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The Relationship between Socio-Economic Factors, Mother's Knowledge of Healthy Environment and Diarrhea with the Incidence of Diarrhea in Toddlers Aged 1-5 Years at Puskesmas Pembina Palembang

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ABSTRACT

Diarrhea is the main cause of pain and death in, children in the developing world with an estimated billion episodes of 1.3 3.2 and million deaths every year in toddlers. Drurhea is the increasing volume of, and a greater frequency than dilution 3. times a day The purpose of this research is to find the factors of knowledge about the environment and healthy, and diarrhea as the socio-economic diarrhea in children under five years of age 1-5 centers. palembangThe population of the research is all mothers have toddlers 1-5 age years going to the health center trustees 59. toddlers in palembangTechnical the sample in research is the, sampling so samples were obtained 59. oneThe results of research on economic factors respondents found that of respondents 59 obtained p value = 0, 033 while this knowledge about the environmental health was found that out of respondents 59 obtained p value = 0.045 and knowledge factor. Poverty, of environmental health and knowledge of a person greatly affects the status of health in children under five years old .Is statistically there was a correlation between factors of economy with an instance of diarrhea in children under five years old, there was a correlation between other factors than a fuel mommy about the level of knowledge of healthful environment with an instance of diarrhea in toddler and he was there was a correlation between the level of knowledge of mommy about frequent bouts of diarrhea with the incident when the town diarrhea in children under five years old.

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1. Introduction

Diarrheal disease is still one of the important public health problems because it is the third major contributor to the morbidity and mortality rate of children in various countries including Indonesia. The main cause of death from diarrhea is dehydration due to loss of fluid and electrolytes through feces. Other causes of death are dysentery, malnutrition, and infection. The age group that suffers the most from diarrhea is children due to their weak immune system [1].

Until now, diarrhea (gastroenteritis) is still a health problem in Indonesia, especially in children. Diarrhea is a leading cause of illness and death in children in developing countries, with an estimated 1.3 billion episodes and 3.2 million deaths each year in infants. Overall, children experience diarrhea an average of 3.3 episodes per year, but in some places there can be more than 9 episodes per year. In areas with high episodes of diarrhea, a toddler can spend 15% of his time with diarrhea. About 80% of deaths associated with diarrhea occur in the first 2 years of life [2].

Diarrhea is the third leading cause of death in the world. In the United States, diarrhea complaints ranks third on the list of patient complaints. It is also estimated that every year there are 3 million diarrhea deaths in the underfive age group (57,533 deaths occur every week, 8,219 deaths every day, 342 deaths every hour or 6 deaths per minute), about 80% of deaths occur in the age group under 2 years in diarrhea sufferers [2].

The Ministry of Health of the Republic of Indonesia states that the child mortality rate due to diarrhea in Indonesia is still relatively high when compared to member countries of the South East Asia Nation Association (ASEAN). The main cause of illness and death in children in developing countries is diarrhea. Until now diarrhea remains as the first ranked child killer in Indonesia [3].

Based on research that has been done it is known that many factors influence the incidence of diarrhea in infants. These factors include environmental factors, socioeconomic conditions and mother's knowledge. These factors are factors that originate from outside and can be corrected, so by improving these risk factors are expected to reduce the morbidity and mortality of diarrhea in infants [4].

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Diarrhea is a condition where a person suffers from diarrhea, his stools are runny, can be mixed with blood and mucus sometimes accompanied by vomiting. So diarrhea can cause body fluids to drain out through the stool. When people with diarrhea lose a lot of body fluids, this can cause death, especially in infants and children under the age of five years [5].

Environmental factors are very important factors for the emergence of certain diseases and also bad environmental factors greatly affect one's health and are susceptible to diseases such as diarrhea, cholera, measles, dengue fever, diphtheria, pertussis, malaria, influenza, hepatitis, typhus and others -other, so that to eradicate infectious diseases required environmental improvement efforts [6].

