

Article

FACTORS RELATED TO THE INCIDENT OF DIAPER RASH IN BABIES AT POSYANDU MELATI SUCI 3-4 SUKAKARYA DISTRICT, BEKASI DISTRICT, 2023

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ABSTRACT

(WHO) in 2012, the prevalence of skin irritation (diaper rash) in babies aged 0-12 months is quite high, 25% of the 6,840,507,000 babies born in the world, most of whom suffer from diaper rash due to the use of diapers. WHO literature estimates in 2020 regarding diaper rash rates vary widely, ranging from 16% to 65%, and considering the short duration of diaper rash (usually 2-4 days). The aim of this research is to determine the relationship between age, education, employment, knowledge and the role of parents with the incidence of diaper rash in babies at Posyandu Melati Suci 3-4 Sukakarya District, Bekasi Regency in 2023

The research method used is a cross sectional survey method. The analysis used is the Chi Square Test. This research uses primary data from interviews and filling out questionnaires by respondents.

The results of the research show that the variables associated with diaper rash in babies at Posyandu Melati Suci 3-4, Sukakarya District, Bekasi Regency in 2023 are maternal education (p value 0.014), maternal knowledge (P value 0.029), while factors that are not related are age (P value 0.728), work (P value 1.000), parental role (P value 0.494).

Advice to health workers to provide education on how to maintain the cleanliness of the baby's anogenital area by avoiding the use of disposable diapers in order to reduce the number of skin disorders in babies and toddlers

I. INTRODUCTION

Diaper rash is the most common contact eczema in infants with the main cause being an irritant reaction to urine and feces, which is facilitated by occlusive conditions under the diaper, which

causes hyperhydration of the stratum corneum (Fölster-Holst, 2018).

The incidence of diaper rash varies in each country, depending on the baby's cleanliness, parents' (caregivers') knowledge about how to use diapers and may also be related to weather factors.

WHO literature estimates in 2020 regarding diaper rash rates vary widely, ranging from 16% to 65%, and given the short duration of diaper rash (usually 2-4 days), the majority of cases are not treated by medical professionals (Ojeda & Mendez, 2023).

The incidence of diaper rash in Indonesia reaches 7-35%, affecting male and female babies under 3 years old, with the highest prevalence in babies aged 9-12 months. The prevalence of diaper rash in West Java in 2017, there were 63.5% of babies who had experienced diaper rash and Bekasi Regency also had a high incidence rate, namely in Bekasi Regency (15.7%). A preliminary study conducted on 35 mothers of toddlers at Posyandu Melati Suci 3 and 4 turned out that 15 people experienced diaper rash or 42.85%. (Nababan, 2019) (Indonesian Ministry of Health, 2019)

In recent years, the use of disposable diapers has become very common in Indonesia. Various sizes are easily available in the community with various types and prices to choose from. Most mothers prefer disposable diapers compared to using cloth diapers, for practical reasons so that they don't feel the need to frequently change diapers that are wet due to defecation, besides that it makes the house cleaner and doesn't get exposed to baby urine or babies who can't use the toilet. (Ojeda & Mendez, 2023)

The causes of diaper rash are multifactorial, including internal and external factors, internal factors including the role of urine, feces, friction, high skin humidity, chemical irritants, poor and inappropriate use of diapers, and the presence of bacterial or fungal infections, and other factors. external factors include culture, environment, the role of parents. As is known, the factors mentioned above are one of the causes of diaper rash. In accordance with research by Izzaty & Julianti (2020)

regarding the relationship between the occurrence of a case and its close relationship with environmental factors. Musmundiroh's research also states in his article that behavioral factors are the most important determinant in making decisions (Musmundiroh, 2019).

