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Analysis of Early MP-ASI Giving and Relationship with Incidence of Diarrhea in Babies 0-6 Months in the District Medan Tuntungan

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ABSTRACT

Complementary foods for breast milk are foods that are given to babies who are 6 months old or older because breast milk does not meet the nutritional needs of babies. Mother's knowledge of MP-ASI is very important so that mothers can give MP ASI to the baby appropriately. Mother's lack of knowledge about the importance of MP-ASI is influenced by the promotion of dietary supplements and formula milk products. Early MP-ASI with the incidence of diarrhea in 0-6 month infants affects the mother's access to the time media that influences decision-making, where the higher the mother's education, the greater the opportunity to provide MP-ASI. The study aims to analyze the early MP-ASI feeding with the incidence of diarrhea in infants 0-6 months with feeding to infants. The type of research is analytical correlative with the design of a *cross sectional* study. The research was carried out in Medan Tuntungan District, starting from September-December 2025. The population and sample in the study of all mothers who had babies in Medan Tuntungan District amounted to 54 people. Sampling is a total sampling technique. The study used the chi-square test with a total of 54 research samples. Respondents were given a questionnaire to find out the early MP-ASI with the incidence of diarrhea in babies 0-6 months of administration. The results of the data obtained were tested using chi-square test statistics with α=0.05. The results showed that there was a significant relationship between early MP-breastfeeding and the incidence of diarrhea in infants 0-6 months, with a probability value (p = 0.000). The results showed that there was a significant significant relationship between early MP-breastfeeding and the incidence of diarrhea in infants 0-6 months, with a probability value (p = 0.000). The research team's suggestion is that it is necessary to carry out a health education program for mothers who have babies aged 0-6 months, coaching and empowerment to mothers in Medan Tuntungan District about the benefits and effects of not giving MP-ASI to babies 0-6 months with the incidence of diarrhea, in order to increase maternal knowledge, change maternal behavior about the importance of giving MP-ASI to babies 0-6 months with the incidence of diarrhea.

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INTRODUCTION

Complementary foods for breast milk are foods given to children aged 6–24 months. The role of supplements is not at all to replace breast milk but to complement breast milk. Complementary foods for breast milk must still be given to children, at least until the age of 24 months. Complementary Foods Breast Milk is a food or drink that contains nutrients given to babies to meet their nutritional needs. According to the World Health Organization (WHO), the purpose of breastfeeding is to increase the energy and nutrients needed by babies because breast milk cannot meet the needs of babies continuously. Thus, additional food is given to fill

the gap between the total nutritional needs of children and the amount obtained from breast milk (Suparyanto, 2021).

In Indonesia, from January to November 2025, as many as 34,132 babies experienced malnutrition. Of the total 196 people who died. The most cases were found in North Sumatra province. Meanwhile, the number of babies who died the most was in the province of North Sumatra. Of the 9,012 cases of malnutrition, 75 died, in Riau out of 43 cases 3 of them died, and in Aceh Darussalam of 1,563 cases of malnutrition, 5 of them died.

Medan city health profile data in 2023, the state of infant nutritional status in 2024, malnutrition data (21.14%), malnutrition (3.09%), while malnutrition is more present (12.31%) and good nutrition is present (62.46%). In addition, in 2025 (Medan City Health Office, 2025) shows that the nutritional status of babies (0.5%) is malnourished, (7.08%) undernourished, (11.03%) overnutrition, (80.68%) is malnourished.

According to data from the Medan Tuntungan Health Center, there will be 12 people who will experience malnutrition in 2024, while in 2025 there will be 5 people who will experience malnutrition. Malnutrition in babies causes various serious effects such as: failure of physical growth, the occurrence of diarrhea, decreased immunity to various diseases and increased risk of pain and death. The causes of malnutrition in babies are so complex that it is still difficult to overcome in general, the causes of malnutrition in babies are usually caused by two things, namely directly, namely through baby food and infectious diseases and indirect causes, namely maternal behavior in meeting poor needs. Malnutrition in babies will cause various very serious effects such as failure of physical organs, diarrhea, decreased immunity to various diseases and increased risk of pain and death (Nurhaeni, 2020).

Low education, knowledge, and maternal behavior about baby food can result in infant malnutrition and diarrhea. Facts show that mothers who breastfeed their babies still think that breast milk can meet the baby's needs until the child makes a request to feed himself (approximately 1 year old). On the other hand, if the mother has given complementary foods to breastfeeding, breastfeeding can be stopped immediately, such an assumption is a wrong assumption. Realizing the importance of maternal behavior regarding infant nutrition, a mother's behavior as the person closest to her baby is very dominant in meeting the nutritional needs of toddlers for the continuity of their growth and development.

