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THE RELATIONSHIP OF KNOWLEDGE REGARDING THE PREVENTION OF DIARRHEA INCIDENCE IN MOTHERS WITH TODDLERS IN THE WORKING AREA OF LAMPULO COMMUNITY HEALTH CENTER, BANDA ACEH CITY

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Abstract

In Indonesia, diarrheal disease still frequently affects toddlers. In 2017, Lampulo Health Center in Banda Aceh City recorded 216 cases of diarrhea among toddlers. The objective of this study was to investigate the relationship between mothers' knowledge and the prevention of diarrhea in toddlers within the Lampulo Public Health Center's service area in Banda Alam Subdistrict, Banda Aceh, in 2019. This was a cross-sectional study with a target population of 216 toddlers. We selected 68 respondents using a proportional sampling technique. The research took place in the Lampulo Health Center's service area, Kuta Alam Sub-District, Banda Aceh City, from May 2 to May 22, 2019. The findings revealed several concerning statistics: 54.4% of children under five did not receive exclusive breastfeeding, 54.4% of toddlers had a poor diet (MP-ASI), 63.2% used contaminated water, 58.8% had inadequate handwashing practices, 60.3% used unsanitary diapers (Jamaban), 63.2% disposed of baby stool improperly, 64.7% of toddlers had not received measles immunization, 54.4% of mothers had insufficient knowledge, and 60.3% of mothers were unaware of how to prevent diarrhea. Statistical analysis yielded a P-value of 0.001, indicating a significant relationship between mothers' knowledge and the prevention of diarrhea in infants at the Lampulo Health Center in Banda Alam Sub-District, Banda Aceh City in 2019. We recommend that the Health Center implement the LROA (Layanan Pencegahan Diare pada Balita) program to provide diarrhea prevention services for toddlers by healthcare professionals to mothers with limited knowledge on the subject.

Keywords: *Diarrhea, Knowledge, Toddler*

1. INTRODUCTION

Currently, diarrhea is still a major problem in society. Every year diarrhea becomes one of the second diseases that cause morbidity and mortality in children under five years old worldwide, especially developing countries, diarrhea also causes 17% of deaths of children under five years old in the world caused by many complications such as malnutrition, growth disorders, and immune disorders (Maulana & Sos, 2009). Diarrhea is a disease that is often found in the community. This disease is mainly caused by contaminated food and drink due to poor hygiene access. In the world it is estimated that around 2.5 billion people have poor access to hygiene (Brunner, 2010).

Maternal knowledge about diarrhea includes understanding, causes, clinical symptoms, prevention, and proper handling of diarrheal disease in toddlers, plays an important role in reducing mortality and preventing the incidence of diarrhea and malnutrition in children. Knowledge also influences the mother's actions regarding the prevention of a disease, especially diarrhea. Various factors can influence the occurrence of diarrhea and increase the risk of hospitalization of children with diarrhea. Risk factors

associated with diarrhea in children include education level, knowledge and preventive measures against diarrhea (Soebagyo, 2008).

Diarrhea is still the leading cause of death in the world, accounting for 5-10 million deaths per year. The magnitude of the problem can be seen from the high morbidity and mortality rates due to diarrhea. The World Health Organization (WHO) estimates that 4 billion cases occur in the world and 2.2 million of them die, and most of them are children under the age of 5 years. In the US, every child experiences 7-15 episodes of diarrhea with an average age of 5 years (Soegijanto, 2002). Even in developing countries, on average, every child under the age of 5 years experiences diarrhea episodes 3 to 4 times per year. Until now, diarrhea cases in Indonesia are still quite high and cause many deaths, especially in infants and toddlers. Based on the results of Basic Health Research (2017). Diarrhea causes death in infants (31.4%) and children under five (25.2%). About 162,000 toddlers die from diarrhea every year or about 460 toddlers per day. Meanwhile, the results of the 2018 household health survey (SKRT) in Indonesia explained that diarrhea is the second cause of death in toddlers, the third for infants, and the fifth for all ages. Every child in Indonesia experiences diarrhea episodes 1.6-2 times per year. The morbidity survey conducted by the Sub-Directorate of Diarrhea from 2015 - 2018 showed an upward trend in incidence. In 2015 the Incidence Rate (IR) of Diarrhea disease was 301/1000 population, in 2016 it rose to 374/1000 population, in 2017 it rose to 423/1000 population to 411/1000 population. Outbreaks of diarrhea still occur frequently, with a high Case Fatality Rate (CFR). In 2015 there were outbreaks in 69 subdistricts with 8133 cases and 239 deaths (CFR 2.94%). In 2016 there was an outbreak in 24 sub-districts with a total of 5,756 cases, with 100 deaths (CFR 1.74%), while in 2018 there was an outbreak of diarrhea in 33 sub-districts with a total of 4204 patients with 73 deaths (CFR 1.74%) (Indonesia, 2017).

