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THE IMPACT OF MOTHER-TODDLER CLASSES ON STUNTING PREVENTION PRACTICES AMONG MOTHERS OF YOUNG CHILDREN

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Abstract

The prevalence of stunting according to WHO in 2021 is 22%. In Indonesia, according to SSGI data in 2022, the stunting rate in 2021 was 24.4%, down 2.8% to 21.6%. Central Java Province in 2022 by 20.8%. This study aims to determine the influence of the class of mothers under five on maternal knowledge and preventive behavior about stunting. This research was conducted at the UPTD Sumurpanggang Health Center in Tegal City in June 2024 with the Case Control research method. The dependent variables in this study are maternal knowledge and preventive behavior against stunting. The independent variable in this study was the class of mothers under five. The population in this study was mothers of toddlers aged 12-24 months. The sample used in this study was a number of mothers who attended toddler classes three times as the case group and those who did not attend toddler classes as the control group. The sampling technique used was purposive sampling. Univariate data analysis in this study used frequency distribution and bivariate analysis using Chi Square. The results showed that there was no significant relationship between participation in toddler mother classes and knowledge about stunting, feeding behavior, and supportive behavior for the prevention of stunting.

Keyword: *Mother of toddler class, Stunting prevention behavior*

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1. Introduction

Adequate nutrition is a key factor in the development of a nation's human resources because it directly affects the growth and potential of future generations. In early childhood, proper nutrition not only supports cognitive and physical development but also establishes a foundation for later productivity [1]. When children do not receive adequate nutrients, they are at higher risk of growth delays, which, if prolonged, can result in stunting.

Recent global data from the World Health Organization (WHO) reported a stunting prevalence of 22% in 2021. In Indonesia, national data from the 2024 SSGI survey indicate a slight decline from 24.4% to 21.6%, while Central Java Province reported a prevalence of 20.8% in 2022 [2].

Stunting has been observed across multiple age groups, including newborns, 0–6 months, 6–11 months, and 12–23 months. These trends highlight two critical intervention periods. The first is the prenatal phase, where preventing anemia among adolescent girls and pregnant women is essential, as 18.5% of newborns already show signs of stunting due to maternal undernutrition. The second period is postnatal, particularly between 6–23 months, when stunting prevalence increases sharply—from 13.7% at 6–11 months to 22.4% at 12–23 months.

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Interventions during this period should focus on exclusive breastfeeding, complementary feeding, and regular monitoring of child growth [2].

Stunting remains a serious public health concern because of its long-term consequences on individual health and societal productivity. It is a cumulative process that can begin during the prenatal period, leaving children with reduced immunity and higher susceptibility to infectious diseases. Widespread stunting can, in turn, affect the overall quality of human resources [3]. In this context, health development aims to improve individuals' awareness, willingness, and capacity to adopt healthy behaviors, ultimately achieving the highest possible public health standards. The national health strategy has shifted from curative approaches toward promotive and preventive measures, emphasizing community empowerment as a central strategy. Community empowerment involves enhancing the knowledge, awareness, and capacity of individuals, families, and communities to actively participate in health promotion. This is achieved through facilitated problem-solving, participatory educational approaches, and attention to local social and cultural contexts.

Maternal knowledge and behavior also play a critical role in the incidence of stunting. Limited awareness regarding nutrition and preventive practices such as early initiation of breastfeeding, exclusive breastfeeding, immunization, and proper child care can negatively influence feeding behaviors, including the type and quantity of food provided to children. Furthermore, insufficient understanding of stunting itself may exacerbate existing growth deficits [4]. To address these challenges, the Indonesian government has established Mother and Toddler Classes, where mothers of children aged 0–5 years gather to discuss, share experiences, and learn about health services, nutrition, and child growth and development under trained facilitators' guidance [3,5].

Currently, stunting remains a national health concern, and the government continues to prioritize its reduction as a strategic program. One key factor in stunting prevention is maternal behavior in feeding practices. Learning forums for mothers, such as Mother and Toddler Classes, play an important role in promotive and preventive efforts. However, few studies have evaluated the effectiveness of these classes in changing mothers' behaviors regarding child feeding.

This study examines the differences in knowledge and practices between mothers who participate in Mother and Toddler Classes and those who do not. Its aim is to assess the impact of participation on mothers' understanding of stunting, their preventive feeding practices, and behaviors that support stunting prevention.

