deviation value was 4.156 and the mean value for the group that was only given essential oil was 29.17 and the standard deviation value was 7.23.

The result of a p value of 0.001< α (0.05) means that H0 is rejected and Ha is accepted, which means that there is a meaningful relationship between the two variables. The bivariate test identified that the administration of rose essential oil in the intervention group had a higher increase in the average quality of infant sleep compared to an increase in the average quality of baby sleep in the control group given essential oil.

The improvement in infant sleep quality in the intervention group reached 33.33% higher than the average quality of baby sleep in the control group, meaning that the intervention for providing rose aromatherapy was able to provide a differentiator for the baby's sleep quality. In line with the theory proposed by Rohmawati (2019) The quality of the baby's sleep not only affects the physical development, but also the behavior of the baby the next day. Babies who sleep enough without waking up often will be fitter and not easily fussy. Babies are said to have sleep disturbances if at night their sleep is less than 9 hours, awakened more than 3 times and the length of awakening is more than 1 hour. During sleep the baby looks always cranky, crying and having trouble falling back to sleep.

Sleep is a very important process for humans, because in sleep there is a regeneration process in the body, this process is useful for restoring a person's condition to be more relaxed, that way the body that experiences fatigue will become refreshed. The stunted recovery process can cause the body's organs to not work optimally, as a result of which people who lack sleep will get tired quickly and experience a decrease in concentration. In babies sleep is often a problem so that it can interfere with the growth of the baby. This is as research by Whittingham & Douglas (2014) which suggests that between 23 - 27% of parents report problems sleeping in the first six months of life (Sari, 2019).

Aromatherapy is therapy by using essential oils whose extracts and chemical elements are taken whole, one type of which is rose aromatherapy. Not only color is the benefit of flowers. Flowers produce a variety of very characteristic odors depending on the type of flower. The smell of jasmine flowers will be very different from the smell of roses or kenanga flowers. Even in one type of flower, it has a different smell, for example, the smell of white roses is different from the smell of red roses. Often the smell of this flower is used as aromatherapy. The smell of flowers gives a feeling of relaxation and relaxation. Several others can cure various types of diseases (Julianto, 2016).

Rose scent is a good scent used to overcome poor sleep quality because rose aromatherapy has the chemical content of linalool and geraniol which are efficacious in calming and provide a relaxing effect of the central nervous system by stimulating the olfactory nerve (Foerwanto, 2016). Rose aromatherapy is a nonpharmacological therapy that can improve sleep quality and is included in relaxation therapy.

This relaxation therapy technique trains the muscles and mind to relax in a fairly simple way, in addition to aromatherapy can also be done with meditation, muscle relaxation, and reducing the light of illumination. Rose aromatherapy as an anti-depressant, lowers blood pressure, and is able to overcome insomnia / sleep disorders, migraines, nervous tension, stress, and sadness.

Rose aromatherapy with the main content of inhaled linalool will be interpreted by various neuron

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cells and delivered to the limbic and hypothalamus systems to be processed in the form of electrical impulses. The message delivered throughout the body triggers the release of the neurochemical substance of the brain. A pleasant odor will stimulate the thalamus to secrete enkefalin which is a natural painkiller and provides a calming effect. The soothing smell will stimulate an area in the brain called the raphe nucleus to secrete serotonin that can deliver us to sleep.

The aromatic ingredients used in aromatherapy treatments will stimulate the autonomic nervous system (Poerwadi, 2006; hidayah, 2015). In line with research conducted by Meihartati (2019) The Effect of Giving Rose Aromatherapy (Rosa Centifolia) on the Sleep Duration of Babies Aged 0 – 28 days. Aromatherapy half of the respondents had their sleep duration normalized, namely 5 babies (50%) and half of respondents 5 babies (50%) less than normal sleep duration before giving Aromatherapy, after aromatherapy the duration of sleep became above normal.

In the opinion of researchers, the mechanism of aromatherapy of roses to reduce the level of insomnia is that it begins at the moment when rose flower oil is inhaled. Then the volatile molecules will carry the aromatic elements contained in them (geraniol and linalool) to the apex of the nose where cilia-cilia emerge from the receptor cells. When the baby is asleep, there is growth and maturation in brain cells and there is an increase in the production of growth hormone which has a role in the growth and development of the baby physically and psychically. Therefore, it is important that the quality and quantity of baby sleep is to be uplifted to be optimal.

The assessment of sleep quality in babies can be seen from the frequent or not of the baby waking up in one sleep cycle. Through the administration of rose aromatherapy, the quality and quantity of baby sleep increases. This happens because through the inhalation of essential oils in rose flowers will stimulate the production of endhorpine hormones that cause the baby to relax and calm down.

CONCLUSION

Based on the results of the research and discussion that has been presented, the conclusions of this study are as follows:

The improvement of the quality of baby sleep in the administration of rose aromatherapy with the value of improving the quality of baby sleep in the intervention group was 33.33 and the standard deviation value of 4.156 compared to the control group was 29.17 and the standard deviation value was 7.230. The result of a p value of 0.001< α (0.05) means that H0 is rejected and Ha is accepted, which means that there is an influence between the two variables.

SUGGESTION

For health workers, health workers need to develop promotion and education about rose flower aromatherapy (Rosa Centifolia) to the community, especially parents to increase the quantity and quality of baby sleep. This can be done by providing counseling and explaining how to get rose aromatherapy accompanied by demonstrations and giving leaflets which can be done through posyandu-posyandu activities or toddler mother class services by health workers.

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