Based on the Aceh Health Office in 2018 the number of diarrhea cases in Banda Aceh City reported at 11 Puskesmas in Banda Aceh City was 3,653 cases consisting of 1,781 cases in men and 1. 872 cases in women, namely Puskesmas Jaya Baru 298 cases of diarrhea, Puskesmas Banda Raya 203 cases of diarrhea, Puskesmas Baiturrahman 375 cases of diarrhea, Puskesmas Batoh 342 cases of diarrhea, Puskesmas Lampulo 143 cases of diarrhea, Puskesmas Meuraxa 366 cases of diarrhea, Puskesmas Lampaseh 268 cases of diarrhea, Kopelma Darussalam Health Center 177 cases of diarrhea, Jeulingke Health Center 579 cases of diarrhea, Ulee Kareng Health Center 259 cases of diarrhea, Lampulo Health Center with the most cases of diarrhea, namely 653 cases consisting of 333 cases in men and 320 cases in women (Yarmaliza & Marniati, 2017).

Research conducted by Mentari in 2013 at Puskesmas Tikala Baru Manado City, Mentari explained that diarrhea is the second cause of death in children under 5 years. Globally every year there are about 2 billion cases of diarrhea with a mortality rate of 1.5 million per year. Maternal knowledge and preventive measures about diarrheal disease affect maternal behavior and family health problems,. Mentari also found an increased risk of hospitalization of patients with acute diarrhea due to the presence of blood in the stool, dehydration, breast milk given not exclusively and lack of access to clean water (Meliyanti, 2016).

Based on preliminary data collection at Puskesmas Lampulo, Kuta Alam Subdistrict, Banda Aceh City in 2018 there were 653 cases of diarrhea in 11 Gampong, namely Gampong Peunayong 75 cases of diarrhea, Gampong Laksana 68 cases of diarrhea, Gampong Keramat 72 cases of diarrhea, Gampong Kuta Alam 58 cases of

diarrhea, Gampong Beurawe 42 cases of diarrhea, Gampong Kota Baru 55 cases of diarrhea, Gampong Bandar Baru 63 cases of diarrhea, Gampong Mulia 55 cases of diarrhea, Gampong Lamdingin 45 cases of diarrhea, Gampong Lambaro Skep 25 cases of diarrhea and Gampong Lampulo the most cases of diarrhea were 95 cases, in toddlers there were 30 cases of diarrhea. From the results of interviews conducted with health center officers, it is known that mothers' knowledge about diarrhea is very poor, such as mothers not knowing the causes of diarrhea in toddlers, symptoms of diarrhea in toddlers and how to treat diarrhea in toddlers so that mothers who bring toddlers to the health center have diarrhea and must be treated.

Based on the results of interviews and observations in the working area of the Lampulo Health Center, Banda Aceh City, researchers conducted interviews with 10 mothers who had toddlers who had diarrhea, 7 out of 10 mothers said they stopped breastfeeding when the child had diarrhea, the mother gave food to the baby when the child had diarrhea so that the child did not have diarrhea such as giving bananas, washing milk bottles and children's eating utensils using murky well water, forgetting to wash hands when cleaning baby feces, using latrines that are always open toilet doors, not disposing of baby feces in diapers immediately left all day in the bathroom, and also no measles immunization. This is because the mother's knowledge is not good so she does not know the mother's behavior can cause diarrhea in toddlers.

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2. LITERATURE REVIEW

2.1. Concept of Knowledge

Knowledge is the result of human sensing of objects through their senses, such as eyes, nose, ears and other sensory organs. By itself, when sensing to produce knowledge is greatly influenced by the intensity of attention and perception of the object (Wawan & Dewi, 2010).

2.2. Concept of Toddlers

Toddlers are children under the age of 5 years with characteristics of rapid growth at the age of 0-1 year, where at the age of 5 months the body weight increases 2 times the birth weight and the body weight increases 3 times the birth weight at the age of 1 year and becomes 4 times at the age of 2 years. Growth begins to slow in the pre-school period of weight gain of approximately 2 kg per year, then constant growth begins to end (Eveline & Djamaludin, 2010).

2.3. Characteristics of Toddlers

The characteristics of toddlers are divided into two categories, namely children aged 1 - 3 years (toddlers) and preschool age children. Children aged 1-3 years are passive consumers, meaning that children receive food from what their mothers provide. The growth rate of the toddler period is greater than the pre-school age period so that a relatively large amount of food is needed. However, their smaller stomachs mean that the amount of food they are able to receive in one sitting is smaller than older children. Therefore, the diet given is small portions with frequent frequency (Soenardi, 2000).

2.4. Etiology of Diarrhea

Diarrhea is defecation with liquid or semi-liquid (semi-solid) stools, the water content of the stool is more than usual more than 200 grams or 200 ml/24 hours. Meanwhile, according to Boyle (2000), diarrhea is a violent discharge of water and electrolyte stools. In infants, stool volume of more than 15 g/kg/24 hours is called diarrhea (Adiningsih, 2010).