2. Method

This study employed a quantitative, case–control design to examine the influence of participation in the Mother–Toddler Class on stunting prevention behaviors under controlled conditions. The research was conducted in June 2024 at Sumurpanggang Primary Health Care. The study population comprised mothers of toddlers aged 12–24 months.

Sampling was conducted using a purposive approach based on predefined inclusion and exclusion criteria. Inclusion criteria were: (1) mothers who completed all three sessions of the Mother–Toddler Class during June 2024 (case group) or mothers who did not participate in the program at all (control group), and (2) willingness to participate in the study. Exclusion criteria included: (1) mothers who attended only one or two class sessions and (2) mothers employed as healthcare professionals or community health volunteers. A total of 44 mothers were recruited, comprising 22 participants in the case group and 22 in the control group.

Data were collected through questionnaires completed by the participants. The questionnaire covered participants' demographic information, knowledge about stunting, feeding practices, and stunting-related supportive behaviors. Data were collected from both

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mothers who participated in the Mother–Toddler Class and those who did not.

Data analysis included univariate analysis to describe the frequency distribution of variables. Bivariate analysis was performed using the Chi-square test, conducted with SPSS software. A significance level of $p < 0.05$ was used to determine statistically meaningful associations.

3. Results and Discussion

Based on the results of the study and data analysis, the findings are as follows:

Table 1. Characteristics of Respondents

Characteristics	F	P
Maternal Reproductive Status		
Healthy	31	70.5%
At Risk	13	29.5%
Maternal Education		
Basic	19	43.2%
Secondary	17	38.6%
Higher	8	18.2%
Maternal Occupation		
Housewife	33	75%
Employed	11	25%
Number of Children		
≤ 2	32	72.7%
>2	12	27.3%
Child Age		
1 year	5	11.4%
2 year	39	88.6%
Gender		
Male	21	47.7%
Female	23	52.3%
Primary Caregiver		
Mother	43	97.7%
Other	1	2.3%
Exclusive Breastfeeding Status		
Exclusive	26	59.1%
Non-exclusive	18	40.9%
Timing of Complementary Feeding		
< 6 months	12	27.3%
≥ 6 months	32	72.7%

Source: Primary Data

The majority of respondents were within the healthy reproductive age range, had a primary level of education, worked as housewives, had children aged 2 years, were directly cared for by their mothers, practiced exclusive breastfeeding, and introduced complementary feeding starting at six months.

Table 2. Participation in Mother-and-Child

Participation	F	P
Attended	22	50%
Not Attended	22	50%

The distribution of mothers' participation in the Mother-and-Child Class was equal, with 50% attending and 50% not attending the class.

Table 3. Participation in Mother-and-Child

Variable	F	P
Knowledge		
Poor	13	29.5%
Good	31	70.5%
Feeding Practices		
Inappropriate	18	40.9%
Appropriate	26	59.1%
Behavior Supporting Stunting Prevention		
Negative	13	29.5%
Positive	32	70.5%

Furthermore, most mothers demonstrated good knowledge of stunting prevention compared to those with limited knowledge. A greater proportion of mothers practiced appropriate child feeding behaviors than those who did not. Adequate and responsive feeding practices were found to be significantly associated with the occurrence of stunting [6]. Similarly, a higher number of mothers exhibited positive behaviors supporting stunting prevention compared to those with negative behaviors.

Table 4. Association Between Participation in Mother-and-Child Class and Knowledge of Stunting

Participation in Mother-and-Child Class	Knowledge of Stunting				P-Value
	Poor		Good		
	F	%	F	%	
Attended	7	31.8	15	68.2	0.74

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Not attended	6	27.3	16	72.7

HThe results of this study indicate that, among both mothers who had and had not participated in the Balita Mothers' Class, the majority demonstrated good knowledge of stunting, with 68.2% of mothers in the non-participant group and 72.7% in the participant group showing adequate understanding. Statistical analysis revealed no significant relationship between participation in the Balita Mothers' Class and maternal knowledge of stunting ($p = 0.74 > 0.05$).

