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Research Article

The Connection between Maternal Knowledge and Attitude in Providing Proper Complementary Food for Infants at Ribang Health Center

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Abstract: Complementary foods, or MP-ASI (food for babies), play a crucial role in providing essential nutrients for infants and children to meet their growing nutritional needs. The knowledge and attitude of mothers are pivotal factors influencing children's nutrition, as a lack of understanding regarding complementary feeding often leads to malnutrition. One of the primary causes of malnutrition in infants is the improper timing of introducing complementary foods, either too early (before six months of age) or too late. This study aims to analyze the relationship between mothers' knowledge and attitudes regarding the provision of complementary feeding for infants aged 6-12 months at the Ribang Health Center, Muara Uya District, Tabalong Regency, South Kalimantan. The study utilized univariate, bivariate, and chi-square tests to analyze the data. A total of 20 respondents were surveyed, with results indicating that 8 respondents (46.7%) had sufficient knowledge and a good attitude, while 14 respondents (70%) demonstrated a good attitude. The chi-square test revealed a p-value of 0.000 (<0.05) at $\alpha = 0.05$, supporting the hypothesis that maternal knowledge is significantly related to the provision of complementary feeding. However, the bivariate analysis showed a p-value of 0.163, indicating no significant effect between maternal attitudes and the provision of complementary feeding. In conclusion, while there is a significant relationship between maternal knowledge and complementary feeding, the study found no significant association between maternal attitudes and the timing of complementary feeding based on statistical analysis. This study highlights the importance of improving maternal knowledge in the provision of complementary feeding to ensure proper infant nutrition.

.**Keywords:** Attitude; Compliance; Family Support; Iron Tablets; Knowledge

1. Introduction

Complementary foods or commonly called MP-ASI refer to foods that provide essential nutrients for infants and children with the aim of meeting their nutritional needs. MP-ASI is usually given to infants from 6 to 24 months of age because infants' nutritional needs increase with growth and development, while breast milk alone is no longer sufficient. MP-ASI acts as a transitional food before babies eat adult food. The introduction of complementary foods is carried out gradually, both in terms of variety and quantity, according to the digestive capacity of infants or toddlers. (Knowledge et al., 2021).

When babies are 0-6 months old, babies only consume breast milk without any additional food. (Bayi et al., 2024). Complementary feeding helps babies switch from milk-based consumption to rice or porridge. Between the ages of 6 and 12 months, breast milk meets about 60% of the baby's nutritional needs; therefore, the remaining needs must be met with appropriate and nutritious additional foods (Oktarina et al., 2023). Provision of appropriate complementary feeding supports healthy child growth. WHO has set four criteria for providing complementary feeding: timely, sufficient, clean, and safe (Almatsier, 2009).

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The involvement of mothers in the family is very important to facilitate efficient provision of complementary feeding, which affects the optimal growth and development of children. (Darmawan et al., 2015).

The appropriateness of complementary feeding includes not only the timing, but also the quantity and quality of food. Factors such as knowledge, parental education level, financial status, age, geographic location, and behaviors such as smoking habits in children influence the practice of providing complementary feeding. WHO recommends providing complementary feeding after the child is six months old. Research shows that only 54% of mothers have sufficient information about the timing of providing complementary feeding, 25.5% understand the optimal consistency, and only 8% know the appropriate amount of complementary feeding. (Aggarwal et al.). Another study also found a significant influence between maternal knowledge and the practice of providing complementary feeding (Srimiati et al., 2020).

Based on Riskesdas 2018, the practice of exclusive breastfeeding in Indonesia was recorded at 37.3%, while 9.3% of infants received breast milk with additional food, and 3.3% received breast milk with a little additional fluid. This data also recorded a prevalence of malnutrition of 17.7% nationally and 16.8% in East Java. The provision of complementary foods in the 6-12 month age range is often inadequate and lacking, both in terms of quality and quantity. Initial investigations showed that all mothers who provided complementary foods to their babies aged 6-12 months only provided minimal amounts, and ignored the diversity of complementary foods provided. The frequency of providing additional foods is still inadequate every day, potentially causing children's nutritional needs to be unmet. However, some mothers provide excessive additional foods so that they do not meet their children's nutritional needs (Puspitasari et al., 2023).

