

FACTORS RELATED TO THE INCIDENCE OF DIARRHEA IN TODDLERS IN THE WORK AREA OF UPTD PUSKESMAS TANJUNG AGUNG

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ABSTRACT

Diarrheal disease is a major cause of child mortality and morbidity in the world, and is mostly the result of contaminated food and water sources. To identify the variables linked to the prevalence of diarrhea in young children in the Tanjung Agung Health Center UPTD's service area. Correlation analysis and cross-sectional approaches are used in this analytical observational study. All 267 mothers with toddlers made up the study's population. Random sampling was used to choose the study's sample, which included up to 100 toddlers with diarrhea. utilizing a questionnaire to obtain data. Data collection using a questionnaire. Based on the results of the study, the application of No Given Exclusive Breastfeeding 62.5%, No Washing Hands Using Soap 47.4%, Work 22.2%. The results of the analysis of Factors Related to the Incidence of Diarrhea in Toddlers Exclusive Breastfeeding with a value of $p = 0.006$. Factors that are not related to the Incidence of Diarrhea in Toddlers are, Washing Hands Using Soap $p = 0.686$, and Occupation $p = 0.317$. There are Exclusive Breastfeeding with the incidence of diarrhea among toddlers. Additionally, hand soap use and occupation are unrelated factors to the prevalence of diarrhea in toddlers..

Keywords: Diarrhea, Exclusive Breastfeeding, Washing Hands with Soap, Work

1. INTRODUCTION

Diarrheal disease, primarily caused by contaminated food and water, is one of the leading causes of child death and morbidity globally. 780 million people worldwide lack access to clean drinking water, and 2.5 billion people lack proper sanitation. In the underdeveloped world, infectious diarrhea is common¹. Pneumonia accounted for 15% of these deaths, with diarrhea coming in second at 9%². In Nigeria, an estimated 151,700–175,000 children die from diarrhea each year³.

Diarrhea is a condition where a child has three or more bowel movements in a day. This disease mainly attacks infants and toddlers and is mostly experienced by children aged 0-2 years⁴. Increased frequency of bowel movements three or more times, together with softer-than-normal stool consistency, are signs of diarrhea. Diarrhea is an inflammation of the stomach, small intestine and large intestine with various pathological conditions of the gastrointestinal tract with

or without vomiting, as well as abdominal discomfort⁵.

Healthy children reflect the health level of a nation. In the regulation (Ministry of Health of the Republic of Indonesia, 2014), every kid has the right to live, grow, and develop, hence it is imperative that integrated, all-encompassing, and ongoing child health initiatives be carried out⁶. Healthy children will support optimal child growth and development⁷.

About 1.7 billion cases of diarrhea in children occurred in 2017, according to the World Health Organization (WHO), with a yearly mortality rate of almost 525,000 toddlers. In the world today, diarrhea remains a health concern, particularly in underdeveloped nations. The morbidity and mortality rates from diarrhea remain high in Indonesia, a developing nation. The Diarrhea Sub-Directate's morbidity survey, which was published in the 2018 National Riskesdas report, revealed that the prevalence of diarrhea in toddlers in

Indonesia was 11.0% with a diagnosis from a health worker and 12.3% with a diagnosis from a health worker or symptoms experienced by up to 93,619 toddlers⁸.

Assuring children's survival by lowering the neonatal, infant, and toddler death rate is one of the objectives of child health initiatives. Of Indonesia's 28,158 toddler deaths in 2020, 72.0% (20,266) happened during the neonatal period, while 19.1% (5,386 deaths) happened between the ages of 12 and 59 months. Diarrhea was the leading cause of death among toddlers⁹. According to health workers' diagnoses, the prevalence of diarrhea is 6.35 percent. According to medical professionals' diagnoses, 10.1% of toddlers in South Sumatra have diarrhea¹⁰. The rate of cases of diarrhea in toddlers in South Sumatra in 2020 was 21.6% and in OKU Regency was 15.9% (Health Profile of South Sumatra Province 2020).

The number of diarrhea sufferers in toddlers found was 2,087 cases from an estimated 7,381 cases, so the prediction of finding diarrhea sufferers in toddlers in Ogan Komering Ulu Regency (2019) was 28.3%, down 10.7% from 2018 (39%). The number of diarrhea sufferers in toddlers treated was 2,087 people from the target age group of 43,779 toddlers, so the morbidity rate of diarrhea in toddlers in OKU Regency in 2019 was 47.67/1,000 toddlers, this figure is still below the national target of 843/1,000 toddlers¹¹.

The number of toddler diarrhea sufferers found was 983 cases from an estimated 5,798 toddler cases, the percentage of toddler diarrhea sufferers found in Ogan Komering Ulu Regency in 2020 was 17%. With a population of 34,387 toddlers, the toddler diarrhea morbidity rate in Oku

Regency in 2020 was 286/1,000 toddlers (in 2019 it was 477/1,000 toddlers) this figure is still below the national target of 843/1,000 toddlers¹².