Socio-economic factors can cause diarrhea. This is because poverty reduces the capacity of parents to support adequate health events in infants, tend to have less hygiene, poor diet, poor education. So poor children have higher mortality and morbidity for almost all diseases. The relative frequency of children of low-income parents is 2 times greater than causing children to die of disease than children whose parents earn enough [2].

Other factors that can cause diarrhea in infants are dirty environment, low economy and a mother's knowledge about diarrhea. In children and the mother's knowledge about these factors in the family is very necessary to prevent the occurrence of diarrhea in children. Thus the mother's knowledge about diarrhea indirectly affects the decrease in the incidence of diarrhea [6].

Based on data from Indonesian diarrhea children, South Sumatra sufferers of diarrhea in 2011-2012 showed an increase. In 2011 there were 25,234 patients, in 2012 there were 30,907 patients [7].

In the area of Palembang's Public Health Center, it is known that the incidence of diarrhea in children in 2010 was 1151, experienced a decrease in 2011 as many as 869 and experienced an increase in 2012 of 1102 (Propil Community Health Center for the last 3 years).

From the above background the researcher is interested in lifting Relationships Environmental, Socio-Economic and Knowledge Factors of mothers with diarrhea occurrences in children under the age of 1-5 in the Palembang counselor health center.

Formulation of the Problem Not yet known The Relationship Between Environmental, Social Economic And Mother Knowledge Factors With The Incidence Of Diarrhea In Toddlers Aged 1-5 Years In Puskesmas Pembina Palembang. The purpose of this study was to determine the relationship of environmental factors with the incidence of diarrhea in infants aged 1-5 years in Puskesmas Pembina Palembang, To determine the relationship of socioeconomic factors of society with the incidence of diarrhea in toddlers aged 1-5 years in Puskesmas Pembina Palembang, To find out the relationship between maternal knowledge factors with the incidence of diarrhea in children aged 1-5 years at the Palembang Public Health Center.

2. Research methods

The research used is quantitative analytic survey research with Cross Sectional approach. The study was conducted with the aim to determine the relationship of environmental factors, socioeconomic and knowledge of mothers with the incidence of diarrhea in children aged 1-5 years in Puskesmas Pembina Palembang in 2013.

The population in this study were all mothers who have toddlers aged 1-5 years with diarrheal disease in the Palembang Public Health Center. The sampling technique in this study is total sampling. Total sampling is a sampling technique where the number of samples is equal to the population is 59 respondents.

Data collection in this study used a questionnaire that had been tested for validity and reliability aimed at obtaining information from respondents.

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3. Results and Discussion

Table 1
Characteristics of Respondents by Age

Variable	The mean Median	Elementary school	Min-Max	95% CI
Age	30.19 30:00	5826	21 45	28.67 31.70

Based on the table shows the average age of respondents 30.19 years (95% CI: 28.67-31.70, median 30.00 years with a standard deviation of 5826 years. The youngest year is 21 years and the oldest is 40 years. From the results of the interval estimation it can be concluded that 95% are believed to be an average age of respondents is between 28.67 years to 31.70.

Table 2
Characteristics of Respondents by Gender

Gender	Frequency	%
Male	2	3,4
Girl	57	96.6
amount	59	100

Based on the table above, it can be seen that respondents who have male sex are 2 respondents (3.4%) and those who are female are 57 respondents (96.6%).

Table 3
Characteristics of Respondents by Age.

Education	Frequency	%
Elementary school	11	18.6
Middle School	17	28.8
High school	26	44.1
College	5	8.5
amount	59	100

Based on the above table it can be seen that respondents who have elementary school education are 11 respondents (18.6%), junior high school education is 17 respondents (28.8%), high school education is 26 respondents (44.1%) and tertiary education is 5 respondents (8.5%).

Table 4.
Based on the incidence of diarrhea

The incidence of diarrhea	Frequency	%
Yes	27	45.8
Not	32	54.2
amount	59	100

Based on table 5.4 above, it can be seen that respondents who suffered diarrhea were 27 respondents (45.8%), while those without diarrhea were 32 respondents (54.2%).

