

## GIVING OLIVE OIL AFFECTS THE HEALING OF NAPPER RASHES IN BABIES

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### ABSTRAK : PEMBERIAN MINYAK ZAITUN MEMPENGARUHI PENYEMBUHAN RUAM POPOK PADA BAYI

Latar Belakang Menurut IDAI (Ikatan Dokter Anak Indonesia) angka kejadian ruam popok di Indonesia pada tahun 2017 mencapai 7-35%, dengan angka terbanyak pada usia 9-12 bulan dan pada bayi laki-laki dan perempuan berusia dibawah tiga tahun. Selain itu, dari beberapa penelitian menunjukkan bahwa hasil penelitian yang dilakukan di Lampung terdapat bayi yang mengalami ruam popok sebanyak 21,14%.

Tujuan Diketahui pengaruh pemberian minyak zaitun terhadap penyembuhan ruam popok pada bayi di Wilayah Kerja Puskesmas Tulang Bawang Baru Kecemasan Bunga Mayang Tahun 2022.

Metode Jenis penelitian menggunakan kuantitatif, rancangan penelitian menggunakan *pra eksperimen* dengan pendekatan *one group pretes-postes design*. Populasi adalah bayi yang menggunakan diaper, sedangkan sampelnya bayi yang mengalami ruam popok sebanyak 25 responden. Teknik sampling *purposive sampling*. Analisa data univariat dan bivariat menggunakan wilcoxon.

Hasil Rata-rata skor ruam popok pada bayi sebelum dilakukan pemberian minyak zaitun dengan mean 5,76 nilai terendah 5 dan nilai tertinggi 6. Rata-rata skor ruam popok pada bayi sesudah dilakukan pemberian minyak zaitun dengan mean 0,76 nilai terendah 0 dan nilai tertinggi 2. Hasil uji statistik didapat nilai beda mean sebesar 5,00 dengan nilai *p-value* 0,000 (<0,05).

Kesimpulan ada pengaruh pemberian minyak zaitun dengan penyembuhan ruam popok pada bayi di Wilayah Kerja Puskesmas Tulang Bawang Baru Kec. Bunga Mayang Tahun 2022.

Saran diharapkan masyarakat atau orang tua dapat menambah wawasan tentang manfaat minyak zaitun dan aloe vera untuk meminimalisir atau mencegah kejadian ruam popok pada bayi serta orang tua mampu mengaplikasikannya

Kata Kunci : Minyak Zaitun, Ruam Popok, Bayi

### ABSTRACT

Background According to IDAI (Indonesian Pediatrician Association) the incidence of diaper rash in Indonesia in 2017 reached 7-35%, with the highest rate at the age of 9-12 months and in male and female infants under three years of age. In addition, from several studies showing that the results of research conducted in Lampung, there were babies who experienced diaper rash as much as 21.14%.

Known Purpose The effect of giving olive oil on the healing of diaper rash in infants in the Bunga Mayang Anxiety Health Center in the Work Area of Tulang Bawang Baru in 2022.

Method This type of research uses quantitative, research design uses pre-experimental with one group pretest-posttest design approach. The population is babies who use diapers, while the sample is babies who experience diaper rash as many as 25 respondents. Purposive sampling technique. Univariate and bivariate data analysis using Wilcoxon.

Results The average score of diaper rash in infants before giving olive oil was given with a mean of 5.76, the lowest score was 5 and the highest score was 6. The average score of diaper rash in infants after being given olive oil with a mean of 0.76, the lowest value is 0 and the highest value is 2. The results of the statistical test obtained a mean difference value of 5.00 with a *p-value* of 0.000 (<0.05).

The conclusion is that there is an effect of giving olive oil to healing diaper rash in infants in the Work Area of the Tulang Bawang Baru Health Center, Kec. Mayang Flowers in 2022.

