Mother's Knowledge of MP-ASI by Early MP-ASI Giving to Mothers Who Have Babies 0-12 Months in the Working Area of the Padasuka Cimahi Health Center: Study Corellation

Dyna Apriany[1*], Siti Dewi Rahmayanti[2], Ai Setianah[3]

[1]Diploma of Nursing Program Study, Jenderal Achmad Yani University, Indonesia
[2,3]Bachelor of Nursing Program Study, Jenderal Achmad Yani University, Indonesia
*Corresponding author Email: dyapriany@gmail.com

ABSTRACT

Complementary foods are foods and drinks other than breast milk that are given to infants when they are 6 months old. Giving food and drink other than breast milk to babies before 6 months of age is called early complementary feeding. Knowledge is the things that a person gets that have been captured through the five senses by that person. The prevalence of infants who have been given early complementary foods in Cimahi city is 40%. The purpose of this research was to see the description of mothers knowledge, early complementary feeding, and the relationship between mothers knowledge and early complementary feeding in the working area of Padasuka Cimahi Health Center. This study uses Analytical Survey research method with Cross Sectional design. The sample technique used was Total Sampling. The sample in this study were mothers who had babies aged 0-12 months totaling 92 mothers in the Padasuka Cimahi Health Center working area. Univariate analysis used frequency distribution and bivariate using Chi Square analysis. Data collection methods using questionnaires. The results of this study indicate that there is a relationship between maternal knowledge about complementary foods and early complementary feeding with the results of the Chi Square test with a p-value of 0.001 <0.05. It is suggested that local health services can increase health promotion about complementary foods in the area to be used as additional information for mothers who are preparing to give complementary foods and who have given complementary foods to their babies, so that mothers can increase their knowledge of complementary foods.

Keywords: Early complementary feeding, Mothers knowledge

Introduction

Child growth is a very important aspect and must be considered from the earliest possible age. At the age from the womb to the age of 2 years (24 months) the baby is in a period of very rapid growth and development, and can also be called the golden period but it can also be a critical period that will interfere with the development and growth of the child. An impact that will occur at this time of growth is the disruption of the baby's brain development that will not be repaired and the lack of nutrition in the baby, so it is very important in providing optimal food and nutrition to support brain development and baby growth (Kurniasih, 2022).

The Ministry of Health has established a strategy for Infant and Child Feeding, with the recommendation of a PMBA gold standard including: Early Breastfeeding Initiation, providing exclusive breastfeeding from newborns to 6 months old, then giving MP-Breast Milk to babies

starting from 6 months old, and continued with breastfeeding up to children aged 2 years (24 months) or more (Ministry of Health of the Republic of Indonesia, 2022).

Complementary Foods for Breastfeeding are foods that can be easily consumed and digested by babies according to nutritional needs and in accordance with the readiness of the digestive system of the baby itself (Ministry of Health of the Republic of Indonesia, 2014 in Rotua, 2018). *The World Health Organization* said that babies who are 6 months old are ready to receive food and drinks other than breast milk. So that Complementary Foods should be given to babies who are 6 months old (WHO, 2018).

Giving MP-ASI is very mandatory depending on the age of a baby, but there are still quite a lot of mothers who have given MP-ASI in infancy, before the predetermined age, this will have a negative impact on the baby's health. Improper feeding of breast milk supplements to babies can have an impact on the health of the baby, including in the digestive tract in the form of diarrhea, because it is caused by the baby's digestive system that is not adequate enough to accept other foods and drinks other than breast milk. In the end, if MP-ASI is still given to babies for less than 6 months, it will produce a negative reaction in the baby's digestive system (Utami, 2025).

The World Health Organization and *Unicef* stated that globally in 2020 the prevalence of exclusive breastfeeding was only 41% (Unicef, 2020). This shows that the rate of exclusive breastfeeding is still quite low, while in various countries the practice of early MP-breastfeeding is quite high. In the *framework document of action: Indonesia Complementary Feeding* (2020), it states that in Indonesia the provision of Complementary Breastfeeding to babies is still inadequate and not appropriate. It is recorded that more than 40% of babies in Indonesia have been given Complementary Foods for Breastfeeding early under the age of 6 months. RISKESDAS in 2021 explained that 52.2% of babies aged less than 6 months received exclusive breastfeeding, thus 47.8% of babies in Indonesia had been given MP-ASI early (Unicef, 2022). In the 2022 Maternal and Child Health Profile Book, it is stated that in the West Java Province area in 2021, the prevalence of babies aged 0 to 5 months was exclusively breastfed at 76.46%, thus there are 23.54% of babies in West Java who have been given MP-ASI for less than 5 months.