2.5. Symptoms of Diarrhea

Early signs and symptoms of diarrhea are characterized by the child becoming whiny, restless, increased body temperature, decreased appetite, then diarrhea occurs. Vomiting may occur before or after diarrhea. If the patient has lost a lot of water and electrolytes, then there are symptoms of dehydration (Irianto, 2013).

2.6. Ways of Diarrhea Transmission

Ways of transmission and risk factors for diarrhea transmission through faecal-oral means, namely through food or drink contaminated with germs or direct contact with the patient's hands or indirectly through flies (through 5F = faeces, flies, food, fluid, finger).

2.7. How to Prevent Diarrhea

Diarrhea prevention according to the Diarrhea Management Guidelines is as follows (Adiningsih, 2010):

a. Breastfeeding, breast milk also provides protection against diarrhea in newborns. Exclusive breastfeeding has 4 times greater protection against diarrhea than breastfeeding accompanied by bottle feeding. (Sumampouw, 2017)
b. Complementary feeding, during this period is a dangerous period for infants because the behavior of complementary feeding can cause an increased risk of diarrhea or other diseases that cause death (Khasanah & Sari, 2016).
c. Using enough clean water because most infectious germs that cause diarrhea are transmitted through the fecal-oral route they can be transmitted by entering the mouth, liquids or objects contaminated with feces such as drinking water, fingers, food prepared in pots that are washed with contaminated water.
d. Handwashing is a habit related to personal hygiene that is important in the transmission of diarrhea germs is handwashing.
e. Using latrines, experience in several countries has shown that efforts to use latrines have a major impact in reducing the risk of diarrheal disease. Families without latrines should build latrines, and families should defecate in latrines.
f. Proper Disposal of Baby Feces Many people think that baby feces are harmless. This is not true because baby feces can also transmit diseases to children and their parents.
g. Measles Immunization, diarrhea often accompanies measles so giving measles immunization can also prevent diarrhea therefore give children measles immunization as soon as they are 9 months old.

3. METHODS

The research design used in this study is Descriptive Correlative with a Cross Sectional Study approach, namely to see the relationship between the independent variable and the dependent variable. The population in this study were mothers who had toddlers, namely 216 toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2018. The sampling technique in this study was carried out using proportional sampling method so that the sample was 68 people. This research was conducted in the Lampulo Health Center Working Area, Kuta Alam Subdistrict, Banda Aceh City on April 02 to April 08, 2019. In this study, descriptive tests and chi square tests were used.

4. RESULTS AND DISCUSSION

4.1. Research Results

4.1.1. Univariate Analysis

a. Breastfeeding

Table 1. Frequency Distribution of Breastfeeding in Work Areas Lampulo Health Center, Kuta Alam District, Banda Aceh City

No	Breastfeeding	Frequency (f)	Percentage (%)
1.	Exclusive	31	45.6
2.	Not Exclusive	37	54.4
	Total	**68**	**100**

Based on table 1, it shows that of the 68 respondents in the Lampulo Community Health Center Working Area, Kuta Alam District, Banda Aceh City, 37 respondents or 54.4% gave non-exclusive breast milk compared to only 31 respondents or 45.6% exclusively.

b. Providing MP-ASI

Table 2. Frequency Distribution of MP-ASI Provision in Work Areas Lampulo Health Center, Kuta Alam District, Banda Aceh City

No	Providing MP-ASI	Frequency (f)	Percentage (%)
1.	Good	31	45.6
2.	Not good	37	54.4
	Total	**68**	**100**

Based on table 2, it shows that of the 68 respondents in the Lampulo Community Health Center Work Area, Kuta Alam District, Banda Aceh City, there were 37 respondents who gave good MP-ASI or 54.4% compared to those who gave good MP-ASI, only 31 respondents or 45. 6 %.

c. Using Clean Water

Table 3. Frequency Distribution of Using Clean Water in the Working Area of the Lampulo Health Center, Kuta Alam District, Banda Aceh City (n=68)

No	Using Clean Water	Frequency (f)	Percentage (%)
1.	Good	25	36.8
2.	Not good	43	63.2
	Total	**68**	**100**

Based on table 3, it shows that out of 68 respondents in the Working Area of the Lampulo Health Center, Kuta Alam Subdistrict, Banda Aceh City, 43 respondents used clean water or 63.2%, compared to only 25 respondents who used good clean water or 36.8% .

d. Washing hands

Table 4. Frequency Distribution of Hand Washing in Work Areas Lampulo Health Center, Kuta Alam District, Banda Aceh City (n=68)

No	Washing hands	Frequency (f)	Percentage (%)
1.	Good	28	41.2
2.	Not good	40	58.8
	Total	**68**	**100**

Based on table 4, it shows that of the 68 respondents in the Lampulo Community Health Center Work Area, Kuta Alam District, Banda Aceh City, there were 40

respondents who washed their hands poorly or 58.8% compared to only 28 respondents who used clean water well or 41.2%.

e. Using a Toilet

Table 5. Frequency Distribution of Using Latrines in Work Areas Lampulo Health Center, Kuta Alam District, Banda Aceh City

