An Analysis of Mothers' Knowledge of Supplementary Feeding (PMT) at Posyandu Kemuning 1–5, Karangsari Village, Purbalingga Regency

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Abstract

Nutritional problems among children under five remain a serious public health issue in Indonesia, including in Purbalingga Regency. Mothers' knowledge of nutrition and supplementary feeding (Pemberian Makanan Tambahan/PMT) plays an important role in meeting the nutritional needs of children during the critical period of growth and development. Based on data from the Purbalingga Regency Health Office in 2022, 3,508 children under five (5.9%) experienced undernutrition, and Purbalingga Regency ranked 11th among 29 stunting-priority regencies in Central Java. Therefore, it is important to assess mothers' knowledge of supplementary feeding as part of efforts to prevent and address nutritional problems among children under five. To determine the level of mothers' knowledge regarding supplementary feeding (PMT) at Kemuning 1–5 Integrated Health Posts (Posyandu) in Karangsari Village, Kalimanah District, Purbalingga Regency. Methods: This study employed a descriptive research design with a cross-sectional approach. The population consisted of 97 mothers with children under five, with a sample of 49 respondents selected using purposive sampling. The research instrument was a closed-ended questionnaire consisting of 13 statements using the Guttman scale. Data were analyzed using univariate analysis. A total of 31 respondents (63.26%) had good knowledge, 17 respondents (34.69%) had moderate knowledge, and 1 respondent (2.05%) had poor knowledge. In terms of age, most respondents were aged 20–35 years, totaling 33 respondents (67.34%), while 16 respondents (32.66%) were over 35 years old. Regarding educational level, 2 respondents (4.08%) had completed elementary school, 10 respondents (20.41%) had completed junior high school, 31 respondents (63.27%) had completed senior high school, and 6 respondents (12.24%) had completed higher education. Most mothers at Kemuning 1–5 Integrated Health Posts in Karangsari Village, Kalimanah District, Purbalingga Regency had a good level of knowledge regarding supplementary feeding (PMT), with 31 respondents (63.26%) classified as having good knowledge.
Keywords: *Maternal knowledge, Supplementary Feeding (PMT)*

A. INTRODUCTION

Maternal knowledge of health and nutrition is an important factor in meeting children's nutritional needs and optimizing their growth and development. Early childhood is a critical period in a child's growth and development; therefore, adequate nutritional intake during this stage requires particular attention. Mothers

with adequate nutritional knowledge are better equipped to select, prepare, and serve food according to their children's nutritional needs. Conversely, limited maternal knowledge of nutrition, particularly regarding supplementary feeding (Pemberian Makanan Tambahan/PMT), may result in inadequate nutritional intake among toddlers and increase the risk of nutritional problems, such as stunting, wasting, and underweight (Kemenkes RI, 2023).

One of the government's efforts to address nutritional problems among toddlers is the Supplementary Feeding (PMT) program. This program is a nutritional intervention designed to help address deficiencies in energy and protein intake, particularly among vulnerable groups experiencing nutritional problems or at risk of impaired growth. PMT is not intended to replace main meals but rather to serve as an additional food source that complements toddlers' daily nutritional requirements. Its implementation should be accompanied by nutrition education, growth monitoring, and continuous assistance from healthcare professionals and community health post (posyandu) cadres to ensure that the program achieves optimal outcomes (Mariana, 2025).

The implementation of PMT using locally available food ingredients is one strategy for improving the nutritional quality of toddlers' diets while utilizing the food resources available within the community. Supplementary foods should provide adequate energy, protein, and other essential nutrients according to children's nutritional requirements. Animal-source protein is an important component of toddlers' nutritional intake. Regular consumption of animal-source protein during the growth period contributes to physical growth, cognitive development, and improvements in children's nutritional status. Combining various animal-source protein foods, such as eggs and fish, eggs and chicken, or eggs and meat, can help meet protein requirements and provide essential amino acids necessary for toddlers' growth and development (Usmaenah, 2024).

