

## **Effectiveness Of Using Virgin Coconut Oil Against Diaper Rash In Babies In PMB Syafriani, Nibong District North Aceh District**

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### **ABSTRACT**

The World Health Organization (WHO) released data about babies who experience diaper rash. This results in as many as 250,000 out of 1,000,000 babies undergoing outpatient care who experience very severe diaper rash. This incident is most often found in babies aged around 1 year. The research aimed to analyze the effectiveness of virgin coconut oil (VCO) on diaper rash in babies at PMB Syafriani. The research method used a plan and strategy to carry out the research, which was included to answer the problems faced. The design of this research used a Quasi-experimental post-test only with a control group with a purposive sampling technique totaling 30 babies. The research results obtained were that the majority of respondents before being given the intervention had a mild/moderate diaper rash category of 14 respondents (46.7%) The majority of respondents after being given the intervention had a mild diaper rash category of 16 respondents (53.3%) Inuence The effectiveness of using Virgin Coconut oil against diaper rash in babies in PMB Syafriani, Nibong sub-district, North Aceh Regency with a sig value of 0.000 (p = value)

**Keywords:** *virgin coconut oil, diaper rash, baby*

## **INTRODUCTION**

The World Health Organization (WHO) released data about babies who experience diaper rash. This results in as many as 250,000 out of 1,000,000 babies undergoing outpatient care when experiencing very severe diaper rash. This incident is most often found in babies aged around 1 year. According to data released by the World Health Organization, the prevalence of skin irritation (diaper rash) in babies is quite high, namely 25% of babies born worldwide, most of whom suffer from skin irritation (diaper rash) due to the use of diapers. The highest numbers are found at the age of 6-12 months (WHO, 2018).

According to Apriza (2017), in Indonesia, 7-35% of male and female babies experience diaper rash. Most occur in babies aged 0-12 months. The cause of diaper rash in babies is generally because parents do not give the baby time to remove the diaper for at least 2-3 hours, the baby is free from wearing diapers, the condition of the diaper is full of urine, the size of the diaper does not suit the child's needs. As a result of frequent use of diapers, the baby's skin becomes infected due to fungi or germs in the feces or urine.

Based on the results of previous research, from Setianingsih & Hasanah (2017), the results showed that there was a decrease in the degree of diaper rash in babies aged 0-12 months after giving olive oil for 5 days in the morning and evening around 2.5 ml of olive oil (olive oil) with a sample of 36 babies with grade 1 diaper rash who experienced recovery, 25 babies (69.9%) and 11 babies (21.6%) experienced improvement in grade 2 diaper rash. The second research conducted by Jennifa, Atik, & Purwaningsih (2014) showed results from applying VCO (Virgin Coconut Oil) for 21 days to a sample of 14 babies with mild diaper rash, 12 babies (85.7%) experienced recovery and 2 babies (14.3%) who still experienced grade 2 diaper rash. Then the third was carried out by Nurlaetul, Hartini & Astuti (2016) by applying for 5 days using nigella sativa oil (black cumin oil) from a sample of 18 babies with grade 2 diaper rash, the results showed that 17 babies had grade 1 diaper rash and 1 baby still had grade 2. The fourth research was conducted by Imran (2017) by applying baby oil, using a sample of 10 babies with grade 1 diaper rash, it was found that 7 babies (70%) experienced recovery and 3 babies (30%) experienced an increase in grade 2 diaper rash. Coverage for babies experiencing skin irritation (diaper rash) is 35 babies. Based on this, research needs to be carried out on the effectiveness of using virgin coconut oil against diaper rash in babies in Pmb Syafriani District. Nibong District. North Aceh to create an internal policy appropriately and in accordance with established procedures.

## METHODS

The design of this research used a Quasi-experimental post-test only with the control group. The design uses a treatment group that is given intervention in the form of standard preventive care with VCO every time the baby's diaper is changed (every 3 hours) in areas of skin that are in close contact with the diaper. The sample for this study was a baby who experienced diaper rash at PMB Syafriani, Nibong Baroh Village, District. Nibong District. North Aceh. The sampling technique was purposive sampling, totaling 30 babies with diaper rash. Data collection was carried out by interviews and observations.

Bivariate analysis was used to determine whether there was a decrease in the degree of diaper rash before and after being given virgin coconut oil, namely by carrying out the T-test, namely the dependent T-test if the data was normally distributed and using the Wilcoxon test if the data was not normally distributed.

## RESULTS AND DISCUSSION

Based on research conducted by researchers in March – May 2024, there were 30 respondents with a research entitled "Effectiveness Of Using Virgin Coconut Oil Against Diaper Rash In Babies In PMB Syafriani, Nibong District North Aceh District". Then the results of the characteristics of respondents can be obtained as follows.

**Table 2.**

Frequency Distribution of Characteristics in PMB Syafriani, Nibong District, North Aceh Regency

No	Characteristic	N	%
1	20-35 years	28	93,3
	>35 years	2	6,7
	<b>Amount</b>	<b>30</b>	<b>100.0</b>
No	Education	N	%
2	SMP	6	20
	SMA	17	56,7
	D III/S1	7	23,3
	<b>Amount</b>	<b>30</b>	<b>100.0</b>
No	Type Of Work	N	%
3	Work	9	30
	Doesn't Work	21	70
	<b>Amount</b>	<b>30</b>	<b>100.0</b>
No	Income	N	%
4	Upper UMP	15	50
	Under UMP	15	50
	<b>Amount</b>	<b>30</b>	<b>100.0</b>
No	Number of Child	N	%
5	1 Child	11	36,7