Suggestion I hope that the community or parents can add insight about the benefits of olive oil and aloe vera to minimize or prevent the occurrence of diaper rash in babies and parents are able to apply it

Keywords : Olive Oil, Diaper Rash, Baby

## INTRODUCTION

Diaper rash can be interpreted as a skin infection due to prolonged exposure to urine and feces coupled with the pressure and friction of disposable diapers (diapers) (Jelita, 2014). Diaper rash is characterized by red, swollen skin, especially on the buttocks and thighs. Diaper rash generally occurs at the age of 0-12 months (Hamdanah, 2021)

Ideally change diapers after every urination or bowel movement. If using Absorbent Gelling Material (AGM) (which is made from sodium polyacrylate which has the advantage of being able to quickly separate urine from feces, retains liquid in its matrix, and maintains pH stability), change diapers as often as possible about once every 2-3 hours. (Hamdanah, 2021).

The incidence of diaper rash in each country varies depending on hygiene and parental behavior regarding the use of disposable diapers. In the United States the prevalence of diaper rash reaches 75%, Japan 87%, Italy 15% and in Iran 34.9%. Infants aged 9-12 months will experience 2 diaper rash with an incidence of 50% to 60%. The literature mentions several incidence rates of diaper rash based on its severity, namely mild 58%, moderate 34% and severe 8%. In one study in the United States, there were 1 million visits to infants and children with diaper rash who went for outpatient treatment each year, and 25% of children were at risk for diaper rash (Irmayanti, 2018).

In Indonesia it is estimated that the number of babies will reach 23,729,583 in 2018. The increase in the number of babies born is proportional to the use of diapers, namely 95%. Lately in Indonesia, disposable diapers have been widely found in society with various types and affordable prices. The use of diapers is the main choice compared to using cloth diapers. Diapers and babies are things that cannot be separated, because baby diapers are a necessity to accommodate the large amount of urine in babies. In addition, using disposable diapers, a mother doesn't have to bother changing wet diapers as a result of the baby urinating frequently (Yuliati, 2020).

According to IDAI (Indonesian Pediatrician Association) the incidence of diaper rash in Indonesia in 2017 reached 7-35%, with the highest rate at the age of 9-12 months and in male and female infants under three years of age. In addition, from several studies showing that the results of research conducted in Lampung, there were babies who experienced diaper rash as much as 21.14% (Silaban, 2022)

The use of disposable diapers in infants can have a negative impact on the baby's skin, therefore the use of diapers must be more careful. Using

diapers for too long will cause the skin to become more moist and increase skin sensitivity in infants, so that the baby's skin will experience irritation or diaper rash. Diaper rash is a condition in which the area of the skin covered by the diaper appears red. These areas include the buttocks, genitals, lower abdomen, upper thighs and groin. Even though diaper rash is harmless, it will cause itching, burning, discomfort and sometimes pain which can cause the baby to be restless and fussy, which makes the baby uncomfortable (Dwienda, et al, 2014).

Several factors can cause diaper rash such as physical, chemical, enzymatic, and biological factors (germs in urine and feces). Diaper rash is caused by irritation of the skin covered by the diaper due to improper use of diapers. According to Agustina (2019), the most important factor is the wetness of the diapers area which is too full and friction which causes the skin barrier function to be destroyed and penetration of irritation becomes easier, then urine and feces due to the role of feces as enzymes (protease, lipase) which degrades urea ammonia then the feces pH increases and causes skin irritation, fungal and bacterial infections, one of which is candida albicans which may be isolated up to 80% in infants resulting in skin irritation perineum.

If not treated immediately, the rash can spread to the groin, stomach and genital area of the baby, and it will be easy for germ infections to occur so that the skin is more swollen and pus and scabs can form, the baby becomes fussy because of the pain. Other symptoms of things that can be seen in diaper rash such as the skin in the area is inflamed, reddish in color sometimes blisters, irritation of the affected skin, appears as erythema, eruptions in areas of direct contact with the buttocks and genitals, lower abdomen, upper thighs, severe condition erythematous papules, vesicles and ulcerations may appear, itching and blisters on the skin (Mutmainah, 2017).

