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RISK FACTORS FOR DIARRHEA INCIDENCE IN TODDLERS IN THE WORK AREA OF BANDAR BARU COMMUNITY HEALTH CENTER, PIDIE JAYA DISTRICT IN 2024

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ABSTRAK

Background: Data on the number of toddlers in the Pidie Jaya area in 2022 was 18,039 toddlers with a target of finding diarrhea cases of 3,041 toddlers and cases found of 834 cases (27.42%). Furthermore, the number of toddlers in the Bandar Baru Health Center area in 2022 was 2,491 toddlers with a target of finding diarrhea cases of 390 toddlers, while the number of diarrhea cases found was 38 toddlers (9.74%) (Pidie Jaya Health Office, 2022). Meanwhile, data for 2023 showed that the number of toddlers in the Pidie Jaya area was 18,393 toddlers with a target of finding diarrhea cases of 3,101 toddlers and cases of 659 cases (21.25%). Furthermore, the number of toddlers in the Bandar Baru Health Center area is 2,579 toddlers with a target of finding diarrhea cases of 435 toddlers, while the number of diarrhea cases found is 68 toddlers (15.64%) (Pidie Jaya Health Office, 2023). **Research Methods**: This study uses a non-experimental quantitative research type, using a Cross-Sectional design approach method. The population in this study were all diarrhea cases in the Bandar Baru Health Center work area in 2024. The study was conducted in August 2024 during a visit to the integrated health post in 22 villages in the Bandar Baru Health Center work area. **Results**: The results of this study indicate that of the 38 respondents studied, 29 respondents (76.3%) had a good level of knowledge 24 respondents (77.4%) had good diarrhea management, and 5 respondents (71.4%) had poor diarrhea management. Meanwhile, from 9 respondents (23.7%) with less knowledge, there were 7 respondents (22.6%) who had adequate diarrhea treatment, and 2 respondents (28.6%) had poor diarrhea treatment. The results of the Chi-Square test obtained a p-value smaller than the α value (0.05), which means that there is a significant relationship between the level of knowledge and diarrhea treatment. Conclusions and suggestions: It can be concluded that there is a significant relationship between the level of mothers' knowledge of diarrhea treatment in children in the Bandar Baru Health Center work area of Pidie Jaya Regency. Based on the results of the study, there is a significant relationship between the attitude and behavior of mothers towards diarrhea treatment in children in the Bandar Baru Health Center work area of Pidie Jaya Regency. Based on the results of this study, it is hoped that future research will be further developed so that the results of this study are more accurate and add insight into diarrhea treatment in children.

INTRODUCTION

Diarrhea is one of the diseases that is still a public health problem in developing countries (Raini & Isnawati, 2017). The United Nations Children's Fund (UNICEF) in 2018 stated that diarrhea is the main killer of children, accounting for around 8% of all deaths among children under 5 years of age worldwide (Makgatho et al., 2019).

Based on (Indonesian Health Profile, 2023) as many as 314 or 10.37% of toddlers died due to diarrhea, while diarrhea cases served in health facilities were 3,979,700 per 1,000 population. This has increased compared to 2022, which was 1,516,438 per 1,000 population. In 2023, the number of toddler diarrhea sufferers served in health facilities was 179,172, or 46.3 percent of the estimated diarrhea in health facilities. Of the number of toddler diarrhea sufferers served in health facilities, as many as 83.6 percent (Aceh Province Health Profile, 2023).

Data on the number of toddlers in the Pidie Jaya area in 2022 was 18,039 toddlers with a target of finding diarrhea cases of 3,041 toddlers and cases found of 834 cases (27.42%). Furthermore, the number of toddlers in the Bandar Baru Health Center area in 2022 was 2,491 toddlers with a target of finding diarrhea cases of 390 toddlers, while the number of diarrhea cases found was 38 toddlers (9.74%) (Pidie Jaya Health Office, 2022). Meanwhile, data for 2023 showed that the number of toddlers in the Pidie Jaya area was 18,393 toddlers with a target of finding diarrhea cases of 3,101 toddlers and cases of 659 cases (21.25%). Furthermore, the number of toddlers in the Bandar Baru Health Center area was 2,579 toddlers with a target of finding diarrhea cases of 435 toddlers, while the number of diarrhea cases found was 68 toddlers (15.64%) (Pidie Jaya Health Service, 2023).

