GLOBAL TEN PUBLIC HEALTH AND NURSING JOURNAL
Volume 4, No. 1, 2026, March, Page 6-13
ISSN: 2579-7913
DOI: 10.36568/gtphnj.v4i1.255

RESEARCH

Maternal Nutritional Status During Pregnancy and the Incidence of Stunting Among Toddlers in Kedungkendo Village, Sidoarjo

Tanty Wulan Dari[1], Moch Bahrudin[1], Siti Maimuna[1]

[1].Department of Nursing, Politeknik Kesehatan Kementerian Kesehatan Surabaya, Sidoarjo, East Java, Indonesia

Corresponding author: Tanty Wulan Dari e-mail: tantywd@yahoo.com ; telephone: 083830001300

ABSTRACT

Stunting is a chronic form of undernutrition that originates in the first 1,000 days of life and is programmed largely in utero; a mother's nutritional status during pregnancy is therefore a proximate determinant of a child's later linear growth. This study aimed to analyze the relationship between maternal nutritional status during pregnancy and the incidence of stunting among toddlers in Kedungkendo Village, Candi District, Sidoarjo Regency. A quantitative analytic study with a cross-sectional design was conducted from February to March 2025. Using total sampling, 100 mothers of toddlers aged one to five years participated. Maternal nutritional status during the index pregnancy was assessed retrospectively from the maternal-and-child health handbook (buku KIA) using mid-upper-arm circumference (MUAC) as the primary indicator, supplemented by gestational weight gain and haemoglobin, and classified as chronic energy deficiency, normal, or over-nutrition; stunting was determined from height-for-age z-scores measured with a microtoise based on World Health Organization standards. Data were analyzed using the Chi-square test with Fisher's exact test. Maternal nutritional status was predominantly normal (49%), and most toddlers were of normal stature (80%); however, stunting clustered among children of mothers who had experienced chronic energy deficiency in pregnancy. A statistically significant relationship was found between maternal nutritional status during pregnancy and stunting ($p < 0.001$). Maternal nutritional status during pregnancy is significantly associated with stunting, and the findings provide local evidence supporting integrated, nutrition-sensitive interventions for community nursing and public health.

Keywords: *chronic energy deficiency; maternal nutrition; mid-upper-arm circumference; stunting; toddlers*

INTRODUCTION

Stunting is a chronic form of undernutrition in which a child's length or height for age falls below minus two standard deviations of the World Health Organization (WHO) Child Growth Standards median, as adopted in the Indonesian anthropometric standards for children (Kementerian Kesehatan Republik Indonesia, 2020). Unlike acute malnutrition, it develops slowly, results from the cumulative effect of inadequate nutrition and repeated infection from pregnancy through the first two years of life, and is difficult to reverse once established. Its consequences extend well beyond childhood: children who are stunted are at greater risk of impaired brain development, delayed motor and verbal milestones, poorer school performance, and lower productivity in adulthood (Putri & Nuzuliana, 2020). For this reason, stunting is regarded not only as a nutritional problem but as an indicator of a population's long-term human-capital potential. Importantly, the window in which stunting can be prevented or reversed is narrow, closing around the child's second birthday, after which the growth deficit becomes largely permanent. This makes timely action during pregnancy and infancy essential and explains why identifying the determinants that place particular children at higher risk is a public-health priority.

Globally, stunting remains one of the most persistent child-health problems. According to the UNICEF, WHO, and World Bank Group Joint Child Malnutrition Estimates, an estimated 148.1 million children under five years of age, or about 22.3 percent, were stunted in 2022 (UNICEF et al., 2023), and the most recent estimates indicate roughly 150 million affected children (UNICEF et al., 2025). Although global prevalence has fallen from about 33 percent in 2000, more than half of all stunted children live in Asia, underscoring that the burden is heaviest in low- and middle-income settings. Progress has been uneven, and current trajectories fall short of the Sustainable Development Goal target of halving the number of stunted children by 2030.

In Indonesia, stunting continues to receive high-level policy attention. National survey data show a

steady decline in prevalence, from 37.6 percent in 2013 to 27.7 percent in 2019 (Kementerian Kesehatan Republik Indonesia, 2022), 21.5 percent in 2023, and 19.8 percent in 2024, corresponding to roughly 4.4 million affected toddlers (Badan Kebijakan Pembangunan Kesehatan, 2025). