International Journal of Interdisciplinary Cultural Studies
ISSN: 2327-008X (Print), ISSN: 2327-2554 (Online)
Volume 21, Issue 1, 2026
https://cgscopus.com/index.php/journals

COMPARATIVE STUDY OF THE CHARACTERISTICS OF TODDLERS IN THE ADMINISTRATIVE AREAS OF BANDUNG REGENCY AND BANDUNG CITY WITH STUNTING STATUS

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Abstract: Toddler health status is a key public health priority and is commonly assessed using nutritional indicators such as height-for-age (HAZ), weight-for-age (WAZ), weight-for-height (WHZ), history of infectious diseases, and immunization status, which are obtained from routine health service records. Stunting remains a major global health problem, including in Indonesia. This study aimed to examine the relationship between toddler characteristics in Bandung City and Bandung Regency and nutritional status outcomes in 2024. A quantitative study with a cross-sectional design was conducted using secondary data from the community-based nutrition recording and reporting application (e-PPGBM) for 2024. The study population consisted of toddlers aged 1–5 years recorded in e-PPGBM in Bandung Regency and Bandung City in February and August 2024. The results showed no association between sex distribution

and administrative area. However, significant differences were found between rural (Bandung Regency) and urban (Bandung City) areas in terms of age distribution, WAZ, HAZ, WHZ, underweight, stunting, and wasting. A double burden of malnutrition was observed across all age groups, including undernutrition and overnutrition. Children with a history of low birth weight had nearly twice the proportion of short and very short stature compared to those with normal birth weight. Overall, nutritional patterns and burdens differed markedly between rural and urban areas, with Bandung City showing higher prevalence of overnutrition and chronic growth disorders than Bandung Regency.

Keywords: Bandung City, Bandung Regency, Stunting, Child Characteristics, Nutritional Status.

INTRODUCTION:

Urbanization significantly affects global health, with more than 55% of the world's population currently living in urban areas—a figure projected to reach 68% by 2050. This demographic shift presents both challenges and opportunities for public health, as urban environments often exacerbate health inequalities rooted in the social determinants of health, such as economic stability, education, environmental conditions, and access to healthcare [1].

Rapid urban growth stimulates migration to cities, particularly in low- and middle-income countries, leading to poor living conditions. Limited economic opportunities, inadequate education, substandard environments, and restricted access to healthcare contribute to living conditions that are not necessarily better than those in rural areas [1]. Similar trends are observed in nutritional issues.

According to the *Indonesia Nutritional Status Survey 2024* released by the Ministry of Health, the national stunting rate has shown a consistent decline over the last ten years. The prevalence of stunting among children under five in Indonesia in 2024 was reported at 19.8%, falling below 20%, which classifies it as a "low" public health problem, down from 21.4% in 2023. Malnutrition—including stunting, wasting, and underweight—remains a global concern, particularly among children in low- and middle-income countries [2].

In Indonesia, although stunting rates have declined, the issue persists in several districts and cities, such as Bandung City and Bandung Regency, where prevalence remains above 20%. This is concerning, as the World Health Organization (WHO) defines stunting as height-for-age that is less than -2 standard deviations (SD) from the WHO Child Growth Standards median.

Potential causes (red flags) of stunting often begin with inadequate weight gain ("weight faltering"), which, if not optimally managed, slows linear growth as the body prioritizes maintaining nutritional status. This impaired linear growth eventually results in stunting (chronic malnutrition).

The Indonesian Ministry of Health uses data from the community-based electronic recording and reporting system (*e-PPGBM*), which aligns with studies conducted in Germany that utilized the *eHealth Literacy Scale* (eHEALS) for assessing electronic health literacy [3].

The Ministry defines stunting as a failure of linear and cognitive growth due to prolonged nutritional deficiencies. Stunted children are shorter than their peers and often experience delayed cognitive development. Contributing factors include poor access to nutritious food—particularly sources of vitamins, minerals, and animal protein—as well as maternal undernutrition, recurrent illnesses, and inappropriate infant and young child feeding (IYCF) practices.