Several factors that cause diarrhea are caused by bacteria through contamination of food and drinks contaminated with feces and/or direct contact with sufferers (Nugraheni, 2012). In addition, the most dominant factors contributing to diarrhea are water, sanitation hygiene, family toilets, and water (Sri Mulyani et al., 2011). The distance of drinking water sources, availability, and ownership of toilets are risk factors for diarrhea. Diarrhea is associated with inadequate sanitation and poor hygiene patterns (Astuti, 2015).

Research conducted by the Mangkang Health Center in Semarang City on risk factors for diarrhea found that environmental factors related to poor community living behavior and poor environmental conditions are the cause of someone being susceptible to diarrhea (Ferllando, 2014). Research conducted by the Lamper Tengah Health Center in

Semarang on environmental sanitation related to diarrhea in toddlers found that the type of water source for drinking and the mother's behavior in managing food and drinks can affect the high rate of diarrhea in toddlers (D, Nurjazuli, & Nurpauji, 2015).

Research conducted stated that there is a relationship between knowledge and the incidence of diarrhea (p-value = 0.000), and there is a relationship between hand washing and the incidence of diarrhea (p-value = 0.000). The study stated that low knowledge and poor hand washing can cause diarrhea in toddlers (Sutriyati & Prasetyo, 2018). Another study stated that mothers of toddlers had sufficient knowledge of 30 people (51.7%) and had insufficient knowledge of 24 people (41.4%) (Humrah et al., 2018). Another study stated that knowledge and attitudes were related to maternal behavior in handling diarrhea in toddlers (Nadeak, 2019).

Several risk factors that contribute to the high incidence of diarrhea in the Bandar Dua Health Center work area include: 1). Poor Sanitation and Hygiene: Inadequate sanitation and poor environmental hygiene are major risk factors for the spread of diarrhea. Contamination of food and drink by bacteria through feces or direct contact with sufferers increases the risk of transmission of this disease. 2). Community Hygiene Behavior: Poor clean and healthy living behavior (PHBS), such as not washing hands with soap, poor management of food and drinks, and the habit of defecating in the open (BABS), contribute significantly to the high incidence of diarrhea. 3). Low Knowledge about Diarrhea Prevention: Public knowledge, especially mothers with toddlers, about how to prevent diarrhea and the importance of good sanitation is still low. Research shows that low knowledge about diarrhea prevention is closely related to the high incidence of diarrhea in toddlers.

Previous studies can conclude that there is a relationship between knowledge and attitudes in mothers the incidence of diarrhea in toddlers. The purpose of this study was to determine the risk factors for the incidence of diarrhea in toddlers in the Bandar Baru Health Center work area, Pidie Jaya Regency in 2024.

RESEARCH METHODS

The research design used in this study is a type of non-experimental quantitative research, using a Cross-Sectional design approach method. The variables used in this study are knowledge, attitudes and behavior toward the risk of diarrhea. The population in this study were all cases of diarrhea in the Bandar Baru Health Center work area in 2024, with as many as 38 children who experienced diarrhea. with a sampling technique

using the Lemeshow formula. The Lemeshow formula is a formula used to determine the number of unknown samples. The sample will greatly influence the representation of the population in the research process. The sampling technique is Accidental Sampling. Accidental Sampling is a sampling technique based on coincidence, namely any case that accidentally meets the researcher can be used as a sample if it is considered that the person who happened to be met is suitable as a data source.