Supplementary feeding for toddlers with poor nutritional status or those at risk of growth disorders aims to increase nutritional intake and improve nutritional status over a specific period. The provision of supplementary foods generally considers menu variety, portion size, and each toddler's energy and protein requirements. Therefore, PMT implementation should not focus solely on providing food but should also consider the appropriate types, quantities, and frequency of feeding according to children's nutritional needs (Rahayu, 2024). To date, the PMT program has also frequently utilized commercially manufactured food products, such as biscuits formulated and fortified with vitamins and minerals to help meet toddlers' nutritional requirements (Murtining, 2023).

Nutritional status reflects the body's condition resulting from the balance between nutrient intake and nutritional requirements. One indicator used to assess the nutritional status of toddlers is the weight-for-height (WHZ) index. This indicator can be used to identify wasting, a condition in which a child's body weight is disproportionately low relative to their height. Based on anthropometric

classifications, toddlers are categorized as experiencing wasting when their WHZ index falls within the range of -3 standard deviations (SD) to less than -2 SD (Kemenkes RI, 2022). This condition highlights the importance of adequate nutritional intake and appropriate nutritional interventions to prevent further deterioration in toddlers' nutritional status.

Nutritional problems among toddlers remain a public health challenge at both global and national levels. Asia is one of the regions contributing substantially to the global burden of childhood stunting, accounting for approximately 52% of all cases worldwide. The prevalence of stunting in South Asia is reported at 30.5%, followed by Southeast Asia at 26.4%, West Asia at 14.0%, Central Asia at 7.7%, and East Asia at 4.9%. According to data from the Asian Development Bank (2024), Indonesia has a stunting prevalence of 31%, making it the country with the second-highest prevalence in Southeast Asia after Timor-Leste, which has a prevalence of 45.1%. These figures indicate that impaired growth among toddlers remains a significant issue requiring sustained attention and intervention (Abdimas et al., 2026).

In Indonesia, nutritional problems among toddlers are not limited to stunting but also include wasting. According to data from the Indonesian Ministry of Health in 2022, the national prevalence of wasting increased by 0.6%, from 7.1% to 7.7%. The provinces with the highest wasting prevalence were Maluku (11.9%), West Papua (11.8%), and Central Sulawesi (11.3%). Meanwhile, the lowest prevalence rates were recorded in Bali (2.8%), Bengkulu (5.5%), and the Bangka Belitung Islands (5.8%). Central Java Province had a wasting prevalence of 7.9%, indicating that nutritional problems among toddlers remain a public health concern at the regional level (Kemenkes RI, 2022).

Data at the regency and municipal levels in Central Java Province indicate variations in wasting prevalence. Semarang City recorded a prevalence of 3.2%, Banjarnegara Regency 3.5%, and Magelang City 3.9%. In contrast, the highest prevalence rates were found in Tegal Regency (18.7%), Kudus Regency (15.8%), and Pekalongan City (15.2%). These differences indicate that nutritional problems among toddlers require interventions tailored to the conditions and needs of each region (Kemenkes RI, 2022).

Nutritional problems among toddlers have also been identified in Purbalingga Regency. According to data from the Purbalingga Regency Health Office in 2023, 3,508 toddlers were classified as having poor nutritional status, accounting for approximately 5.9% of all toddlers in the region. In addition, Purbalingga Regency was included among the 11 priority regencies for nutritional problem management in Central Java Province, out of 29 regencies designated as priority areas (Purbalingga, 2023). These conditions indicate that efforts to improve toddlers' nutritional status need to be strengthened, particularly through optimizing the implementation of the PMT program and improving maternal knowledge of children's nutritional requirements.

Maternal knowledge is an important aspect of successful PMT implementation because mothers play a primary role in meeting their children's daily food requirements. Adequate knowledge is expected to help mothers understand the objectives of supplementary feeding, appropriate food types, required nutritional content, and proper feeding practices. A previous study by Paputungan & Mamahit, (2026), examined maternal knowledge and attitudes toward preventing undernutrition among toddlers, found that most respondents had good knowledge, comprising 19 mothers (52.8%), while 17 respondents (47.2%) had moderate knowledge. Meanwhile, a study by Harsoyo, (2024) examining maternal knowledge, PMT practices, and stunting among children aged 6–23 months found that the majority of mothers had good knowledge of PMT (91%); however, PMT practices remained inappropriate among most respondents (95%). These findings indicate that maternal knowledge of PMT is an important aspect that warrants further investigation, particularly regarding mothers' understanding of appropriate supplementary feeding practices.

