

Knowledge, Attitudes, and Practices of Complementary Feeding among Mothers at the Stunting Locus Area: A Cross-Sectional Study in West Sulawesi

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ABSTRACT

Introduction: Bebanga Village, Kalukku District recorded a stunting prevalence of 38.5%. Stunting is caused by various factors, including mothers' lack of knowledge about IYCF. **Purpose:** To find out the description of knowledge, attitudes, and complementary feeding practices in mothers and the nutritional status of children in the stunting locus area. **Methods:** The study used a cross-sectional design conducted from January to May 2023 at the Stunting Locus in Bebanga Village, West Sulawesi. A total sample of 148 was calculated using proportional random sampling. Measuring the nutritional status of children uses four indicators: weight/age, height/age, weight/height, and BMI/age. **Results:** The prevalence of stunting children in was 48.0%. As many as 51.5% of mothers had sufficient knowledge about complementary feeding, 51.4% of mothers had a negative attitude about complementary feeding, and as many as 76.4% of mothers practiced complementary feeding not according to standards. The chi-square test showed that the aspects of knowledge (p -value=0.165), attitude (p -value=0.880), and practice (p -value=0.280) of complementary feeding among mothers were not related to the incidence of stunting among children at the stunting locus area. **Conclusion:** Many stunted children were found among mothers with good knowledge and attitudes toward ICYF but lacked practice.



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INTRODUCTION

Children aged 0-23 months are in a period of rapid growth and development, so it is often called the golden and critical periods. The golden period can be realized if, during this period, children get appropriate nutritional intake for optimal growth and development (Prendergast & Humphrey, 2014). Conversely, if children at this time do not receive food according to their nutritional needs, then the golden period will turn into a critical period that will disrupt the growth and development of infants and children, both now and in the future. Children given ASI and MP-ASI appropriately have a 13% lower risk of death (Kemenkes RI, 2020).

Indonesian Nutrition Status Survey (SSGI) data for 2022 shows an increase in the prevalence of stunting under five in West Sulawesi from 33.8% to 35.0%. It makes West Sulawesi the number 2 province with the highest prevalence of stunting nationally (Kemenkes RI, 2023). Stunting is a nutritional problem caused by various factors, including the lack of knowledge of mothers about the practice of infant and child feeding

(IYCF), including the low level of exclusive breastfeeding (Syukri, Nurbaya, Nurcahyani, Nafilata, & Eskadela, 2022), pre lacteal feeding in the first days of the baby's birth (Wolde, Ayele, & Takele, 2019), low mother's knowledge, husband's support and support from health workers and posyandu cadres related to complementary feeding (Mustafyani & Mahmudiono, 2017; Nurbaya, Najdah, Sukardi, & Rahman, 2023), as well as the lack of practice of giving appropriate complementary foods to children (Rd. Halim et al., 2022; Yudianti, Hapzah, & Nurbaya, 2022). The causes of complex stunting problems require cross-sectoral and comprehensive handling (Reinhardt & Fanzo, 2014).

The period of giving complementary foods to toddlers depends on the mother's behavior which is influenced by the mother's knowledge and attitude. Generally, the mother or caregiver contributes most significantly to making decisions about food choices to be given to children (Mahmood, Flores-Barrantes, Moreno, Manios, & Gonzalez-Gil, 2021). The mother's role is enormous in formulating the diet given to her child, from identifying, selecting, handling, and serving to provide the child's daily nutritional menu. The mother's behavior in giving complementary foods, in terms of timeliness, type of food, food consistency, and amount of food, is determined by the mother's knowledge of complementary feeding. Insufficient mothers' knowledge about appropriate complementary feeding is one of the leading causes of nutritional problems in toddlers, especially those under two years of age (Mediani, 2020; Nurbaya, 2021; Oktaviana & Nuzula, 2017).

The data obtained from the results of the *grebek* stunting in the Bebanga Village, Kalukku District, recorded a stunting prevalence of 38.5%. Bebanga Village is one of the locus of stunting areas in West Sulawesi Province (Nurbaya, Kalua, Hasyim, & Damayanti, 2023). This figure is high for the national stunting prevalence standard (Kemenkes RI, 2021). This study aimed to describe the knowledge, attitudes, and practices of complementary feeding among mothers and the nutritional status of toddlers in the stunting locus of the Bebanga Village, Kalukku District, West Sulawesi.

METHODS

This study used a cross-sectional design which was conducted in the Bebanga Village, one of the stunting areas in Kalukku District, Mamuju. Research activities were carried out from January to May 2023. This study's population was all mothers with children aged 6-23 months in the Bebanga Public Health Center, Mamuju Regency, in 2023.