According to the WHO conceptual framework, four direct factors influence stunting: family and household characteristics, breastfeeding, complementary feeding (MPASI), and infections. Moreover, maternal undernutrition during adolescence, pregnancy, and lactation significantly increases the risk of stunting. Access to proper sanitation and clean water also plays a crucial role in child growth.

Similar findings were reported in Ethiopia, where diarrhea and unsafe drinking water were identified as strong predictors of stunting [4]. Reliable data sources are therefore essential. In Germany, the GR-eHEALS instrument has proven reliable and valid for measuring eHealth literacy across gender, age, and education groups [3].

In Ethiopia, high rates of stunting and wasting were found among children aged 6–59 months, particularly among boys, those fed less than three times per day, and those exposed to diarrhea or unprotected water sources (AOR = 2.1) [4].

The underlying cause of stunting is closely related to poverty. Poverty limits access to affordable nutritious food, increases exposure to infectious diseases, and restricts access to healthcare—key factors driving stunting [5]. Families with low socioeconomic status and many children often struggle to provide adequate attention and basic needs such as food, clothing, and housing [6].

Similarly, a study in Afghanistan found that large family size was a significant risk factor for stunting [2]. This condition is often observed in rural areas within regency-level administrative regions. In Indonesia, *regencies* (kabupaten) and *cities* (kota) share administrative functions but differ in typology: regencies are largely rural, characterized by agriculture, plantations, and

fisheries, with low population density and challenges in healthcare access, sanitation, and water quality.

This aligns with research conducted in rural areas of the United States, where rural populations experience systemic disparities in healthcare access and outcomes compared to urban populations [7]. Changing perceptions of rural versus urban living have also been observed in India, where differing patterns between rural and urban areas reflect rapid urbanization—especially in North India and the National Capital Region (NCR)—influencing prevalence rates and related comorbidities [8], [9].

Rapid economic transitions are bridging the urban-rural gap, as anthropometric and biochemical profiles between these populations show no significant differences [9].

In several contexts, poverty is closely linked to stunting. A study in the Philippines found that children from low socioeconomic households and those with low parental education were more likely to experience stunting and wasting, with an overall stunting prevalence of 49.9% [10].

Supporting findings from [11] indicate that sanitation and hygiene (WASH) conditions affect stunting through infectious diseases such as diarrhea. Approximately 88% of diarrhea cases among children are caused by poor water sources, inadequate sanitation, and poor hygiene practices. Similarly, the *Philippine Demographic and Health Survey (2020)* found that financial status, water sources, sanitation facilities, and fecal waste disposal were indirect factors contributing to stunting, while oral rehydration therapy for children with diarrhea was a direct mitigating factor [12].

Bandung City, characterized by urban infrastructure, dense population, and economic activity in industry, services, and trade, provides easier and faster healthcare access—factors that attract rural-to-urban migration. A study in India showed that migration between rural and urban areas influenced healthier lifestyle adoption among migrants, potentially preventing or delaying associated disorders [13].

Family characteristics, particularly household income, are strongly associated with stunting among children aged 6–12 months [14]. Other relevant characteristics include healthcare facilities (such as community health centers and hospitals) in Bandung Regency and Bandung City between 2020–2023, differences in birth weight, nutritional status (stunting, underweight, wasting, overweight), age groups, sex, height-for-age, weight-for-age, and other anthropometric indicators.

It is therefore essential to examine the relationship between child characteristics and stunting in Bandung Regency and Bandung City in 2024.

International Journal of Interdisciplinary Cultural Studies
ISSN: 2327-008X (Print), ISSN: 2327-2554 (Online)
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https://cgscopus.com/index.php/journals

METHODOLOGY:

Study Design

This study is a quantitative cross-sectional study, in which data were collected at a single point in time. The study utilized secondary data obtained from the *e-PPGBM* (Community-Based Nutrition Recording and Reporting System) for the year 2024.

