



## Knowledge of Families of Patients with Diarrhea Prevention in The in-Treatment Room of Akademis Hospital Makassar

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### Abstract

Based on the results of research related to diarrheal diseases in various regions in Indonesia, there are several interrelated factors, namely inadequate supply of clean water, water polluted by feces, lack of sanitation facilities, unhygienic disposal of feces, poor personal and environmental hygiene, and improper processing and storage of food. Many factors can directly or indirectly be a driving factor for the occurrence of diarrhea, consisting of host agent, environmental and behavioral factors. The purpose of this study was to determine the relationship between the knowledge of the patient's family and the prevention of diarrheal diseases at the Makassar Akademis Hospital. This type of research is descriptive with the research design used is the Cross-Sectional method, namely the type of research that emphasizes the time of measurement / observation of independent and dependent variable data only once. Place This research was conducted in the inpatient room of the Makassar Akademis Hospital. According to the results of data analysis using the chi-square statistical test, a value of  $p = 0.000$  ( $p < 0.05$ ) was obtained, this means that there is an environmental relationship with the incidence of diarrhea in toddlers in the child care room at the Makassar Akademis Hospital. The conclusion is that there is a relationship between environmental, socio-economic conditions, and mother's knowledge with the incidence of diarrhea in the child care room at the Makassar Akademis Hospital.

**Keywords:** Family Knowledge, Patients, Diarrhea Prevention, Akademis Hospital.

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## 1. Introduction

Diarrhea is a symptom of a disease in the gastrointestinal system or other diseases outside the digestive tract. (Ngastiyah, 2006). Based on several definitions of diarrhea, it can be concluded that diarrhea is excessive loss of fluids and electrolytes that occurs due to frequent bowel movements in the form of watery or liquid stools.

a. Classification of diarrhea based on the duration of diarrhea consists of acute diarrhea, persistent diarrhea and chronic diarrhea:

1) Acute diarrhea

Diarrhea is diarrhea that occurs intermittently, lasting less than 14 days, with discharge of soft or liquid stools which may or may not be accompanied by mucus and blood.

2) Persistent Diarrhea Persistent diarrhea is diarrhea that lasts 15-30 days, is a continuation of diarrhea or a transition between diarrhea and chronic.

3) Chronic diarrhea is diarrhea that comes and goes, or lasts a long time with non-infectious causes, such as gluten sensitivity or inherited metabolic disorders. Chronic diarrhea longer than 30 days.

b. Factors that cause diarrhea

1) Infection Factors: Enteral infections, namely digestive tract infections which are the main cause of diarrhea in children.

2) Bacterial infections: *Vibrio* coma, *Escherichia coli*, *Salmonella*, *Shigella*, *Compilobacter*, *Yersenia* and *Acromonas*.

3) Viral infections: Enterovirus (echo virus, Coxsackievirus and Poliomyelitis), Adenovirus, Rotavirus and Astrovirus.

4) Parasitic infections: Worms, protozoa and fungi.

5) Parental infections, namely infections in other parts of the body outside the digestive tract, such as otitis media, tonsillopharyngitis and so on. This situation is especially in infants and children under 2 years.

c. Not a factor of infection

1) Food allergy: milk and protein.

2) Metabolic disorders or malabsorption.

3) Direct irritation of the digestive tract by food.

4) Drugs such as antibiotics.

5) Intestinal diseases such as ulcerative colitis, Crohn's disease and enterocolitis.

6) Psychological factors: fear and anxiety.

d. Pathophysiology

Diarrhea can be caused by one or more of the following pathophysiology, namely osmotic disturbances and secretory disturbances. (Hidayat, A, 2006).





- 1) Osmotic disorders. The mucosa of the small intestine is a porous epithelium, through which water and electrolytes pass rapidly to maintain osmotic pressure between the intestinal contents and the extracellular fluid. Diarrhea occurs if the material is osmotically active and difficult to absorb. These materials are isotonic and hypertonic solutions. Isotonic solutions, water and materials dissolved in it will pass without being absorbed, causing diarrhea. If the substance absorbed is in the form of a hypertonic solution, water and electrolytes will move from the extracellular fluid into the intestinal lumen until the osmolarity of the intestinal contents equals that of the extracellular fluid and blood, resulting in diarrhea.
- 2) Secretory disorders. Due to the stimulation of abnormal mediators such as enterotoxins, the villi fail to absorb sodium, while the secretion of chloride in the epithelial cells continues or increases. This causes an increase in the secretion of water and electrolytes into the intestinal cavity. Excessive contents of the intestinal cavity will stimulate the intestine to expel it, causing diarrhea.