The results of an initial survey obtained from the Cimahi City Health Office office on February 28, 2024, showed that the prevalence of early MP-ASI in the Cimahi area was 40%, and data was obtained that in the Padasuka Health Center area, Central Cimahi District, Cimahi City Regency, the total number of newborns in 2024 was 1,164 babies. The prevalence of babies who are exclusively breastfed at the Padasuka Health Center, Central Cimahi District is

85.2%, while babies who do not receive exclusive breastfeeding, which means that they have been given MP-ASI early, is 14.8%. The highest area of coverage of exclusive breastfeeding for babies is at the North Cimahi Health Center at 96.2% (Cimahi City Health Office, 2024).

The factor that hinders the sustainability of the mother in giving Complementary Foods is a factor of the mother's knowledge, that the mother feels that her baby when the baby has not reached the age of 6 months, if only consuming breast milk it will not be enough to get the intake of nutrients for the baby (Heryanto, 2019). Knowledge itself is a result of "Knowing" and it will happen if one has perceived a specific object. If there is no knowledge, then a person cannot have a basis to make a decision and an attitude to solve a problem that he is experiencing. Perception is intertwined through the five senses of humans, including sight through the eyes, smell through the nose, hearing through the ears, taste through the tongue as well as touch through touch, Moreover, most of the knowledge comes through the five senses, namely sight and hearing (Tumurang, 2020).

There are still many mothers of babies who prefer to give additional food and drinks to babies who are less than 6 months old, this means that the mother has given breastfeeding companions early to her baby, with the reason that the baby gets fat quickly and the mother thinks to get more nutrients, while the benefits of breast milk until now have not been matched with other foods and drinks for babies less than 6 months. This can occur due to a mother's lack of knowledge about exclusive breastfeeding and proper MP-breastfeeding (Chalid, et al. 2019). The role of nurses as health workers in this case is to play a role in providing good and correct education to the community, regarding the proper provision of MP-Breastfeeding to reduce the incidence of early complementary feeding to babies less than 6 months.

On March 3-4, 2024, the researcher conducted a preliminary study in the working area of the Padasuka Health Center, Central Cimahi District, which was conducted on 10 respondents in the Padasuka Health Center and Posyandu RW 05 Padasuka Village, the researcher asked several questions to mothers who have babies 0-12 months related to basic knowledge about complementary foods for breastfeeding, the right time to give MP-ASI, what types of MP-ASI are given, as well as asking whether or not they have been given formula milk to their babies before the baby is 6 months old, 5 mothers can explain what MP-ASI is and types, 5 mothers cannot explain what MP-ASI is, there are 8 out of 10 mothers who have given fluids other than breast milk such as water, honey water, as well as tajin water on the baby before the baby is 6 months old which means that he has given MP-ASI, but the mother does not realize this, the mother only gives the reason because the baby is whining and looks thirsty, and it is found that there are only 2 mothers who only give breast milk to their babies before

the baby is 6 months old. 8 out of 10 mothers agreed to give MP-ASI when their babies were 6 months old and there were 2 mothers who had given complementary foods for less than 6 months in the form of rice team and rice porridge, with the reason that the baby's needs were low and the baby was fussy and looked hungry when he saw his parents eating. From this, it can be seen that a mother's knowledge of MP-ASI is still quite low, which causes there to still be an early incidence of MP-ASI among mothers who have babies under 6 months. Based on what has been explained, the researcher is interested in researching the relationship between maternal knowledge about MP-ASI and the provision of early MP-ASI to mothers who have babies 0-12 months in the working area of the Padasuka Health Center, central Cimahi District, Cimahi City Regency.

