



## **Abnormal Skin Conditions (Skin Disorders) in Babies Aged 0-12 Months Regarding the Use of Tools to Maintain the Cleanliness and Comfort of Babies (Baby Diapers) And Mother 's Behavior In Tangkil Village**

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### **Abstract**

Babies have very sensitive skin, different from adult skin, which makes babies more susceptible to infection, irritation, and allergies, and it is not uncommon for babies to experience dermatitis, one of which is commonly called diaper dermatitis. Baby diapers are tools used and created to absorb urine and hold feces, designed to keep the skin dry so that it is protected from direct contact with the baby's clothes, bed and environment. The purpose of this study was to determine the relationship between the use of tools to maintain cleanliness and comfort of babies (baby diapers). This type of research is quantitative analytical. The population and sample of respondents were all babies aged 0-12 months who used baby diapers, totaling 64 people. The behavioral measurement method uses the scoring method and for data processing uses univariate and bivariate analysis. Data were analyzed descriptively in the form of tables and narratives. The results of the study showed that the level of maternal knowledge was good, the mother's attitude and actions were good. There was no significant relationship between maternal knowledge of skin disorders in infants ( $p$  value = 0.648), there was no significant relationship between maternal attitudes towards skin disorders in infants ( $p$  value = 0.256), but there was a significant relationship between maternal actions towards skin disorders in infants ( $p$  value = 0.045).

**Keywords:** Skin Conditions, Skin Disorders, Babies, Use of Tools, Baby Diapers, Mother's Behavior, Tangkil Village

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## 1. Introduction

Babies have very sensitive skin, different from adult skin, which makes babies more susceptible to infection, irritation, and allergies, and it is not uncommon for babies to experience dermatitis, one of which is commonly called diaper dermatitis. Diaper dermatitis or diaper rash is a skin disorder that occurs due to inflammation in the area covered by the diaper, namely the genitals, around the anus, buttocks, thigh folds, and lower abdomen, which is usually caused by prolonged contact with certain materials and high levels of skin moisture due to urine and feces (Rukiyah & Yulianti, 2010).

Many mothers make disposable diapers their main choice when choosing baby diapers because the function of disposable diapers can make it easier for mothers to maintain the cleanliness and comfort of their babies when sleeping or traveling. Its use is also not difficult and only takes a short time, and disposable baby diapers are easy to carry and can be obtained anytime and anywhere. Disposable diapers offer advantages at affordable prices for all groups, both mothers who are economically well off and those who are less so, choose this alternative to the troublesome use of pants. However, behind the many advantages of disposable diapers, it turns out that they can cause several skin disorders in babies, such as diaper rash (diaper dermatitis).

The use of disposable diapers is not balanced with the mother's knowledge about the manufacturing process and the contents of disposable diapers. The high number of diaper rashes or irritation on the baby's skin due to the use of diapers causes anxiety for parents and gives rise to various assumptions that disposable diapers contain materials that are not safe for babies and the manufacturing process does not meet the requirements. The results of the study by De Vito & Schecter (2002), obtained from four diapers examined, there were 3 diapers containing dioxin (a by-product of bleaching using chlorine), which were divided into 2 disposable diapers and 1 diaper made of cotton. Another study by Bayu (2018), from 11 samples of sanitary products such as tampons, diapers and feminine pads, chlorine dissolved in the sample soaking water was detected in all samples except for sanitary products made from cotton raw materials with a concentration of 25-707 mg/kg.

Chlorine use can have long-term and short-term impacts. The size of the effects of chlorine use is based on the level, type of compound and the level of toxicity of the





compound. The effects of chlorine on long-term health are disrupting the immune system, damaging the liver and kidneys, causing cancer and disrupting the reproductive system. The short-term effects of exposure to chlorine are irritation. Irritation caused by chlorine on the skin can cause burning, inflammation and blistering. Some of the effects of chlorine exposure on the skin include making the skin dry, causing brownish spots, hyperkeratosis and the appearance of atypical epithelial cells in the epidermis of the skin (Kurniawana, 2014).