Table 5
The Relationship between Environmental Factors and the Incidence of Diarrhea in Toddlers Aged 1-5 years

Environment	Diarrhea		No diarrhea		P value
Good	2	3,4	11	18.6	0, 045
Enough	16	27.1	13	22.0	
Less	9	15.3	8	13.6	
amount	27	45.8	32	54.2	

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From the results of the analysis of the relationship between environmental factors and the incidence of diarrhea, it was found that from 59 respondents who suffered from diarrhea with good environment as many as 2 respondents (3.4%), who did not have diarrhea as many as 11 respondents (18.6%). Enough environment with diarrhea for 16 respondents (27.1%) and non-diarrhea for 13 respondents (22.0%). Whereas with less environment, diarrhea was 9 respondents (15.3%) and no diarrhea was 8 respondents (13.6%).

From the Chi-Square test results through Pearson Chi-Square Tests analysis p value = 0.045 was obtained. Because p value ≤ 0.05, so that Ho is rejected means that there is a significant relationship between environmental factors and the incidence of diarrhea in children aged 1-5 years.

Table 6
The Relationship of Economic Factors with the Incidence of Diarrhea in Toddlers Age 1-5

The economy	diarrhea		No diarrhea		P value
High	8	13.6	2	3,4	0, 033
Low	19	32.2	30	50.8	
amount	27	45.8	32	54.2	

From the results of the analysis of the relationship between economic factors and the incidence of diarrhea, it was found that of 59 respondents who had diarrhea with a low economy of 19 respondents (32.2%), those who did not have diarrhea were 30 respondents (50.8%) while the high economy who suffered from diarrhea were 8 respondents (13.6%), and those without diarrhea with a high economy of 2 respondents (3.4%). Statistically means that those with a low economy suffer more diarrhea.

From the Chi-Square test results through fisher analysis, the Exact Test obtained p value = 0.033. Because the p value ≤ 0.05, so Ho is rejected means that there is a significant relationship between economic factors and the incidence of diarrhea in children aged 1-5 years.

Table 7.
The Relationship between Mother's Knowledge and Diarrhea in Toddlers Age 1-5

Knowledge	diarrhea		No diarrhea		P value
Good	5	8.5	11	8.6	0, 028
Enough	6	10.2	13	22.0	
Less	16	27.1	8	13.6	
amount	27	45.8	32	54.2	

From the analysis of the relationship between Mother's Knowledge and the incidence of diarrhea, it was found that from 58 respondents, those with good knowledge suffering from diarrhea were 5 respondents (8.5%), 11 respondents were not diarrhea (8.6%), while those with enough knowledge suffered diarrhea as many as 6 respondents (10.2%), who did not have diarrhea 13 respondents (22.0%) while lack of knowledge suffered from diarrhea as many as 16 respondents (27.1%), who did not have diarrhea 8 respondents (13.6%). Statistically means that more or less people suffer from diarrhea.

From the Chi-Square test results through Pearson Chi-Square Tests analysis p value = obtained 0.028. Because the p value ≤ 0.05, so Ho is rejected means that there is a significant relationship between economic factors and the incidence of diarrhea in children aged 1-5 years.

3.1. Discussion

a. The Relationship between Environmental Factors and the Incidence of Diarrhea in Toddlers Aged 1-5 years

Based on statistical test results obtained p value = 0.045, meaning there is a significant relationship of environmental factors with the incidence of diarrhea in Palembang Public Health Center in 2013. The problems of environmental health in Indonesia include clean water, faeces disposal, health of the settlement, garbage disposal, insect pests, food and beverages, and environmental pollution. There is a strong relationship and significant influence between environmental conditions on public health in urban areas and settlers [8]. The results of this study

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are in line with the results of research conducted by [7], which states that the environment (water type) has a relationship with the incidence of diarrhea based on the results of the analysis known to be significant value p = 0.01, and the type of latrine used is also related to the incidence of diarrhea. seen from the results of the statistical test p value = 0.001. It can be concluded that there is a relationship between the type of water used and the latrine used with the occurrence of diarrhea.