RESULTS AND DISCUSSION

Research Results

Univariate Analysis

Table 1

Distribution of Respondent Characteristics in the Bandar Baru Health Center Work Area, Pidie Jaya Regency

Characteristics	N	%
Age		
41-50	3	7,9
31-40	21	55,3
21-30	14	36,8
Education		
Higher Education	4	10,5
Diploma Three	1	2,6
Diploma Two	1	2,6
Senior High School	29	76,3
Junior High School	2	5,2
SD	1	2,6
Work		
Civil Servant	1	2,6
Honorary	2	5,2
Housewife	35	92,1

Based on table 1. of the 38 respondents studied, shows that the age characteristics of the respondents were mostly 31-40 years old, namely 21 (55.3%) respondents, the educational characteristics of the respondents were mostly high school, namely 29 (76.3%) respondents, and the occupational characteristics of the respondents were mostly housewives, namely 35 (92.1%) respondents.

Bivariate Analysis

Table 2

Relationship of Knowledge Level to Handling Diarrhea in Children in the Bandar Baru Health Center Work Area, Pidie Jaya Regency

Level of Knowledge	Treatment of Diarrhea				Total	
	Good		Bad			
	N	%	N	%	n	%
Good	24	77,4	5	71,4	29	76,3
Not enough	7	22,6	2	28,6	9	23,7
Amount	31	100	7	100	38	100
p=0,019						

Based on Table 2. shows that of the 38 respondents studied, having a good level of knowledge consists of 29 respondents (76.3%) and those whose diarrhea handling is good 24 respondents (77.4%), and those whose diarrhea handling bad are 5 respondents (71.4%). While from 9 respondents (23.7%) with poor knowledge, there are 7 respondents (22.6%) whose diarrhea handling is sufficient, and 2 respondents (28.6%) whose diarrhea handling is bad. The results of the Chi-Square test obtained a p-value smaller than the α value (0.05) which means that there is a significant relationship between the level of knowledge and diarrhea handling.

Table 3

Relationship of Attitudes towards Handling Diarrhea in Children in the Work Area of Bandar Baru Health Center, Pidie Jaya Regency

Attitude and behavior	Treatment of Diarrhea				Total	
	Good		Bad			
	n	%	N	%	n	%
Good	24	77,4	5	71,4	29	76,3

Not enough	7	22,6	2	28,6	9	23,7
Amount	31	100	7	100	38	100
p=0,019						

Table 3. shows that of the 38 respondents studied, a good level of knowledge consists of 29 respondents (76.3%) and those whose diarrhea handling is good 24 respondents (77.4%), and those whose diarrhea handling is bad are 5 respondents (71.4%). While from 9 respondents (23.7%) with poor knowledge, there are 7 respondents (22.6%) whose diarrhea handling is sufficient, and 2 respondents (28.6%) whose diarrhea handling is bad. The results of the Chi-Square test obtained a p-value smaller than the α value (0.05) which means that there is a significant relationship between the level of knowledge and diarrhea handling.

Discussion

The relationship between maternal knowledge levels and the handling of diarrhea in children

Based on statistical tests 38 respondents studied who had sufficient knowledge consisted of 29 respondents (76.3%) and there was good diarrhea handling 24 respondents (77.4%), and those with poor diarrhea handling there were 5 respondents (71.4%). While from 9 respondents (23.7%) with less knowledge, there was sufficient diarrhea handling in as many as 7 respondents (22.6%), and diarrhea handling was poor there were 2 respondents (28.6%). The results of the Chi-square test using SPSS version 22 obtained a p-value = 0.019 which means the p-value is smaller than the value (α) 0.05 then H_a is accepted and H_o is rejected. This shows that there is a significant relationship between the level of maternal knowledge on diarrhea handling in children in the Bandar Baru health center work area, Piidie Jaya district.