According to Maryunani (2010), the symptoms of diaper dermatitis vary from mild to severe and can be seen clinically as follows:

- a) The symptoms commonly found in diaper dermatitis due to contact with irritants are widespread redness, shiny, sometimes similar to burns, the appearance of red spots, blisters or scaly wounds, sometimes wet and swollen in areas that have the longest contact with the diaper, such as the inner thighs and groin folds.
- b) Symptoms that occur due to repeated friction on the edge of the diaper, namely reddish spots that form a line on the edge of the diaper on the thighs and stomach.
- c) Symptoms due to candida albicans fungus are characterized by bright red spots or bumps, wet with blisters on the mucous membrane of the anus and the skin around the anus, the lesions have clear boundaries and there are other lesions around them.

According to Wahyuni, Kapti & Fatimah (2012), perianal care for babies is the care of the area covered by diapers on babies. Prevention of diaper rash can be done by avoiding the use of wet diapers, cleaning properly, using diapers that are not too tight and letting the genital area be exposed to air for a while. The mother's ability in perianal care is very dependent on various factors, one of which is knowledge related to perianal care (Aisyah, 2009).

The worst impact of using the wrong diapers, apart from disrupting skin health, can also disrupt the growth and development of babies and toddlers. It was stated by a skin health expert in Jakarta that the low level of knowledge on how to use baby diapers properly has indeed become a symptom in Indonesia. Prevention of diaper rash must be done immediately by avoiding the use of wet diapers.





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According to Notoatmodjo (2010) knowledge is the result of "knowing" from humans and occurs after someone senses a certain object. Knowledge will greatly determine a person's behavior, health behavior is a person's response to stimuli or objects related to illness and disease, health service systems, food and drink, and the environment (Notoatmodjo, 2010).

### 2. Research Methods

This research method is quantitative to determine the frequency distribution of skin disorders in infants aged 0-12 months which was carried out in Tangkil Village on November 7, 2024. The population in this study were babies aged 0-12 months who used baby diapers in Tangkil Village. The research sample was the entire population using the total sampling technique. The instrument used in this study was a questionnaire sheet. There are 2 types of variables in this study, namely the independent variable, namely maternal behavior and the dependent variable, namely skin disorders.

Univariate analysis was used to present quantitative data to determine the frequency distribution of skin disorders in infants aged 0-12 months. Bivariate analysis was used to test the relationship between independent variables (gender, age of the baby, use of diaper type, duration of use, frequency of use, knowledge, attitude, and action) with the dependent variable (skin disorders). The statistical test used was the Chi-Square test, if the significance limit is obtained p value <0.05 means there is a statistically significant relationship and if p value > 0.05 means there is no statistically significant relationship.

### 3. Results and Discussion

#### a) Results

Table 1.

Relationship between Baby Gender, Baby Diaper Type, Duration of Use Diapers, and Frequency of Diaper Use with History of Skin Disorders

Variables	Abnormalities Skin Baby				Total		p- value
	Once		No Once		n	%	
	n	%	n	%			
Type Sex Man	25	61.0	16	39.0	41	100	0.6740
Woman	12	52.2	11	47.8	23	100	





Amount	37	57.8	27	42.2	64	100	
Type Baby Diapers							
Cloth	1	4.3	22	95.7	23	100	
Very Use	36	87.8	5	12.2	41	100	0.0001
Amount	37	57.8	27	42.2	64	100	
Long Use							
1-4 O'clock	10	30.3	23	69.7	33	100	
> 4 O'clock	27	87.1	4	12.9	31	100	0.0001
Amount	37	57.8	27	42.2	64	100	
Frequency of Use							
Often	28	75.7	9	24.3	37	100	
Seldom	9	33.3	18	66.7	64	100	0.0020
Amount	37	57.8	27	42.2	64	100	

Table 2.  
 Relationship between Knowledge, Attitude, and Action  
 towards History Abnormalities Skin in Babies

Variables	Abnormalities Skin Baby				Total		p- value
	Once		No Once		n	%	
	n	%	n	%			
Knowledge							
Good	15	23.4	24	37.5	39	60.9	
Currently	11	17.1	11	17.1	22	34.4	0.648
Bad	2	3.1	1	1.5	3	4.7	
Amount	28	43.6	36	56.4	64	100.0	
Attitude							
Good	17	26.5	18	28.1	35	54.6	
Currently	10	15.6	19	29.6	29	45.4	0.256
Bad	0	0	0	0	0	0	
Amount	27	42.1	37	57.9	64	100.0	
Action							
Good	7	10.9	13	20.3	20	31.3	
Currently	6	9.3	13	20.3	19	29.7	0.045
Bad	17	26.5	8	12.5	25	39.0	





