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| <b>NIP/NIK</b>       | <b>198504032008121004</b>  |
| <b>Nama</b>          | <b>Rudi Fakhriadi, SKM, M. Kes (Epid)</b>  |
| <b>Fakultas</b>      | <b>Fakultas Kedokteran dan Ilmu Kesehatan</b>  |
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## DESCRIPTION OF DIARRHEA DETERMINANT FACTORS IN MAINLAND AREA AND RIVERBANK IN BANJAR DISTRICT

Rudi Fakhriadi<sup>1</sup>, Noor Ahda Fadillah<sup>1</sup>, Lisda Hayatie<sup>2</sup>, Erida Wydiamala<sup>2</sup>

<sup>1</sup>Department of  
Epidemiology, Faculty of  
Medicine, University of  
Lambung Mangkurat

<sup>2</sup>Department of Micropar,  
Faculty of Medicine,  
University of Lambung  
Mangkurat

### Korespondensi

rudi.fakhriadi@ulm.ac.id

### ABSTRACT

Diarrheal disease is a disease characterized by changes in the form and consistency of stools that soften until they are liquefied and an increase in the frequency of passing more than three times a day. Until now, diarrheal disease is still a world health problem, especially in developing countries. The magnitude of the problem can be seen from the high morbidity and mortality due to diarrheal disease. WHO estimates that 1.7 billion cases of diarrheal disease in children occur in the world, in 2019 as many as 525,000 children under five died from diarrheal disease. Banjar Regency is an area that has many rivers passing through, especially the Martapura River and Barito River. In addition, according to the 2018 Riskesdas data, Banjar Regency is the district with the highest prevalence of diarrheal disease, with the prevalence of diarrheal disease in Banjar Regency exceeding 25.35%. This study aims to describe the determinants of diarrheal disease in children in the mainland and river areas of Banjar Regency, South Kalimantan. This study used an analytic observational design with a descriptive approach method. The results showed that in the troubled mainland areas there were factors of low parental education (61.16%), low income (58.25%), poor hand washing behavior (41.74%) and waste management that did not meet the requirements (90.29%). Whereas in the riverbanks the dominant diarrheal disease determinant factors were low income (52.43%), incomplete immunization (51.45%), latrines that did not meet the requirements (44.66%) and waste management that did not meet the requirements (84, 46%).

### KEYWORDS

Diarrhea; Land; Riverbanks; Waste management; Latrines

### INTRODUCTION

Diarrheal disease is a disease characterized by changes in the form and consistency of stools that soften until they are liquefied and an increase in the frequency of passing more than three times a day. Until now, diarrheal disease is still a world health problem, especially in developing countries. The magnitude of the problem can be seen from the high morbidity and mortality due to diarrheal disease. WHO estimates that 1.7 billion cases of diarrheal disease in children occur in the world, in 2019 as many as 525,000 children under five will die from diarrheal disease<sup>13</sup>

Diarrheal disease often attacks infants and toddlers, if not treated further it will cause dehydration which results in death. The latest data from the Ministry of Health shows that diarrheal disease is the first killer disease in infants and toddlers in Indonesia after pneumonia or pneumonia with a mortality proportion of 47.41%<sup>7</sup>.

South Kalimantan is an area surrounded by many rivers so that the culture of the people depends on the rivers. In addition, the prevalence of diarrheal disease in South Kalimantan is quite high. RI Health profile data for 2020 shows the prevalence of diarrheal disease in South Kalimantan is 20.1%<sup>6</sup>.

Banjar Regency is an area passed by many rivers, especially the Martapura River and Barito River, besides that according to the 2018 Riskesdas data Banjar Regency is the district with the highest prevalence of diarrheal disease with diarrheal disease prevalence in Banjar Regency exceeding 25.35%<sup>6</sup>.

The life of the Banjar people in South Kalimantan is closely related to river culture as reflected in the traditional Banjar settlements which are located on the banks of the river and their daily activities depend on the river. Historically, rivers have been centers of growth, movement routes and main transportation infrastructure until now. Activities and life are oriented towards the river so that

the river has a very important role and meaning for the Banjar people<sup>12</sup>.

Along with the growth of cities and increasing population, new settlements developed uncontrollably along rivers, so that several rivers lost their function and decreased the quality of their environment. The culture of the river, which is a characteristic of the people along the river, has experienced a shift caused by a change in the orientation of living from river people to mainland people, resulting in damage to the settlement environment on the river banks. One of the impacts of decreasing the quality of the environment on the banks of the river is the increasing cases of diarrheal disease in the areas along the river<sup>13</sup>.

Diarrheal disease in children is caused by several factors, including the age of the child, immunization, exclusive breastfeeding, water sources, use of latrines, hand washing habits, mother's knowledge, social and economic aspects. Based on the background above, the researcher is interested in conducting research on the analysis of differences in risk factors in the Puskesmas area on the mainland and the Puskesmas area on the riverbank in Banjar Regency.

## RESEARCH METHOD

This research is an analytic observational study with a cross-sectional study design, to determine the risk factors for diarrheal disease in children in Banjar district. Research Population The research population was all infants and children in Banjar District. Research Sample The sample in this community is children in Sungai Tabuk and West Martapura Districts with a total of 100 children in Martapura Barat and 100 children in the Aluh-aluh Health Center. Questionnaire and observation sheet To measure risk factors for diarrhea in children. The variables of this study were age, nutritional status, education, source of drinking water, type of latrines, garbage and waste disposal. Furthermore, the data were tabulated and analyzed descriptively to determine the phenomenon of the determinant factors of diarrhea in children.