The analysis was comparative, comparing two groups—Bandung Regency and Bandung City—in relation to stunting characteristics. Data analysis was performed using SPSS software, employing descriptive analysis. The analysis was conducted in two stages:

1. Univariate analysis, to describe the distribution of each variable.

2. Bivariate analysis, to examine relationships between variables.

Population

The study population consisted of all children under five years old (toddlers) in Bandung Regency and Bandung City in 2024.

Table 1. Population of Toddlers in Bandung Regency and Bandung City, 2024

Criteria	Bandung Regency	Bandung City
Total population	3,773,104 persons	2,591,763 persons
Total number of toddlers	246,040 toddlers	165,708 toddlers
Number of toddlers recorded in e-PPGBM	216,380 toddlers	91,236 toddlers
D/S (Coverage rate)	87.9%	55%

Source: West Java Health Profile, 2024

The research subjects were all toddlers recorded in the e-PPGBM database for 2024, consisting of 216,380 toddlers from Bandung Regency and 91,236 toddlers from Bandung City, for a total sample size (N) of 307,636 toddlers.

Health Facilities

The following table shows the number of community health centers (Puskesmas) and hospitals in Bandung Regency and Bandung City during the period 2020–2023.

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https://cgscopus.com/index.php/journals

Table 2. Number of Community Health Centers and Hospitals in Bandung Regency and Bandung City (2020–2023)

No	Type of Facility	2020	2021	2022	2023
		Bandung Regency	Bandung City	Bandung Regency	Bandung City
1	Community Health Centers (Puskesmas)	62	80	62	80
2	Hospitals	17	41	10	37
Total Health Facilities	79	121	72	117	73

Source: West Java Health Profile, 2020

RESULTS AND DISCUSSION:

Table 1. General characteristics of children in Bandung City and Bandung Regency based on e-PPGBM data in 2024

Category	Frequency (n)	Percentage (%)
Region (n = 307,616)		
Bandung City	91,236	29.7
Bandung Regency	216,380	70.3
Sex (n = 307,616)		
Male	162,821	52.9
Female	144,795	47.1
Age (n = 307,616)		
< 1 year	43,312	14.1
1–2 years	127,781	41.5
3–4 years	135,830	44.2
4–5 years	693	0.2
Birth Weight (n = 302,717)		
Low Birth Weight (LBW)	18,423	6.0
Normal	284,294	92.4
Weight-for-Age (W/A) (n = 307,422)		
Severely Underweight	5,357	1.7
Underweight	26,062	8.5
Normal	261,893	85.1
At Risk of Overweight	14,110	4.6
Height-for-Age (H/A) (n = 307,422)		
Severely Stunted	10,100	3.3
Stunted	23,030	7.5

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https://cgscopus.com/index.php/journals

Normal	273,063	88.8
Tall	1,229	0.4
Weight-for-Height (W/H) (n = 307,422)		
Severely Wasted	1,286	0.4
Wasted	12,332	4.0
Normal	261,539	85.0
At Risk of Overweight	22,094	7.2
Overweight	6,094	2.0
Obese	2,814	0.9
Outlier	1,263	0.4
Underweight Status (n = 307,422)		
Underweight	30,985	10.1
Normal	276,437	89.9
Stunting Status (n = 307,422)		
Stunted	32,565	10.6
Normal	274,857	89.4
Wasting Status (n = 307,422)		
Wasted	20,910	6.8
Normal	286,512	93.2

Source: e-PPGBM 2024

The majority of study subjects originated from Bandung Regency, accounting for approximately seven out of ten children, with a relatively balanced sex distribution and a slight predominance of boys. The middle age group of toddlers, comprising more than 85.7% of the population, dominated the age distribution, indicating a research focus on the most critical period of growth and development.

Overall, the perinatal condition of the subjects was generally good, as reflected by the high proportion (over 92.4%) of children with normal birth weight. This finding suggests that most children began life with a relatively favorable biological status, although a small proportion were born with low birth weight.