Maternal education and attitudes are very important; lack of maternal understanding regarding supplementary feeding is often a trigger for malnutrition. Malnutrition in infants is caused by inappropriate timing of supplementary feeding, either too early (before six months) or too late (after six months) (Prajayanti, 2022). Maternal attitudes towards supplementary feeding significantly influence decision-making. Attitude is an individual's response or reaction that has not yet acted on a particular stimulus or object faced. A person's attitude is based on good knowledge; however, a positive attitude does not inherently influence a person's behavior or decision-making process. Incentives from various stakeholders are essential to changing maternal practices in providing supplementary feeding in a timely manner "(Knowledge & Behavior, nd).

This study aims to determine the relationship between maternal knowledge and attitudes with exclusive breastfeeding in infants at the Pinangsori Health Center, Central Tapanuli Regency, in 2022. This study intends to assess the relationship between maternal knowledge and attitudes about exclusive breastfeeding at the Ribang Health Center, Muara Uya District, Tabalong Regency, South Kalimantan Province.

2. Research methods

2.1 Study Design

This study uses a descriptive "correlational" design, which aims to analyze the relationship between two variables. The approach used is the cross-sectional method, where measurements or observations are carried out simultaneously at one time.

3. Result and Discussion

Table 1. Distribution of respondents according to provision of MPASI at Ribang Health Center

Providing complementary feeding	Frequency	%
Yes	8	40.0
No	12	60.0
Amount	20	100

Based on the data in the table, from a total of 20 respondents, there were 12 respondents (60.0%) who did not provide complementary feeding, this number is greater than the respondents who provided complementary feeding, which was 8 respondents (40.0%).

Table 2. Distribution of respondents according to knowledge at Ribang Health Center

Mother's Knowledge	**Frequency**	**%**
Good	7	35.0
Enough	8	40.0
Not enough	5	25.0
Amount	20	100

Based on the table above, among 20 respondents, 8 people (40.0%) have sufficient knowledge, above 7 people (35.0%) who show strong knowledge. Five respondents (25.0%) have insufficient knowledge.

Table 3. Distribution of respondents according to mothers' attitudes at the Ribang Health Center

Mother's Attitude	**Frequency**	**%**
Positive	14	70.0
Negative	6	30.0
Amount	20	100

Based on the table above, from 20 responses, 14 people (70.0%) showed a positive attitude, exceeding 6 people (30.0%) who showed a negative attitude.

Table 4. Relationship between knowledge and provision of complementary feeding at Ribang Health Center

	Providing complementary food				**Total**		**P.Value**
Knowledge	**Yes**		**No**				
	n	%	n	%	n	%	

Good	7	87.5	0	0	7	35.0	0,000
Enough	1	12.5	7	58.3	8	40.0	
Not enough	0	0	5	41.7	5	25.0	
Total	8	100	12	100	20	100	

Based on the table, from a total of 20 respondents, 7 respondents had good knowledge, 1 other respondent had sufficient knowledge, and 5 other respondents had insufficient knowledge. Of the 7 respondents with good knowledge, all (87.5%) provided complementary feeding, while no respondents (0%) from this group did not provide complementary feeding. Among the 8 respondents with sufficient knowledge, 1 respondent (12.5%) provided complementary feeding, while 7 respondents (58.3%) did not provide complementary feeding. In addition, the five respondents with insufficient knowledge also did not provide complementary feeding. Bivariate analysis using SPSS showed a p-value of 0.000, which indicated a significant relationship between the level of knowledge and the provision of complementary feeding.