## RESULTS AND DISCUSSIONS

This research was conducted in the working area of the Martapura 1 Health Center which represented the land area and the Aluh-Aluh Health Center area to represent the riverbanks area. The total number of respondents obtained was 206 respondents which were divided into 103 respondents in the Martapura 1 Health Center area and 103 Respondents in the Aluh-Aluh Health Center. Based on the results of the study, the characteristics of the research respondents were obtained as follows: Table 1.1 Description of the Determinant Factors of Diarrhea in Children in the mainland and riverbank areas in 2022.

Table 1. Number of Receptors in Each Container

| Variable                     | Mainland  |       | Riverbank |       |
|------------------------------|-----------|-------|-----------|-------|
|                              | Frequency | %     | Frequency | %     |
| <b>Education</b>             |           |       |           |       |
| Low                          | 63        | 61,16 | 50        | 48,54 |
| Hight                        | 40        | 38,84 | 53        | 51,46 |
| <b>Income</b>                |           |       |           |       |
| Low                          | 60        | 58,25 | 54        | 52,43 |
| Hight                        | 43        | 41,75 | 49        | 47,57 |
| <b>Knowledge</b>             |           |       |           |       |
| Low                          | 48        | 46,60 | 46        | 44,66 |
| Hight                        | 55        | 53,40 | 57        | 55,34 |
| <b>imunisasi</b>             |           |       |           |       |
| Complete                     | 38        | 36,89 | 53        | 51,45 |
| Incomplete                   | 65        | 63,11 | 50        | 48,56 |
| <b>Hand washing behavior</b> |           |       |           |       |
| Bad                          | 43        | 41,74 | 40        | 38,83 |
| Good                         | 60        | 58,26 | 63        | 61,17 |
| <b>Clean water</b>           |           |       |           |       |
| Not Eligible                 | 21        | 20,38 | 40        | 35,39 |
| Eligible                     | 82        | 79,62 | 73        | 64,61 |

|                           |    |       |    |       |
|---------------------------|----|-------|----|-------|
| <b>Toilet</b>             |    |       |    |       |
| Not Eligible              | 29 | 28,15 | 46 | 44,66 |
| Eligible                  | 74 | 71,85 | 57 | 55,34 |
| <b>Garbage management</b> |    |       |    |       |
| Not Eligible              | 37 | 35,92 | 48 | 46,60 |
| Eligible                  | 66 | 64,08 | 55 | 53,40 |
| <b>Waste Management</b>   |    |       |    |       |
| Not Eligible              | 93 | 90,29 | 87 | 84,46 |
| Eligible                  | 10 | 9,71  | 16 | 15,54 |

Based on table 1. it is known that in the mainland area the most problematic in waste management variables which are more in open waste. Meanwhile, in the riverbanks, the problematic variables are immunization, clean water, type of latrines, garbage and waste. The type of latrine most frequently used in riverbank areas is the cemplung latrine, the water used for daily needs is river water, and the waste used by the community is open channel waste water.

Notoatmodjo (2007) states that, knowledge or cognitive is a very important domain for the formation of one's actions. Before diarrhea occurs in toddlers, we can prevent it through clean and healthy living behaviors<sup>10</sup>. Children's health is especially strongly influenced by the behavior of the surrounding community. How they manage their environment, becomes their environmental health status, which greatly determines the health of the baby, especially because babies spend most of their time in that environment<sup>1</sup>.

In addition to knowledge, hand washing behavior is also related to the incidence of diarrhea in toddlers in the mainland with a value of  $p = 0.034$  ( $p < 0.05$ ). This research is supported by the theory of the Ministry of Health that habits related to personal hygiene that are important in the transmission of diarrheal germs are washing hands. Washing hands with soap, especially after defecating, after disposing of child feces, before preparing/feeding food, and before eating has a positive impact on reducing the incidence of diarrhea. However, the lack of awareness of hygiene in everyone causes widespread cases of diarrhea. The culture of washing hands with soap before or after carrying out activities is a means of avoiding diarrheal diseases.

The level of education plays an important role in the health of a community. consider and analyze the consequences. The results of this study are in line with the research of Hoirunisa Fathia et al (2015) The relationship between education level and mother's knowledge with the incidence of diarrhea which states that there is a relationship between the education level of the mother and the incidence of diarrhea. The  $p(0.001)$  value of mothers' low education will make it difficult for them to be informed about the importance of personal hygiene and environmental sanitation to prevent the spread of infectious diseases, including diarrhea.

With the difficulty they receive counseling, causing them not to care about the prevention of infectious diseases. Mothers who are highly educated will be more likely to instill and carry out a healthy life from the education they receive. Meanwhile, those with low education in the implementation of healthy living are only based on the experience they get without considering and analyzing the consequences that occur.

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Environmental health includes water sanitation, namely securing and determining water quality for various needs and human life. Thus the water used for daily needs in addition to fulfilling or covering it in quantity must also meet a predetermined quality. Water can act as a transmission of disease transmission through microorganisms that are transmitted by water (water borne disease) or equipment that is washed with water (water washed disease).

The results of this study are in line with research conducted by Saktha Yudha et al (2019) which stated that there was a relationship between family latrines and the incidence of diarrhea.  $p$  value (0.001). Because his research showed that more than half of the respondents did not have latrines, especially those who did not meet the requirements. The condition of family latrines that do

not meet the requirements can cause diarrhea in children under five due to fecal matter that is not buried tightly and will attract flies and rats which will have an impact on environmental health.

## **CONCLUSION**

There are differences in the distribution of the determinant factors for the incidence of diarrhea in children, namely in mainland areas where the prevalence is low parental education (61.16%), low income (58.25%), poor hand washing behavior (41.74%) and management waste that does not meet the requirements (90.29%). Whereas in the riverbanks the dominant diarrhea determinant factors were low income (52.43%), incomplete immunization (51.45%), latrines that did not meet the requirements (44.66%) and inadequate waste management.

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