Another study conducted by Renata, (2023), which examined maternal knowledge of locally based supplementary feeding for toddlers aged 12–24 months, found that before receiving education, 21 respondents (63.6%) had a low level of knowledge, while 12 respondents (36.4%) had a higher level of knowledge. These studies demonstrate that maternal knowledge of PMT remains an important factor in efforts to improve toddlers' nutritional status. However, research examining maternal knowledge of PMT among mothers with toddlers at Posyandu Kemuning 1–5, Karangsari Village, Kalimanah District, Purbalingga Regency, is still needed to provide an overview of maternal knowledge based on respondents' characteristics and the local context.

Based on a preliminary survey conducted on June 29, 2026, at 1:00 p.m. Western Indonesian Time (WIB), through an interview with a midwife at Posyandu Kemuning 1–5, Karangsari Village, Kalimanah District, Purbalingga Regency, it was found that 97 mothers with toddlers were registered at the community health post. The interview revealed that mothers had varying levels of knowledge regarding supplementary feeding. These differences in knowledge provided the basis for conducting this study to determine the extent of mothers' understanding of PMT, considering that knowledge is one of the factors that may support the appropriate implementation of supplementary feeding for toddlers.

Based on the foregoing, this study aimed to describe the level of maternal knowledge regarding Supplementary Feeding (PMT) at Posyandu Kemuning 1–5, Karangsari Village, Kalimanah District, Purbalingga Regency, and to identify maternal characteristics based on age and educational level. The findings are expected to provide information and serve as an evaluation resource for healthcare professionals and posyandu cadres in planning nutrition education and counseling activities that address community needs, particularly those aimed at improving maternal knowledge of supplementary feeding for toddlers.

B. METHOD

This study employed a descriptive research design with a cross-sectional approach to describe maternal knowledge of Supplementary Feeding (Pemberian Makanan Tambahan/PMT) through data collection at a single point in time, without providing any specific intervention to the respondents (Nuha, Yuniarti, 2024). The study was conducted from August 10 to 14, 2026, at Posyandu Kemuning 1–5, Karangsari Village, Kalimanah District, Purbalingga Regency. The study population consisted of 97 mothers of toddlers who were registered at the community health post (Mushofa, Hermina, D., & Huda, 2024).

The sample was selected using purposive sampling based on predetermined inclusion and exclusion criteria (Nuralim, Rizky, M. S., & Aguspriyani, 2023). The sample size was calculated using Slovin's formula with a 10% margin of error, resulting in a total of 49 respondents. The inclusion criteria were mothers who had toddlers, were registered at Posyandu Kemuning 1–5, and were willing to participate by signing an informed consent form. The exclusion criteria included mothers who were absent during data collection or unwilling to participate in the study (Desiana, Z. R., Rakhma, L. R., & Kisanway, 2025).

The study variable was maternal knowledge of PMT, which was measured using an ordinal-scale (Adiningrat, K. G., Naryoso, A., & Nabila, 2025). The research instrument consisted of a respondent identification section, including initials, age, and highest educational attainment, as well as 13 closed-ended statements assessing knowledge of PMT (Permatasari, I. D., Sa'diyah, H., & Fahmi, 2025).

Responses were scored using the Guttman scale, with a score of 1 assigned to each correct answer and 0 to each incorrect answer. The knowledge score was calculated as the percentage of correct answers relative to the total number of questions, multiplied by 100% (Sari, 2025). Knowledge levels were subsequently classified into three categories: good (80%–100%), moderate (60%–79%), and poor (below 60%).