Thus, out of 29 (76.3%) respondents who had a good level of knowledge, there were 24 (77.4%) respondents who had good diarrhea management, because the higher the level of a mother's knowledge about diarrhea, the easier it is for the mother to handle diarrhea in her child, especially if the mother already has experience from herself or others, then the mother is able to cope if diarrhea occurs in children. Meanwhile, out of 5 (71.1%) respondents who had poor diarrhea management, this was caused by the respondent's knowledge not being in line with the practices carried out by the

respondents regarding diarrhea management. From the results of the study, this was supported by some respondents who argued that if a child has loose/diarrheal stools 3 to 4 times a day, it only needs to be left alone without being given water or oral rehydration solution. In addition, based on the results of the study, some respondents argued that oral rehydration solution was only given at the beginning of diarrhea indications, meaning that oral rehydration solution was not given to the child until the child recovered, furthermore, respondents also argued that oral rehydration solution should not be stopped when the child vomits. With the above facts, it can be concluded that the high level of knowledge of respondents about diarrhea does not guarantee that the respondents, in this case, the child's mother, are alert in dealing with the early symptoms of diarrhea.

Of the 9 (23.7%) respondents who had poor knowledge, there were 7 (22.6%) respondents whose diarrhea treatment was good although the level of knowledge of the respondents was poor, the diarrhea treatment was good, because the mother only knew that if the child had diarrhea, they should be given oralit solution. However, the mother only knew how to handle it, the mother did not know what oralit was until when the child was given oral if they had diarrhea. Meanwhile, of the 2 (28.6%) respondents who had poor diarrhea treatment, because the mother's level of knowledge was lacking about how to treat diarrhea in her child. The mother did not get much information about the meaning of diarrhea, the causes of diarrhea, and how to treat diarrhea. The lack of information means that the mother did not know the right way to treat diarrhea in her child. Health center officers or integrated health post cadres need to provide health education about diseases that often occur in children, especially education about diarrhea. The mother's low knowledge is a risk factor that causes diarrhea in children.

These results shows that the category of respondents' knowledge level regarding diarrhea treatment is quite good. Handling diarrhea in children is very important to prevent dehydration. As for diarrhea management, such as, if a child has diarrhea, immediately give plenty of drinks such as oral solution or household water such as vegetable soup, plain water, or rice water, for infants and toddlers who are still breastfeeding, continue to be given breast milk more often and more, if the child has received additional food, continue eating as usual, when a child has diarrhea, they should be given soft food, do not give any medicine except from health workers (Ariani, 2016).

According to Notoatmojo, (2003) said that knowledge is the result of knowing, and this happens after people sense certain objects. Most human knowledge is obtained

through the eyes and ears, namely the process of seeing and hearing. In addition, the process of experience and learning processes in formal and informal education (Lestari Titik, 2015).

The results of this study are also in line with Najamuddin Andi Palancoi's research on the Relationship Between Knowledge and Environment with the Incidence of Acute Diarrhea in Children in Pabbundukang Village, Pangkajene District, Pangkep Regency (2014). Based on the results of the study conducted from 38 respondents, a p-value of 0.010 was obtained, because p <α (0.05), meaning there is a relationship between knowledge and the incidence of diarrhea.

The results of this study are also in line with the study conducted by Dwi Hastuti entitled The Relationship between Knowledge and Habits of Mothers Washing Hands and the Incidence of Diarrhea in Toddlers in the Work Area of the Pameungpeuk Bandung Health Center (2015). Based on the results of the study, showed that from 62 respondents, p = 0.046 was obtained, meaning that there is a relationship between maternal knowledge and the incidence of diarrhea in their children.

Thus, the researcher concluded that there are still mothers who do not know how to treat diarrhea in children, due to a lack of information received, such as mothers not utilizing existing sources of information such as the mass media.

Relationship between maternal attitudes and behavior towards handling diarrhea in children

Based on statistical tests of 38 respondents studied who had a good attitude consisted of 29 respondents (76.3%) those whose diarrhea handling was good were 24 respondents (77.4%), and those whose diarrhea handling was bad were 5 respondents (71%). While from 9 respondents (23.7%) with poor attitudes, there were 7 respondents (22.6%) who had adequate diarrhea handling, and 2 respondents (28.6%) who had poor diarrhea handling. The results of the Chi-square test using SPSS version 22 obtained a p-value = 0.019 <α (0.05) which means that there is a significant relationship between attitudes and diarrhea handling.