Data from January–December 2023 from the Working Area of UPTD PUSKESMAS Tanjung Agung, West Baturaja District, Ogan Komering Ulu Regency, showed that 267 toddlers had diarrhea.

The researcher is interested in investigating Factors Related to the Incidence of Diarrhea in Toddlers in the Tanjung Agung Public Health Center UPTD's Working Area in 2024, given the background information provided above.

2. METHOD

Correlation analysis, a research approach utilized in this study to determine whether two or more variables are connected, was employed. Cross-sectional research, which stresses the measurement/observation period of two independent and dependent variables just once at a time, is used in this study (Nursalam, 2013). The 267 moms who had toddlers in the UPTD Tanjung Agung Health Center's Working Area made up the study's population, which was derived from the health center's statistics. The study's sample consisted of one hundred youngsters who had diarrhea. This study's sampling strategy involved selecting a subset of the population at random or by accident. Accidental Sampling Formula According to the Midwifery Research Methodology book¹³, in this study it was calculated using the Solvin formula.

3. RESULTS

Table 1. Frequency Distribution of Toddler Diarrhea Incidents at the Tanjung Agung Health Center UPTD Working Area

Diarrhea Incident	Frequency	%
Diarrhea	50	50
No Diarrhea	50	50
Amount	100	100

Table 1. As can be observed, 50 respondents (50%) did not have diarrhea, and another 50 respondents (50%) did.

Table 2. Distribution of toddlers' exclusive breastfeeding rates at the Tanjung Agung Health Center UPTD's working area

Exclusive Breastfeeding	Frequency	%
Not Given	40	40
Given	60	60
Total	100	100

It is evident from Table 2 above that 60 respondents (60%) was given exclusive breastfeeding, whereas 40 respondents (40%) did not receive it.

Table 3. Frequency Distribution of Toddlers' Soap-Based Hand Washing at the Tanjung Agung Health Center UPTD Workplace

Hand Washing	Frequency	%
No	57	57
Yes	43	43
Total	100	100

Table 3. Above, it can be seen that 57 respondents (57%) of mothers of toddlers do not wash their hands using soap, while 43 respondents (43%) wash their hands.

Table 4. Distribution of Mother Toddler Work Frequencies in the UPTD Tanjung Agung Health Center Work Area

Job	Frequency	%
Yes	50	50
No	50	50
Total	100	100

This is shown in Table 4 above, 50 respondents (50%) of moms of toddlers do not work, while 50 respondents (50%) do.

Table 5. The Association between Exclusive Breastfeeding and the Rate of Diarrhea in Toddlers in the Tanjung Agung Health Center UPTD Work Area

No Exclusive Breastfeeding	Diarrhea Incident				total	%	P value
	Diarrhea		No Diarrhea				
	F	%	F	%			

1	Not given	25	62.5	15	37.5	40	100	0.006
2	Given	25	41.7	35	58.3	60	100	
Total		50	50	50	50	100	100	

Table 5. Above we can see the proportion of toddlers suffering from diarrhea who are not given exclusive breastfeeding, namely (62,5%) when compared to the proportion given exclusive breastfeeding, namely

(41,7%). Conclusions of the Chi-Square statistical test show a significant link between exclusive breastfeeding and toddler diarrhea, with an associated p-value of 0.006.

Table 6. The Association Between Handwashing with Soap and Toddler Diarrhea Incidence at the Tanjung Agung Health Center UPTD Workplace

No	Washing hands	Diarrhea Incident				Total	%	P value
		Diarrhe a		No Diarrhea				
		F	%	F	%			
1	No	27	47.4	30	52.6	57	100.0	0.686
2	Yes	23	53.5	20	46.5	43	100.0	
Total		50	50	50	50	100	100.0	

Table 6. It can be seen that the proportion of toddlers who suffer from diarrhea is lower, namely 47,4% mothers do not wash their hands using soap compared to 53,5% mothers who wash their hands using soap. With a p value of 0.686, the Chi-Square statistical test results indicated that there was no significant correlation between hand washing and toddler diarrhea incidence..

Table 7. Relationship between Work and Toddler Diarrhea Incidence in Tanjung Agung Health Center UPTD's Working Area

No	Work	Diarrhea Incident				Total	%	P value
		Diarrhe a		No Diarrhea				
		F	%	F	%			
1	No	28	56	22	44	50	100.0	0.317
2	Yes	22	44	28	56	50	100.0	
Total		50	50	50	50	100	100.0	

Table 7. It can be seen that the proportion of mothers of toddlers suffering from diarrhea who do not work is 28 mothers (56%), of those who do are working mothers, 22 mothers (44%). With a p value of 0.317, the Chi-Square statistical test results indicated that there was no

significant correlation between Work and toddler diarrhea incidence. The study's findings indicate that toddlers who do not receive exclusive breastfeeding (62.5%) outnumber toddlers who receive exclusive nursing (41.7%). In the Tanjung Agung Health

Center UPTD working area, there is a strong correlation between exclusive breastfeeding and the incidence of diarrhea in toddlers, as indicated by the statistical analysis's p-value of 0.006.