The study used quantitative data obtained directly from respondents through self-administered questionnaires completed before the posyandu activities began (Sutriyanti, & Muspawi, M.Sutriyanti, & Muspawi, 2024). The collected data were analyzed using univariate analysis and presented as frequency distributions and percentages to describe respondents' characteristics based on age and educational attainment, as well as their level of knowledge regarding PMT(Nurdewi., 2022). This study adhered to the ethical principles of health research, including voluntary participation through informed consent, protection of respondents' privacy and confidentiality, and the principles of beneficence and non-maleficence (Ishak, 2023).

C. RESULTS AND DISCUSSION

1. Research Results

a. Respondent Characteristics at Posyandu Kemuning 1

Table 1. Frequency Distribution of Respondent Characteristics Based on Age and Educational Attainment at Posyandu Kemuning 1

Characteristics	Number of Respondents	%
Age		
20–35 years	3	50
>35 years	3	50
Total	**6**	**100**
Educational attainment		
Elementary school	1	16.67
Junior high school	3	50
Senior high school	2	33.33
Total	**6**	**100**

b. Maternal Knowledge Level at Posyandu Kemuning 1

Table 2. Frequency Distribution of Maternal Knowledge Levels at Posyandu Kemuning 1

Knowledge Level	Number of Respondents	%
Good	3	50
Moderate	3	50
Total	**6**	**100**

c. Respondent Characteristics at Posyandu Kemuning 2

Table 3. Frequency Distribution of Respondent Characteristics Based on Age and Educational Attainment at Posyandu Kemuning 2

Characteristics	Number of Respondents	%
Age		
20–35 years	6	60
>35 years	4	40
Total	**10**	**100**
Educational attainment		
Junior high school	1	10
Senior high school	8	80

Higher education	1	10
Total	**10**	**100**

d. Maternal Knowledge Level at Posyandu Kemuning 2

Table 4. Frequency Distribution of Maternal Knowledge Levels at Posyandu Kemuning 2

Knowledge Level	Number of Respondents	%
Good	6	60
Moderate	4	40
Total	**10**	**100**

e. Respondent Characteristics at Posyandu Kemuning 3

Table 5. Frequency Distribution of Respondent Characteristics Based on Age and Educational Attainment at Posyandu Kemuning 3

Characteristics	Number of Respondents	%
Age		
20–35 years	8	66.67
>35 years	4	33.33
Total	**12**	**100**
Educational attainment		
Junior high school	2	16.67
Senior high school	7	58.33
Higher education	3	25
Total	**12**	**100**

f. Maternal Knowledge Level at Posyandu Kemuning 3

Table 6. Frequency Distribution of Maternal Knowledge Levels at Posyandu Kemuning 3

Knowledge Level	Number of Respondents	%
Good	9	63.26
Moderate	3	34.69
Total	**12**	**100**

g. Respondent Characteristics at Posyandu Kemuning 4

Table 7. Frequency Distribution of Respondent Characteristics Based on Age and Educational Attainment at Posyandu Kemuning 4

Characteristics	Number of Respondents	%
Age		
20–35 years	6	85.72
>35 years	1	14.28
Total	**7**	**100**
Educational attainment		
Junior high school	1	14.28
Senior high school	6	85.72
Total	**7**	**100**

h. Maternal Knowledge Level at Posyandu Kemuning 4

Table 8. Frequency Distribution of Maternal Knowledge Levels at Posyandu Kemuning 4

Knowledge Level	Number of Respondents	%
Good	5	71.42
Moderate	2	28.58
Total	**7**	**100**

i. Respondent Characteristics at Posyandu Kemuning 5

Table 9. Frequency Distribution of Respondent Characteristics Based on Age and Educational Attainment at Posyandu Kemuning 5

Characteristics	Number of Respondents	%
Age		
20–35 years	10	71.42
>35 years	4	28.58
Total	**14**	**100**
Educational attainment		
Elementary school	1	7.14
Junior high school	3	21.43
Senior high school	8	57.14
Higher education	2	14.29
Total	**14**	**100**

j. Maternal Knowledge Level at Posyandu Kemuning 5

Table 10. Frequency Distribution of Maternal Knowledge Levels at Posyandu Kemuning 5

Knowledge Level	Number of Respondents	%
Good	8	57.14
Moderate	5	35.72
Poor	1	7.14
Total	**14**	**100**

k. Overall Respondent Characteristics at Posyandu Kemuning 1–5

The findings regarding respondent characteristics, including age and educational attainment, at Posyandu Kemuning 1–5, Kalimanah District, Purbalingga Regency, are presented in the following table and narrative description.