Skin conditions that are too moist will more easily damage the skin's barrier (defense), making it easier for skin irritation to occur. Usually diaper rash is not dangerous, but it can cause pain and cause anxiety in babies, toddlers and parents. Every baby who uses diapers has the potential to suffer from diaper rash and urinary tract infections. (Ojeda & Mendez, 2023)

Another factor that causes diaper rash is ammonia in urine or feces which can cause skin maceration. Another cause is increased skin hydration, damp skin is more easily injured due to diaper friction when the child moves and is more easily irritated. Other factors are contact with skin irritants (urine, feces, bile salts), mechanical friction (skin to skin, diaper to skin), skin pH, nutritional status or diet (stool composition), diarrhea, and certain medical conditions. (Irfanti et al., 2020)

How to deal with diaper rash in children consists of five steps according to IDAI (2022), namely: A (Air out) by leaving the diaper area dry in the open air for as long as possible. B (Barrier) by applying cream containing zinc oxide or petroleum to the diaper area to protect the skin (barrier) in the diaper area. C (Clean) by keeping the diaper area clean by immediately changing dirty diapers. D (Diapers) As long as your child has diaper rash, you should use disposable diapers. E (Educate) by providing information on how to prevent the recurrence of diaper rash. Parental knowledge and behavior in using diapers for babies and children under 5 years of age (toddlers) in Indonesia is also still low (Carr et al., 2020).

The results of Hadminah's research (2022) showed that there was no

relationship between maternal education and diaper rash in babies. Meanwhile, the Odds Ratio (OR) value is 1.854, which means that mothers who have low education are 1.854 times more likely to experience diaper rash in their babies compared to mothers who have higher education.

II. METHODS

The research method used is a cross sectional survey method. The analysis

III. RESULT

Table 1. Respondent Characteristics

Variable I	Category	f	%
Rash	Yes	35	70.0
Diaper	No	15	30.0
Age	< 20 or > 35 years	13	26.0
	20 – 35 years	37	74.0
Education	< High school	34	68.0
	> High school	16	32.0
Work	Doesn't work	43	86.0
	Work	7	14.0
Knowledge	Not enough	23	46.0%
	Good	27	54.0%
The role of parents	Not enough	22	44.0%
	Good	28	56.0%

Based on table 1 above, it shows that of the 50 respondents, 35 people (70.0%) had babies who had diaper rash, and 15 people (30.0%) had babies who did not have diaper rash. There were 37 people (74.0 %) aged 20-35 years and 13 respondents (26.0%) were at risk or aged < 20 years or > 35 years. There were 34 mothers (68.0 %) with <high school education, and 16 mothers

used is the Chi Square Test. This research uses primary data from interviews and filling out questionnaires by respondents. The number of samples in this study was 50 people. This research will be conducted in October 2023 at Posyandu Melati Suci 3-4 Sukakarya District , Bekasi Regency.

(32.0%) with >high school education. There were 43 people (86.0 %) who were housewives and did not work, while 7 people (14.0%) were working mothers. There were 27 people (54.0 %) with good knowledge, and 23 people (46.0%) with poor knowledge. And as many as 22 people (44.0 %) their parents' role was not good, and 28 people (56.0%) their parents' role was good.

Table 1 Relationship between maternal age and the incidence of diaper rash in babies

Mother's Age	Diaper Rash				Total		P Value	OR (95%CI)
	Yes		No		F	%		
	f	%	f	%				
<20 or >35 years	10	76.9%	3	23.1%	13	100.0%	0.728	1,600
20-35 years	25	67.6%	12	32.4%	37	100.0%		(0.371-6.906)
Total	35	70.0%	15	30.0%	50	100.0%		

Table 2 Relationship between maternal education and the incidence of diaper rash in babies

Education	Diaper Rash				Total		P Value	OR (95%CI)
	Yes		No		F	%		
	f	%	f	%				
< High school	28	82.4%	6	17.6%	34	100.0%	0.009	6,000 (1,596-22,551)
> High school	7	43.8%	9	56.3%	16	100.0%		
Total	35	70.0%	15	30.0%	50	100.0%		

Table 3: Relationship between mother's work and the incidence of diaper rash in babies