Table 5. Relationship between maternal attitudes and provision of complementary feeding at Ribang Health Center

Attitude	**Providing complementary food**				**Total**		**P.Value**
	Yes		**No**				
	n	**%**	**n**	**%**	**n**	**%**	
Positive	7	87.5	7	58.3	14	70.0	0.163
Negative	1	12.5	5	41.7	6	30.0	
Total	8	100	12	100	20	100	

Based on the table, out of a total of 20 respondents, 14 had positive attitudes and 6 had negative attitudes. Among the 14 respondents with positive attitudes, 7 respondents (87.5%) provided complementary feeding, while 7 respondents (58.3%) "did not provide complementary feeding. On the other hand, out of 6 respondents with negative attitudes, only 1 respondent (12.5%) provided complementary feeding, while 5 respondents (41.7%) did not provide complementary feeding.

The results of the bivariate analysis using the Chi-Square statistical test through SPSS showed a p-value of 0.163. From these results, it shows that there is no significant relationship between maternal attitudes and the provision of MP-ASI."

3.1. Sub Section 1

The table above illustrates the findings of the univariate study. Of the 20 respondents, 12 (60.0%) did not provide complementary foods, while 8 (40.0%) provided complementary foods. Of the 20 respondents, 12 (60.0%) did not provide complementary foods, while 8 (40.0%) provided complementary foods. This information was obtained from table 2. Table

3 shows that 14 respondents (70.0%) showed a more positive attitude compared to 6 respondents (30.0%) who showed a negative attitude from the 20 respondents.

Table 4 shows that out of a total of 20 respondents, 7 respondents had good knowledge, 1 respondent had sufficient knowledge, and 5 respondents had poor knowledge. Of the 7 respondents with good knowledge, all (87.5%) provided complementary feeding, and no respondents (0%) from this group did not provide complementary feeding. On the other hand, out of the 8 respondents with sufficient knowledge, only 1 respondent (12.5%) provided complementary feeding, while 7 respondents (58.3%) did not provide complementary feeding. In addition, all 5 respondents with poor knowledge also did not provide complementary feeding. The results of the bivariate analysis using the Chi-Square test via SPSS showed a p-value of 0.000, indicating a significant relationship between maternal knowledge and the provision of complementary feeding.

Table 5 shows that 14 respondents have positive attitudes and 6 respondents have negative attitudes. Of the 14 respondents with positive attitudes, 7 respondents (87.5%) provide complementary feeding, while 7 respondents (58.3%) do not provide complementary feeding. Conversely, of the 6 respondents with negative attitudes, only 1 respondent (12.5%) provides complementary feeding, while 5 respondents (41.7%) do not provide complementary feeding. Bivariate analysis using the Chi-Square test produced a p-value of 0.163, which indicates "there is no significant relationship between maternal attitudes and the provision of complementary feeding."

3.2. Sub Section 2

Although mothers are aware that giving complementary foods is not recommended for babies under six months, they are often influenced by social culture that encourages early giving of complementary foods to make babies full and not fussy. Lack of knowledge regarding proper scheduling can lead to early giving of complementary foods to neonates (Mauliza, 2021). Knowledge plays an important role in shaping actions, as it can affect a child's well-being. Mothers with low knowledge tend to pay less attention to their babies' needs, while mothers with high knowledge are more concerned about the transition from exclusive breastfeeding to complementary foods, which has a major impact on child growth (Mauliza, 2021).

The mother's attitude in this study was divided into two categories: good (if the score is more than 35) and less (if the score is less than 35). Univariate data showed that 37 respondents (82.2%) had a positive attitude, while 8 respondents (17.8%) had a negative attitude. From the bivariate analysis, 33 of the 37 respondents with a positive attitude (73.3%) provided complementary feeding, and only 4 respondents (8.9%) did not provide complementary feeding. Conversely, of the 8 respondents with a negative attitude, only 2 respondents (4.4%) provided complementary feeding, while 6 respondents (13.3%) did not provide it. The results of the Chi-Square statistical test showed a p-value of 0.000, which

indicates a significant relationship between the mother's attitude and the provision of complementary feeding (Mauliza, 2021).