In the opinion of a good drinking water researcher, Waste and waste management must also be considered, because most respondents dispose of waste on vacant land such as bushes. Disposing of household waste on open land, and using water sources from wells and gallons gallons. This will be an excellent medium for breeding germs.

b. The Relationship of Economic Factors with the Incidence of Diarrhea in Toddlers Age 1-5

Based on the statistical test results obtained p value = 0.033, meaning there is a significant relationship of economic factors with the incidence of diarrhea in Palembang Public Health Center in 2013. According to [10], that poverty is a level of material deprivation in a number of people compared to the general standard of living that applies in the society concerned. Poverty is not merely a deficiency in economic measures, but also involves deficiencies in cultural and psychological measures. This is because poverty reduces the capacity of parents to support the incidence of adequate health in children, tends to have less hygiene, poor diet, poor education. This study is in line with research conducted by [7], which states that the economy has a relationship with the incidence of diarrhea based on the results of Pearson chi square analysis (n = 230) known significant value of p = 0,000 and the incidence of diarrhea is also influenced by education, warman research results (2008) showed that the average education level of elementary school respondents was 53%. In the opinion of researchers shows that a person's economy plays a full role in determining one's health due to the low average end of community education, so that with a low level of education, their ability to develop themselves is limited, low ability and helplessness that causes limited employment that can be entered. As a result, the dominating work is manual labor, most of the mothers are housewives, while their husbands work as entrepreneurs, such as laborers, builders, and pedicab drivers. In the opinion of researchers shows that a person's economy plays a full role in determining one's health due to the low average end of community education, so that with a low level of education, their ability to develop themselves is limited, low ability and helplessness that causes limited employment that can be entered. As a result, the dominating work is manual labor, most of the mothers are housewives, while their husbands work as entrepreneurs, such as laborers, builders, and pedicab drivers. In the opinion of researchers shows that a person's economy plays a full role in determining one's health due to the low average end of community education, so that with a low level of education, their ability to develop themselves is limited, low ability and helplessness that causes limited employment that can be entered. As a result, the dominating work is manual labor, most of the mothers are housewives, while their husbands work as entrepreneurs, such as laborers, builders, and pedicab drivers.

c. The Relationship between Mother's Knowledge and Diarrhea in Toddlers Age 1-5

The statistical test results obtained p value = 0.028, meaning there is a significant relationship between maternal knowledge and the incidence of diarrhea in Palembang Public Health Center in 2013.Measurement of knowledge can be done by interview or questionnaire that asks the contents of the material to be measured from the research subject. Knowledge as a parameter of social conditions can greatly determine public health. Society can avoid disease as long as knowledge about health can be improved, so that the behavior and state of the social environment becomes healthy. The results of research conducted by [8] which states that maternal education has no relationship with the incidence of diarrhea based on the results of the analysis revealed a significant value of p = 0.080. It can be concluded that there is no relationship between mother's knowledge and the incidence of diarrhea. This illustrates that the higher a mother's knowledge of a disease, the smaller the risk of her toddler suffering from the disease.

4. Conclusion

After conducting research on 59 respondents at the Children's Health Service Clinic (BP Child) at the Palembang Public Health Center in 2013, it can be concluded that:

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a. Statistically there is a relationship between environmental factors and the incidence of diarrhea in infants, it can be seen from the p value ≤ 0.05 that is p value = 0.045.
b. Statistically there is a relationship between economic factors and the incidence of diarrhea in infants, it can be seen from the p value ≤ 0.05 that is p value = 0.017.
c. Statistically there is a relationship between mother's knowledge and the incidence of diarrhea in infants, it can be seen from the p value ≤ 0.05 that is p value = 0.028.

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