

## Relationship Of Early Complementary Food And Diarrhea In Infants Aged 0-6 Months In Posyandu Sedap Night Tengger East Kandangan Surabaya

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### ABSTRACT

Giving complementary foods too early will result in the baby's digestive ability not ready to receive additional food. This will have an impact on the high incidence of infections such as diarrhea, respiratory infections, and growth disorders. The purpose of this study was to determine the relationship between early complementary breastfeeding and the incidence of diarrhea in infants aged 0-6 months.

The design in this study was observational analytic with method cross sectional. The population in this study were 50 mothers who had babies aged 0-6 months at the Tengger Kandangan Timur Posyandu Sedap Malam Surabaya. The sample size of 45 people was taken using probability sampling technique, with method simple random sampling. Data analysis using test Chi-square.

The results showed that almost all respondents (91.1%) gave early complementary breastfeeding. And of the 41 respondents who provided early complementary breastfeeding, most of them had diarrhea (68.3%). 4 respondents who did not provide early complementary breastfeeding did not experience diarrhea. Based on the statistical test, the significance value of  $\alpha = 0.05$  obtained  $p\text{-value} = 0.016$ , which means that the  $p\text{-value} < \alpha$ , then  $H_0$  is rejected, meaning that there is a relationship between early complementary breastfeeding and the incidence of diarrhea in infants aged 0-6 months at the Sedap Malam Posyandu. Tengger Kandangan Timur Surabaya.

Early complementary breastfeeding has a significant relationship with the incidence of diarrhea. Thus, it is hoped that health services will provide more health education to the community, especially mothers, about the benefits of exclusive breastfeeding and the impact that will arise if it is given early complementary breastfeeding so that babies do not experience diarrhea.

**Keywords:** Early complementary breastfeeding, diarrhea, Infant

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**BACKGROUND**

Babies are a golden period because during this period there is rapid growth and development which reaches its peak at the age of 24 months. The golden period in children's life can be achieved optimally if it is supported by proper nutritional intake from birth in the first 2 years (Mufida, Widyaningsih, & Maligan, 2015). In order to reduce infant morbidity and mortality, UNICEF and WHO recommend that babies only be breastfed (ASI) for at least 6 months without any additional food or drink, and breastfeeding should be continued until the baby is 2 years old, but in reality it is a habit in society. a mother provides food and drink to a baby who is a few days old or less than 6 months old, such as providing formula milk, honey, boiled rice, biscuits, bananas and others. (WHO, 2018).

Nationally, in 2018, the coverage of infants who received exclusive breastfeeding was 68.74%, while the provincial level of East Java was in the 3rd highest position, with a percentage of 77.51%. Surabaya city has an exclusive breastfeeding rate of 60.52%, with 21,780 babies being examined. (Indonesia Health Profile, 2018). While the percentage of diarrhea incidence in children under five in East Java province is 48.48%. while diarrhea cases in Surabaya were 60,627 cases out of 77,285 estimated cases or equal to 78.45% (Risksedas, 2018).

The introduction and provision of complementary foods should be done in stages, both in form and in quantity according to the baby's digestion. Digestion of food other than breast milk in the baby's digestive tract (0-6 months) is still not perfect. The secretion of enzymes that function to break down polysaccharide carbohydrates such as amylase enzymes produced by the pancreas has not been secreted in the first 3 months and is only present in small amounts until the baby is 6 months old. Incomplete digestion of polysaccharides in infants can interfere with the absorption of other nutrients and can lead to growth problems. Giving complementary foods too early will also reduce breast milk consumption and if it is late it will cause the baby to be malnourished and feeding at an early age results in the baby's digestive ability not ready to receive additional food (Wargiana, 2013). The impact of early complementary breastfeeding will cause several problems such as intestinal cramps, excess nutrition or obesity, diarrhea, food allergies, constipation, damage to the digestive system and cause the baby to choke (Lakshita, 2012).

