

***Relationship of Complementary Feeding Of Breastmilk
With Case of Diarrhea in Children Aged 4-24 Months in Dukuh
Kupang Health Center Surabaya***

Salma Nadhila Zatil Adli¹, Inawati², Akhmad Sudibya³
Faculty of Medicine, University of Wijaya Kusuma Surabaya¹
Faculty of Medicine Lecturer, University of Wijaya Kusuma Surabaya²
Faculty of Medicine Lecturer, University of Wijaya Kusuma Surabaya³
Jl. Dukuh Kupang XXV No.54, Dukuh Kupang, Kec. Dukuh Pakis, Surabaya,
Jawa Timur 60225

Correspondence author email : salmanadilla@gmail.com

Phone : 082119058140

Abstract

Diarrhea is one of the main causes of morbidity and mortality in childhood in developing countries. Early complementary feeding is one of the factors causing diarrhea. Complementary food is additional food given to babies after 6 months of age. The provision of complementary foods greatly influences the incidence of diarrhea. This study aims to determine the relationship between giving complementary feeding of breastmilk and the incidence of diarrhea in children 4-24 months at the Dukuh Kupang Health Center, Surabaya. This type of research is an observational analytic study with a cross-sectional design with a sample size of 39 respondents taken by purposive accidental sampling in November 2022-May 2023. The data study used the chi-square test with a significance level ($\alpha = 0.05$). The results showed that 45% of mothers were not correct in giving complementary food and 55% were correct in giving complementary food. The results of the chi-square test showed that there was complementary feeding with the incidence of diarrhea in infants aged 4-24 months with a p-value = 0.005 ($\alpha = <0.05$). It can be concluded that giving complementary foods that are not appropriate can cause the risk of experiencing diarrhea. Efforts to reduce the incidence of diarrhea can be carried out by counseling about proper complementary feeding.

Keywords: Complementary food, diarrhea, children

**Hubungan Antara Pemberian MPASI dengan Kejadian Diare
pada Anak Umur 4 — 24 Bulan di Puskesmas Dukuh Kupang
Surabaya**

Abstrak

Diare adalah salah satu penyebab utama kesakitan dan kematian pada masa anak-anak di negara berkembang. Pemberian MPASI dini merupakan salah satu faktor penyebab terjadinya diare. Makanan pendamping ASI adalah makanan tambahan yang diberikan pada bayi setelah usia 6 bulan. Pemberian makanan pendamping (MPASI) sangat berpengaruh terhadap kejadian diare. Penelitian ini bertujuan untuk mengetahui hubungan pemberian MPASI dengan kejadian diare pada anak 4-24 bulan di Puskesmas Dukuh Kupang Surabaya. Jenis penelitian ini adalah

penelitian analitik observasional dengan desain cross sectional dengan besar sampel 39 responden diambil secara purposive aksidental sampling pada bulan November 2022-Maret 2023. Analisis data menggunakan uji chi-square dengan tingkat kemaknaan ($\alpha = 0,05$). Hasil penelitian menunjukkan ada 45% ibu tidak tepat dalam pemberian MPASI dan 55% yang tepat dalam pemberian MPASI. Hasil uji chi-square menunjukkan ada pemberian MPASI dengan kejadian diare pada bayi usia 4-24 bulan dengan $p\text{-value} = 0,005$ ($\alpha = <0,05$). Dapat disimpulkan pemberian MPASI yang tidak tepat dapat menyebabkan risiko mengalami diare. Upaya dalam menurunkan kejadian diare dapat dilakukan penyuluhan tentang pemberian MPASI yang tepat.

Kata kunci: Makanan pendamping ASI (MPASI), diare, anak

INTRODUCTION

Diarrhea is a condition in which a person experiences defecation more frequently (three or more times a day) with feces that are thinner than usual, in some cases accompanied by blood and mucus (Nurhayati, 2020). Diarrhea itself is still a public health problem in developing countries such as Indonesia, because morbidity and mortality are still high (Ministry of Health, 2011).

Exclusive breastfeeding is protective and prevents diarrhea in toddlers and also reduces the severity of diarrhea. Apart from that, the cause of diarrhea in children can be caused by errors in feeding, where children are given food other than breast milk (ASI) before they are 6 months old as a companion to breast milk (Wardani et al., 2022). Exclusive breastfeeding based on Government Regulation Number 33 of 2012 is breast milk given to babies from birth for 6 (six) months, without adding and/or replacing it with other foods or drinks.