Materials and Methods

The research used in this study is a quantitative approach, and the method used in this study is an analytical survey, while the design in this study is using a *cross sectional design*. The independent variables in this study are the mother's knowledge of MP-ASI, and the dependent variable is the provision of MP-ASI early. The hypothesis in this study is there is a relationship between mother's knowledge of MP-ASI and the provision of early MP-ASI in the working area of the Padasuka Cimahi Health Center (P Value 0,001).

The population in this study is all mothers who have babies 0-12 months in the Padasuka Cimahi Health Center Working Area amounting to 92 mothers. Sugiyono (2022), explained that if the population is not more than 100 people or respondents, the technique that is often used is the total sampling technique. So the sampling technique used by the researcher is total sampling where the entire population is used as a research sample.

The instrument used in this study was a structured questionnaire designed to assess mothers' knowledge regarding complementary feeding (MP-ASI). The questionnaire consisted of 22 multiple-choice items scored using the Guttman scale, where correct answers were assigned a score of 1 and incorrect answers a score of 0.

Early complementary feeding practices were measured using an additional questionnaire consisting of two statements related to providing complementary feeding before the age of six months. This section also applied the Guttman scale, with response scores ranging from 1 (indicating early complementary feeding) to 2 (indicating no early complementary feeding).

Validity and reliability testing was conducted using a sample of 30 respondents at the Padasuka Public Health Center. All questionnaire items demonstrated acceptable validity,

indicated by calculated r-values higher than the r-table (>0.361). The reliability test produced a Cronbach's alpha value of 0.859 ($\alpha \geq 0.6$), confirming that the instrument was reliable and appropriate for use in this research.

The data analysis used in this study is a univariate analysis using frequency distribution, which aims to determine the percentage value of each variable analyzed, namely the variable of maternal knowledge about MP-ASI with early MP-ASI administration. The bivariate analysis in this study used *Chi Square analysis,* which aimed to find out whether there was a relationship between the variables of maternal knowledge about MP-ASI and early MP-breastfeeding.

Result and Discussion

Table 1. Distribution of Knowledge of Mothers with children 0-12 months about MP-ASI in the Working Area of the Padasuka Cimahi Health Center (n=92) in 2024.

Knowledge Level	Frequency (n)	Percentage (%)
Good Knowledge	21	22,8
Sufficient Knowledge	26	28,3
Lack of Knowledge	45	48,9
Total	92	100

The results of the research presented in Table 1 above show that almost half of the respondents out of 92 people have poor knowledge, which is as much as 48.9%, while there are only 22.8% of mothers who have good knowledge of MP-ASI.

Table 2. Distribution of Early MP-ASI Feeding for Infants Less Than 6 Months in the Working Area of the Padasuka Cimahi Health Center in 2024.

Giving MP-ASI	Frequency (n)	Percentage (%)
MP-ASI Dini	55	59,8
No MP-Early Breastfeeding	37	40,2
Total	92	100

The results of the study in Table 2 above show that out of 92 respondents, 55 (59.8%) mothers give early MP-ASI to their babies, this shows that there are still many early MP-ASI to mothers who have babies aged 0-12 months in the working area of the Padasuka Cimahi Health Center.

Table 3 shows that from all 92 respondents, it was found that out of 21 well-informed respondents, 15 (71.4%) mothers did not give MP-ASI early to their babies, while out of 45

respondents who were less knowledgeable, 41 (91.1%) mothers who had given MP-ASI early to their babies were obtained.

Table 3. The Relationship of Mother's Knowledge of MP-ASI with the Provision of Early MP-ASI in the Working Area of the Padasuka Cimahi Health Center (n=92) in 2024.

Knowledge	Giving MP-ASI				Total		p-Value
	MP-ASI Dini		No MP-Early Breastfeeding				
	n	%	n	%	n	%	
Good	6	28,6	15	71,4	21	100	0,001
Enough	8	30,8	18	69,2	26	100	
Less	41	91,1	4	8,9	45	100	
Total	55	59,8	37	40,2	92	100	

1. Mother's Knowledge About MP-ASI

The results of the study seen in table 4.1 regarding mothers' knowledge about MP-ASI show that out of 92 respondents, 45 (48.9%) mothers are knowledgeable, while there are 21 (22.8) mothers with good knowledge. The average knowledge of mothers obtained in this study is that mothers who are less knowledgeable.