Amount	30	46.7	34	53.3	64	100.0	
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## b) Discussion

Based on the research results, it was found that there was no relationship between the sex of the baby and the history of skin disorders. This can be seen from the number of men and women who have experienced a history of skin disorders which are not much different, namely 25 men (61.0%) and 12 women (52.2%). The difference in skin pigment in babies, both men and women, is basically not much different, but much thinner than adult skin. Based on its physiological anatomy, baby skin has a higher water content so that the function of skin protection is not yet optimal (Budiarta, 2009).

From the results of the study, it was found that there was a relationship between the type of baby diaper and the history of baby skin disorders. This can be seen by comparing the number of babies who have experienced a history of skin using disposable diapers as many as 36 (87.8%) compared to using cloth diapers. Users of disposable diapers experience more skin disorders because the materials in disposable diapers contain chemicals that can be sensitive to babies, such as the use of chlorine in the bleaching process of disposable diapers. Coupled with the mother's bad behavior in using it, it is a factor in the high number of disposable diaper use causing a history of skin disorders (Counts, Weisboar & Yin, 2017).

This study shows a relationship between the duration of diaper use and the history of skin disorders in infants. If a comparison is made between mothers who change their baby's diaper every 1-4 hours and those who change their baby's diaper for >4 hours, then the babies who have a history of skin disorders are mothers who change their baby's diaper for >4 hours, which is 27 (87.1%) babies. The correct use of diapers is to change the baby's diaper every 1-4 hours, because if it is more than 4 hours, it is feared that bacteria from the baby's feces will interfere with the baby's skin health, while the baby's skin is still very vulnerable and the protection of the baby's skin is not as optimal as adult skin (Hazlianda, 2014).

The relationship between the frequency of diaper use and the history of skin disorders is also proven by the results of this study. It was found that 28 (75.7%) babies





had a history of skin disorders due to frequent use of diapers. Meanwhile, for babies who rarely use diapers, only 9 (33.3%) babies have experienced skin disorders. The more often babies use diapers, especially disposable ones, the more susceptible their skin is to skin disorders (Aisyah, 2016).

The condition of disposable baby diapers containing hazardous materials such as chlorine requires better maternal behavior, in order to minimize the occurrence of skin disorders in babies. Such as how to choose diapers that are safe for babies, the duration of safe diaper use, frequency of use and other actions related to the use of these diapers (Januarti, 2011).

Mother's behavior in using baby diapers consists of knowledge, attitudes, and actions of mothers. From the results of this study, there was no relationship between knowledge ( $p = 0.648$ ) attitudes ( $p = 0.256$ ) to the history of skin disorders in babies. However, there is a relationship between actions ( $p = 0.045$ ) to the history of skin disorders in babies. We can see from the results of the study that the actions of mothers with bad categories experienced more skin disorders in their babies compared to the actions of mothers who were good and moderate. Researchers assume that if the mother's behavior is good in using babies, skin disorders will not occur, conversely if the mother's behavior is not good in using baby diapers, the baby will be susceptible to skin disorders.

#### 4. Conclusion

Based on the results of research regarding the description of knowledge regarding dental and oral health maintenance in grade II (two) elementary school children in Bantaeng Regency, South Sulawesi, it can be concluded that:

- 1) There is The relationship between types of baby diapers, namely cloth diapers and disposable diapers, and skin disorders baby 0-12 month in Tangkil Village.
- 2) There is a relationship between the duration of diaper use for 1-4 hours and >4 hours with skin disorders in babies aged 0-12 months in Tangkil Village.
- 3) There is a relationship between the frequency of use of baby diapers, those who often use and rarely use baby diapers, and skin disorders in babies aged 0-12 months in Tangkil Village.





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- 4) There is no relationship between maternal knowledge and attitudes towards skin disorders in infants aged 0-12 months in Tangkil Village.
- 5) There is a relationship between maternal actions towards skin disorders in infants aged 0-12 months in Tangkil Village.

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