No	Using a Toilet	Frequency (f)	Percentage (%)
1.	Good	27	39.7
2.	Not good	41	60.3
	Total	**68**	**100**

Based on table 5, it shows that of the 68 respondents in the Lampulo Community Health Center Work Area, Kuta Alam District, Banda Aceh City, 41 respondents or 60.3% used poor toilets compared to only 27 respondents or 39.7% who used good toilets.

f. Disposing of Baby Feces

Table 6. Frequency Distribution of Throwing Baby Feces in Work Areas Lampulo Health Center, Kuta Alam District, Banda Aceh City

No	Disposing of Baby Feces	Frequency (f)	Percentage (%)
1.	Good	25	36.8
2.	Not good	43	63.2
	Total	**68**	**100**

Based on table 6, it shows that of the 68 respondents in the Lampulo Community Health Center Working Area, Kuta Alam District, Banda Aceh City, there were 43 respondents who disposed of baby feces poorly or 63.2% compared to only 25 respondents who disposed of baby feces well or 36.8%. .

g. Administration of Measles Immunization

Table 7. Frequency Distribution of Measles Immunization in the Lampulo Community Health Center Working Area, Kuta Alam District, Banda Aceh City

No	Administration of Measles Immunization	Frequency (f)	Percentage (%)
1.	There is	24	35.3
2.	There isn't any	44	64,7
	Total	**68**	**100**

Based on table 7, it shows that of the 68 respondents in the Lampulo Community Health Center Working Area, Kuta Alam District, Banda Aceh City, there were 44

more respondents or 64.7% who did not receive measles immunization compared to only 24 respondents or 35.3% who received measles immunization. .

h. Mother's Knowledge

Table 8. Frequency Distribution of Mothers' Knowledge in Work Areas Lampulo Health Center, Kuta Alam District, Banda Aceh City

No	Mother's Knowledge	Frequency (f)	Percentage (%)
1.	Good	31	45.6
2.	Not good	37	54.4
	Total	**68**	**100**

Based on table 8, it shows that of the 68 respondents in the Lampulo Community Health Center Working Area, Kuta Alam District, Banda Aceh City, there were 37 more respondents with poor maternal knowledge or 54.4% compared to only 31 respondents with good maternal knowledge or 45.6%.

i. How to Prevent Diarrhea

Table 9. Frequency Distribution of Diarrhea Prevention Methods in Regions Work at Lampulo Community Health Center, Kuta Alam District, Banda Aceh City

No	How to Prevent Diarrhea	Frequency (f)	Percentage (%)
1.	Good	27	39.7
2.	Not good	41	60.3
	Total	**68**	**100**

Based on table 9, it shows that of the 68 respondents in the Lampulo Community Health Center Working Area, Kuta Alam District, Banda Aceh City, the number of respondents who had poor diarrhea prevention methods was 41 respondents or 60.3% compared to only 27 respondents who had good diarrhea prevention methods or 39.7%. .

4.1.2. Bivariate Analysis

a. The Relationship between Breastfeeding and Diarrhea Prevention

Table 10. Relationship between breastfeeding and preventing diarrhea in toddlers in the working area of Lampulo Community Health Center, Kuta Alam District, Banda Aceh City

Breastfeeding	How to Prevent Diarrhea				Total		P-value
	Good		Not good				
	f	%	f	%	f	%	
Exclusive	24	77.4	7	22,6	31	100	0.001
Not Exclusive	3	8,1	34	91.9	37	100	
Total	**27**	**39.7**	**41**	**60.3**	**68**	**100**	

The table above shows that of the 31 respondents who gave exclusive breastfeeding, 24 respondents (77.4%) of them did so by preventing diarrhea well. Meanwhile, of the 37 respondents who gave non-exclusive breastfeeding, 34 respondents (91.9%) of them did not use good diarrhea prevention methods. The statistical test results obtained a value of P=0.001 (P<0.05) that there was a relationship between breastfeeding and preventing diarrhea in toddlers in the Lampulo Community Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019.

b. The relationship between giving MP-ASI and preventing diarrhea

Table 11. Relationship between giving MP-ASI and preventing diarrhea For Toddlers in the Lampulo Community Health Center Working Area Kuta Alam District, Banda Aceh City

Giving MP-ASI	How to Prevent Diarrhea				Total		P-value
	Good		Not good				
	f	%	f	%	f	%	
Good	24	77.4	7	22,6	31	100	0.001
Not good	3	8,1	34	91.9	37	100	
Total	**27**	**39.7**	**41**	**60.3**	**68**	**100**	

The table above shows that of the 31 respondents who provided MP-ASI well, 24 respondents (77.4%) of them were good at preventing diarrhea. Meanwhile, of the 37 respondents who provided MP-ASI poorly, 34 respondents (91.9%) of them did not provide good diarrhea prevention methods. The statistical test results obtained a value of P=0.001 (P<0.05) that there was a relationship between giving MP-ASI and preventing diarrhea in toddlers in the Lampulo Community Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019.