According to nutritional status assessments based on anthropometric indicators, approximately 85–89% of children fell within the normal category across all measures. However, nutritional problems still persist within the study population. Based on the weight-for-age indicator, about one in ten children were underweight or at risk of malnutrition, while nearly 5% were overweight.

Although the prevalence of stunting remained above 10%, the height-for-age indicator also revealed a proportion of stunted and severely stunted children, albeit smaller compared to the normal group. In terms of acute malnutrition, wasting was observed in nearly 7% of children, suggesting that short-term nutritional problems continue to be a concern.

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Conversely, various forms of overnutrition were also identified. The weight-for-height indicator showed that around 10% of children were classified as at risk of overnutrition to obese, indicating the presence of a double burden of malnutrition among children in this study.

Overall, these findings highlight that both undernutrition and overnutrition remain significant public health issues, requiring special attention in the planning of child health interventions in the study area, even though the majority of children had a normal nutritional status.

Table 4. Comparison of Child Characteristics between Bandung City/Regency Areas

Category	Bandung City f(%)	Bandung Regency f(%)	p-value (Significance)
Sex			
Male	48,318 (53%)	114,503 (52.9%)	**0.83**
Female	42,918 (47%)	101,877 (47.1%)	
Total	91,236 (100%)	216,380 (100%)	
Age			
< 1 year	11,399 (12.5%)	31,913 (14.7%)	
1–2 years	38,699 (42.4%)	89,082 (41.2%)	**< 0.001**
3–4 years	40,978 (44.9%)	94,852 (43.8%)	
4–5 years	160 (0.2%)	533 (0.2%)	
Total	91,236 (100%)	216,380 (100%)	
Birth Weight			
Low Birth Weight (LBW)	4,617 (5.1%)	13,806 (6.5%)	**< 0.001**
Normal	86,009 (94.9%)	198,285 (93.5%)	
Total	90,626 (100%)	212,091 (100%)	
Weight-for-Age (W/A)			
Severely Underweight	1,899 (2.1%)	3,458 (1.6%)	
Underweight	8,098 (8.9%)	17,964 (8.3%)	**< 0.001**
Normal	76,345 (83.8%)	185,548 (85.8%)	
At Risk of Overweight	4,785 (5.3%)	9,325 (4.3%)	
Total	91,127 (100%)	216,295 (100%)	
Height-for-Age (H/A)			
Severely Stunted	2,660 (2.9%)	7,440 (3.4%)	
Stunted	6,398 (7.0%)	16,632 (7.7%)	**< 0.001**
Normal	81,795 (89.8%)	191,268 (88.4%)	
Tall	274 (0.3%)	955 (0.4%)	
Total	91,127 (100%)	216,295 (100%)	
Weight-for-Height (W/H)			
Severely Wasted	427 (0.5%)	859 (0.4%)	**< 0.001**
Wasted	3,627 (4.0%)	8,705 (4.0%)	

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https://cgscopus.com/index.php/journals

Normal	77,146 (84.7%)	184,393 (85.3%)	
At Risk of Overweight	6,747 (7.4%)	15,347 (7.1%)	
Overweight	1,898 (2.1%)	4,196 (1.9%)	
Obese	942 (1.0%)	1,872 (0.9%)	
Outlier	340 (0.4%)	923 (0.4%)	
Total	91,127 (100%)	216,295 (100%)	
Underweight Status			< **0.001**
Underweight	9,882 (10.8%)	21,103 (9.8%)	
Normal	81,245 (89.2%)	195,192 (90.2%)	
Total	91,127 (100%)	216,295 (100%)	
Stunting Status			< **0.001**
Stunted	8,922 (9.8%)	23,643 (10.9%)	
Normal	82,205 (90.2%)	192,652 (89.1%)	
Total	91,127 (100%)	216,295 (100%)	
Wasting Status			< **0.001**
Wasted	4,059 (4.5%)	16,851 (7.8%)	
Normal	87,068 (95.5%)	199,444 (92.2%)	
Total	91,127 (100%)	216,295 (100%)	

Comparison of Child Characteristics Between Bandung City and Bandung Regency

The comparison of child characteristics between Bandung City and Bandung Regency shows that the distribution of sex does not differ significantly between the two regions ($p=0.83$), indicating a relatively balanced gender composition. In contrast, the age distribution shows a significant difference ($p<0.001$), with variations in the proportions of age groups between the urban and regency areas, suggesting differences in demographic structure.

