

**ANALYSIS OF THE RELATIONSHIP OF MOTHER'S
KNOWLEDGE WITH THE INCIDENT OF DIARRHEA IN
TODDLER IN THE BATOH HEALTH CENTER,
KOTA BANDA ACEH**

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Abstract

The study aimed to investigate the relationship between maternal knowledge and the occurrence of diarrhea in toddlers within the jurisdiction of the Batoh Community Health Center in Banda Aceh City. Diarrhea is identified as the leading cause of death in infants and toddlers, leading to poor nutritional status and growth failure. Accidental sampling was utilized as the method for selecting participants in this study. The findings revealed that out of the total participants, 8 individuals (33.3%) had low maternal knowledge regarding the incidence of diarrhea in toddlers, while 14 individuals (27.5%) had high knowledge in this area. On the other hand, 16 individuals (66.7%) had low knowledge regarding the absence of diarrhea in toddlers, while 37 individuals (72.5%) had high knowledge in this area. To determine the relationship between maternal knowledge and the occurrence of diarrhea in toddlers, the Chi-Square test was conducted. The test yielded a p-value of 0.803, which indicates that there is no significant relationship between maternal knowledge and the occurrence of diarrhea in toddlers within the Batoh Community Health Center's jurisdiction in Banda Aceh City. These findings suggest that maternal knowledge alone may not be the sole determinant of the occurrence of diarrhea in toddlers. Other factors such as hygiene practices, access to clean water, and proper sanitation may also play a significant role in preventing diarrhea in this population. Further research is needed to explore these factors and develop comprehensive interventions to reduce the incidence of diarrhea in infants and toddlers in this community.

Keywords: Diarrhea, Mother's Knowledge, Toddlers

1. INTRODUCTION

Diarrheal diseases remain a public health problem and are the leading cause of child morbidity and mortality in the world. Although preventable, through safe drinking water and adequate sanitation and hygiene, 780 million people lack access to improved drinking water, and 2.5 billion lack improved sanitation worldwide. Outbreaks of infectious diarrheal disease are widespread throughout developing countries where sanitation is relatively poor (Kateule et al., 2020).

Diarrhea is the most common cause of death in infants and toddlers (Simahara et al., 2023). Diarrhea leads to poor nutritional status and poor nutritional status and causes growth failure, even permanent weight loss due to fluid loss and dehydration. The problem felt is defecation with a soft or liquid consistency, it can even be in the form of water alone and the frequency is more frequent usually three or more times a day (Arda et al., 2020).

According to WHO data, around 1,400 children under the age of five die every day, and an estimated 525,000 children under the age of five die every year (Trisiyani et al., 2021). Based on *Riskesmas* data in 2018, the average prevalence of diarrhea in children under 5 years of age in Indonesia reached around 11.0% (Riskesmas, 2018). The number of diarrhea cases in Indonesia in 2020 was 44.4%, while in children under five the number of diarrhea was 28.9%. West Nusa Tenggara Province has the highest incidence of diarrhea for all ages with a prevalence of 78.3%, while the incidence of diarrhea in children under five years old in this province is 61.4%. Aceh alone has a total diarrhea case rate of 38.5%, while diarrhea in children under five has a prevalence rate of 18.5% (Ministry of Health of the Republic of Indonesia, 2020).

Diarrhea is an endemic disease that is often accompanied by death in Indonesia. In 2018, the number of diarrhea patients under five who were served in health facilities was 40.90% of the estimated diarrhea in health facilities (Soegijanto, 2004). Diarrhea disease is ranked as the second leading cause of death in children under five. Each year diarrhea causes the deaths of two billion children worldwide, of which as many as 525,000 cases of death at the age of five. Diarrhea in toddlers is a risk group for death if not taken seriously. The highest incidence of diarrhea occurs in the first two years of life and will decrease as the child grows older (Sari & Sartika, 2021).