Prevention of diaper rash can be done with pharmacological therapy such as giving zinc oxide (zinc oxide) ointment or corticosteroid ointment, while non-pharmacological therapy, such as: eliminating or reducing moisture and skin friction by changing diapers immediately after urinating or defecating or when using diapers disposables should be used according to the capacity of the press, keeping the skin of the diaper area always clean and dry (Indonesian Pediatric Society, 2019; Hamdanah, 2021).

Another alternative that can be used to prevent or treat diaper rash is by adding olive oil mixed with aloe vera. Olive oil is proven to be able to keep the skin moist, and by its nature as an antiseptic

oil it can reduce the redness of diaper rash and can prevent water from making direct contact with skin affected by diaper rash. The olives extracted into olive oil are rich in vitamin A, the function of vitamin A on the skin. This vitamin is able to repair the epidermal and dermis layer systems down to the DNA level. B2 plays an important role in tissue repair and wound healing. Vitamin D has the function of dealing with skin problems such as psoriasis, a chronic skin disease marked by red, dry and scaly patches, especially on the skin of the ears and ears. sex,

This substance also has an antioxidant effect that can protect the body's cells from damage, vitamin K has been proven to remove scars, be it bruises, scratches, even minor burns. This vitamin is able to heal wounds on the skin more quickly because it reduces inflammation. , S.M 2020).

This is evidenced by the results of research conducted by Yuliati (2020) The Effect of Perianal Hygiene Treatment with Olive Oil on the Prevention of Diaper Rash in Babies. The statistical test used was the Paired Sample T-Test at a significance level of 95% ( $\alpha = 0.05$ ). The results showed that the value of  $p < \alpha$  was  $0.000 < 0.05$  indicating that there was an effect of perianal hygiene treatment with olive oil on the prevention of diaper rash in infants at the Cengkareng Health Center, West Jakarta. The conclusion of this study is that perianal hygiene treatment with olive oil has an effect on reducing the incidence of diaper rash.

Based on the results of a pre-survey conducted in the Work Area of the Tulang Bawang Baru Health Center, Bunga Mayang District, to 5 babies who had diaper rash, several mothers gave honey, and also baby powder for rashes, while the health workers themselves had recommended treatment diaper rash using sterile and clean techniques by changing diapers and cleaning the skin from the remaining bowel movements and urination.

The current role of midwives in overcoming the incidence of diaper rash is to provide health education to post partum mothers to carry out care with personal hygiene techniques for infants to prevent diaper rash. The use of olive oil has never been done for now. The use of herbal medicines is regulated in the Regulation of the Minister of Health of the Republic of Indonesia of 2018 concerning complementary traditional health services explaining that in order to implement the provisions of Article 13, Article 20 paragraph (3), Article 26 paragraph (3), and Article 65 Government Regulation Number 103 of 2014 concerning Health Services Traditional Health, it is necessary to stipulate a Regulation of the

Minister of Health concerning Implementation of Complementary Traditional Health Services. Complementary Traditional Health Services are the application of traditional health that utilizes biomedical and biocultural sciences in their explanations and their benefits and safety are scientifically proven (Permenkes RI, 2018).

## RESEARCH METHODS

This type of research uses quantitative, the research design uses pre-experimental with a one group pretest-posttest design approach. The sample population is infants with diaper rash. The working area of the Tulang Bawang Baru Health Center for the Mayang Flower Anxiety. Purposive sampling technique. Univariate and bivariate data analysis using Wilcoxon.

## RESULTS

### Characteristics of Respondents

Table 1

**Characteristics of Respondents in the Work Area of the Tulang Bawang Baru Health Center, Bunga Mayang District, 2022**

Variabel	f	Percentage (%)
Mother's Age		
At risk (Age < 20 and > 35 Years)	5	20.0
Not at risk (age 20-35 years)	20	80.0
Education		
JUNIOR HIGH SCHOOL	6	24.0
SENIOR HIGH SCHOOL	15	60.0
College	4	16.0
Work		
Laborer	5	20.0
Housewife	12	48.0
civil servant	1	4.0
Self-employed	7	28.0
Baby Age		
9 months	16	64.0
10 months	4	16.0
11 months	4	16.0
12 months	1	4.0
Gender		
My man	17	68.0
Woman	8	32.0