Table 11. Frequency Distribution of Respondent Characteristics Based on Age and Educational Attainment

Characteristics	Number of Respondents	%
Age		
20–35 years	33	67.34
>35 years	16	32.66
Total	**49**	**100**
Educational attainment		
Elementary school	2	4.08
Junior high school	10	20.41
Senior high school	31	63.27
Higher education	6	12.24
Total	**49**	**100**

As shown in Table 4.11, the majority of respondents were mothers aged 20–35 years, comprising 33 respondents (67.34%). Meanwhile, 16 respondents (32.66%) were aged over 35 years. Regarding educational attainment, most respondents had completed senior high school, accounting for 31 respondents (63.27%). This was followed by junior high school graduates, comprising 10 respondents (20.41%); higher education graduates, comprising 6 respondents (12.24%); and elementary school graduates, comprising 2 respondents (4.08%). Overall, the respondents were predominantly mothers aged 20–35 years, with senior high school as their highest level of educational attainment.

1. Overall Maternal Knowledge Level Regarding Supplementary Feeding

The findings regarding maternal knowledge of Supplementary Feeding (PMT) at Posyandu Kemuning 1–5, Kalimanah District, Purbalingga Regency, are presented in the following table and narrative description.

Table 12. Frequency Distribution of Maternal Knowledge Levels

Knowledge Level	Number of Respondents	%
Good	31	63.26
Moderate	17	34.69
Poor	1	2.05
Total	**49**	**100**

As shown in Table 4.12, the largest proportion of respondents had a good level of knowledge regarding PMT, comprising 31 respondents (63.26%). Meanwhile, 17 respondents (34.69%) had a moderate level of knowledge, and only 1 respondent (2.05%) had a poor level of knowledge.

2. Discussion

a. Age

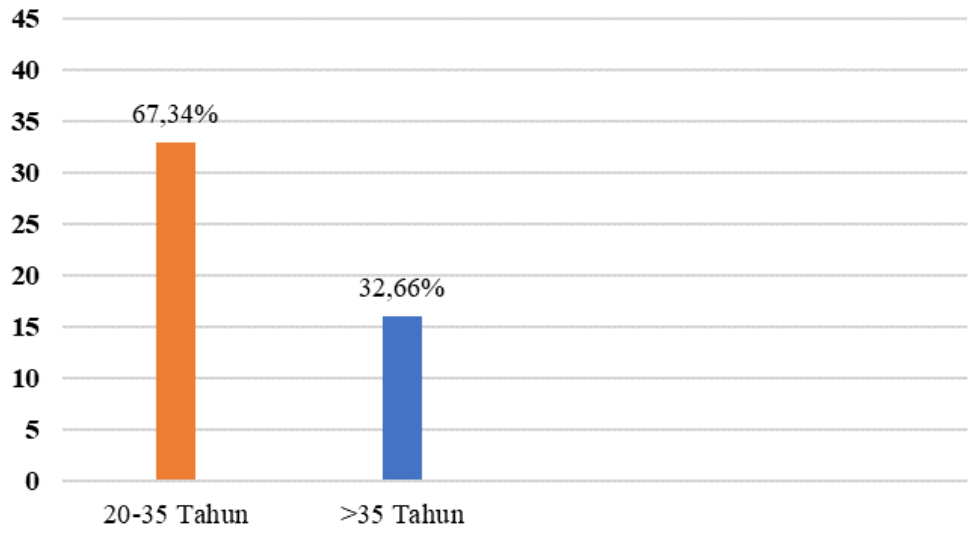


Figure 1. Distribution of Respondents by Age

Based on Figure 4.1, the respondents were predominantly in the 20–35-year age group, comprising 33 individuals (67.34%), while respondents aged over 35 years accounted for 32.66%. This distribution indicates that most respondents belonged to the productive age group. This predominance is important to consider because the use of application-based services is not only related to device ownership and internet access but also to individuals' ability to understand features, follow procedures, and fulfill their needs through applications. Therefore, the age characteristics of

respondents in this study may provide context for understanding the patterns of digital service use being examined.