Children who are breastfed from an early age generally develop rapidly compared to children who only get formula milk because children who only get formula milk usually experience less or late development and will affect the quality of the child (Firdaus, 2012).

Exclusive breastfeeding is very important for the child's growth. Therefore, we as health workers need efforts to provide education for the community, especially mothers, to provide exclusive breastfeeding for their children. provide knowledge about breastfeeding, such as what are the benefits of breastfeeding, what are the effects that will arise when we provide early complementary breastfeeding.

**METHODS**

The research design used was *analytic observational*, namely research aimed at testing hypotheses about the relationship between variables, while the approach used was *wastechique cross sectional*. The population in this study were mothers who had babies aged 0-6 months at the Tengger Kandangan Timur Surabaya Posyandu Sedap Malam for 50 mothers. The number of samples was 45 people, using *probability sampling*, with *simple random sampling technique*. This research was conducted in April 2020. The independent variable in this study was the provision of early complementary breastfeeding, the dependent variable was the incidence of diarrhea. Using a questionnaire instrument.

Determine the score / value for the question items and determine the lowest and highest scores:

1. The observation results of the questionnaire on early complementary breastfeeding were 2 questions divided into 2 parts, namely Yes and No, if the statement with the answer is No then it is assessed = 1, if the statement is Yes then it is assessed = 0 .
2. The results of the observation of the diarrhea incidence questionnaire were 4 questions which were divided into two parts, namely Yes and No. If the statement with the answer is not assessed = 1. If the answer is Yes, it is assessed = 0. The total score if the answer is No 1-4, and if the answer is Yes the total score is 0

The data is processed by *entering* data from the results of filling out the questionnaire into a computer program package . The computer program package used for *entry* is the SPSS 22 *for windows program*. Analyzing the data to determine the relationship between early complementary breastfeeding and the incidence of diarrhea using the *Test Chi-Square*, with a significance level of  $p = 0.05$ ,  $H_0$  is rejected and  $H_1$  is accepted, which means that there is a relationship between complementary foods and the incidence of diarrhea.

**RESULT**

Respondent characteristics based on early complementary breastfeeding

Table 5.4 Frequency distribution of respondents based on the characteristics of early complementary breastfeeding for infants 0-6 months at the Sedap Malam Posyandu, Tengger Kandangan Timur, Surabaya.

No	complementary complementary feeding	Frequenc y	Percentage
1	complementary	41	foods
2	complementary foods	4	without91.1
<b>Total</b>		45	100

Source: Primary data, April 2020

Based on table 5.4 it was obtained from 45 mothers who had babies 0-6 months (91 , 1%) gave early complementary breastfeeding and (8.9) did not provide early complementary breastfeeding. This shows that almost all of them provide early complementary breastfeeding.

Characteristics of respondents based on the incidence of Emesis gravidarum (nausea and vomiting)

Table 5.5 Distribution of the frequency of respondents based on the incidence of diarrhea in infants aged 0-6 months at the Sedap Malam Posyandu, Tengger Kandangan Timur, Surabaya.

No	Incidence of Diarrhea	Frequenc y	Percentage
1	Diarrhea	28	62.2
2	No	17	37.8
<b>Total</b>		45	100

Source: Primary Data, April 2020

Based on table 5.4 it was found that 45 mothers who had babies 0-6 months (62.2%) occurred dairei and (37.8%) had no diarrhea. This shows that diarrhea occurs mostly.

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early complementary breastfeeding with diarrhea incidence in infants aged 0-6 months at the Table 5.6 Cross-tabulation between early complementary breastfeeding and diarrhea in infants aged 0-6 months at the Tengger Kandangan Sedap Malam Posyandu East of Surabaya.