## 2. Research Method

This type of research is descriptive with the research design used is the Cross-Sectional method, which is a type of research that emphasizes the time of measurement / observation of independent and dependent variable data only once, at one time (Sander, 2008). This study aims to examine the relationship between the independent variables (environmental knowledge and attitudes) and the dependent variable (prevention of diarrhea). Place This research will be conducted in the inpatient room of the Makassar Akademis Hospital.

## 3. Results And Discussions

### a. Result

- 1) The relationship between the environment and the incidence of diarrhea

Table 1

Distribution of environmental relations with the incidence of diarrhea  
In the pediatric care room at the Makassar Akademis Hospital





Environment	Diarrhea incident				Total		p
	Suffer		Not Suffering		n	%	
	n	%	n	%			
Not enough	15	88%	2	12%	17	100%	0.000
Good	3	10%	26	90%	29	100%	
Total	18	39%	28	61%	46	100%	

Based on table 1 above, it can be interpreted that of the 17 respondents whose environment was not healthy, as many as 15 respondents with their children had diarrhea (88%) and 2 respondents who did not have diarrhea (12%). Meanwhile, of the 29 respondents who had a good environment, 26 of their children did not have diarrhea (90%) and 3 of them had diarrhea (10%). According to the results of data analysis using the chi-square statistical test, a value of  $p = 0.000$  ( $p < 0.05$ ) is obtained, this means that the hypothesis test  $H_a$  is accepted or  $H_0$  is rejected, thus it can be said that there is an environmental relationship with the incidence of diarrhea in child care rooms. Makassar Akademis Hospital.

## 2) Socio-economic relationship with the incidence of diarrhea

Table 2

Distribution Socio-economic relationship with the incidence of diarrhea  
In the pediatric care room at the Makassar Akademis Hospital

Socioeconomic	Diarrhea incident				Total		p
	Suffer		Not Suffering		n	%	
	n	%	n	%			
Not Enough	14	78%	4	22%	18	100%	0.003
Good	4	14%	24	86%	28	100%	
Total	18	39%	28	61%	46	100%	

Based on table 2 above, it can be interpreted that of the 18 respondents who were socioeconomically poor, 14 respondents with their children had diarrhea (78%) and 4 respondents who did not have diarrhea (22%). Meanwhile, of the 28 respondents who had good socioeconomic status, 24 of them had no diarrhea (86%) and 4 of them had diarrhea (14%).





According to the results of data analysis using the chi-square statistical test, the value of  $p = 0.003$  ( $p < 0.05$ ) is obtained, this means that the hypothesis test  $H_a$  is accepted or  $H_o$  is rejected, thus it can be said that there is a socio-economic relationship with the incidence of diarrhea in toddlers in Children's care room at the Makassar Akademis Hospital.

- 3) The distribution of the relationship between knowledge and the incidence of diarrhea

Table. 3

Distribution The relationship between knowledge and the incidence of diarrhea  
In the pediatric care room at the Makassar Akademis Hospital

Knowledge	Diarrhea incident				Total		$p$
	Suffer		Not Suffering		n	%	
	n	%	n	%			
Not Enough	14	82%	3	18%	17	100%	0.000
Good	4	14%	25	86%	29	100%	
Total	18	39%	28	61%	46	100%	

Based on table 3 above, it can be interpreted that of the 17 respondents who had less knowledge, 14 respondents with their children had diarrhea (82%) and 3 respondents who did not suffer from diarrhea (18%). Meanwhile, of the 29 respondents who had good knowledge, 4 of their children had diarrhea (14%) and 25 respondents did not suffer from diarrhea (86%). According to the results of data analysis using the chi-square statistical test, the value of  $p = 0.000$  ( $p < 0.05$ ) is obtained, this means that the hypothesis test  $H_a$  is accepted or  $H_o$  is rejected, thus it can be said that there is a relationship between mother's knowledge and the incidence of diarrhea in toddlers. Children's care room at the Makassar Akademis Hospital.