Factors that can affect a person's knowledge are age, which if a mother gets older or more mature, the knowledge obtained will be more. According to data from the results of the research obtained by the researcher, mothers who have babies aged 0-12 months in the working area of the Padasuka Health Center, Cimahi City, are aged from 19-45 years old with an average age of mothers in the area of 20-25 years. This age factor is evidenced by research data that mothers who are more than 30 years old and above on average have a better knowledge of MP-ASI.

The next factor is education, which if a mother has higher education, it is highly expected that her knowledge will also be better, the results of the data obtained by the researcher were obtained by the average mother who has a baby aged 0-12 months in the Padasuka Cimahi Health Center Working Area, namely high school graduates. However, judging from the results of the respondent's level of knowledge, on average there are still many respondents whose knowledge is not good, this respondent's knowledge can be influenced by other factors such as lack of exposure to information, work, lack of experience, age and so on which results in the respondent's knowledge is still lacking, as explained by Notoatmodjo (2018).

The next factor that can affect knowledge is work, from the anamnesis data obtained by researchers in the field, that the average mother who has a baby aged 0-12 months in the Padasuka Cimahi Health Center Working Area is as a housewife, of course. do not work outside the home. The last factor is experience and exposure to information sources, both of these factors can affect a person's knowledge because an experience is one way to get the right knowledge by repeating the same problem again in order to gain better knowledge than before and be able to solve problems faced in the past. Information sources can also affect knowledge because information sources are data that has been processed in a form that has meaning and value for the recipient, information sources can come from the sender of messages to recipients in the form of print media, electronic media, and can be obtained from family members, friends, teachers and so on (Notoatmodjo 2018). Previous Research said that Several factors may influence a mother's knowledge. One is age older or more mature mothers tend to acquire more knowledge. In this study's population (mothers of infants aged 0–12 months in the service area of Padasuka Health Center, Cimahi City), maternal ages ranged from 19 to 45 years, with the largest group between 20–25 years. Supporting literature indicates that mothers over 30 years of age generally exhibit better knowledge about MP-ASI. (Rosdawati 2024). Another influencing factor is education: mothers with higher educational attainment are expected to have better knowledge. In this study, most mothers had completed high school, yet many still had inadequate knowledge. This suggests that despite formal education, other determinants such as limited exposure to information, lack of experience, employment status, and age may hinder adequate knowledge, in line with explanations by behavioral theory (Cindy, 2021) Employment (work status) is another factor: the majority of respondents were housewives who did not work outside the home. Depending solely on informal or non-professional activity may limit opportunities for exposure to formal health education or community nutrition information programs. Finally, experience and exposure to information sources play an important role. Prior experience with infant feeding or repeated exposure to nutrition information (through health workers, media, family, or community networks) can reinforce correct knowledge and behavior.

Based on the results of this study, as well as the theories related to the research, it can be concluded that knowledge about MP-ASI is very important and very much needed by a mother. Better knowledge will be able to influence a mother to be able to choose properly and correctly to make a decision and action, as well as make provisions for a mother to overcome the problems that a mother will face in giving complementary breastfeeding to her baby.

2. Early MP-ASI Giving

The results of this study which have been shown in table 4.2 show that the number of mothers who have given breastfeeding companion food early or before the baby is six months old to their babies, which is as many as 55 (59.8%) mothers, this indicates that there are still many incidents of early breastfeeding by a mother to her baby in the working area of the Padasuka Cimahi Health Center.

Several factors contribute to the early introduction of complementary feeding. One key factor is the mother's level of knowledge; mothers with better knowledge are more likely to provide appropriate MP-ASI at the recommended time. Occupational and maternal health conditions may also influence feeding practices, as working mothers may have limited time to focus on their own health and their child's nutritional needs. In addition, exposure to advertising through television and the internet can encourage mothers to introduce MP-ASI prematurely. Socio-cultural beliefs, economic status, and family purchasing power further shape decision-making around infant feeding. Lastly, inadequate guidance from health workers may lead to misinformation and increase the likelihood of early MP-ASI practices (Joe, 2020).