A total sample of 148 was calculated using proportional random sampling at 15 posyandu in the Bebanga Village. A questionnaire measured the mother's knowledge, attitudes, and practices regarding complementary feeding. Knowledge questionnaire to measure mother's knowledge regarding appropriate complementary feeding. Mother's knowledge was categorized into three groups, namely good (score 80-100), sufficient (score 60-79), and poor (score <60). The attitude questionnaire is to find out how the mother evaluates or responds to giving complementary feeding. The attitude aspect is categorized into two categories, namely positive attitude (mean score <75) and negative attitude (mean score ≥75). While in the practical aspect for the action or practice of the mother in giving complementary feeding under IYCF standards according to the Ministry of Health, namely giving complementary feeding according to the child's age considering five components, namely: age, frequency of administration, amount, texture, variety (4-stars menu), and responsiveness. The practice of giving complementary feeding is categorized into two: appropriate if the five components

comply with IYCF standards and not appropriate if there is 1 component that does not comply with IYCF standards.

The measurement of the nutritional status of toddlers uses four indicators: weight/age, height/age, weight/height, and BMI/age. Nutritional status was measured using the WHO Anthro application. After all the data is collected, the data is then analyzed descriptively using the SPSS application and presented in tables and narratives to discuss the research results.

RESULTS

Table 1 shows the characteristics of the under-five children. Father's age (58.5%) and mother's age (74.3%) are in the age group between 20-35 years. The education of fathers and mothers mostly elementary school, namely 53.4% and 52.0%, respectively. The father's work is mostly farmers 48.8% and housewives 93.2%. Of the 148 children, 64.2% were in the 12–23-month age group. As many as 52.0% are female, and 47.3% are male.

Table 1. Characteristics of children in the stunting locus of Bebanga Village Kalukku District (n=148)

Characteristics	Frequency	
	Number	Percent (%)
Father's age (years)		
<20	1	0.7
20-35	87	58.8
>35	60	40.5
Mother's age (years)		
<20	8	5.4
20-35	110	74.3
>35	30	20.3
Father's education		
Elementary school	79	53.4
Junior high school	24	16.2
Senior high school	34	23.0
Higher education	11	7.4
Mother's education		
Elementary school	77	52.0
Junior high school	24	16.2
Senior high school	37	25.0
Higher education	10	6.8
Father's occupation		
Laborer	29	19.6
Honorary	5	3.4
Fisherman	14	9.5
Trader	3	2.0
Farmer	71	48.0
Civil servant	3	2.0
Driver	7	4.7
Miners	2	1.4
Self-employed	14	9.5
Mother's occupation		
Honorary	2	1.4
Housewife	138	93.2
Farmer	3	2.0

Characteristics	Frequency	
	Number	Percent (%)
Civil servant	3	2.0
Self-employed	2	1.4
Children's age (Months)		
6-8	27	18.2
9-11	26	17.6
12-23	95	64.2
Children's sex		
Male	77	52.0
Female	71	48.0

The nutritional status of the children using four indicators can be seen in Table 2. According to the weight/age indicator, 25.0% of toddlers have underweight status, and the majority have normal status 66.9%. However, the number of stunting toddlers is relatively high, namely 48.0%.

Table 2. Nutritional Status of Children at the Stunting Locus Area of the Bebanga Village, Kalukku District

Nutritional Status	Number	Percent (%)
Weight/age		
Severely underweight	11	7.4
Underweight	37	25.0
Normal	99	66.9
Overweight	1	0.7
Height/Age,		
Stunted	71	48.0
Normal	77	52.0
Weight/Height		
Severely wasted	6	4.1
Wasted	10	6.8
Normal	118	79.7
possible risk of overweight	11	7.4
overweight	3	2.0
BMI/Age		
Severely wasted	6	4.1
Wasted	6	4.1
Normal	121	81.8
Possible risk of overweight	12	8.1
Overweight	2	1.4
Obese	1	0.7

Table 3 shows mothers' knowledge level about complementary feeding with a sufficient knowledge level category of 76 mothers (51.4%), good categorical knowledge of 21.4%, and poor knowledge category of 27.0%.

Table 3. Frequency Distribution based on Knowledge, Attitude, and Complementary Feeding Practices for Mothers

Characteristics	Number	Percent (%)
Knowledge		
Good	32	21.6
Sufficient	76	51.4
Poor	40	27.0
Attitude		

Characteristics	Number	Percent (%)
Negative	76	51.4
Positive	72	48.6
Practices		
Appropriate	35	23.6
Not appropriate	113	76.4

The attitude related to complementary feeding evaluates the mother's response in giving the correct complementary. As many as 51.4% of mothers had a negative attitude, and 48.6% had a positive attitude. Meanwhile, in the practice aspect, which assesses the practice and actions of mothers in providing solids under the golden IYCF standards, it shows that most mothers (76.4%) need to practice complementary foods appropriately.