c. The Relationship between Using Clean Water and How to Prevent Diarrhea

Table 12. Relationship between using clean water and preventing diarrhea in toddlers in the Lampulo Community Health Center working area Kuta Alam District, Banda Aceh City

Using Clean Water	How to Prevent Diarrhea				Total		α	P-value
	Good		Not good					
	f	%	f	%	f	%		
Good	20	80	5	20	25	100	0.05	0.001
Not good	7	16.3	36	83.7	43	100		
Total	**27**	**39.7**	**41**	**60.3**	**68**	**100**		

The table above shows that of the 25 respondents who use good clean water, 20 respondents (80%) use good diarrhea prevention methods. Meanwhile, of the 43 respondents who used poor clean water, 36 respondents (83.7%) used poor diarrhea prevention methods. The statistical test results obtained a value of P=0.001 (P<0.05) that there is a relationship between using clean water and preventing diarrhea in toddlers in the Lampulo Community Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019.

d. Relationship between hand washing and diarrhea prevention

Table 13. Relationship between washing hands and preventing diarrhea in toddlers in the Lampulo Community Health Center working area Kuta Alam District, Banda Aceh City

Washing hands	How to Prevent Diarrhea				Total		P-value
	Good		Not good				
	f	%	f	%	f	%	
Good	24	85.7	4	14.3	28	100	0.001
Not good	3	7,5	37	92.5	40	100	
Total	**27**	**39.7**	**41**	**60.3**	**68**	**100**	

The table above shows that of the 28 respondents who washed their hands well, 24 respondents (85.7%) were good at preventing diarrhea. Meanwhile, of the 40 respondents who did not wash their hands well, 37 respondents (92.5%) did not do it well by preventing diarrhea. The statistical test results obtained a value of P=0.001 (P<0.05) that there was a relationship between washing hands and preventing diarrhea in toddlers in the Lampulo Community Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019.

e. Relationship between using latrines and preventing diarrhea

Table 14. The Relationship between Using a Latrine and Preventing Diarrhea in Toddlers in the Working Area of the Lampulo Health Center Kuta Alam District, Banda Aceh City

Using a Toilet	How to Prevent Diarrhea				Total		P-value
	Good		Not good				
	f	%	f	%	f	%	
Good	24	77.4	7	22,6	31	100	0.001
Not good	3	8,1	34	91.9	37	100	
Total	**27**	**39.7**	**41**	**60.3**	**68**	**100**	

The table above shows that of the 31 respondents who use good toilets, 24 respondents (77.4%) use good methods to prevent diarrhea. Meanwhile, of the 37 respondents who used poor toilets, 34 respondents (91.9%) used poor methods of preventing diarrhea. The statistical test results obtained a value of P=0.001 (P<0.05) that there was a relationship between using a latrine and preventing diarrhea in toddlers in the Lampulo Community Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019.

f. Relationship of Disposing of Feces with Diarrhea Prevention Methods

Table 15. Relationship between throwing away feces and preventing diarrhea in toddlers in the Lampulo Community Health Center working area Kuta Alam District, Banda Aceh City

Throwing Out Feces	How to Prevent Diarrhea				Total		P-value
	Good		Not good				
	f	%	f	%	f	%	
Good	20	80	5	20	25	100	0.001
Not good	7	16.3	36	83.7	43	100	
Total	**27**	**39.7**	**41**	**60.3**	**68**	**100**	

The table above shows that of the 25 respondents who disposed of their feces well, 20 respondents (80%) did so by preventing diarrhea properly. Meanwhile, of the 43 respondents who disposed of their feces poorly, 36 respondents (83.7%) of them used poor methods of preventing diarrhea. The statistical test results obtained a value of P=0.001 (P<0.05) that there was a relationship between throwing away feces and preventing diarrhea in toddlers in the Lampulo Community Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019.

g. The Relationship between Measles Immunization and Diarrhea Prevention

Table 16. The Relationship between Giving Measles Immunization by Preventing Diarrhea in Toddlers in the Working Area of the Lampulo Health Center Kuta Alam District, Banda Aceh City

Giving Measles immunization	How to Prevent Diarrhea				Total		P-value
	Good		Not good				
	f	%	f	%	f	%	
There is	6	25	18	75	24	100	0.067
There isn't any	21	47.7	23	52,3	44	100	
Total	**27**	**39.7**	**41**	**60.3**	**68**	**100**	

The table above shows that of the 24 respondents who were given measles immunization, 18 respondents (77=5%) of them did not provide good diarrhea prevention methods. Meanwhile, of the 44 respondents who had not been given measles immunization, 23 respondents (52.3%) had poor diarrhea prevention methods. The statistical test results obtained a value of P=0.067 (P<0.05) that there was no relationship between giving measles immunization and preventing diarrhea in toddlers in the Lampulo Community Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019.

h. The Relationship between Mother's Knowledge and How to Prevent Diarrhea

Table 17. Relationship between Mother's Knowledge and How to Prevent Diarrhea in Toddlers in the Lampulo Community Health Center Working Area Kuta Alam District, Banda Aceh City

Mother's Knowledge	How to Prevent Diarrhea				Total		P-value
	Good		Not good				
	f	%	f	%	f	%	
Good	25	80.6	6	19.4	31	100	0.001
Not good	2	5,4	35	94.6	37	100	
Total	27	39.7	41	60.3	68	100	

The table above shows that of the 31 respondents whose maternal knowledge was good, 25 respondents (80.6%) included good methods of preventing diarrhea. Meanwhile, of the 37 respondents whose mother's knowledge was not good, 35 respondents (94.6%) had poor diarrhea prevention. The statistical test results obtained a value of P=0.001 (P<0.05) that there was a relationship between maternal knowledge and how to prevent diarrhea in toddlers in the Lampulo Community Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019.