This finding contrasts with the study by Zahrotussalamah, which reported a significant association between attendance in the Balita Mothers' Class and mothers' knowledge and attitudes regarding infant and child feeding [7]. In addition, Kusumawati identified three main factors that simultaneously influence the occurrence of stunting: infectious diseases, food availability, and environmental sanitation [8].

The Mother-and-Childs' Class provides educational sessions covering various aspects of child care, including balanced nutrition, feeding practices for infants and young children, growth and development monitoring, and information on childhood infectious diseases [9]. Collectively, these sessions contribute to enhancing maternal knowledge, equipping mothers with the necessary information to actively prevent stunting in their children.

Table 5. Association Between Participation in Mother-and-Child Class and Child Feeding Behavior

Participation in Mother-and-Child Class	Feeding Behavior				P-value
	Inappropriate		Appropriate		
	F	%	F	%	
Attended	10	45.5	12	54.5	0.540
Not attended	8	36.4	14	63.6	

The results of this study indicate that the majority of mothers demonstrated appropriate feeding practices, both among those who had not attended the Mothers' Class (54.5%) and those who had participated (63.6%). Statistical analysis showed no significant relationship between participation in the Mothers' Class and feeding practices ($p=0.54>0.05$).

In contrast, Kostania (2018) reported a significant association between attendance in the Mothers' Class and maternal knowledge and practices regarding complementary feeding [10]. This difference may be influenced by the accessibility of alternative information sources, as access to multiple sources can support better maternal knowledge and informed behaviors.

Currently, numerous media platforms and mobile applications provide guidance on child growth and development, offering mothers practical information outside of direct contact with healthcare providers. Evidence suggests that greater exposure to diverse information sources positively affects stunting prevention practices. These sources include direct guidance from healthcare professionals as well as mass media channels [11].

Specifically, health promotion through social media platforms such as WhatsApp has been shown to significantly influence maternal knowledge regarding complementary feeding [12]. To optimize the use of social media for child health campaigns, researchers recommend verifying the accuracy of information, leveraging algorithms for targeted outreach, enhancing social media literacy, collaborating with influential figures, and considering the development of dedicated platforms focused on child health [13]. By implementing these strategies, social media-based child health campaigns are expected to become more effective and impactful, particularly in efforts to prevent stunting and improve the overall well-being of children worldwide [14].

Table 6. Association Between Participation in Mother-and-Child Class and Supportive Behavior for Stunting Prevention

Participation in Mother-	**Supportive Behavior for Stunting Prevention**		Total
	Negative	Positive	

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and-Child Class	F	%	F	%	
Attended	8	36.4	14	63.6	0.32
Not attended	5	22.7	17	77.3	

The study results indicate that the majority of mothers demonstrated positive behaviors in stunting prevention, both among those who had not attended the Mother and Childs' Class (63.6%) and those who had participated (77.3%). Statistical analysis revealed no significant association between participation in the Mother-and-Childs' Class and supportive behaviors for stunting prevention ($p=0.32>0.05$).

Implementation of the Mother-and-Childs' Class has been shown to improve the nutritional status of children identified as stunted. Previous studies reported significant changes in the nutritional status of children before and after participating in the Mother and Childs' Class [15]. Despite these findings, the current analysis did not find a statistically significant effect of Mothers' Class participation on maternal knowledge or stunting prevention behaviors.

4. Conclusion

The findings of this study indicate that the majority of mothers were of reproductive age (70.5%), had primary education (43.2%), were homemakers (75%), had no more than two children (72.7%), had children older than one year (88.6%), had female children (52.3%), provided direct maternal care (97.7%), practiced exclusive breastfeeding (59.1%), and introduced complementary feeding at the recommended age of six months (72.7%).

Statistical analysis revealed no significant associations between participation in the Mothers' Class and maternal knowledge, feeding practices, or supportive behaviors for stunting prevention. These findings suggest that, under the conditions of this study, attendance in the Mothers' Class alone may not be sufficient to produce measurable changes in maternal knowledge or behavior. Possible explanations include the small sample size, the cross-sectional design which limits causal inference, and potential exposure to alternative sources of information outside the program.

Future research should employ more rigorous study designs, such as quasi-experimental pre-post assessments with larger sample sizes, to more accurately evaluate the effectiveness of the Mothers' Class. Additionally, evaluation of program implementation, including facilitator quality, content relevance, and instructional methods, is recommended to optimize outcomes.

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