A mother has the potential to breastfeed her child exclusively, but it would be a pity that not all mothers can understand and appreciate the nature of being a mother. There are still many mothers who are more interested in giving additional food and drinks to their babies who are less than six months old, which means that they have given MP-Breast Milk early to their babies, with the reason that the baby gets fat quickly, and mothers think that if the baby is fed faster, the baby will get more nutrients, while the benefits of breast milk have not been matched with other foods and drinks for babies who are less than six months old. This happens because of a mother's lack of knowledge about exclusive breastfeeding and proper MP-breastfeeding (Chalid, et al. 2019).

Based on the results of this study, as well as the theories related to the research, it can be concluded that the incidence of early complementary feeding can be caused by several factors, as well as the most important factor, namely the level of mother's knowledge, if the mother's knowledge is good, the potential for the occurrence of early MP-Breastfeeding to the baby will be able to decrease and vice versa, if the mother's knowledge is lacking, there will be a potential for the occurrence of breastfeeding complementary feeding early.

3. The Relationship of Mother's Knowledge of MP-ASI with Early MP-ASI Provision in the Working Area of the Padasuka Cimahi Health Center

The results of this study can be seen from table 4.3 showing that out of 92 respondents, there were 21 respondents (22.8%) who had good knowledge who did not give MP-ASI early

to their babies, there were 15 (71.4%). There were 45 (48.9%) respondents who had less knowledge and 41 (91.1%) respondents who had given early MP-ASI to their babies. The results of this study obtained a p-value = 0.001 (p<0.005) meaning that Ho was rejected and Ha failed to be accepted, which proves the relationship between mothers' knowledge of MP-ASI and the provision of early MP-ASI to mothers who have babies aged 0-12 months in the work area of the Padasuka Cimahi Health Center in 2024.

Of the 21 respondents, there are (71.4%) who do not give MP-ASI early to their babies, which means that almost all respondents who have good knowledge give MP-ASI to their babies appropriately, this proves that if the respondents' knowledge is good, it is likely that there will be no early MP-ASI to mothers who have babies.

Respondents who had knowledge of the good category turned out that there were still 6 respondents (28.6%) who had given MP-ASI early to their babies who were less than 6 months old. Judging from the 6 respondents, they only know knowledge about MP-ASI but are not practiced in their actions, this can be due to several other factors besides knowledge as explained by Joe (2020), that the factors that can affect the early administration of MP-ASI from mothers to their babies who are less than 6 months old, including other than knowledge, namely work and maternal health, the existence of MP-ASI advertisements, socio-economic and cultural from mothers, and can also be factored into health workers (Joe, 2020).

Of the respondents who had less than 45 respondents, there were (91.1%) respondents who had given early MP-ASI to their babies, which means that almost all respondents who had a level of knowledge in the low category had given MP-ASI to their babies early. This can prove that mothers' lack of knowledge about MP-ASI can cause the occurrence of early MP-ASI. There were 4 respondents (8.9%) who had less knowledge but did not give MP-ASI early to their babies, this shows that even though the respondents had less knowledge but the respondents gave MP-ASI on time to their babies, this can be influenced by the mother's age and experience. As explained by Notoatmodjo (2018) who stated that with increasing a person's age, there will also be an increase in insight and experience, experience is one way to obtain the right knowledge by repeating it in order to gain better knowledge than before, and can solve problems faced in the past.

The things mentioned above, and based on the results of the analysis, have shown that there is a relationship between knowledge and early MP-breastfeeding in mothers who have babies aged 0-12 months in the Padasuka Cimahi Health Center Working Area. This can prove that if the mother's knowledge about MP-ASI is lacking, it can cause the occurrence of early

MP-ASI to her baby, and if the respondent's knowledge is good, it is likely that there will be no early MP-breastfeeding in mothers who have babies.

Conclusion

This study can be concluded: 1) Based on the description of the distribution of the frequency of maternal knowledge about MP-ASI in mothers who have babies aged 0-12 months in the working area of the Padasuka Cimahi Health Center, it shows that out of a total of 92 respondents who have been studied, almost half of the 45 respondents (48.9%) have lack of knowledge. 2) Based on the description of the distribution of the frequency of early MP-ASI to mothers who have babies aged 0-12 months in the working area of the Padasuka Cimahi Health Center, it shows that out of the total 92 respondents who have been studied, more than half of the 37 respondents (40.2%) not given early MP-ASI breasfeeding to their babies who are less than six months old. 3) The results of the statistical test showed that the value of p-value = 0.001 < α (0.05) which means that there is a relationship between the mother's knowledge of MP-ASI and the provision of early MP-ASI to mothers who have babies 0-12 months in the working area of the Padasuka Cimahi Health Center.