These findings are consistent with Adnyani (2022) who reported that 73% of respondents were aged 26–35 years. Theoretically, this situation can be explained through Van Dijk's (2022) concepts of the skills divide and usage divide, as cited in (Fayra et al., 2026). The skills divide refers to disparities in individuals' abilities to use technology, whereas the usage divide concerns differences in usage patterns, intensity, and purposes. Hidayah (2022) also found that the digital divide is not limited to differences in access but also encompasses disparities in technological skills and levels of participation in digital technology use. Meanwhile, Laksmi et al. (2024) found that older users continued to experience difficulties in learning to use mobile applications, with 51% of older respondents in their study reporting difficulties in learning how to use applications. These findings reinforce the notion that age may be associated with individuals' experiences and skills in using technology. However, the predominance of respondents aged 20–35 years in this study should be interpreted as a characteristic of the study population rather than evidence that age directly determines an individual's ability to use digital services.

b. Educational Attainment

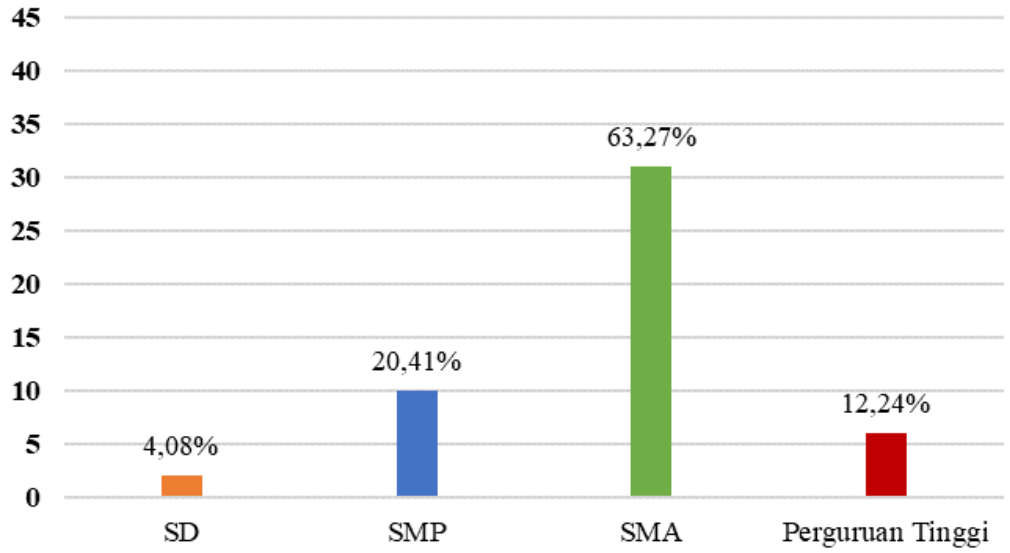


Figure 2. Distribution of Respondents by Educational Attainment

Based on Figure 4.2, the majority of respondents had completed senior high school, accounting for 31 individuals (63.27%). This distribution indicates that most respondents had a secondary education background. This characteristic is important because education can serve as a foundation for receiving and processing information regarding health and children's nutritional needs. However, the predominance of senior high school graduates does not necessarily indicate that respondents have limited knowledge. Mothers' ability to apply health information is

also influenced by parenting experience, access to information, interactions with healthcare professionals, and education obtained outside formal schooling.