From the results of the study (Hananto, 2022), it is stated that malnutrition in infants and children is caused by improper feeding habits of complementary breastfeeding. Mothers are less aware that after the baby is 6 months old, they need complementary foods for breast milk in increasing quantity and quality, according to the baby's age and the ability of his digestive system. Based on a preliminary study conducted by the author on several mothers who carried in Medan Tuntungan District, 3 mothers said that they did not understand in providing the right complementary foods for their babies. There are 2 mothers who say they have given complementary foods breast milk to babies from an early age, but they say that the baby often cries because of hunger, so the nutritional intake needed by the baby is not in accordance with his needs, it looks like the baby is allergic, diarrhea and difficulty defecating. Looking at the above phenomenon, the author is interested in knowing the analysis of early MP-breastfeeding and the relationship with the incidence of diarrhea in babies aged 0-6 months in Medan Tuntungan District in 2025.

METHODS

The type of research used is correlative analytical research with the design of a cross sectional study The purpose of the study is to analyze the provision of early MP-ASI and the relationship with the incidence of diarrhea in infants 0-6 months in Medan Tuntungan District in 2025. The research was carried out in Medan Tuntungan District. The research was carried out from September to December 2025. The population in the study is all mothers who have babies in Medan Tuntungan District, which totals 32 people. The sample in the study was in

the form of all mothers who had babies, sampling was carried out in total sampling with a total of 32 people. There is a relationship between knowing that there is a relationship between early MP-breastfeeding and the incidence of diarrhea in infants 0-6 months in Medan Tuntungan District using ordinal and nominal scales using the Chi-Square formula with a 95% confidence level at the value (α) = 0.05.

RESULTS AND DISCUSSION

Distribution of Mother's Education Frequency in Medan Tuntungan District

No	Education	F	%
1	SMP	4	12,5
2	SMA	11	34,4
3	D-III	9	28,1
4	S-1	8	25,0
	Total	**32**	**100**

From the table above, it can be seen that the majority of the respondents' education level is high school graduates, namely 11 people (34.4%).

Distribution of Mother's Knowledge Frequency about MP-ASI in Medan Tuntungan District

No	Knowledge	F	%
1	Good	9	28,1
2	Enough	16	18,8
3	Less	17	53,1
	Total	**32**	**100**

From the table above, it can be seen that the majority of mothers' knowledge about MP ASI is not good, namely 17 people (53.1%).

Results of Statistical Test Analysis of Early MP-Breastfeeding and Relationship with the Incidence of Diarrhea in Infants 0-6 Months in Medan Tuntungan District

No	Education Level	Mother's Knowledge						Total		P
		Good	%	Enough	%	Less	%	N	%	
1	SMP	-	-	-	-	4	12,5	4	12,5	0.000
2	SMA	-	-	-	-	11	34,4	11	34,4	
3	D III	3	9,4	6	18,8	-	-	9	28,1	
4	S1	6	18,8	-	-	2	6,3	8	25,0	
	Total	**9**	**28,1**	**6**	18,8	**17**	**53,1**	**32**	**100**	

Based on the table, it was shown that 4 respondents had a junior high school education (12.5%) with limited knowledge, 11 respondents had a high school education (34.4%) with less knowledge, 3 respondents with a DIII education (9.4%) with good knowledge, 6 respondents with a DIII education (18.8%) with sufficient knowledge, 6 respondents with a S1 education (18.8%) with good knowledge, and 2 respondents with a S1 education (6.3%) with less knowledge. From the results of a statistical test using the chi-square test, the result was obtained that the value (p = 0.000) means that there is a relationship with the incidence of diarrhea in babies aged 0-6 months in Medan Tuntungan District in 2025.

CONCLUSION

Mother's Education Level about MP-ASI

Based on the results of the research conducted on 32 mothers who were respondents, the results were obtained that 4 people had a junior high school education, 11 people had a high school education, 9 people had a D-III education, and 8 people had a Bachelor's education (S1). Formal education is education that has a certain form or organization such as in schools or universities. There is a strict and real organization. For example, about the leveling of teaching methods or methods in schools. A mother with low formal education is not necessarily able to formulate a diet that meets nutritional requirements compared to a person with a higher formal education. It should be considered that the education level factor also determines whether or not it is easy to absorb and understand the nutritional knowledge that mothers have acquired (Syaiful, 2024).

According to Hary (2020), it is stated that the level of education also determines whether or not a person can easily absorb and understand the knowledge they acquire. The level of education that has been passed can affect the knowledge possessed. In general, the higher a person's education, the better his knowledge. The level of education and knowledge of the mother affects the act of giving MP-ASI to the baby. Where high education and good knowledge of mothers will have a great opportunity to provide MP-ASI. On the other hand, poor maternal education and knowledge will negatively affect the provision of MP-Breastfeeding to babies, and the high maternal access to media can influence mothers to give formula milk to their babies, so the chances of not giving MP-Breastfeeding are very high (Abdullah, 2023).