Based on table 1 above, it can be seen the characteristics of the respondents in the Work Area of the Tulang Bawang Baru Health Center, Bunga Mayang District in 2022, by looking at the highest number of characteristics, the age of the mother is not at risk 20-35 years 20 respondents (80.0%), the highest education is SMA 15 respondents (60.0%), the most occupations are housewives 12

respondents (48.0%), the most babies are 9 months old as many as 16 respondents (64.0%), the most gender is male as many as 17 respondents (68, 0%).

olive oil in the Work Area of the Tulang Bawang Baru Health Center, Bunga Mayang District in 2022 with a mean of 5.76 in the category of severe rash, the lowest being 5 and the highest value being 6.

#### Univariate analysis

Based on table 2 above, it was found that 25 respondents had diaper rash in infants before giving

Table 2

**Incidents of Diaper Rash in Babies Before Giving Olive Oil in the Work Area of the Tulang Bawang Baru Health Center in Bunga Mayang District in 2022**

Diaper Rash	N	Means	Min-Max	SD	SE
Pretest	25	5,76	5-6	0.436	0.087

Table 3

**Incidence of Diaper Rash in Babies After Giving Olive Oil in the Work Area of the Tulang Bawang Baru Health Center in Bunga Mayang District in 2022**

Diaper Rash	N	Means	Min-Max	SD	SE
Day 1	25	4.64	4-5	0.490	0.098
Day 2	25	3,16	2-4	0.850	0.170
Day 3	25	1.92	1-3	0.862	0.172
Posttest	25	0.76	0-2	0.723	0.145

Based on table 3 above, it was found that from 25 respondents the incidence of diaper rash in infants after being given olive oil in the Work Area of the Tulang Bawang Baru Health Center, Bunga Mayang District, in 2022. Diaper rash on the first day with a mean of 4.64 scores was in the category of moderate rash, the lowest was 4 and the highest value is 5. The second day with a mean of 3.16 scores with the moderate rash category, the lowest is 2 and the highest value is 4. The third day with a mean of 1.97 with the mild rash category, the lowest value is 1 and the highest value is 3. The fourth day

with a mean of 0, 76 with no rash category, the lowest score was 0 and the highest score was 2. In this study, significant healing of diaper rash occurred on day 4.

#### Bivariate Analysis

Based on table 4 above, it was known from 25 respondents the incidence of diaper rash in infants before giving olive oil in the Work Area of the Tulang Bawang Baru Health Center, Bunga Mayang District with a mean of 5.76 with a severe rash category, and after being given olive oil with a mean of 0.76 with no rash category with a mean difference of 5.00.

Table 4

**The Effect of Giving Olive Oil to Cure Diaper Rash in Babies in the Work Area of the Tulang Bawang Baru Health Center in Bunga Mayang District in 2022**

Diaper Rash	N	Means	Different Means	SD	SE	P-Value
Pretest	25	5,76	5.00	0.436	0.087	0.000
Posttest	25	0.76		0.723	0.145	

The results of the statistical test obtained a p-value of 0.000 ( $\alpha 0.05$ ), which means that there is an effect of giving olive oil to healing diaper rash in infants in the Work Area of the Tulang Bawang Baru Health Center, Bunga Mayang District, in 2022.

#### DISCUSSION

##### Univariate analysis

Incidents of Diaper Rash in Babies Before Giving Olive Oil in the Work Area of the Tulang Bawang Baru Health Center in Bunga Mayang District in 2022

Based on table 2 above, it was found that 25 respondents had diaper rash in infants before giving olive oil in the Work Area of the Tulang Bawang Baru Health Center, Bunga Mayang District in 2022 with a mean of 5.76 in the category of severe rash, the lowest being 5 and the highest value being 6.

In line with the theory put forward by Putra (2012) Diapers rash is an abnormality in infants or toddlers that occurs due to the use of diapers, skin disorders in the form of abnormalities in the skin of the buttocks. In normal skin, there is a small amount of candida fungus, but when the skin is moist, the fungus will grow faster, causing inflammation which causes diapers rash.