Table 4. Distribution of Mother's Knowledge, Attitude and Practice on Children Nutritional Status

Variables	Children Nutritional Status (Height/Age)						<i>p</i>-value
	Stunted		Normal		Total		
	n	%	n	%	n	%	
Knowledge							
Good	14	43.8	18	56.3	32	100.0	0.165
Sufficient	42	55.3	34	44.7	76	100.0	
Poor	15	37.5	25	62.5	40	100.0	
Attitude							
Negative	36	47.4	40	52.6	76	100.0	0.880
Positive	35	48.6	37	51.4	72	100.0	
Practice							
Appropriate	14	40.0	21	60.0	35	100.0	0.280
Not appropriate	57	50.4	56	49.6	113	100.0	

Table 4 shows the knowledge of mothers about complementary feeding on nutritional status with Height/Age indicators; as many as 42 (55.3%) mothers with sufficient knowledge and the nutritional status of stunting children out of 76 mothers who have sufficient knowledge about complementary feeding.

The aspect of attitude, as many as 36 (47.4%) mothers have a negative attitude and the nutritional status of stunting children out of 76 mothers who have a negative attitude in giving complementary feeding. While the aspect of mothers' practice in giving complementary feeding and children's nutritional status with Height/Age indicators. As many as 57 (50.4%) mothers who gave complementary feeding did not comply with the standards and nutritional status of stunted children from 113 mothers who gave complementary feeding did not meet the standards.

After conducting the chi-square test, it was found that the aspects of knowledge (p -value=0.165), attitude (p -value=0.880), and practice (p -value=0.280) of complementary feeding among mothers were not related to the incidence of stunted children at the Bebanga Village. It shows that there are other factors apart from knowledge, attitudes, and practices in giving complementary foods that affect the incidence of stunting under five in that area.

DISCUSSION

These results indicate that the nutritional status of children aged 6-24 months based on the Height/Age indicators in the Bebanga Village shows a high prevalence

of stunting, namely 48.0%. This prevalence is higher than stunting at the provincial level of West Sulawesi, which is 35.5% (Kemenkes RI, 2023). The high prevalence of stunting indicates high nutritional problems in the region (WHO, 2010).

The results of the research conducted in the Bebanga Village illustrated those 148 respondents, there were 32 respondents (21.6%) in the category of good knowledge regarding complementary feeding, 76 respondents (51.4%) mothers had sufficient knowledge regarding complementary feeding, and 40 respondents (27.0%) mothers lack knowledge about giving complementary feeding. The mother's knowledge about complementary feeding is closely related to the mother's education level, most of whom graduated from elementary school (52.0%). It can affect the mother's belief or perception of giving complementary feeding, thereby reducing the mother's desire to act. The higher a person's education, the faster they receive and understand information, so their knowledge is also higher.

In the attitude aspect, 76 respondents (51.4%) had a negative attitude toward giving MP-ASI. In the practical aspect, most of the respondents (76.4%) did not provide complementary feeding under the standards for giving appropriate complementary feeding among children. The results showed that the low practice of mothers in giving complementary feeding was due to negative attitudes and low knowledge about giving MP-ASI. Attitude is a tendency to act (practice). Attitudes are not necessarily manifested in the form of actions because other factors are needed to realize actions, such as facilities and infrastructure (Parandari, Muslimin, Hajrah, Imran, & Adam, 2021). Meanwhile, the practice of giving complementary foods that is not appropriate, such as providing food that is not diverse, has the risk of causing stunting for toddler (Yudianti et al., 2022).

After conducting the chi-square test, it was found that the aspects of knowledge (p -value=0.165), attitude (p -value=0.880), and practice (p -value=0.280) of complementary feeding among mothers were not related to the incidence of stunted children at the Bebanga Village. It shows that there are other factors apart from knowledge, attitudes, and practices in giving complementary foods that affect the incidence of stunting under five in that area. Several studies have shown that the practice of giving complementary foods is not the main cause of stunting among children. Many other factors cause, among others, the incidence of infectious diseases, such as diarrhea and pneumonia, which recur in children (Ariati, 2019). Beliefs and traditions of pre-lacteal feeding can also be a risk factor that hinders exclusive breastfeeding for infants who are at risk of causing stunting (Muthoharoh, 2020; Wolde, Ayele, & Takele, 2019).

CONCLUSIONS AND SUGGESTIONS

The prevalence of stunted children aged 6-23 months in the Bebanga Village is 48.0%. As many as 51.5% of mothers had sufficient knowledge about complementary feeding, 51.4% had a negative attitude about complementary feeding, and 76.4% of mothers practiced complementary feeding not according to standards. The chi-square test results showed no relationship between knowledge, attitudes, and the practice of giving complementary foods to the incidence of stunting among children aged 6-23 months in the stunting locus area of Bebanga Village. An in-depth study of other aspects of the causes of stunting in the region is needed in order to be able to provide a more valid picture of the causes of stunting so that it can become material for policymakers in efforts to prevent and reduce stunting rates in West Sulawesi.

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