Bandung Regency has a higher proportion of infants with low birth weight compared to Bandung City ($p<0.001$). This finding indicates disparities in the early-life conditions of children between regions, which may influence subsequent nutritional status. A significant difference was also found in nutritional status based on weight-for-age (W/A) ($p<0.001$). Compared to Bandung Regency, Bandung City has a slightly lower proportion of children with normal nutritional status and a higher proportion of those at risk of overweight, indicating differing patterns of nutritional problems between urban and rural areas.

The height-for-age (H/A) indicator also shows a significant difference ($p<0.001$). Bandung Regency has a higher proportion of children who are short or severely stunted compared to Bandung City, suggesting a greater burden of chronic malnutrition. Nutritional patterns based on weight-for-height (W/H) also differ significantly between the two regions. Bandung City has more

children with a higher risk of overweight and obesity, while Bandung Regency has more undernourished children, indicating distinct forms of the double burden of malnutrition in each area.

The results are further supported by the analysis of specific nutritional status indicators. Bandung Regency shows higher prevalence rates of underweight and stunting compared to Bandung City, and wasting is also more common in the regency area ($p<0.001$). These differences indicate that children's nutritional status varies across regions, reflecting disparities in social, economic, and health environment conditions.

Overall, these comparative findings suggest that although both areas are part of the metropolitan region, the patterns and burdens of child nutritional problems differ markedly—Bandung City tends to experience more issues related to overnutrition and chronic growth disorders, whereas Bandung Regency faces a greater burden of undernutrition.

Table 5. Relationship between Child Characteristics and Birth Weight

Category	Low Birth Weight (LBW) f(%)	Normal f(%)	p (Significance)
Sex			
Male	8,896 (48.3%)	151,283 (53.2%)	<0.001
Female	9,527 (51.7%)	133,011 (46.8%)	
Total	18,423 (100%)	284,294 (100%)	
Age			
< 1 year	3,025 (16.4%)	39,346 (13.8%)	<0.001
1–2 years	7,894 (42.8%)	117,530 (41.3%)	
3–4 years	7,469 (40.5%)	126,769 (44.3%)	
4–5 years	35 (0.2%)	649 (0.2%)	
Total	18,423 (100%)	284,294 (100%)	
Weight-for-Age (W/A)			
Severely Underweight	811 (4.4%)	4,276 (1.5%)	<0.001
Underweight	2,581 (14.0%)	23,097 (8.1%)	
Normal	14,391 (78.2%)	243,486 (85.7%)	
At Risk of Overweight	629 (3.4%)	13,253 (4.7%)	
Total	18,412 (100%)	284,112 (100%)	
Height-for-Age (H/A)			
Severely Stunted	1,156 (6.3%)	8,582 (3.0%)	<0.001
Stunted	2,072 (11.3%)	22,629 (7.2%)	
Normal	15,100 (82.0%)	253,858 (89.4%)	
Tall	84 (0.5%)	1,115 (0.4%)	