Work	Diaper Rash				Total		P Value	OR (95%CI)
	Yes		No		F	%		
	f	%	f	%				
Doesn't work	30	69.8%	13	30.2%	43	100.0%	1,000	1,083 (0.186-6.324)
Work	5	71.4%	2	28.6%	7	100.0%		
Total	35	70.0%	15	30.0%	50	100.0%		

Table 4 Relationship between knowledge and the incidence of diaper rash in babies

Knowledge	Diaper Rash				Total		P Value	OR (95%CI)
	Yes		No		F	%		
	f	%	f	%				
Not enough	20	87.0%	3	13.0%	23	100.0%	0.035	5,333 (1,275-22,317)
Good	15	55.6%	12	44.4%	27	100.0%		
Total	35	70.0%	15	30.0%	50	100.0%		

Table 5 Relationship between parental roles and the incidence of diaper rash in babies

Role Parent	Diaper Rash				Total		P Value	OR (95%CI)
	Yes		No		F	%		
	f	%	f	%				
Not enough	17	77.3%	5	22.7%	22	100.0%	0.494	1,889 (0.535-6.670)
Good	18	64.3%	10	35.7%	28	100.0%		
Total	35	70.0%	15	30.0%	50	100.0%		

Based on the statistical results described in table 2-6, it is stated that the variables that are related to the incidence of diaper rash in babies are parental education

and knowledge, while the variables that are not related are age, employment and parental role .

IV. DISCUSSION

age is not directly related to the incidence of diaper rash in babies. So far, there is no strong scientific evidence that shows that the mother's age is directly related to the incidence of diaper rash in babies. Environmental and genetic factors that affect a baby's skin are also not directly related to the mother's age. For example, the sensitivity of the baby's skin or genetic factors in the family may contribute to a predisposition to diaper rash, but these are not related to the mother's age. Younger mothers or first-time mothers may not have enough knowledge or experience in caring for babies, including diaper rash prevention measures. This can include changing diapers regularly, gently cleaning the diaper area, and ensuring baby's skin stays dry.

Although maternal age is not a direct factor in the incidence of diaper rash, it is important for every mother, regardless of age, to understand good baby care practices, including keeping the diaper area clean, avoiding the use of products that may cause irritation, and changing diapers regularly.

Maternal education can have a significant influence on the incidence of diaper rash in babies. Although there is no direct correlation between the mother's education level and diaper rash, the level of education can influence the mother's knowledge and understanding of baby care, hygiene, and preventive measures that can help reduce the risk of diaper rash. Mothers with a high level of education are able to capture the information they receive to take positive action (Herlina & Rokhaidah, 2018).

Education level is often related to individual knowledge. Individuals who have a lot of knowledge tend to act and behave in accordance with their knowledge. The knowledge of parents, especially mothers, is closely related to education, so it will influence parents'

behavior in maintaining healthy skin in their children. Accuracy in caring for the perianal area requires appropriate maternal behavior in maintaining the health of the baby's skin. (Rustiyaningsih et al., 2018)

Education influences the learning process, the higher a person's education, the easier it is for a person to receive information. Information about a person's higher education is obtained both from other people and from the mass media. The more information you enter, the more knowledge you gain. (Ritonga, 2021)

Based on the results of research data analysis using the Cooperative Learning Together method regarding diaper rash, it shows that the average knowledge of pregnant women before being given health education about preventing diaper rash is 58.75 and the average knowledge of pregnant women after being given health education is 83.25 with a significant value of 0.000 or p value <0.05. There is an influence of health education and prevention of diaper rash on the knowledge of pregnant women. Respondents with a high school education level were relatively good at absorbing information about preventing diaper rash, so their knowledge about preventing diaper rash was also good. This is as stated in the theory put forward by Mubarak and Chayatin that the higher a person's education, the easier it is to receive information. It is better if someone has a low level of education, this will hinder the development of a person's attitude towards accepting information and new values. (Rusmawati et al., 2019)

Naimah found that the majority of respondents in the category of very rarely replacing the use of disposable diapers were 17 respondents (53%). This is because the majority of respondents who work as housewives are 21 people (66%), so because they work as housewives who have no income other than their husband's income, they indirectly have the ability to

buy disposable diapers (disposable diapers) as well. Even if you can afford it, it is used for a long period of time to save costs or reduce expenses (Naimah, 2019).