These findings are consistent with Susilawati (2022), who reported that maternal education is associated with the ability to understand and apply information regarding child feeding. Meanwhile, Aprizah (2021) emphasized that a low level of formal education does not necessarily indicate limited knowledge, as information can also be acquired through non-formal education and the surrounding environment. These findings are further supported by Putri dan Afifah (2023), who demonstrated that nutritional knowledge and complementary feeding practices are important components in meeting children's nutritional needs, although the relationship between these factors and nutritional status was not statistically significant in their study. Susilowardani dan Budiono (2022) also found that nutrition education can improve mothers' knowledge and practices regarding complementary feeding. Thus, the findings of this study can be further understood through Becker's Human Capital Theory (1964), as cited in Rahmadani (2026), which views education as an investment in knowledge and skills that can enhance an individual's capacity to receive information. In the context of this study, senior high school education serves as a basic foundation that may support respondents in understanding health and nutrition information, but it is not the only factor determining mothers' ability to meet their children's nutritional needs.

These findings are also consistent with Shodikin dan Mardiyati (2023), who identified maternal education as one of the factors associated with children's growth and development. Therefore, the educational characteristics of the respondents indicate that most mothers had a secondary education background, which may support their ability to receive health-related information. Nevertheless, knowledge and parenting practices can also develop through various other learning sources. This is important to ensure that respondents' educational backgrounds are not interpreted deterministically but rather as one of several characteristics that may support mothers' ability to understand and apply information regarding children's health and nutrition.

c. Maternal Knowledge Level Regarding Supplementary Feeding

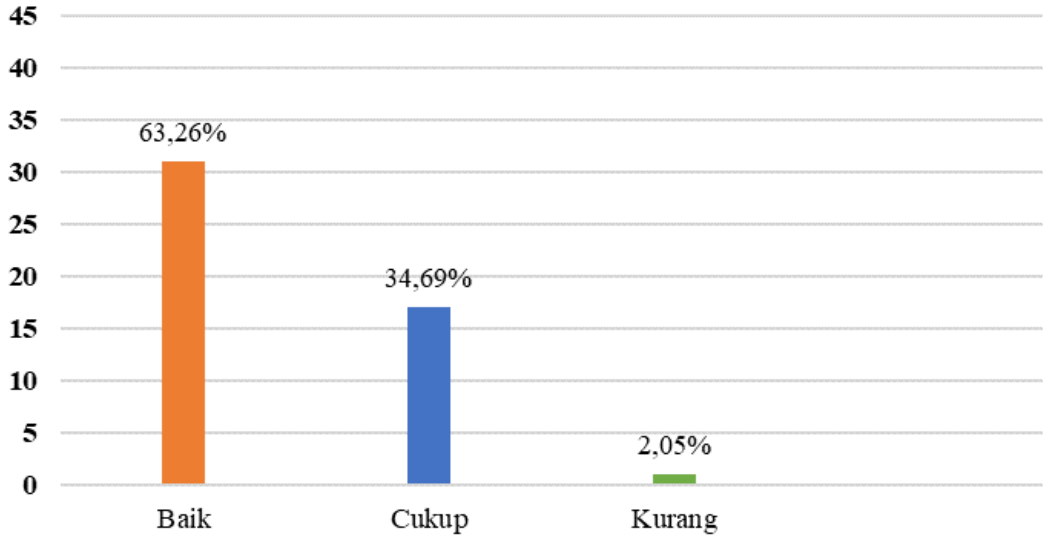


Figure 3. Distribution of Maternal Knowledge Levels

Based on Figure 4.3, most respondents had a good level of knowledge regarding Supplementary Feeding (PMT), comprising 31 individuals (63.26%), whereas only 1 respondent (2.05%) had a poor level of knowledge. These findings indicate that most mothers had a relatively good understanding of basic information about PMT, including food selection, protein sources, feeding schedules, nutritional content, and portion sizes appropriate to children's needs. The high proportion of respondents with good knowledge may serve as a foundation for supporting mothers in determining the types of food provided to their children. However, these findings do not necessarily indicate that all knowledge has been translated into actual feeding practices, as the application of knowledge may also be influenced by access to information, parenting experience, family circumstances, and environmental support.