This research is in line with research⁽¹⁴⁾, about the correlation between exclusive breastfeeding and the prevalence of diarrhea in the Cibadak Health Center work area, Lebak Regency, which revealed that many babies still had diarrhea (36.0%) and that babies who were not given exclusive breastfeeding had a 0,000,000 infant diarrhea incidence. Mothers who did not give their babies exclusive breastfeeding were more than eight times more likely to have diarrhea than mothers who gave their babies exclusive breastfeeding¹⁴.

This research is also in line with research (15), had a p value of 0.000, indicating a strong correlation between the occurrence of diarrhea in infants and exclusive breastfeeding¹⁵.

In this study, toddlers who were not given Exclusive Breastfeeding experienced diarrhea 75% and those who did not have diarrhea 25%. Because breast milk contains immunological components such lactobacillus bifidus, lactoferrin, lysozyme, and peroxide, it also increases the risk of diarrhea in children who do not receive exclusive breastfeeding. Antistreptococcal factors and cellular immunoglobulins that can increase the immune status of children, the risk of infection, one of which is a digestive tract infection that causes diarrhea¹⁶.

From the bivariate analysis, it was found that toddlers who suffered from diarrhea from mothers who did not wash their hands using soap, namely (47.4%) were lower when compared to mothers who washed their hands using soap, namely (53.5%). The statistical analysis's findings yielded a p-value of 0.686, indicating that there was no The incidence of diarrhea in toddlers in the Tanjung Agung Health Center UPTD's working area is

significantly correlated with hand washing with soap.

According to the Journal⁽¹⁷⁾, Washing Hands With Soap is a very important behavior for efforts to prevent diarrhea. The habit of washing hands is applied after disposing of clean water, after helping children defecate (cleaning children), before feeding children, before managing food (cooking) and before eating. Washing hands with clean water and soap can clean dirt and kill germs¹⁷.

The results of this study indicate that there is no Relationship between Washing Hands and Using Soap with the Incidence of Diarrhea in Toddlers. Most toddlers in Buru Kaghu Village do not wash their hands using soap before eating. Usually parents when they come home from the fields and before feeding their toddlers, only wash their hands using dishwashing water and then wipe their hands on the clothes or pants they are wearing, with the excuse of being in a hurry to feed their children because the children are crying or fussy asking for food. The behavior of washing hands without using soap and clean water and in the container that is collected causes the germs in the rinse water to stick back to the hands.

Based on the results of the study conducted, it was found that the toddlers who suffered from diarrhea were mothers who did not work (50.0%), compared to mothers who worked (50.0%). Based on the results of the Chi Square test between Work and the Incidence of Diarrhea in Toddlers, the p-value = 0.317, so there is a significant relationship between Work and the Incidence of Diarrhea in Toddlers. So the hypothesis stating that there is a significant relationship between Work and the Incidence of Diarrhea in Toddlers is proven.

(Kurniasari & Astuti, 2015) in his research concluded that there is a

relationship between the mother's work and the incidence of diarrhea in toddlers with OR 3.340 at CI 95% which means that mothers who do not work have a 3.340 times risk of their toddlers experiencing diarrhea compared to mothers who work. According to researchers when mothers work it means that there is other income besides from their husbands. The income earned by these mothers can be used freely by the mother to improve her child's food so that her child's food needs are met and are protected from malnutrition which has an impact on her child's good immune system. This is in contrast to mothers who do not work. Mothers who only rely on income from their husbands are certainly not free to use the money they have plus there are many other needs that must be considered. Plus if the mother's social life only revolves around the house, together with other mothers who do not work. From the results of the researcher's observations, these mothers who do not work have a low level of education so that their insight and curiosity about a problem are lacking, therefore it is important for the health center to reach these mothers with information that is carried out repeatedly so that it forms correct knowledge¹⁸.

Working mothers have more toddlers who experience diarrhea. This is because working mothers have to let their children be cared for by others, so they have a greater risk of getting sick. It is hoped that mothers who work outside the home, even though their toddlers are cared for by others, must teach the person caring for their toddler how to care for their toddler so that they do not get diarrhea, for example, when you want to give milk to a toddler, the milk bottle must be washed clean first and rinsed with hot water first so that the germs that stick to it can be removed¹⁹.

Diarrhea occurs more often in babies and toddlers whose family economic status is low. If the income level is good, then their health facilities, especially in their homes,

will be guaranteed, the problem is in the provision of clean water, the provision of their own toilets or if they have livestock, they will be given a good and clean pen²⁰.

4. CONCLUSION

According to the results of a Chi square test, there is a correlation between exclusive breastfeeding and the prevalence of diarrhea in toddlers in the Tanjung Agung Health Center UPTD work area (p-value = 0.006). With a chi square test and a p-value of 0.686, there is no correlation between hand washing use and the frequency of diarrhea in toddlers in the Tanjung Agung Health Center UPTD work area. A Chi square test using a p-value of 0.317 indicates that there is no correlation between work and the incidence of diarrhea in toddlers in the Tanjung Agung Health Center UPTD work area.

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