

Characteristics of the Mothers on Stunting Toddlers 12–36 Months West Bandung Regency, Indonesia

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Article History

Received: September 12, 2023

Accepted: March 21, 2024

Published: April 15, 2024

DOI: 10.15850/ijhs.v12.n1.3578

IJHS. 2024;12(1):31–35

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Abstract

Objective: To determine the characteristics of respondents with stunted toddlers aged 12–36 months in the Batujajar and Cihampelas districts of West Bandung District.

Methods: A case-control study with a pretest-posttest design was conducted from May to August 2022 in West Bandung Regency, Indonesia. The study included 124 mothers with stunted toddlers, who were divided into two groups-control and treatment-with 62 toddlers each, using simple random sampling.

Result: The majority of children under the age of five in this study were female. In the case group, the majority of mothers were in the 20–29 age range (40.3%), while in the control group, the majority were in the 30–39 age range (38.7%). Most mothers in both the control and case groups had a high school education (41.8%). The majority of participating mothers were housewives (85.5%). Childcare was primarily provided by mothers, and most of the resource persons were also mothers.

Conclusion: Based on the characteristics observed in this study, the majority of children under the age of five were female in both the case and treatment groups. Most mothers in both groups had a high school education, and the majority of participating mothers were housewives. Childcare was primarily handled by mothers, and most of the resource persons were also mothers.

Keyword: District area, parents characteristic, stunting

Introduction

The issue of stunting remains a persistent global health concern that has yet to be effectively addressed. Stunting refers to impaired linear growth resulting from inadequate food intake and malnutrition, as indicated by a height-for-age z-score (height/age) that falls below -2 standard deviations according to WHO guidelines. According to the WHO in 2019, the prevalence of stunting was estimated at 21.3%, with 144.2 million children worldwide experiencing stunting. The World Health Assembly is determined to reduce the global prevalence of stunting in

children by 40% by 2025, aiming to decrease the number of stunted children from 171 million in 2018 to approximately 100 million in 2025.¹

Stunting is a significant health concern due to its correlation with increased susceptibility to morbidity, mortality, and developmental abnormalities. In Indonesia, the problem of stunting and child development has decreased in numbers, but it has not yet met the government's achievement targets. Efforts are needed to improve nutrition and address developmental deviations in stunted children, particularly during the critical period of early childhood (under 5 years old).⁵ The

government has implemented integrated interventions, including specific nutritional interventions and socialization, counseling, training, and education related to stunted growth problems.

However, these efforts have not succeeded in reducing the incidence of stunting and nutritional problems in Indonesia. The government has overlooked the importance of increasing knowledge of good nutrition and promoting changes in parental behavior to improve healthy lifestyles in addressing stunting issues. In the West Bandung District of Indonesia, the coverage deviation for stunted children was 28.8% in 2020, which is still above the standard set by West Java Province (13-14%). In this area, the growth of children is the lowest compared to other districts/cities, with only 16.8% (6,726 children) receiving examinations. This suggests that the assessment of children's growth in this region is suboptimal, particularly for those experiencing stunting.

A study conducted at the Kalasan Public Health Centre in Yogyakarta found a notable correlation between stunting status and various aspects of child growth. The study revealed an odds ratio of 3.9, indicating that children with stunting are more likely to experience growth delays in these areas.³ Based on interviews with 10 mothers of children in the Batujajar and Cihampelas areas, 90% of them stated that they still lacked clear knowledge about monitoring child growth, especially in terms of early detection of child development and how to carry it out. Mothers of toddlers only perceive abnormal growth based on their age and rely solely on routine monitoring conducted at the posyandu, which includes weighing and measuring height to assess the child's growth, but not their development. As a result, mothers of toddlers have limited knowledge in this area.⁴

Furthermore, the lack of health resources and difficult access to demographics make it challenging to conduct comprehensive examinations. The local posyandu, assisted by cadres, can only measure weight and height according to the age recorded in maternal and child health books, with developmental checks rarely being carried out. This can negatively impact the health and development of stunted children due to inadequate nutritional intake.⁵

Methods

This study utilized a quasi-experimental design with a two-group pretest-posttest

design. The research was conducted from May to August 2022 in Batujajar and Cihampelas Subdistricts, West Bandung Regency, Indonesia. The research was approved by the Center for the Study of Health Systems and Education Innovation for Health Workers, Faculty of Medicine, Padjadjaran University, Indonesia, under ethical test number 276/UN6.KEP/EC/2022. The study included 124 mothers with stunted toddlers, divided into two groups: the control group and the case group, with 62 toddlers in each group. The sample selection was carried out using simple random sampling. The inclusion criteria for mothers with stunted toddlers were as follows: mothers with toddlers aged 12–36 months, biological parents of the child, residing in Batujajar and Cihampelas Districts, and responsible for parenting at home or by the closest family members, such as grandparents or babysitters.

The exclusion criteria included physically disabled toddlers and those with significant pathological abnormalities based on physical examination. Research instruments included questionnaires to gather information about the characteristics of the respondents. The data used in this study consisted of primary and secondary data. Secondary data was obtained from the register of toddlers in Batujajar district who experienced stunting between the ages of 12–36 months, while primary data was collected through questionnaires. The objective of the univariate analysis was to provide a comprehensive description of various attributes related to the research subjects, including the gender of the toddler, age of the mother, educational background of the mother, and occupation of the mother. Data analysis was conducted using SPSS software Version 25.0.