Early complementary breastfeeding	YES		No		Total	
	f	%	f	%	f	%
Yes	28	68,3	13	31,7	41	100
No	0	0,0	4	100	4	100
<b>Total</b>	28	62,2	17	37,8	45	100

**$\rho = 0,016$**

Source: Primary data, April 2020

Based on the results of cross tabulation from Table 5.6, it was found that of the 41 who provided early complementary breastfeeding, most (68.3%) had diarrhea, 4 respondents who did not provide early complementary breastfeeding (0.0%) did not diarrhea occurs. The results of the test *Chi-Square* with a significance value of  $\alpha = 0.05$  obtained *p-value* = 0.016, which means that the *p-value* <  $\alpha$ , then  $H_0$  is rejected, meaning that there is a relationship between early complementary breastfeeding and the incidence of diarrhea in infants aged 0-6 months at Posyandu Sedap. Tengger Kandangan Timur Night Surabaya.

## DISCUSSION

Based on the results of this research, the provision of complementary breastfeeding was indicated by the incidence of diarrhea in the tuberoso posyandu, perched at Kandangan Timur, Surabaya using *Chi-square* with a significance value of  $\alpha = 0.05$ , the value of *p-value* = 0.016 means *p-value* <  $\alpha$ , then  $H_0$  is rejected, meaning that there is a relationship between Early MP-ASI with Diarrhea in Infants aged 0-6 months at the Sedap Malam Posyandu, Kandangan Timur, Surabaya.

Based on table 5.6, cross tabulation shows that out of 45 respondents, 41 respondents gave early complementary breastfeeding and most respondents who gave early complementary breastfeeding had diarrhea. This is in line with the theory of Proverawati (2010). The basic mechanism that causes diarrhea is an osmotic disturbance which results in the presence of food or substances that cannot be absorbed by the body which causes osmotic pressure in the intestinal cavity. Excessive contents of the intestinal cavity will stimulate the intestines to remove contents from the intestine, causing diarrhea.

The results of the research conducted by researchers are in line with research conducted by Sangsoko which states that there is a relationship between the timing of complementary feeding and the incidence of diarrhea in infants aged 0-12 months. This occurs because the factor of giving complementary breastfeeding is too early because the digestive system of infants aged 0-6 months is still immature and not ready to receive this type of food. In serving food, there is less hygiene, poor storage methods (open), so that contaminated food and bacteria are also the cause of diarrhea.

The results of this study are also in line with Widiana's (2009) study which states that there is a relationship between complementary feeding and the incidence of diarrhea in infants aged 0-6 months. The child's body needs the proper nutrients to grow and develop properly. Good nutritional intake can be pursued by giving exclusive breastfeeding until the age of 6 months. This is also in accordance with the statement of the Indonesian Ministry of Health (2017) that before giving complementary foods to babies, they should pay attention to the age of the baby whether they are ready to be given complementary foods or not. The age of complementary breastfeeding is right when it is first given when the baby is more than 6 months old, with the aim that the baby does not experience infection or digestive disorders due to viruses or bacteria. Babies who are given complementary breastfeeding have a 14,043 times risk of being exposed to diarrhea, compared to babies who are not given early complementary ASI (Kalbe, 2007).

Thus, giving complementary foods to infants aged 0-6 months has a strong relationship with the incidence according to Soetjningsih (2005) in Ikee (2012) that the incidence of diarrhea often occurs, especially in infants who get complementary foods and formula milk, where the figure is more significantly higher than infants who are exclusively breastfed. According to WHO (2018) the impact of early complementary breastfeeding will increase the risk of diarrheal disease because food is not as versatile as breast milk. This proves that there is a relationship between early recognition of contaminated food and the length of storage time after it is made and also has a direct correlation with microorganisms that will enter the baby's digestion directly.

## CONCLUSION

1. Almost all babies aged 0-6 months at the Tengger Kandangan Timur Surabaya Posyandu are given early complementary breastfeeding.
2. Babies aged 0-6 months at the Tengger Kandangan Timur Surabaya Sedap Malam Posyandu mostly experience diarrhea.
3. There is a relationship between early complementary breastfeeding and the incidence of diarrhea in infants aged 0-6 months at the Tengger Kandangan Timur Surabaya Sedap Malam Posyandu.

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