These findings are consistent with Adri et al. (2024), who reported that formal maternal education is not the only factor associated with knowledge of PMT and emphasized the importance of mothers' participation in activities such as posyandu visits as a source of information Naelasari dan Nurmaningsih (2022) also found that training in the preparation of supplementary foods using local food ingredients could improve mothers' knowledge. Similarly, Longgupa et al. (2024) reported an increase in the proportion of mothers with good knowledge following counseling on supplementary feeding using locally available food ingredients. Comparable findings were reported by Suryati et al. (2024), who identified an increase in maternal knowledge scores following training on the preparation of locally based supplementary foods. These findings support the Knowledge-to-Action (KTA) framework developed by Graham et al. (2006), as cited in Kossinna et al (2025), which emphasizes that knowledge must be translated into action to generate tangible

benefits. In the context of this study, the high level of maternal knowledge provides a favorable foundation for implementing appropriate PMT practices. However, its effectiveness still depends on mothers' ability to apply this knowledge in their children's daily feeding practices.

The distribution of leaflets and the provision of educational information after questionnaire completion are also relevant to the KTA framework because they provide additional information that can help mothers clarify and reinforce their understanding of PMT. Candra et al. (2024) found that educational sessions on healthy food significantly improved mothers' nutritional knowledge. Similarly, education delivered through video and booklet media has also been reported to improve mothers' knowledge of PMT. Therefore, the findings of this study indicate that most mothers already had a good level of knowledge regarding PMT. The educational materials provided by the researchers can be considered an effort to reinforce this knowledge so that it does not remain limited to understanding but can also support feeding practices that are appropriate to children's nutritional needs.

D. CONCLUSION

Based on the findings of this study on maternal knowledge of Supplementary Feeding (Pemberian Makanan Tambahan/PMT) at Posyandu Kemuning 1–5, Karangsari Village, Kalimanah District, Purbalingga Regency, most respondents were aged 20–35 years, accounting for 33 mothers (67.34%), while 16 respondents (32.66%) were over 35 years of age. Regarding educational attainment, the majority had completed senior high school, comprising 31 respondents (63.27%), followed by junior high school graduates (10 respondents; 20.41%), higher education graduates (6 respondents; 12.24%), and elementary school graduates (2 respondents; 4.08%). The findings also revealed that most mothers had a good level of knowledge regarding PMT, comprising 31 respondents (63.26%). Meanwhile, 17 respondents (34.69%) had a moderate level of knowledge, and 1 respondent (2.05%) had a poor level of knowledge. Therefore, maternal knowledge of PMT at Posyandu Kemuning 1–5, Karangsari Village, Kalimanah District, Purbalingga Regency, was generally classified as good.

This study had several limitations that should be considered when interpreting the findings. First, the descriptive research design provided an overview of maternal knowledge regarding PMT but did not examine relationships or causal effects between variables. Second, limited personnel during the data collection process required the researchers to seek assistance from facilitators to ensure that the questionnaires were completed properly. In addition, some respondents needed extra time to complete the questionnaires because their toddlers occasionally cried or became restless, requiring the mothers to attend to their children first. Another limitation was the relatively short data collection period, as the questionnaires were administered before the posyandu activities began. Furthermore, respondents arrived at different times, requiring the researchers to provide explanations about

PMT to each respondent individually. These circumstances presented challenges during data collection and highlight the need for more effective time and personnel management in future studies.

Based on these findings, mothers with toddlers are encouraged to improve their knowledge of PMT by actively seeking information from healthcare professionals, posyandu cadres, and reliable health information sources. Mothers are also expected to pay greater attention to selecting and providing nutritious foods that meet their toddlers' nutritional needs to support their growth and development. Healthcare professionals, particularly midwives and posyandu cadres, are encouraged to conduct regular counseling and educational activities on PMT using simple and easily understandable language. The educational materials should cover the benefits of supplementary feeding, appropriate food types, nutritional content, and proper feeding practices according to toddlers' nutritional requirements. Furthermore, future researchers are encouraged to expand the scope of their studies by incorporating additional variables and broader research methods to obtain more comprehensive findings. In conducting data collection, researchers should also consider preparing additional assistants, particularly when dealing with a relatively large number of respondents. These assistants should receive prior guidance on questionnaire administration and explanation procedures to ensure that the data collection process is more effective, systematic, and consistent with the established research procedures.

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