Based on the 2021 East Java Province Health Profile, data from the Regency/City shows that the coverage of babies receiving exclusive breast milk in East Java in 2021 is 73.6%. In the 2020 Surabaya City Health Profile, exclusive breastfeeding coverage reached 73.56% in the West Surabaya Region at 66.42% spread across 12 Community Health Centers in the Dukuh Kupang

Community Health Center itself reaching 61.45%, a figure which is still far from the provincial target as well as national.

Based on the description above, researchers are interested in conducting research with the title "Relationship of Complementary Feeding Of Breastmilk With Case of Diarrhea in Children Aged 4-24 Months in Dukuh Kupang Health Center Surabaya"

MATERIAL AND METHODS

Research Design

This type of research is analytical observational research which looks for the relationship between two variables, namely the independent variable and the dependent variable. The approach used is cross sectional because when data is collected for the independent and dependent variables only once at a time.

Research Sample

The population in this study were all mothers who had children aged 4-24 months who visited the Dukuh Kupang Surabaya Health Center and were recorded in the medical records at the Dukuh Kupang Surabaya Health Center.

RESULTS

1. Characteristics Based on Giving Complementary Feeding Of Breastmilk

Complementary Feeding of Breastmilk	Frequency	Percentage (%)
Correct	18	45
Incorrect	21	55
Total	39	100

Table V.1 showed that the majority of respondents (55%) gave Complementary Feeding of Breastmilk incorrectly and the remainder (45%) gave Complementary Feeding of Breastmilk correctly.

2. Characteristics Based on the Occurrence of Diarrhea

Diarrhea	Frequency	Percentage (%)
Yes	21	53.85
No	18	46.15
Total	39	100

Table V.2 showed that the majority of babies in this study, 21 children (53.85%) experienced diarrhea, while 18 children (46.15%) did not experience diarrhea.

DATA ANALYSIS

The relationship between giving complementary feeding of breastmilk and the incidence of diarrhea

MP ASI	Diarrhea		Total	p-value
	Yes	No		
Correct	5 (27,8 %)	13 (72,2 %)	18 (100 %)	0,009
Incorrect	16 (76.1 %)	5 (23.81 %)	21 (100 %)	
Total	21 (53.85 %)	18 (46.15 %)	39 (100 %)	

Table V.3 showed that of the 100% of mothers who correctly provided complementary feeding of breastmilk, 53.85% of their babies experienced diarrhea and 46.15% did not experience diarrhea. Of the 100% of mothers who gave complementary feeding of breastmilk incorrectly, only 53.85% of

their babies experienced diarrhea. The Chi-square test results obtained a p-value of 0.009. Because $p < 0.05$, H_0 is rejected, meaning there is a relationship between giving complementary feeding of breastmilk and the incidence of diarrhea in children aged 4-24 months in the Dukuh Kupang Community Health Center working area, Surabaya.

DISCUSSION

The results of the study found that the majority of respondents in this study, 22 people (55%), provided complementary feeding of breastmilk appropriately to babies aged 6-24 months. However, it was still found that 18 people (45%) were not providing complementary feeding of breastmilk correctly. The results of this research are in accordance with research conducted by Cahyandiar et al. (2021) who found that 66.7% of mothers had given complementary feeding of breastmilk appropriately to babies aged 6-24 months.

Appropriate complementary feeding should be given when the child is after six months of age. This is because the digestive system of children aged six months can already receive food properly. Children who are given complementary feeding of breastmilk when they are less than six months old will be at risk of being exposed to diarrhea. The accuracy of giving complementary feeding of breastmilk to babies greatly influences the child's growth and development process. Apart from that, the accuracy of giving complementary feeding of breastmilk to babies also influences the fulfillment of the baby's needs which can cause diseases in toddlers, one of which is diarrhea (Maelana, 2017).

Giving complementary feeding of breastmilk aims to increase the energy and nutrients needed by babies because breast milk cannot meet the baby's needs continuously, so additional food is given

to fill the gap between the child's total nutritional needs and the amount obtained from breast milk.