#### b. Discussion

1. The relationship between environmental conditions and the incidence of diarrhea in children under five in the child care room at the Makassar Akademis Hospital.

The results of the research on the environmental conditions of the respondents in the child care room at the Makassar Akademis Hospital, from filling out the questionnaire and observing the researchers, it was found that the environmental





conditions of the respondents who were classified as deficient and many of them were classified as bad were in the problem of waste management, garbage, latrines and housing. More than 13% of respondents do not have waste management. Household waste and landfills are disposed of in the open and usually directly contaminate the soil. Likewise with the factor of the respondent not having a good latrine. 56.5% did not use a septic tank. On average, people who live beside the river still use the Overhung Latrine, where the need for clean water, such as for bathing and washing, also comes from the same river water. Some of the respondents also defecate in open areas such as gardens, using plastic bags, which are then disposed of in the bushes. This is certainly very threatening health conditions, especially for children. So that efforts are needed to improve the quality of this environmental condition. According to the results of data analysis using the chi-square statistical test, a value of  $p = 0.000$  ( $p < 0.05$ ) was obtained, this means that there is an environmental relationship with the incidence of diarrhea in toddlers in the child care room at the Makassar Akademis Hospital.

2. The relationship of socio-economic conditions to the incidence of diarrhea in children under five in the child care room at the Makassar Akademis Hospital.

According to the results of data analysis using the chi-square statistical test, a value of  $p = 0.003$  ( $p < 0.05$ ) was obtained, this means that there is a relationship between mother's knowledge and the incidence of diarrhea in toddlers in the Work Area. Based on the results of the questionnaire, some people have used PAM facilities, namely protected drinking water sources, as the family's main water source and some still use unprotected drinking water sources, namely wells, as the family's main water source.

Sources of drinking water have a role in the spread of several infectious diseases. The source of drinking water is one of the sanitation facilities related to the incidence of diarrhea. Most infectious germs that cause diarrhea are transmitted by the faecal-oral route. They can be transmitted by putting liquids or objects contaminated with feces into their mouths (Depkes RI, 2000).

The results showed that the source of drinking water used affected the occurrence of diarrhea with a  $p$  value  $< 0.05$ , (OR) = 3.10, and the results of Yulisa's research (2008), which showed that there was an effect of the source of drinking water on the incidence of diarrhea in toddlers with  $p$ -value = 0.0001.

3. Description of mother's knowledge of the incidence of diarrhea in children under five in the child care room at the Makassar Akademis Hospital.





According to the results of data analysis using the chi-square statistical test, a value of  $p = 0.000$  ( $p < 0.05$ ) was obtained, this means that there is a relationship between maternal knowledge and the incidence of diarrhea in toddlers in the child care room at the Makassar Akademis Hospital. There is still a lot of moderate knowledge of mothers about the incidence of diarrhea in children under five because the respondents are only at the know level and have not yet understood, applied, analyzed, synthesized and evaluated material related to the occurrence of diarrhea. In addition, the level of knowledge is also influenced by multifactors such as level of education, the role of health educators, access to available information and the desire to seek information from various media. The majority of respondents only graduated from elementary school. Based on the descriptions above, the researcher assumes that the incidence of diarrhea is closely related to a person's level of knowledge. This can be seen that researchers often find that the better a person's level of knowledge, the ability to deal with various problems, especially health problems, will also be good too.

#### 4. Conclusion

Based on the results of the study, the following conclusions were obtained:

- a) There is a relationship between environmental conditions and the incidence of diarrhea in the child care room at the Makassar Akademis Hospital.
- b) There is a relationship between socio-economic and the incidence of diarrhea in the child care room at the Makassar Akademis Hospital.
- c) There is a relationship between mother's knowledge and the incidence of diarrhea in the child care room at the Makassar Akademis Hospital.

#### 5. Compliance with ethical standards

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##### Disclosure of conflict of interest

This research collaboration is a positive thing for all researchers so that conflicts, problems and others are absolutely no problem for all writers.





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**Statement of informed consent**

Every action we take as authors is a mutual agreement or consent.

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