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Factors Related To Stunting Prevention Practices At The Mersam Public Health Center, 2025

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Abstract

Stunting remains an important public health problem because it affects children's growth and development. Mothers' behavior in preventing stunting is one of the key efforts to reduce the incidence of stunting among children under five. Several factors such as knowledge, attitudes, and family support are thought to be associated with stunting prevention behavior. This study aimed to determine the factors associated with stunting prevention behavior among mothers with children under five in the working area of Mersam Public Health Center, Batanghari Regency. The results showed that most respondents had good stunting prevention behavior (58.9%). The majority of respondents had good knowledge (62.2%), poor attitudes (75.6%), and good family support (64.4%). Bivariate analysis showed that knowledge was significantly associated with stunting prevention behavior (PR=1.73; 95% CI=1.07–2.82; p=0.045), and attitude was also significantly associated with stunting prevention behavior (PR=2.66; 95% CI=1.04–6.69; p=0.023). Meanwhile, family support was not significantly associated with stunting prevention behavior (PR=0.87; 95% CI=0.50–1.48; p=0.769).

Keywords: Stunting, Prevention Behavior, Knowledge, Attitude, Family Support, Children Under Five.

INTRODUCTION

Nutrition problems among children under five in Indonesia remain a major challenge in health development. The country is facing a *triple burden of malnutrition*, which includes undernutrition (stunting, wasting, and underweight), overnutrition (overweight/obesity), and micronutrient deficiencies such as anemia and vitamin A deficiency. This situation indicates that nutritional issues are not limited to chronic undernutrition alone but have become increasingly complex with the rising prevalence of overnutrition and specific nutrient deficiencies.

Stunting is one form of chronic undernutrition that results in children having a height below the standard for their age. This problem often does not occur in isolation but is part of what is known as *triple undernutrition*, which consists of three interrelated conditions: stunting (chronic growth failure), wasting (acute malnutrition), and micronutrient deficiencies (lack of essential nutrients such as iron, vitamin A, and iodine). These three conditions frequently occur simultaneously among children in developing countries, particularly in environments characterized by poverty, poor sanitation, and limited access to health services.

The first 1,000 days of life, spanning from pregnancy to a child's second birthday, represent a critical period for preventing these three forms of undernutrition. Nutritional deficiencies during this phase affect not only physical growth but also brain development and a child's learning capacity. Integrated management of triple undernutrition, through both nutrition-specific and nutrition-sensitive interventions, is essential to break the intergenerational cycle of malnutrition and to improve the quality of human resources in the future.

According to the theory developed by Lawrence Green (1980), as cited in Notoatmodjo (2014), health behavior is influenced by three main components: *predisposing factors*, which include knowledge, attitudes, beliefs, and individual perceptions; *enabling factors*, which are related to the availability of health service facilities such as community health centers and medications; and *reinforcing factors*, which are reflected in the behavior and support of health workers as well as

community leaders.[12] In the context of stunting prevention, knowledge is a crucial element that can encourage the formation of positive behaviors. One example is the implementation of specific nutrition interventions for children aged 0–23 months, carried out through nutrition counseling approaches targeting individuals and families.[13]

Mersam health center, as a primary healthcare facility, plays a strategic role in stunting prevention programs in Mersam District, Batanghari Regency. Despite the implementation of intervention programs such as supplementary feeding and education for pregnant women, the prevalence of stunting in this area remains relatively high. Data as of February 2025 indicate that there are still 82 children under five affected by stunting.

RESEARCH METHODS

This study used a cross-sectional design. The research was conducted in the working area of Mersam Public Health Center from September to December 2025. The study population consisted of 859 mothers who had children aged 0–59 months. A total of 90 respondents were selected using the simple random sampling technique. Data were collected through interviews using a structured questionnaire. Data analysis was conducted using univariate and bivariate analyses with the chi-square test.

RESULTS AND DISCUSSION

The results showed that most respondents had good stunting prevention behavior (58.9%). The majority of respondents had good knowledge (62.2%), poor attitudes (75.6%), and good family support (64.4%). Bivariate analysis showed that knowledge was significantly associated with stunting prevention behavior (PR=1.73; 95% CI=1.07–2.82; p=0.045), and attitude was also significantly associated with stunting prevention behavior (PR=2.66; 95% CI=1.04–6.69; p=0.023). Meanwhile, family support was not significantly associated with stunting prevention behavior (PR=0.87; 95% CI=0.50–1.48; p=0.769).