In accordance with research conducted by Apriza (2017) The Effect of Giving Olive Oil (Olive Oil) on Diaper Rash in Babies at Bangkinang Hospital in 2016. The results of this study indicate that before giving olive oil (olive oil) oopok rash in infants is most at degree was moderate, namely 10 respondents (66.7%), while after giving olive oil, diaper rash in infants was mostly mild, namely 7 respondents (46.6%).

According to researchers, diaper rash is characterized by swollen, reddish skin, especially on the buttocks and thighs. Diaper rash generally occurs at the age of 0-12 months. Several factors can cause diaper rash such as physical, chemical, enzymatic, and biological factors (germs in urine and feces). The cause of diaper rash is mainly caused by irritation of the skin covered by the diaper due to improper diaper use.

Symptoms of diaper rash can vary from mild to severe/severe. In the initial symptoms of the disorder, mild degrees of mild redness of the skin in the diaper area are limited, accompanied by minor abrasions or cuts to the skin. Moderate degree of abnormality in the form of redness with or without nodules arranged around it like satellites, accompanied by blisters covering a large surface, usually painful and uncomfortable. In severe diaper rash found intense redness accompanied by purulent nodules covering large areas of skin.

The most important factor is the wetness of the diapers area which is too full and friction which causes the skin barrier function to be destroyed and irritation penetration becomes easier, then urine and feces due to the role of feces as enzymes (protease, lipase) which degrades urea ammonia and then the feces pH increases and cause skin irritation, fungal and bacterial infections, one of which is candida albicans may be isolated up to 80% in infants resulting in perineal skin irritation.

Incidence of Diaper Rash in Babies After Giving Olive Oil in the Work Area of the Tulang Bawang Baru Health Center in Bunga Mayang District in 2022

Based on table 3 above, it was found that from 25 respondents the incidence of diaper rash in infants after being given olive oil in the Work Area of the Tulang Bawang Baru Health Center, Bunga Mayang District, in 2022. Diaper rash on the first day

with a mean of 4.64 value in the category of moderate rash. The second day with a mean of 3.16 values with the moderate rash category. The third day with a mean of 1.97 with a mild rash category. Fourth day with a mean of 0.76 with no rash category. In this study, significant healing of diaper rash occurred on day 4.

In line with the opinion expressed by Diaper Rash is a skin problem in the form of irritation and inflammation in the diaper area, namely the groin, lower abdomen, buttocks, and anogenital which is commonly found in infants and toddlers who use diapers. Diaper rash usually occurs at the age of less than 3 years and most often at the age of 9-12 months. This often occurs due to the use of diapers that are wet due to urine and feces that are left on for too long, diapers that are rarely changed, skin hygiene that is not maintained, and an unhealthy and unhealthy environment. Prolonged contact between skin and wet diapers can affect some parts of the baby's and toddler's skin which is still sensitive and thin.

In accordance with research conducted by Yulianti (2020) The Effect of Perianal Hygiene Treatment with Olive Oil on the Prevention of Diaper Rash in Babies. The statistical test used was the Paired Sample T-Test at a significance level of 95% ( $\alpha = 0.05$ ). The results showed that the p value was 0.000, which means that there is an effect of perianal hygiene treatment with olive oil on the prevention of diaper rash in infants.

According to researchers, treatment and prevention of diaper rash can be done with pharmacological therapy such as administration of zinc oxide ointment (zinc oxide) and corticosteroid ointment (Lakonata, 2004). While non-pharmacological therapy, one of the natural processed ingredients that can be considered as an alternative topical therapy that can be used for skin care in babies who experience diaper rash, namely: using olive oil because olive oil will keep the skin moist. Olive oil is cool and moist and is used to rejuvenate the skin. Olive oil contains many active compounds such as phenols, tocopherols, sterols, pigments, squalene and vitamin E.