4.2. Discussion

4.2.1. Relationship between Maternal Knowledge and Diarrhea Prevention Methods

Based on the results of the study, it was found that there was a relationship between maternal knowledge and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019, showing that of the 31 respondents whose maternal knowledge was good, 25 respondents (80.6%) of them had good diarrhea prevention methods. Meanwhile, of the 37 respondents whose maternal knowledge was not good, 35 respondents (94.6%) of them had a poor way of preventing diarrhea. The statistical test results obtained a value of P = 0.001 (P <0.05) that there is a relationship between maternal knowledge and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019.

The results of the above study are in accordance with the theory that says that knowledge about diarrhea in mothers of toddlers shows the ability of mothers of toddlers to know everything related to diarrhea which includes understanding, symptoms and signs of diarrhea, how diarrhea is transmitted, causes of diarrhea, treatment of diarrhea and prevention of diarrhea disease.

The results of this study are in line with research conducted by Uswatun (2016) on the relationship between the level of maternal knowledge about diarrhea with diarrhea prevention behavior in toddlers in the work area of the Kota Gede II Yogyakarta Health Center. the results showed that there was a relationship between the level of maternal knowledge about diarrhea with diarrhea prevention behavior in toddlers in the work area of the Kota Gede II Yogyakarta Health Center, with a p value = 0.027 < α = 0.0536.

Researchers assume that there is a relationship between maternal knowledge and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019. This is because mothers have a poor way of preventing diarrhea such as if the baby has diarrhea the mother stops breastfeeding so that the child does not have diarrhea again, in giving complementary foods the mother gives it before the baby is over 6 months old so that the baby is at risk of diarrhea, the use of clean water that still does not meet the hygiene requirements, the mother forgets to wash her hands with soap after cleaning the baby's poop and directly holding the baby, using latrines that do not meet the requirements, disposing of baby feces that are piled up for days in the trash in the house. The age of infants <3 years is more 73.5% which is vulnerable to diseases including diarrhea so that it requires a good way of preventing diarrhea from the mother.

4.2.2. Relationship between Breastfeeding with Diarrhea Prevention Methods

Based on the results of the study obtained the relationship between breastfeeding and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019, showing that of the 31 respondents who were exclusively breastfeeding, 24 respondents (77.4%) of them had a good way of preventing diarrhea. Meanwhile, of the 37 respondents who were not exclusively breastfed, 34 respondents (91.9%) of them had a poor way of preventing diarrhea. The statistical test results obtained a value of P = 0.001 (P <0.05) that there is a relationship between breastfeeding and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019.

The results of the study above are in accordance with the theory that infants who are breastfed are less likely to get diarrhea due to the presence of gastrointestinal

protective substances such as Lactobacillus bifidus, lactoferrin, lysozyme, SIgA, allergic factors, and T and B lymphocytes. These protective substances function as immunologic resistance against foreign substances that enter the body (Widjaja, 2002).

The results of this study are in line with research conducted by Eka Putri (2017) on. The results showed that there was a relationship between exclusive breastfeeding and the incidence of acute diarrhea in infants aged 0-1 years at the Kuranji Health Center in Padang City, with a p value = 0.001.

Researchers assume that there is a relationship between breastfeeding and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019. This is because mothers stop breastfeeding when the child has diarrhea, mothers think that breastfeeding only makes the child diarrhea continuously, when the child has diarrhea the mother feels the child is better given formula milk than breast milk, and the mother gives diarrhea medicine directly to the baby when the baby has diarrhea. As for mothers who work as much as 36.8% so that children who get exclusive breastfeeding are only 45.6%, therefore mothers lack knowledge about how to prevent diarrhea in toddlers.

4.2.3. Relationship between complementary feeding with diarrhea prevention methods

Based on the results of the study obtained the relationship between the provision of complementary foods and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019, showing that of the 31 respondents who gave good complementary foods, 24 respondents (77.4%) of them had a good way of preventing diarrhea. Whereas out of 37 respondents who gave complementary food poorly, 34 respondents (91.9%) of them had a poor way of preventing diarrhea. The statistical test results obtained a value of P = 0.001 (P <0.05) that there is a relationship between the provision of complementary foods and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019.