Table 1. Distribution of Characteristics and Sociodemographic Profile of Research Respondents, 2025

Category	n	%
Genders		
Male	43	47,8
female	47	52,2
By Ages		
0–11 Month	26	28,9
12–24 Month	24	26,7
25–36 Month	17	18,9
37–48 Month	12	13,3
49–60 Month	11	12,2
Based on village		
Mersam	16	17,8
Kembang Paseban	15	16,7
Pematang Gadung	14	15,6
Benteng Rendah	14	15,6
Sengkati Gedang	12	13,3
Teluk Melintang	7	7,8

Sengkati Baru	7	7,8
Kembang Tanjung	5	5,6
Educational background(mother)		
No Schooling	2	2,2
Elementary School	7	7,8
High School/Vocational School	79	87,8
Higher education institution	2	2,2
Educational background(father)		
No Schooling	1	1,1
Elementary School	3	3,3
High School/Vocational School	76	84,4
Higher education institution	10	11,1
Profession		
Unemployed	83	92,2
Military/Police/Government	1	1,1
Karyawan/BUMN/BUMD	1	1,1
Entrepreneur	1	1,1
Businesswoman/Farmer	4	4,4
Pekerjaan Ayah		
Military/Police/Government	7	7,8
Karyawan/BUMN/BUMD	17	18,9
Entrepreneur	34	37,8
Businessman/Farmer	32	35,6
Income		
< UMP	70	77,8
≥ UMP	20	22,2

Based on Table 1, the majority of under-five respondents were female, totaling 47 children (52.2%), while male children accounted for 43 (47.8%). Based on age category, the largest group was 0–11 months, with 26 children (28.9%), followed by those aged 12–24 months, totaling 24 children (26.7%).

In terms of village/sub-district residence, most respondents were from Mersam Village, with 16 children (17.8%), followed by Kembang Paseban Village with 15 children (16.7%). Based on the mothers' level of education, the majority had completed senior high school or its equivalent, totaling 79 individuals (87.8%), while fathers' education was also predominantly at the senior high school level, with 76 individuals (84.4%).

Regarding occupation, most mothers were unemployed, totaling 83 individuals (92.2%), while the most common occupation among fathers was self-employment, with 34 individuals (37.8%). In addition, the majority of respondents' families had an income below the regional minimum wage, totaling 70 families (77.8%).

The research respondents were female, accounting for 59.4%.

Table 2. Description of Stunting Prevention Behavior

Prevention Behavior of stunting	**Frekuensi**	
	n	**%**
Not Good	37	41,1
Good	53	58,9
Total	**25**	**100,0**

Based on table 2, the majority of respondents demonstrated good stunting prevention behavior, totaling 53 individuals (58.9%), while 37 respondents (41.1%) were categorized as having poor stunting prevention behavior.

Table 3. Description of Factors Associated with Stunting Prevention Behavior

Categories	n	%
Knowledge		
Not Good	34	37,8
Good	56	62,2
Behavior		
Not Good	68	75,6
Good	22	24,4
Family Supports		
Not Good	32	35,6
Good	58	64,4

Based on Table 3, the majority of respondents had good knowledge about stunting prevention, totaling 56 individuals (62.2%), while 34 respondents (37.8%) had poor knowledge.

Regarding the attitude variable, most respondents had a negative or inadequate attitude toward stunting prevention, totaling 68 individuals (75.6%), while 22 respondents (24.4%) had a positive attitude.

Furthermore, in terms of family support, the majority of respondents received good family support, totaling 58 individuals (64.4%), whereas 32 respondents (35.6%) had low family support.

Table 4. Association Between Factors and Stunting Prevention Behavior in the Working Area of Puskesmas Mersam (n=90)

Variabel	Prevention Behavior of stunting				PR (95% CI)	P-value
	Kurang		Baik			
	n	%	n	%		
Knowledge						
Not Good	19	55,9	15	44,1	1,73 (1,07-2,82)	**0,045***
Good	18	32,1	38	67,9		
Behavior						
Not Good	33	48,5	35	51,5	2,66 (1,04-6,69)	**0, 023***
Good	4	18,2	18	81,8		
Family Supports						
Not Good	12	37,5	20	62,5	0,87 (0,50-1,48)	0,769
Good	25	43,1	33	56,9		

Based on Table , respondents with poor knowledge who demonstrated poor stunting prevention behavior accounted for 55.9%, whereas among respondents with good knowledge, the proportion was 32.1%. Statistical test results showed a p-value of 0.045 (<0.05), indicating a significant association between knowledge and stunting prevention behavior. The PR value of 1.73 (95% CI: 1.07–2.82) suggests that respondents with poor knowledge were 1.73 times more likely to exhibit poor stunting prevention behavior compared to those with good knowledge.

For the attitude variable, respondents with a negative or poor attitude who demonstrated poor stunting prevention behavior accounted for 48.5%, while among those with a positive attitude, it was 18.2%. The statistical test showed a p-value of 0.023 (<0.05), indicating a significant relationship between attitude and stunting prevention behavior. The PR value of 2.66 (95% CI: 1.04–6.69)

indicates that respondents with a poor attitude were 2.66 times more likely to have poor stunting prevention behavior compared to those with a good attitude.

Meanwhile, for the family support variable, respondents with low family support who demonstrated poor stunting prevention behavior accounted for 37.5%, whereas among those with good family support, it was 43.1%. The statistical test showed a p-value of 0.769 (>0.05), indicating no significant relationship between family support and stunting prevention behavior in the working area of Puskesmas Mersam.