### Bivariate Analysis

The Effect of Giving Olive Oil to Cure Diaper Rash in Babies in the Work Area of the Tulang Bawang Baru Health Center in Bunga Mayang District in 2022

The results of the statistical test obtained a p-value of 0.000 ( $<\alpha 0.05$ ), which means that there is an effect of giving olive oil to healing diaper rash in infants in the Work Area of the Tulang Bawang Baru Health Center, Bunga Mayang District, in 2022.

In accordance with the theory of Apriyanti (2012) Olive oil is used to rejuvenate the skin because it is cold and moist. Olive oil contains many active compounds such as phenols, tocopherols, sterols, pigments, squalene and vitamin E. All of these compounds are beneficial for the skin, repairing damaged skin cells as antioxidants neutralizing free radicals reduce redness on the skin and can protect the skin from irritation .

In line with the research conducted Rahayu, RDP (2021). TA Giving Olive Oil (Olive Oil) Against the Degree of Diaper Rash in Infants. The degree of diaper rash in infants before being given olive oil experienced mild to moderate degrees of diaper rash. The degree of diaper rash in infants after being given olive oil (olive oil) has a mild degree of diaper rash until there is no rash.

In this study the incidence of diaper rash in infants before giving olive oil in the Work Area of the Tulang Bawang Baru Health Center, Kec. Bunga Mayang with a mean of 5.76 with a severe rash category, and after being given olive oil with a mean of 0.76 with a category of no rashes with a mean difference of 5.00 in this study it can be concluded if there is a decrease in diaper rash scores in infants aged 9-12 after giving oil for 2 times a day for 4 days, so this can prevent occurrence and speed up the healing process of diaper rash in babies and is able to protect the skin from irritation.

According to researchers, olive oil has advantages, especially in this case, namely to treat diaper rash in babies. From the results of this study, it was found that diaper rash scores decreased on day 4 with an average score of 0 and 1. In this study, diaper rash decreased on day 3 and there were no signs of symptoms on day 4. This could be because vitamin D has a function Dealing with skin problems such as psoriasis, a chronic skin disease characterized by dry and scaly red patches, especially on the skin of the ears and genitals, vitamin E is an important substance that can support a healthy body. This substance also has an antioxidant effect that can protect the body's cells from damage, vitamin K has been proven to remove scars, both bruises, scratches,

Olive oil can treat diaper rash in babies because the content of fatty acids and vitamins in olive oil, especially vitamin E, functions as a natural antioxidant that is useful for protecting skin cells from free radicals that cause damage to the cells themselves. In addition, vitamin E can maintain skin elasticity and moisture, protect the skin from ultraviolet radiation, and accelerate wound healing (Fajriyah et al., 2015).

Regular use of olive oil in the morning and evening for 4 days can effectively reduce the degree of diaper rash. The degree of diaper rash can decrease if olive oil is given more often. This is because of the various substances contained in olive oil. Among them are vitamins and various kinds of fatty acids that can treat diaper rash in babies while keeping the skin moist. Olive oil also contains many active compounds such as phenols. Tocopherols, sterols, pigments, squalene and vitamin E. All of these compounds are beneficial for the skin by repairing damaged skin cells as antioxidants neutralizing free radicals reducing redness on the skin and can protect the skin from irritation (Apriyanti, 2012).

Therefore, giving olive oil can be used as a child nursing intervention, especially child nursing in families in dealing with diaper rash in infants.

This is supported by Apriza (2017) The Effect of Giving Olive Oil (Olive Oil) on Diaper Rash in Babies at Bangkinang Hospital in 2016. The results of this study indicate that before giving olive oil (olive oil) diaper rash in infants has decreased from moderate to mild , mostly in moderate degrees, namely 10 respondents (66.7%), while after giving olive oil, diaper rash in infants mostly in mild degrees, namely 7 respondents (46.6%).

## CONCLUSION

There is an effect of giving olive oil to healing diaper rash in infants in the Work Area of the Tulang Bawang Baru Health Center, Kec. Mayang Flowers in 2022.

## SUGGESTION

It is hoped that the community or parents can add insight into the benefits of olive oil and aloe vera to minimize or prevent the occurrence of baby diaper rash and parents are able to apply it

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