2-4 Child		19	63,3
<b>Amount</b>		<b>30</b>	<b>100.0</b>
<b>No</b>	<b>Age Of Child</b>	<b>N</b>	<b>%</b>
5	1-6 months old	20	66,7
	7-11 months old	10	33,3
<b>Amount</b>		<b>30</b>	<b>100.0</b>
<b>No</b>	<b>Weight at Birth</b>	<b>N</b>	<b>%</b>
6	<2500 gram	1	3,3
	2500-4000 gram	29	96,7
<b>Amount</b>		<b>30</b>	<b>100.0</b>

Source: Primary Data (Processed in 2024)

Based on Table 1, it can be seen that the majority of respondents aged 20-35 years were 28 people (93.3%), had a high school education as many as 17 people (56.7%), were not working as many as 21 people (70%), had income above the minimum wage (UMR). 15 people (50%), the number of children was 2-4 people (63.3%), the number of children aged 0-6 months was 20 people (66.7%) and the birth weight was 2500-4000 grams. 29 people (96.7%).

**Table 2.**

Frequency Distribution of Respondents Based on Diaper Rash in PMB Syafriani, Nibong District, North Aceh Regency

No	Diaper Rush	Before		After	
		f	%	f	%
1	Very light	0	0	8	26,7
2	Light	5	16,6	16	53,3
3	Light-medium	14	46,7	6	20
4	Currently	11	36,7	0	0
<b>Amount</b>		<b>30</b>	<b>100</b>	<b>30</b>	<b>100</b>

Source: Primary Data (Processed in 2024)

Based on Table 2, it can be seen that before being given virgin coconut oil, the majority experienced mild/moderate diaper rash, 14 people (46.7%), whereas after being given virgin coconut oil, the majority experienced mild diaper rash, 16 people (53.3%)

**Table 3. Data Normality Test**

Groups	Shapiro-Wilk		
	Statistik	Df	p value
Diaper rash pretest	0,798	30	0,000
Diaper rash posttest	0,804	30	0,000

Source: Primary Data (Processed in 2024)

Based on Table 3, it can be seen that the results of the normality test are not normally distributed ( $p < 0.05$ ), namely diaper rash before administering virgin

coconut oil with a  $\rho$  value of 0.000 and after administering a virgin coconut oil compress of 0.000, so the statistical test used is the Wilcoxon test.

**Table 4.**  
Average Diaper Rash Before and After Giving Virgin Coconut Oil in PMB Syafriani Nibong District North Aceh Regency

Virgin Coconut Oil	Diaper Rush		
	Mean Pretest	Mean Posttest	Diference
Pretest-posttest	1,60	0,97	0,63

*Source: Primary Data (Processed in 2024)*

Based on Table 4, it can be seen that before being given virgin coconut oil the average number of respondents' diaper rash was 1.60, whereas after being given virgin coconut oil the average level of diaper rash was 0.97 with a decrease of 0.63, meaning there is a difference in the average degree of diaper rash before and after administering virgin coconut oil.

**Table 5.**  
Posttest diaper rash- Pretest diaper rash with the Wilcoxon test at PMB Syafriani Nibong District North Aceh Regency

Virgin Coconut Oil	Ruam Popok			
	Negatif Ranks	Positif Ranks	Ties	$\rho$ value
Pretest-posttes	30	0	0	0,000

*Source: Primary Data (Processed in 2024)*

Based on Table 5, it can be seen that after being given virgin coconut oil, 30 respondents experienced a decrease in the degree of diaper rash (negative value ranks 30), and there were 0 respondents who experienced an increase in the degree of diaper rash after being given virgin coconut oil (positive value ranks 0) and none There were respondents whose degree of diaper rash persisted after being given virgin coconut oil (tie value 0) with a  $\rho$  value of 0.000, meaning that providing virgin coconut oil was effective in treating diaper rash in babies.

## **DISCUSSION**

### **Coconut Oil Effectiveness Results**

Based on the results of the Wilcoxon test to determine the effectiveness of the research, it was found that the average diaper rash before and after the intervention was given, the results of the normality test were not normally distributed ( $p < 0.05$ ), namely diaper rash before giving virgin coconut oil with a  $p$  value of 0.000 and after giving virgin coconut oil 0.000, so the statistical test used is the Wilcoxon test.

The results of this research are in accordance with research conducted by Raras Dwi, et al, (2023) Data analysis using the Wilcoxon test. The results of this study show that there is a difference after giving VCO to babies aged 0-12 months  $p = 0.000 (< 0.05)$  with an average decrease score of 1,175. There is an effect of giving Virgin Coconut Oil (VCO) on diaper rash in babies aged 0-12 months given 2x a day for 5 days. Vco can be an alternative for treating diaper rash in babies. Based on the results of research conducted by Setianingsih and Hasanah (2017), it was found that there was a reduction in the degree of diaper rash in babies aged 0-12 months, after giving olive oil for 5 days in the morning and evening at around 2.5 ml of olive oil.

The results of research by Jennifa et al, (2014), obtained results from applying VCO (virgin coconut oil) for 21 days to a sample of 14 babies with mild diaper rash who experienced recovery from 12 babies (85.7%) and 2 babies (14.3 %) who still have a rash.

## **CONCLUSION**

Based on research entitled The Effectiveness of Using Virgin Coconut Oil on Diaper Rash in Babies in PMB Syafriani, Nibong District, North Aceh Regency, it can be concluded that the Effect of Effectiveness of Using Virgin Coconut Oil on Diaper Rash in Babies in PMB Syafriani, Nibong District, North Aceh Regency with a sig value. 0.000 ( $p = \text{value} < 0.05$ ).

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