Thus, out of 29 (76.3%) respondents who had a good attitude, there were 24 (77.4%) good diarrhea handling. Because mothers already know how to handle diarrhea, and what kind of handling is given when the child has diarrhea, and there were several respondents who answered that they provide sachet oralit at home. So that mothers are easier to handle when their children have diarrhea. While out of 5 (71.4%) respondents,

diarrhea handling is poor, this is due to the lack of respondent knowledge about good diarrhea handling. In this case, in general, respondents have implemented a clean lifestyle such as washing hands with soap before and after eating, drinking boiled water, and maintaining food hygiene, but from the results of the study from 5 (71%) respondents who had poor diarrhea handling because they had not been exposed to information about what to do first if a child shows symptoms of diarrhea.

Meanwhile, from 9 (23.7%) respondents who had poor attitudes, there were 7 (22.6%) who handled diarrhea well. The mother's attitude is also influenced by the surrounding environment, especially from other mothers who have experience in giving oral rehydration solutions to their children who have diarrhea. The mother will provide information to mothers who have never given initial treatment to children with diarrhea, thus influencing the mother's attitude to provide initial treatment for diarrhea in their children who have diarrhea. Thus, the better the mother's attitude about handling diarrhea, the better the attitude to make efforts to handle diarrhea in their children. Meanwhile, 2 (28.6%) respondents with poor diarrhea handling. This is due to the lack of parental supervision of food consumed by children at home, at school, and in public places so that children are more susceptible to diarrhea.

Attitude is a process of assessment carried out by a person towards an object or situation which is accompanied by certain feelings and provides a basis for the person to make a response or behave in a certain way that he chooses (Lestari Titik, 2015).

The results of the study showed that there was a significant relationship between attitudes and handling of diarrhea in children in the Bandar Baru Health Center Work Area, Pidie Jaya Regency. The results of this study are in line with the study conducted by Suparno entitled Factors Related to the Incidence of Diarrhea in Toddlers in Saung Naga Village, Baturaja Barat District (2015). The results of the study showed that 65 respondents obtained p = 0.000, this indicates that there is a significant relationship between the incidence of diarrhea and the mother's attitude.

Thus, researchers conclude that the mother's attitude is very important in handling diarrhea in children because diarrhea is caused by a lack of personal hygiene such as washing hands before giving food to children, and has not become a habit in everyday life so it can trigger germs to enter the child's body and make it easier to get diarrhea.

CONCLUSION AND SUGGESTIONS

Conclusion

Based on the results of the study, there is a significant relationship between the level of knowledge of mothers regarding the handling of diarrhea in children in the Bandar Baru Health Center, Pidie Jaya Regency. Based on the results of the study, there is a significant relationship between the attitudes and behavior of mothers regarding the handling of diarrhea in children in the Bandar Baru Health Center, Pidie Jaya Regency. Based on the results of this study, it is expected that mothers will continue to play an active role in seeking information on the impacts that can occur in children if diarrhea occurs, so that dehydration does not occur, and other complications occur, seeking information can be through the mass media or visiting health facilities.

Suggestion

Based on the results of this study, it is expected that mothers will continue to play an active role in seeking information on the impacts that can occur in children if diarrhea occurs, so that dehydration does not occur, and other complications occur, seeking information can be through the mass media or visiting health facilities. It is important for health workers to be more active in carrying out outreach programs to the community in order to increase public knowledge about the definition of the disease itself, its causes, prevention, treatment, and complications of diseases that often attack children, especially in cases of diarrhea. It is hoped that future research will be further developed so that the results of this study are more accurate and increase insight into the treatment of diarrhea in children.

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