Acknowledgment

Praise be to the presence of Allah SWT for all His grace and convenience so that the research entitled "Mother's Knowledge of MP-ASI with Early MP-ASI Provision in Mothers Who Have Babies 0-12 Months in the Working Area of the Padasuka Cimahi Health Center: Correlation Study" can be completed properly.

The author would like to thank all parties who have helped, especially the research supervisor, the Padasuka Cimahi Health Center, the research respondents, and families and colleagues who have provided support during the research process. Hopefully this research will provide benefits and contribute to the development of health science, especially in the practice of giving proper MP-ASI for babies.

References

Arikunto, S. (2016). *Research Procedure: A Practical Approach.* Jakarta: Rineka Cipta.

Health Research and Development Agency. (2022). *Basic health research report in 2018*. Jakarta: IAARD of the Ministry of Health of the Republic of Indonesia.

Bappenas, Kemenkes RI, & UNICEF. (2019). *Framework of Action: Indonesia complementary feeding.*

Chalid, M. T., et al. (2019). *The First 1000 Days of Life*. Jakarta: CV Sagung Seto.

Heryanto, E. (2019). Factors Related to Early Breastfeeding Companion Feeding.*AISYAH : Journal of Health Sciences*, 2(2),141-152

Hidayatullah, R. N., et al. (2021). Early MP-Breastfeeding Behavior in Babakan Madang District, Bogor Regency. *Journal of Community Service,* 01(02).

Hurek, R.K.K & Esem, O. (2020). Determinants of Feeding in Babies Less Than Six Months Old.*ARKESMAS,* 5 (2).

Joe, G. C. (2020). The Relationship between Maternal Knowledge, Family Income and Early MP-Breastfeeding with the Nutritional Status of Infants Aged 6-7 Months Serdang Bedagai 2018.

Ministry of Health of the Republic of Indonesia. (2022). *Infant and Toddler Care*. Jakarta: Indonesian Obstetrics and Gynaecology Association.

Ministry of Health of the Republic of Indonesia. (2022). *Infant and Child Feeding Counseling Coach Training Curriculum (PMBA).* Jakarta: Ministry of Health of the Republic of Indonesia.

Notoatmodjo, S. (2014). *Health Behavioral Sciences*. Jakarta: Rineka Cipta.

Notoatmodjo, S. (2016). *Health promotion and behavioral science*. Jakarta: PT Rineka cipta

Notoatmodjo, S. (2018). *Health Promotion and Behavior*. Jakarta: Rineka Cipta.

Rotua, D.F., Novayelinda, R., & Utomo, W. (2018). Identification of Maternal Behavior in Early MP-ASI Provision at the Tambang Health Center, Kampar Regency.

Rosdawati, (2024). Hubungan Tingkat pengetahuan ibu menyusui tentang MP ASI dengan Pemberian MP ASI pada Bayi 0-6 bulan di Puskesmas Kebun Handil Jambi. Jambi : Jurnal Arumas

Sugiyono. (2022). *Quantitative, Qualitative, and R&D Research Methods*. Bandung: Alfabeta.

Come on, N. Marjes. (2018). *Health Promotion*. Sidoarjo: Indomedia Pustaka.

Unicef. (2020). *Breastfeeding during the Corona Covid-19 Virus outbreak*.

Unicef. (2022). World Breastfeeding Week: UNICEF and WHO call for greater support for breastfeeding in Indonesia as breastfeeding rates decline during the COVID-19 pandemic.

Utami. (2015). *Exclusive Breast Milk Smart Book*. Yogyakarta: Diva Press.

WHO. (2020). *Infant and young child feeding.*

World Health Organization. (2016). *Ambition and Action in Nutrition. 2016 - 2025. Geneva; 2016. World Health Organization. Nutrition In South East Asia. Nutrition Profile of the WHO South East Asia Region*. New Delhi: World Health Organization Regional Office for South-East Asia; 2000.