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Volume 21, Issue 1, 2026
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Total	18,412 (100%)	284,112 (100%)	
Weight-for-Height (W/H)			
Severely Wasted	217 (1.2%)	1,054 (0.4%)	<0.001
Wasted	1,244 (6.8%)	10,922 (3.8%)	
Normal	15,403 (83.7%)	242,129 (85.2%)	
At Risk of Overweight	1,035 (5.6%)	20,618 (7.3%)	
Overweight	268 (1.5%)	5,715 (2.0%)	
Obese	131 (0.7%)	2,640 (0.9%)	
Outlier	114 (0.6%)	1,034 (0.4%)	
Total	18,412 (100%)	284,112 (100%)	
Underweight			
Underweight	3,363 (18.3%)	27,055 (9.5%)	<0.001
Normal	15,049 (81.7%)	257,057 (90.5%)	
Total	18,412 (100%)	284,112 (100%)	
Stunting			
Stunted	3,194 (17.3%)	28,697 (10.1%)	<0.001
Normal	15,218 (82.7%)	255,415 (89.9%)	
Total	18,412 (100%)	284,112 (100%)	
Wasting			
Wasted	1,453 (7.9%)	19,061 (6.7%)	<0.001
Normal	16,959 (92.1%)	265,051 (93.3%)	
Total	18,412 (100%)	284,112 (100%)	

Relationship Between Child Characteristics and Birth Weight

According to the study results, there is a significant relationship between birth weight and various child characteristics. The distribution of sex differs significantly between the normal birth weight and low birth weight (LBW) groups ($p<0.001$), indicating a possible link between biological vulnerability or perinatal factors and the child's sex.

The age distribution also shows a significant difference ($p<0.001$), with a higher proportion of children with a history of LBW found among younger age groups. This pattern suggests that low birth weight may influence early childhood development. The relationship between nutritional status based on weight-for-age (W/A) and birth weight is also strong ($p<0.001$). Children with a history of low or very low birth weight have lower nutritional status compared to those with normal birth weight, indicating that LBW is a major risk factor for postnatal growth disorders.

A consistent relationship was also observed for height-for-age (H/A) ($p<0.001$). Children with a history of LBW were nearly twice as likely to be stunted or severely stunted compared to those with normal birth weight, demonstrating that LBW is a key factor in long-term linear growth

impairment. Additionally, there was a significant difference in weight-for-height (W/H) ($p<0.001$). Children with normal birth weight were more frequently found within the acute undernutrition spectrum, while those with LBW tended to fall within the normal or overnutrition range. This pattern indicates differences in nutritional trajectories between the two groups since infancy.

These findings were further supported by the analysis of specific nutritional status indicators. The relationship between LBW and wasting remained statistically significant ($p<0.001$), showing a higher vulnerability to acute malnutrition among children with a history of LBW. The prevalence of underweight was nearly twice as high among LBW children compared to those with normal birth weight.

Overall, these findings indicate that low birth weight is strongly associated with multiple forms of growth and nutritional disorders in children, both chronic and acute. Low birth weight also serves as an important determinant in the overall pattern of childhood nutritional problems.

Table 6. Relationship between Child Characteristics and the Incidence of Stunting

Category	Yes f(%)	No f(%)	p (Significance)
Sex			
Male	18,275 (56.1%)	144.437 (52,5%)	<0.001
Female	14.290 (43,9%)	130.420 (47,5%)	
Total	32.565 (100%)	274.857 (100%)	
Age			
< 1 year	2,953 (9.1%)	40.358 (14,7%)	<0.001
1–2 years	15,342 (47.1%)	112.438 (40,9%)	
3–4 years	14,201 (43.6%)	121.595 (44,2%)	
4–5 years	69 (0.2%)	466 (0,2%)	
Total	32,565 (100%)	274.857 (100%)	
Birth Weight			
Low Birth Weight (LBW)	3,194 (10.0%)	15.218 (5,6%)	<0.001
Normal	28,697 (90.0%)	255.415 (94,4%)	
Total	31,891 (100%)	270.633 (100%)	
Underweight			
Underweight	16,689 (51.2%)	14.296 (5,2%)	<0.001
Normal	15,876 (48.8%)	260.561 (94,8%)	
Total	32,565 (100%)	274.857 (100%)	
Wasting			
Wasted	2,853 (8.8%)	18.057 (6,6%)	<0.001
Normal	29,712 (91.2%)	256.800 (93.4%)	
Total	32,565 (100%)	274.857 (100%)	