Mother's Knowledge of MP-ASI

Based on the results of the study conducted on 32 mothers who became respondents, the results were obtained that 9 people (28.1%) had good knowledge of MP-ASI, 6 people (18.8%) had sufficient knowledge, and 17 people (53.1%) had poor knowledge. This is due to the level of education of mothers, the majority of whom only graduated from high school as many as 11 people (34.4%). The mother's education and work can influence the mother's knowledge and understanding of the importance of the benefits of giving MP-ASI to the baby. Maternal knowledge of MP-ASI is essential in underpinning the behaviors that support MP-breastfeeding in babies. This knowledge can be obtained naturally or planned, namely through the educational process. Mothers with poor knowledge of MP-ASI are predisposed to behavior that does not support the success of MP-ASI in infants (Abdullah, 2024).

According to Notoatmodjo (2023), knowledge is the result of knowing, this is after people have sensed a certain object. Knowledge can be influenced by several factors, namely: age, intelligence, education level, information, environment, experience, and socio-economy. Knowledge can be obtained from several factors, both formal such as education obtained in school and non-formal. Knowledge is an important factor for the formation of a person's actions. This is corroborated by research conducted by Rongers (2021), about a person's behavior which reveals that behavior based on good knowledge will be more lasting than behavior that is not based on knowledge.

By holding activities at the posyandu in the form of counseling, health education and coaching about the benefits of MP-ASI, how to give MP-ASI correctly, and the effects of not giving MP-ASI to babies, so that it can increase mothers' knowledge, and mothers understand and understand the importance of the benefits of giving MP-ASI to babies. So by giving MP-ASI to babies, mothers have helped reduce or minimize infant mortality.

The Relationship between Education Level and Mother's Knowledge of Early Breastfeeding Companion Foods in Medan Tuntungan District

Based on the table, it was shown that 4 respondents had a junior high school education (12.5%) with limited knowledge, 11 respondents had a high school education (34.4%) with less knowledge, 3 respondents with a DIII education (9.4%) with good knowledge, 6 respondents with a DIII education (18.8%) with sufficient knowledge, 6 respondents with a S1 education (18.8%) with good knowledge, and 2 respondents with a S1 education (6.3%) with

less knowledge. Mothers who do not give MP-ASI are influenced by the mother's knowledge and last level of education. The low level of education and knowledge of mothers about the importance of giving MP-ASI to babies is due to the lack of information and knowledge possessed by mothers about all nutritional plus values and benefits contained in breast milk. This caused a change from the basic pattern of breastfeeding to formula feeding (Prasetyono, 2019).

Knowledge of another factor influencing mothers to give MP-ASI to their babies is the work factor. The problem faced by mothers is that they have to work, so it is difficult to be able to give MP-Breast Milk all day to the baby because they are busy working (Kodrat, 2020). In addition, socio-cultural, lack of maternal awareness of the importance of MP-ASI, economic factors, availability of health facilities, maternal psychological factors, maternal physical factors, family support for health, as well as mothers' habits of not breastfeeding their babies and family trust in health, can affect mothers in giving MP breast milk to babies (Rahayuningsih, 2025).

The better the mother's knowledge about the benefits of MP-ASI, the better the mother will be in giving MP-ASI to her baby. And vice versa, the lower the mother's knowledge of the benefits of MP-ASI, the less opportunity the mother has to give MP-ASI to her baby. (Suharyono, 2022). So that mothers who have poor knowledge about MP ASI do not give MP-ASI to their babies, but often give supplements and formula milk to their babies.

The results of the study conducted by the researcher using the chi-square test showed that there was a significant significant relationship between the level of education and knowledge of the mother about MP-ASI and its administration in the infant, with a probability value ($p = 0.000 < p = 0.05$). Based on the results of the research obtained, the author can assume that the better the mother's knowledge about MP-ASI, the better the success of giving MP-ASI to the baby. According to Rulina Suradi (2024), mothers from all economic levels have good knowledge about the usefulness of MP-ASI and have a positive attitude towards efforts to provide MP-ASI, but in practice it is not in line with their knowledge. Efforts to overcome this problem are that health workers, especially mothers and children who work at posyandu, must conduct counseling once in two months. Counseling that must be activated in posyandu provides health education and information about the importance of the benefits of giving MP-ASI and the effects of not giving MP-ASI to babies (Rahayuningsih, 2024).

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Based on the results of the analysis of early MP-ASI and the relationship with the incidence of diarrhea in babies 0-6 months in Medan Tuntungan District in 2025, the following conclusions can be drawn: the majority of the education level of mothers who graduated from high school is 11 people (34.4%), the majority of mothers' knowledge about MP-ASI is not good, namely 17 people (53.1%), there is a relationship between the analysis of early MP-ASI and the relationship with the incidence of diarrhea in babies 0-6 months in Medan Tuntungan District in 2025. 2025 with a value of $P = 0.000$ ($P<0.05$). It is necessary to carry out counseling once in two months, namely with a program to provide health education and coaching to mothers in Medan Tuntungan District about the benefits and effects of not giving MP-ASI to babies, in order to increase knowledge, mothers, change maternal behavior, and empower mothers about the importance of giving exclusive MP-ASI to babies, for mothers who have babies are expected to give MP-ASI to their babies.

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