However, if you give complementary feeding of breastmilk too early it can result in many babies experiencing diarrhea. The problem of growth disorders at an early age is strongly suspected to be related to the large number of babies who have been given complementary feeding of breastmilk since the age of one month, even before (Maelana, 2017).

The research results showed that of the 100% of mothers who correctly provided complementary feeding of breastmilk, 27.8% of their babies experienced diarrhea and 72.2% did not experience diarrhea. Of the 100% of mothers who gave complementary feeding of breastmilk incorrectly, only 53.85% of their babies experienced diarrhea. The Chi-square test results obtained a p-value of 0.009. $P < 0.05$ means H_0 is rejected so it can be concluded that there is a relationship between giving complementary feeding of breastmilk and the incidence of diarrhea in children aged 4-24 months in the working area of the Dukuh Kupang Community Health Center, Surabaya.

The results of this research are in accordance with research conducted by Cahyandiar et al. (2021) who found that there was a significant relationship between lack of complementary feeding and the incidence of diarrhea in children aged 4-24 months in the Dukuh Kupang Community Health Center working area, Surabaya. According to research by Widyasari (2017), there is a relationship between the type of complementary feeding of breastmilk given and the method of giving complementary feeding of breastmilk with the incidence of diarrhea in toddlers. Another study conducted by Wahyuni (2019) found a relationship between the method of giving complementary feeding of breastmilk and the type of

complementary feeding of breastmilk given to babies aged less than 6 months with the incidence of diarrhea.

When giving proper complementary feeding of breastmilk, 27.8% of babies still experience diarrhea. Babies are an age that is vulnerable to infectious diseases, one of which is diarrhea caused by contaminated food. The *Esherichia Coli* bacteria that most often causes diarrhea in babies is due to contamination of the baby's eating utensils when providing complementary feeding breast milk (MPASI) (Vitiani et al., 2017).

There is a study stating that the transmission of diarrhea from food contamination is mainly caused by complementary foods where the level of contamination is higher than drinking water (Morse et al., 2019). Other factors that can cause a child to get diarrhea include, according to the Ministry of Health, there are eight ways that a mother must do before giving complementary breast milk, namely the mother washing her hands before giving complementary feeding of breastmilk, the second the mother washing her hands after giving complementary feeding of breastmilk, the third the mother washing the baby's hands before eating, the fourth mother washes the toddler's hands after eating, the fifth mother washes food before cooking, the sixth mother washes kitchen utensils before using them, the seventh mother washes baby eating utensils before using them, and the last mother does not store unused baby food (Republic of Indonesia Ministry of Health, 2014).

CLOSING

Conclusion

Based on the analysis and discussion in the previous chapter, it can be concluded as follows:

1. There is a relationship between the accuracy of giving complementary

feeding of breastmilk and the incidence of diarrhea ($p=0.009$)

2. Most of the respondents in this study (55%) gave complementary feeding of breastmilk appropriately to babies aged 6-24 months. However, it was still found that 45% were not giving complementary feeding of breastmilk correctly.
3. Most of the babies in this study (53.85%) had experienced diarrhea, while the other 46.15% had not experienced diarrhea.

Suggestion

Based on the conclusions above, several suggestions can be made as follows :

1. For Relevant Agencies

Community health centers provide more information by authorized health workers at the community health center level regarding efforts to treat diarrhea in toddlers to mothers who have babies and more importantly. There needs to be attention from the government, especially the Health Service in the health promotion section, to disseminate information using IEC strategies to mothers with toddlers and their families about efforts to treat diarrhea in toddlers, such as the causes of diarrhea, how to treat diarrhea, symptoms of diarrhea, and the consequences of diarrhea in children.

2. For The Parents

Children's parents can expand their knowledge about diarrhea and implement correct behavior in preventing diarrhea, such as paying attention to the accuracy of giving complementary feeding breast milk, regulating food processing methods and paying attention to the environment so that it is hoped that this will reduce the risk of toddlers experiencing diarrheal disease.

3. For Further Researchers

Future researchers can use the results of this study as a reference for continuing research on diarrhea in infants. Future researchers should be able to add other,

more specific variables so that later they will obtain broader and more complete information.

Research Limitations

1. This research was carried out for the first time and the researchers lacked experience so there are still many shortcomings.
2. The research design using cross sectional has weaknesses, namely. Variable measurements are only carried out once at a time, so predicting a trend is invalid.

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