International Journal of Interdisciplinary Cultural Studies
ISSN: 2327-008X (Print), ISSN: 2327-2554 (Online)
Volume 21, Issue 1, 2026
https://cgscopus.com/index.php/journals

Relationship Between Child Characteristics and Stunting Risk

According to the bivariate analysis, there is a significant correlation between stunting and various child characteristics. The distribution of sex differs significantly between stunted and non-stunted children ($p < 0.001$), with a higher proportion of boys in the stunted group. This suggests possible biological vulnerability or differences in exposure to risk factors based on sex. In addition, there is a significant difference in the age distribution ($p = 0.001$). Stunting is most common among children aged 1–2 years and 3–4 years, which represents a critical period of linear growth when the effects of nutritional and environmental factors become more evident.

The relationship between birth weight and stunting incidence is strong ($p < 0.001$), indicating that perinatal conditions influence long-term linear growth. There is also a significant correlation between nutritional status based on weight-for-age and stunting ($p = 0.001$). More than 50% of stunted children are underweight, while nearly all non-stunted children have normal nutritional status. These findings suggest that chronic malnutrition and impaired height growth are interrelated conditions.

Furthermore, a significant association was found between wasting and stunting ($p = 0.001$), indicating that acute malnutrition may contribute to disruptions in linear growth.

Overall, these findings indicate that low birth weight and undernutrition are major factors influencing stunting. The results reinforce the importance of implementing integrated intervention strategies from early life through early childhood to prevent stunting.

Discussion

When compared to the total population in the two administrative regions, the Bandung Regency area—which has a larger population—actually has significantly fewer community health centers (Puskesmas) and hospitals. This finding aligns with the theory that regency-level administrative areas generally have fewer healthcare facilities. Consequently, this shortage affects the availability and accessibility of healthcare services for children under five, which may contribute to challenges in ensuring adequate health services for this group.

The number of children under five in Bandung Regency is higher, consistent with the general understanding that regency areas tend to have larger populations. Although the ratio of boys to girls is nearly equal, the proportion of boys in the regency is slightly higher. There is a relationship between the ratio of boys and girls across the two administrative regions; however, based on e-PPGBM 2024 data, there is no significant relationship between the general characteristics of children in Bandung City and Bandung Regency in terms of age, birth weight, weight-for-age

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(W/A), height-for-age (H/A), weight-for-height (W/H), underweight, stunting, and wasting.

There is, however, a significant relationship between child characteristics (including sex, age, W/A, H/A, W/H, underweight, stunting, and wasting) and birth weight. This indicates a link between biological vulnerability or perinatal factors and the child's sex. Overall, the findings suggest that low birth weight (LBW) is associated with various growth and nutritional disorders, both chronic and acute. LBW also plays a key role as an important component in the overall pattern of nutritional problems among children under five. In addition, poverty may influence food intake, the frequency of infections, and the quality of antenatal care (ANC), all of which affect the birth outcomes of infants.

Furthermore, there is a significant relationship between child characteristics (including sex, age, W/A, H/A, underweight, and wasting) and stunting incidence.

CONCLUSIONS

Bandung Regency, representing rural areas, and Bandung City, representing urban areas, show distinctly different patterns and burdens of nutritional problems among children under five. Bandung City has a higher prevalence of overnutrition and chronic growth disorders compared to Bandung Regency.

A comparison of child characteristics between Bandung Regency and Bandung City shows no significant relationship with sex differences, but there are significant associations with age, birth weight, weight-for-age (W/A), height-for-age (H/A), weight-for-height (W/H), underweight, stunting, and wasting.

The relationship between child characteristics and birth weight indicates significant associations with sex, age, W/A, H/A, underweight, stunting, and wasting.

Furthermore, the relationship between child characteristics and stunting risk shows significant associations with sex, age, birth weight, underweight, and wasting.

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