The national incidence of diarrhea in children under five years of age in 2021 was 33.6% and 23.8% of the target. The disparity between provinces for service coverage of diarrhea patients of all ages is between 6.7% (North Sumatra) and Banten (68.6%). Meanwhile, the disparity between provinces for the coverage of services for diarrhea patients under five is between 3.3% (North Sumatra) and Banten (55.3%). Patients with diarrhea in toddlers from the data reported in Aceh province who were served in 2022 were 18,030 or 29% of the estimated diarrhea case finding. the coverage of diarrhea patients in toddlers given the highest service was Bener Meriah district at 56.75% and the lowest was Gayo Lues district which was only 1, 26% with overall coverage in Aceh province of 29.04%. One of the causes of diarrhea in the community that is still high is the lack of awareness of clean and healthy living behaviors. (Aceh Health Profile, 2022).

According to *Riskesmas* data, the highest incidence of diarrhea occurred in the Bireuen area with a percentage of 21.51 while the lowest diarrhea data according to *Riskesmas* Banda Aceh City was in Sabang city with a percentage of 5.4% (Riskesmas, 2018). In Banda Aceh City according to data in the working area of the batoh health center, it has the highest percentage of diarrhea incidence, namely 35 sufferers in 2022, which has 69 sufferers in children aged 1-4 years and the highest incidence occurs at the age of 20 years and over with an average of 11 sufferers and the incidence rate increases every month while the typical diarrhea that occurs at the age of 1-4 years with an average of 12 sufferers among children aged 1-4 years and there is an increase and decrease in the typical case every month. So that researchers are interested in choosing the location of the Batoh Health Center working area in Banda Aceh City as a place of research. This study also aims to determine the analysis of aspects of maternal knowledge with the incidence of diarrhea in children aged 1-4 years in the Batoh Health Center working area in 2022.

Suprpto (2017) argues that diarrhea is a disease with signs of changes in stools that are mushy to liquefied and an increase in the frequency of defecation (defecation) 3

times or more in one day. Factors that influence diarrhea are environment, nutrition, population, education, socioeconomics and community behavior. The factors of diarrhea can be divided into three, namely environmental factors, individual factors and behavioral factors. Environmental factors such as unclean water quality, dense environment and lack of availability of clean water facilities. Individual factors such as malnutrition and behavioral factors such as food sanitation and hygiene, open defecation, not washing hands before eating and not washing eating utensils before use (Utamingtyas et al., 2021).

Many risk factors are thought to cause the occurrence of diarrheal disease in infants and toddlers, one of the risk factors that is often examined is the environmental factors that include Clean Water Facilities (WASH), sanitation, latrines, Waste Water Drains (SPAL), bacteriological quality of water and housing conditions. Poor drinking water quality causes diarrhea cases (Rahman et al., 2016). The purpose of this study was to determine the relationship between maternal knowledge and the incidence of diarrhea in toddlers in the working area of the batoh health center, Banda Aceh city.

2. RESEARCH METHOD

This study was conducted in December 2023 involving 75 mothers of toddlers. Respondents in this study are mothers who have toddlers come to the health center or do posyandu toddlers held in each village. The method used was accidental sampling. The respondents were also given a questionnaire. Each respondent completed an assessment questionnaire to identify the relationship between maternal knowledge and diarrhea. This study was conducted in the Working Area of UPTD Puskesmas Batoh, Banda Aceh City District, Aceh Province, Indonesia. This location was chosen based on the consideration that the Batoh health center area has diarrhea cases as many as 62 cases in 2022, which is ranked 2nd most in the city of Banda Aceh.

3. RESULT AND DISCUSSION

3.1. Research Results

a. Respondent Characteristics

Table 1. Respondent Characteristics

VARIABLE	N	%
Mother's Age		
17 - 27	16	21,3
28 - 37	44	58,7
38 - 47	14	18,7
48 - 57	1	1,3
Total	75	100
Mother's Education		
High	31	41,3
Medium	41	54,7
Basic	3	4
Total	75	100

Baby's Age		
0 – 12	19	25,3
13 – 24	33	44
25 – 36	13	17,3
37 – 48	7	9,3
49 - 60	3	4
Total	75	100
Mother's Knowledge		
High	51	68
Low	24	32
Total	75	100
Incidence of Diarrhea		
Ever	22	29,3
Never	53	70,7
Total	75	100

Based on table 1 on the characteristics of maternal age, the most respondents were aged 28-37 (58.7%), and the lowest respondents were aged 48-57 (1.3%).