The results of the above study are in accordance with the theory that says that maternal knowledge about food greatly influences the first age of complementary feeding. Most of the incidence of malnutrition can be avoided if you have enough knowledge about how to maintain and organize nutritious food in children. The mother's occupation influences feeding, nutrition, and child care.

The results of this study are in line with research conducted by Siti Wulandari (2015) on the Relationship between the Frequency of Giving Mother's Milk Complementary Foods (MP-ASI) with the Weight of Children Under Two Years of Age, the results showed that there was a relationship between the frequency of giving MP-ASI with an increase in body weight of children under two years of age with a significance value of p = 0.024 (p < 0.05). It was concluded that the higher the frequency of complementary feeding, the more the child's weight increased.

Researchers assume that there is a relationship between the provision of complementary foods and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019. This is because mothers give additional formula milk before the child is 6 months old, mothers give bananas when the child is 2 months old, and mothers give ready-made additional food such as biscuits and baby porridge. Mothers are also busy working as much as 36.8% so

that they do not have much time to provide exclusive breastfeeding, therefore mothers are assisted with formula milk and complementary foods that are not in accordance with the age of toddlers.

4.2.4. The Relationship of Using Clean Water with Diarrhea Prevention Methods

Based on the results of the study obtained the relationship between using clean water and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019, showing that of the 25 respondents who used good clean water as many as 20 respondents (80%) of them with good diarrhea prevention methods. Whereas out of 43 respondents who used poor clean water, 36 respondents (83.7%) of them used poor diarrhea prevention methods. The statistical test results obtained a value of P = 0.001 (P <0.05) that there is a relationship between using clean water and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019.

The results of the above study are in accordance with the theory which says that the main drinking water source is one of the sanitation facilities that is no less important in relation to the incidence of diarrhea. Some infectious germs that cause diarrhea are transmitted by the oral fecal route. They can be transmitted by taking into the mouth, liquids or objects contaminated with feces, for example drinking water, fingers, and food prepared in pots washed with contaminated water.

The results of this study are in line with research conducted by Bumulo (2012) on the Relationship between Clean Water Supply Facilities and the Incidence of Diarrhea in Toddlers in the Pilolodaa Health Center Working Area, West City District, Gorontalo City. The results of the Chi-Square statistical test obtained P value = 0.001, it is known that there is a relationship between clean water supply facilities and the incidence of diarrhea in children under five in the Pilolodaa Health Center Working Area, West City District, Gorontalo City.

Researchers assume that there is a relationship between using clean water and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019. This is because there are still residents who use well water for daily needs, such as washing baby equipment mothers use well water, water for making toddler milk is well water that is cooked first instead of water from PDAM or refill water, drinking water sources such as wells have a distance not far from household SPAL so that this can put toddlers at risk of diarrhea.

4.2.5. Relationship between Hand Washing and Diarrhea Prevention Methods

Based on the results of the study obtained the relationship between hand washing and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019, showing that of the 28 respondents who washed their hands well, 24 respondents (85.7%) of them with good diarrhea prevention methods. Meanwhile, of the 40 respondents who washed their hands poorly, 37 respondents (92.5%) of them had a poor way of preventing diarrhea. The statistical test results obtained a value of P = 0.001 (P <0.05) that there is a relationship between hand washing and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019.

The results of the above study are in accordance with the theory that says that hands are the part of our body that is most contaminated with dirt and disease seeds. When

holding something, and shaking hands, of course there are seeds of disease attached to the skin of our hands. After holding the restroom door (a source of disease originating from human feces), when drying hands with a cloth in the kitchen, holding money, passing by public transportation seat handles, public telephone handles, and parts in public places, hands are almost certainly contaminated with any type of disease seed. The habit of washing hands with soap is part of healthy living behavior. Proper handwashing is not only influenced by the way it is washed, but also by the water used and the hand wipe used.

The results of this study are in line with research conducted by (Sunardi & Ruhyanuddin, 2017) on Hand Washing Behavior Impacts on the Incidence of Diarrhea in Toddlers in Malang Regency, the results showed that the results of the study proved that there was a significant relationship between hand washing behavior and the impact on the incidence of diarrhea in toddlers in Malang Regency.

Researchers assume that there is a relationship between hand washing and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019. This is because mothers forget to wash their hands when feeding toddlers, mothers sometimes forget to clean their hands when cleaning up children's defecation or mothers wash their hands only when exposed to baby feces, and mothers wash their hands without using soap when holding children. So that children are most quickly infected with diseases caused by bad hand washing habits in mothers.

4.2.6. Relationship between using latrines and diarrhea prevention methods

Based on the results of the study obtained the relationship between using latrines and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019, showing that of the 31 respondents who used good latrines, 24 respondents (77.4%) of them had good diarrhea prevention methods. Whereas out of 37 respondents who used poor latrines, 34 respondents (91.9%) of them used poor diarrhea prevention methods. The statistical test results obtained a value of P = 0.001 (P <0.05) that there is a relationship between using latrines with how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019.

The results of the above study are in accordance with the theory that says that every family member must use a toilet when defecating, therefore toddlers who have not been able to use the toilet should be disposed of directly into the toilet. The low use of latrines will affect the high diarrhea morbidity rate.