Parental knowledge and behavior in using diapers for babies and children under 5 years of age (toddlers) in Indonesia is still low. Previous research showed that 45.5% of respondents had sufficient knowledge, but there were still wrong actions in perianal care to prevent diaper rash in children. (Ojeda & Mendez, 2023)

The results of other research also show that one of the factors that has a significant influence on providing complementary breast milk (MP-ASI) to babies aged 0-6 months is education (p value 0.019). (Erlina, 2019)

This is different from the results of other studies which show that the level of maternal knowledge is 60.9 % and there is no significant relationship between maternal knowledge of skin disorders in babies with a P value of 0.648 > 0.05. (Simamora, 2019)

According to Wawan and Dewi (2018), one way of gaining knowledge is based on personal experience, namely events that have happened before, either directly to the individual himself or hearing and seeing other people's experiences, can make the individual know because of previous memories, so that The individual comes to understand that he not only knows but is able to mention and apply it so that he can use these principles, then analyze, namely a person's ability to describe or separate a problem, then be able to synthesize or conclude from the problem that occurs, and evaluation is able to judge well what is good. and which ones don't.

The level of knowledge influences socialization, where a person reacts according to stimuli. The knowledge gained underlies a person in overcoming the problems they will face, so it is clear that mothers who have less knowledge cannot overcome the problem of diaper

rash in their babies and mothers who have good knowledge can overcome the problem of diaper rash in their babies. (Sugiarti, 2017) (Simanjutak et al., 2017) (Armi, 2019)

Behavior is a mother's tendency to act and actions are related to the occurrence or non-occurrence of a health problem. According to Aimee Liu, book author and member of the American Academy of Pediatrics, diaper rash occurs more often in babies who are not kept clean and left wet, especially if feces are left overnight in diapers, but diaper rash occurs less frequently in breastfed babies. So there is a confounding factor considering that most of the research subjects were <2 years old and were still breastfeeding. (Izzaty & Julianti, 2020) (Ojeda & Mendez, 2023)

The results of research conducted by Sugimura et al found that children who change disposable diapers less often per day can have an increased risk of diaper rash. An increased risk of diaper rash can occur due to wearing disposable diapers that take too long to change, which causes the perineal area to become moist, causing the emergence of pathogenic bacteria. (Simamora, 2019)

One of the factors that influences the incidence of diaper rash is the mother's incorrect behavior in using disposable diapers (diapers) for babies, such as keeping the genital area clean, rarely changing diapers and wearing diapers that are too tight, which will have a 2 times higher risk of their child suffering from diaper rash. compared to mothers who have the right behavior. Previous research shows that poor maternal behavior in the procedure of using disposable diapers prevents diaper rash by 45% with diaper rash being 55%. Then research in 2017 showed that there were still mothers who had negative behavior as much as 65.3 % , this means there were still mothers who were wrong in preventing diaper rash. (Ansori, 2015) (Ojeda & Mendez, 2023)

As a parent, there are several actions you can take to prevent and treat diaper rash

in babies, such as changing diapers regularly, especially after the baby defecates or urinates, cleaning the diaper area gently using warm water and a soft cloth. Using a special diaper rash cream or ointment before putting diapers on babies, choosing diapers that are appropriate to the baby's size and not too tight and keeping the baby's diaper area clean and dry can reduce the incidence of diaper rash in babies (Agustina, 2021) .

V. CONCLUSION

Based on the statistical results, the variables that are related to the incidence of diaper rash in babies are parental education and knowledge, while the variables that are not related are age, employment and the role of parents.

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