In the characteristics of maternal education shows the highest level of intermediate knowledge with a percentage of 54.7% high level of knowledge with a presentation of 41.3%. in the characteristics of the age of the baby the most is at the age of 13-24 months with a presentation of 44.0% and the lowest age of the baby is at the age of 48-60 months with a presentation of 4.0%. In the characteristics of maternal knowledge shows the category of low knowledge level is 32.0% and the category of high knowledge level is 68.0%. And on the characteristics of the incidence of diarrhea in toddlers showed that never diarrhea by 70.7% and who had diarrhea by 29.3%.

Table 2. Chi-Square Test Results

Variable	Incidence of Diarrhea				Total		<i>p</i>
	Ever		Never		n	%	
Mother's Knowledge	n	%	N	%			
Low	8	33,3	16	66,7	24	18	0,803
High	14	27,5	35	72,5	51	72	

From table 2, maternal knowledge with the presence of diarrhea in toddlers with low knowledge levels amounted to 8 people (33.3%) and high knowledge levels amounted to 14 people (27.5%). While maternal knowledge with no incidence of diarrhea in toddlers with low knowledge level amounted to 16 people (66.7%) and high knowledge level amounted to 37 people (72.5%). This means there is no relationship between maternal knowledge and the incidence of diarrhea in toddlers.

3.2. Discussion

This study is not in line with Muhammad (Firenza et al., 2022), the results of the study obtained a value of 0.001 which means $\alpha < 0.05$, it can be concluded that there is a

relationship between maternal knowledge and the incidence of diarrhea in toddlers in Pusong Village, Lhokseumawe.

Maternal knowledge does not directly affect the incidence of diarrhea. Even if the mother does not have the knowledge, the mother's knowledge about diarrhea may not have an impact because of the good behavior and hygiene of the mother and her family (Ekawati et al., 2023). In addition, good hygiene can also be another reason why maternal knowledge about diarrhea is not statistically significant to the frequency of diarrhea. The mother's level of education increases her awareness of the state of the home environment so as to prevent infection. Furthermore, highly educated mothers provide their children with health facilities, sanitation, and nutritious food (Tungga et al., 2018).

This study is not in line with Utamingtyas et al (2021), it is known that respondents with a lack of knowledge and experiencing diarrhea in toddlers are 26 respondents and respondents with a good level of knowledge who experience diarrhea in toddlers are 4 respondents. The statistical test results obtained a p value $(0.024) < \alpha (0.05)$ so that H_0 is accepted. This means that it can be known that there is a relationship between respondents' knowledge and the incidence of diarrhea in toddlers in the Padangsidimpuan Children's Hospital in 2020. This result shows that the majority of respondents have low knowledge about diarrhea so it can be said that one of the causes of recurrent diarrhea can be caused by low knowledge as well. Therefore, to address this, appropriate action is needed from related parties to increase the knowledge of respondents about diarrhea. Thus it is hoped that their knowledge can increase and this diarrheal disease does not occur repeatedly.

This study is in line with research Putri & Windi Wulandari (2019) that there is no statistically significant relationship between the mother's formal education level. This happens because the mother's understanding and knowledge is not only obtained through formal knowledge, but non-formal knowledge also plays a role. However, different results were found in other studies. Research that shows there is no relationship between the level of maternal knowledge about diarrhea and the incidence of diarrhea in toddlers (Rane et al., 2017).

4. CONCLUSION

Based on the results of this study, it can be concluded that the Chi-Square test results show a p value = 0.803, which is a p value > 0.05 , meaning that there is no significant relationship between maternal knowledge and the occurrence of diarrhea in toddlers within the Batoh Community Health Center's jurisdiction in Banda Aceh City. These findings suggest that maternal knowledge alone may not be the sole determinant of the occurrence of diarrhea in toddlers. Other factors such as hygiene practices, access to clean water, and proper sanitation may also play a significant role in preventing diarrhea in this population. Further research is needed to explore these factors and develop comprehensive interventions to reduce the incidence of diarrhea in infants and toddlers in this community.

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