Discussion

The age of children under five, the 0–11 months age group was the largest, with 26 children (28.9%), followed by the 12–24 months group with 24 children (26.7%). The 25–36 months, 37–48 months, and 49–60 months groups accounted for 17 children (18.9%), 12 children (13.3%), and 11 children (12.2%), respectively. This distribution indicates that nearly half of the sample (approximately 55.6%) falls within the 0–23 months range, which is considered the "golden window" of child growth. According to World Health Organization (2024), the 0–23 months period is a critical phase during which nutritional interventions, exclusive breastfeeding, appropriate complementary feeding practices, and infection prevention significantly contribute to reducing the risk of stunting.

Based on village/sub-district of origin, most respondents came from Mersam Village, totaling 16 children (17.8%), followed by Kembang Paseban with 15 children (16.7%), Pematang Gadung and Benteng Rendah with 14 children each (15.6%), and other villages such as Sengkati Gedang, Teluk Melintang, Sengkati Baru, and Kembang Tanjung with smaller proportions (7.8%–5.6%). The dominance of respondents from Mersam Village and Kembang Paseban suggests that these areas serve as central hubs for family health service activities within the working area of Puskesmas Mersam, including maternal and child health services, integrated health posts (posyandu), and stunting reduction programs.

The educational level of mothers shows that the majority of respondents had completed senior high school or its equivalent, totaling 79 individuals (87.8%), while a smaller proportion had lower levels of education (7.8%). This finding is consistent with several studies indicating that secondary education (senior high school) is the dominant level of education in rural populations of South Sumatra. Based on a 2025 literature review on sociodemographic factors and stunting, low maternal education (e.g., not completing primary school or only completing elementary school) is closely associated with a higher risk of stunting, as it affects understanding of nutrition, utilization of health services, and child-rearing practices. However, in this study sample, most mothers had completed senior high school, which generally provides adequate literacy and numeracy skills to understand educational messages related to stunting prevention, and ideally should be followed by good preventive behavior.

Based on occupation, as many as 83 mothers (92.2%) were not employed and were categorized as housewives. In the context of stunting prevention, this non-working status can have dual implications: on one hand, mothers have more time to care for their children, provide breastfeeding, manage dietary patterns, and access health services; on the other hand, without sufficient knowledge and support, housewives may be influenced by traditional norms that are less responsive to the importance of balanced nutrition and infection prevention. A study by Qamariyah (2025) found that mothers with secondary education who do not work outside the home are generally more accessible to health workers (such as community health volunteers, midwives, and doctors) through programs like *posyandu*, home visits, and community health education, making them a strategic target group for stunting prevention interventions. On the other hand, fathers' occupations were predominantly self-employed, totaling 34 individuals (37.8%), followed by traders/farmers at 32 individuals (35.6%), with smaller proportions working as civil servants/military/police (7 individuals, 7.8%) and employees of state-owned or regionally owned enterprises (17 individuals, 18.9%). This pattern reflects the

characteristics of a rural economy based on small-to-medium enterprises and agriculture, which are vulnerable to price fluctuations and unstable monthly income. Self-employed workers and traders/farmers often face income instability, which can affect the availability of nutritious food at the household level, especially in the absence of financial reserves or adequate social protection programs.

Based on family income categories, 70 families (77.8%) had incomes below the Provincial Minimum Wage (UMP), while 20 families (22.2%) had incomes equal to or above the UMP. The dominance of families earning below the UMP in this sample is consistent with the economic profile of rural communities, which are generally classified within the lower–middle income group. Data from the National Nutrition Research (*Risnas Gizi*) 2018–2023 indicate that low-income families are at higher risk of stunting due to limited purchasing power for nutritious food, restricted access to healthcare services, and high transportation costs to reach health facilities. Family economic capacity is therefore an important determinant, alongside maternal education and child-rearing practices. Cross-regional studies in Indonesia also show that low-income families are more vulnerable to stunting due to a combination of low energy and protein intake, monotonous dietary patterns, and limited access to clean water and proper sanitation, which can lead to recurrent infections in children under five. Thus, the high proportion of families with incomes below the UMP in this study may represent a significant risk factor that needs attention in stunting prevention efforts. However, not all low-income families experience stunting, particularly when supported by adequate nutritional knowledge, strong family support, and good access to healthcare services.

Overall, the sociodemographic characteristics of respondents in this study indicate a profile of mothers and families with a relatively adequate level of secondary education (senior high school), a dominant maternal employment status as housewives, and family income that tends to be low but still within the lower–middle category. This pattern emphasizes that the key factors influencing stunting prevention behavior are not solely dependent on formal education, but also on access to information, social control within the community, and the economic conditions of the family.

CONCLUSION

Knowledge and maternal attitudes were significantly associated with stunting prevention behavior, while family support was not significantly related. Efforts to improve stunting prevention behavior should focus on increasing maternal knowledge and fostering positive attitudes through continuous health education and counseling.

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