Results

Based on the data presented in Table 1, this study found that the majority of children under five in both the control and treatment groups were female (54.8%). Additionally, the majority of mothers fell into the age categories of 20–29 years (40.2%) and 30–39 years (38.7%). Furthermore, most of the mothers had a high school education (41.9%) in both groups. The study also revealed that the majority of mothers who participated were housewives (85.5%). Finally, it was observed that the majority of respondents regarding children's parenting and sources of information were the mothers themselves

Table 1 Distribution of Respondent Characteristics Mothers and Toddlers

Characteristics	Group		Total
	Control	Cases	
Gender			
Man	30 (48.4%)	28 (45.2%)	58 (46.8%)
Woman	32 (51.6%)	34 (54.8%)	66 (53.2%)
Mother's Age (years)			
<20	6 (9.7%)	3 (4.8%)	9 (7.3%)
20–29	23 (37.1%)	25 (40.3%)	48 (38.7%)
30–39	24 (38.7%)	24 (38.7%)	48 (38.7%)
40–49	9 (14.5%)	10 (16.1%)	19 (15.3%)
Education			
Primary school	13 (21.0%)	13 (21.0%)	26 (21.0%)
Junior high school	23 (37.1%)	22 (35.5%)	45 (36.3%)
Senior high school	26 (41.9%)	26 (41.9%)	52 (36.3%)
University	0 (0.0%)	1 (1.6%)	1 (1.6%)
Employment			
Employed	14 (22.6%)	9 (14.5%)	23 (18.5%)
Unemployed	48 (77.4%)	53 (85.5%)	101 (81.5%)
Type of work			
Housewife	48 (77.4%)	53 (85.5%)	101 (81.5%)
Teacher	0 (0.0%)	1 (1.6%)	1 (0.8%)
Employee	14 (22.6%)	5 (8.1%)	19 (15.3%)
Farmer	0 (0.0%)	3 (4.8%)	3 (2.4%)
Child Care			
Mother	47 (75.8%)	54 (87.1%)	101 (81.5%)
Grandmother	5 (8.1%)	5 (8.1%)	10 (8.1%)
Aunt	6 (9.7%)	1 (1.6%)	7 (5.6%)
Household assistant	3 (4.8%)	1 (1.6%)	4 (3.2%)
Daycare	1 (1.6%)	1 (1.6%)	2 (1.6%)
Source person			
Mother	42 (67.7%)	45 (72.6%)	87 (70.2%)
Father	11 (17.7%)	11 (17.7%)	22 (17.7%)
Grandmother	4 (6.5%)	2 (3.2%)	6 (4.8%)
Grandfather	2 (3.2%)	3 (4.8%)	5 (4.0%)
Aunt	2 (3.2%)	1 (1.6%)	3 (2.4%)
Daycare	1 (1.6%)	0 (0.0%)	1 (0.8%)

(87.1% and 72.6%, respectively).

Discussion

Consistent with the findings of a study conducted by Gosdin in 2018, the results

indicate a correlation between gender and the prevalence of stunting.⁶ The sex of the child is related to their growth and development achievements, considering the differences in growth spurts between girls and boys.⁷ In a 2019 study conducted in China, it was

discovered that females in China have a higher susceptibility to stunting compared to boys. This disparity can be attributed to variations in poor nutritional intake resulting from societal norms favoring boys, particularly in rural areas. This discrepancy in weight status between genders may be partially explained by these factors.⁸ Over time, many boys are overweight, while rural girls are at risk of stunting.⁹

Age plays a role in increased physical and psychological maturity, as well as the ability to think and work. The age of the respondents in this study was evenly distributed within the reproductive age range. However, there were also respondents who were too young or too old. The age of the mothers in this study ranged from <20 years to 50 years. Age is associated with richer experience, more information, and better emotional maturity for decision making. The two groups of respondents in this study are similar in terms of emotional maturity, experience, and information, as the age of the respondents in the two groups was not significantly different.

The findings of this study are consistent with previous research conducted in 2019, which examined the impact of family factors on the prevalence of stunting.¹⁰ Specifically, the study found that a proportion of mothers had completed high school education, while the majority of mothers were engaged in homemaking activities. The prevalence of stunting in children born to mothers without formal education is twice as high as those born

to mothers with bachelor's degrees.¹¹ The level of maternal education significantly impacts parenting behaviors, particularly in terms of nutrition regulation during feeding practices and the maintenance of child health.¹² Parental employment is an indirect factor in the occurrence of stunting.

Mothers who work outside often have less time for housework compared to mothers who don't work, so parenting styles influence the child's growth and development, which can ultimately be disrupted.¹³ The characteristics of the mother also need to be considered, as stunting is a chronic condition that occurs due to long-standing conditions such as poverty, poor parenting due to busy parents, busy work schedules, poor maternal nutrition knowledge due to low levels of education, and frequent relapses due to unhealthy living and eating.⁹

Parenting is a practice carried out by caregivers such as mothers, fathers, grandmothers, or others to maintain health, provide food, provide emotional support to children, and provide the stimulation children need during growth and development. Negative parenting patterns are associated with an increased likelihood of stunting in children. However, it is essential to note that while access to information may be easier for the millennial generation, it does not necessarily translate to increased access to health-related information. This discrepancy may be one of the contributing factors to the lack of correlation between information access and the incidence of stunting.¹⁴

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