The results of this study are in line with research conducted by Meithyra (2014) on the relationship between latrine sanitation and disposing of feces with the incidence of diarrhea in toddlers in Terjun Village, Medan Marelan Subdistrict, Medan City in 2014, the results showed that there was a relationship between latrine sanitation and disposing of feces with the incidence of diarrhea in toddlers in Terjun Village, Medan Marelan Subdistrict, Medan City in 2014, with a p value = 0.010 < α = 0.0540.

Researchers assume that there is a relationship between the use of latrines and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019. This is because there are still residents who do not clean the toilet once a week, only cleaned when it looks dirty, the bathroom door is not closed tightly when not in use, and the latrines used by not all houses use goose necks. The toilet is a place that easily transmits disease because disease vectors easily enter and

exit if the bathroom door is not closed tightly, as well as the bathroom floor which must be brushed once a week.

4.2.7. Relationship between Disposing of Feces with Diarrhea Prevention Methods

Based on the results of the study obtained the relationship between disposing of feces and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019, showing that of the 25 respondents who disposed of feces well, 20 respondents (80%) of them with good diarrhea prevention methods. Meanwhile, of the 43 respondents who disposed of feces poorly, 36 respondents (83.7%) of them had poor diarrhea prevention methods. The statistical test results obtained a value of P = 0.001 (P <0.05) that there is a relationship between disposing of feces with how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019.

The results of the above study are in accordance with the theory that says that the habit of disposing of feces carelessly can result in environmental pollution including soil and water and also allow contamination of food or water sources through vectors such as rats or flies.

The results of this study are in line with research conducted by Meithyra (2014) on the relationship between latrine sanitation and fecal disposal with the incidence of diarrhea in toddlers in Terjun Village, Medan Marelan Subdistrict, Medan City in 2014, the results of the chi square statistical test showed that there was a relationship between latrine sanitation and fecal disposal with the incidence of diarrhea in toddlers in Terjun Village, Medan Marelan Subdistrict, Medan City in 2014, with a p value = 0.017 < α = 0.0540.

Researchers assume that there is a relationship between disposing of feces and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019. This is because mothers have bad habits, namely mothers do not immediately dispose of diapers containing baby feces, mothers dispose of baby feces diapers after the trash can in the house is full, and mothers dispose of baby feces diapers not in a closed place. This causes the disease vector to easily transmit the disease to food or the baby itself so that the baby gets diseases such as diarrhea.

4.2.8. Relationship between Measles Immunization with Diarrhea Prevention Methods

Based on the results of the study, it was found that there was no relationship between the provision of measles immunization and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019, indicating that of the 24 respondents who had measles immunization as many as 18 respondents (77.5%) of them with poor diarrhea prevention methods. Meanwhile, of the 44 respondents who were not immunized against measles, 23 respondents (52.3%) of them had poor diarrhea prevention methods. The statistical test results obtained a value of P = 0.067 (P <0.05) that there is no relationship between breastfeeding and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019.

The results of the above study are not in accordance with the theory which says that measles immunization can effectively protect children against measles. Measles is a

disease caused by the measles virus, which can cause dangerous complications such as lung infection, seizures, and brain damage.

The results of this study are in line with research conducted by Nurul (2015) on the relationship between measles immunization status and the incidence of diarrhea in toddlers at Prof. Dr. Margono Soekarjo Purwokerto Hospital, the results showed there was a relationship between measles immunization status and the incidence of diarrhea in toddlers at Prof. Dr. Margono Soekarjo Purwokerto Hospital, with a p value = 0.001 < α = 0.05.43

Researchers assume that there is no relationship between the provision of measles immunization and how to prevent diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019. This is because mothers are aware that children must be given measles immunization because of the many counseling on the importance of measles immunization so that children avoid measles rubella disease but mothers do not know measles immunization can reduce the risk of diarrhea in toddlers.

5. CONCLUSION

Research on maternal knowledge related to the prevention of diarrhea in toddlers in the Lampulo Health Center Working Area, Kuta Alam District, Banda Aceh City in 2019 resulted in the finding that there was a significant relationship between maternal knowledge and how to prevent diarrhea in toddlers (P=0.001, P<0.05). The results also revealed several relevant sub-variables, including the relationship between breastfeeding, complementary feeding, use of clean water, use of latrines, hand washing, and stool disposal with diarrhea prevention in children under five. However, no association was found between measles immunization and diarrhea prevention among children under five.

Based on these findings, recommendations are given to mothers, health centers, and the nursing profession. For mothers, it is recommended to improve latrine sanitation and clean water sources, especially keeping septic tanks away from clean water sources. If possible, water used for food and drinks should be cooked until boiling. Puskesmas are expected to provide a Diarrhea Prevention Service for Toddlers (LROA) program to provide better services to mothers with toddlers. Meanwhile, the nursing profession is expected to increase its role as an educator to the community and patients, especially in education on how to prevent diarrhea.

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