Similar research at the Melati Health Center, Perbaungan District, Serdang Bedagai Regency, in 2021 also showed a significant relationship between maternal attitudes and the provision of complementary feeding, with a p-value of 0.003 from 57 respondents (Nurhayati, 2021). Attitude, which is a disposition to act or an evaluative response, is influenced by knowledge. Therefore, counseling regarding the importance of complementary feeding needs to be improved to provide knowledge that can form a positive attitude in supporting the practice of providing complementary feeding. A positive attitude is supported by a strong knowledge base, while lack of knowledge will certainly contribute to the formation of a negative attitude. The formation of a person's attitude is greatly influenced by the source of information obtained about complementary feeding and the influence of culture that is still related to the area where we live and grow up (Ilham, 2020). A mother's attitude towards complementary feeding can be influenced by her level of knowledge. Mothers who have the right information about MPASI for infants aged 6-12 months are more likely to adopt a positive attitude towards the topic, while mothers who do not have such information are more likely to adopt a negative attitude towards the topic (Ilham, 2020). Knowledge and motivation are the main determinants that influence mothers' perspectives on providing additional food. The practice of providing additional food, such as honey and sugar, to newborns when visiting neighbors' houses that is already culturally rooted also influences the decision not to provide only breast milk. Unsupportive attitudes include rejection of colostrum because of the assumption that colostrum is easily spoiled and causes diarrhea in infants, giving food or drinks before the start of lactation (prelactal), inappropriate breastfeeding practices, and lack of confidence in the adequacy of breast milk for infants (Nurhayati, 2021). Attitude is a predisposition to engage in or refrain from engaging in certain behaviors or actions. Therefore, attitude is not merely a psychological condition related to the individual's mental state (purely physical), but rather a process of consciousness that is unique to each individual. A process that is objectively and clearly visible in each person. The uniqueness of this issue is related to individual differences that arise from the ideals and conventions that the person wants to maintain. A mother's positive or supportive attitude towards complementary foods will result in the mother's behavior in providing these foods to her baby which is also positive or supportive. The mother will introduce MPASI at the right time, namely between the ages of 4-6 months, by considering the physical and psychological readiness of the baby, as well as the quality and type of MPASI that is right to ensure adequate nutritional intake for babies and toddlers. In addition,exclusive breastfeeding should be continued until it is gradually reduced when the child reaches the age of two years (Nurhayati, 2021). The mother's disposition is classified as positive or pleasant. This is in accordance with the statement that the knowledge obtained from the subject will then cause an internal response in the form of an attitude towards the object that has been studied, when

viewed from the lack of respondent knowledge regarding the fixed period of MPASI (Notoatmodjo, 2017). Therefore, it can be concluded that a positive attitude will result from a high level of knowledge. However, the results of this study indicate that knowledge and attitudes are not in line. Respondents' knowledge regarding the right time to provide MPASI, which is 54.17, is classified as "poor" compared to their attitudes who all agree (Nurhayati, 2021). However, the results of the study regarding the types of complementary foods are classified as good (Nurhayati, 2021).

4. Conclusion

The results of the study on 20 respondents showed that the majority of respondents had a positive attitude, with the majority of 14 respondents (70%) and 8 respondents (46.7%) having sufficient knowledge. Based on the results of the analysis with $\alpha = 0.05$ which produced a value of "$p = 0.000$ (<0.05), Ha was accepted, explaining that there was an influence between maternal knowledge and infants aged 6-12 months in providing complementary feeding. Bivariate analysis conducted using the SPSS statistical test using Chi-Square produced a p value of 0.163, indicating that there was no significant relationship between maternal attitudes and the provision of additional food. All mothers are expected to be able to provide additional food to their babies in a way that is appropriate to their development.

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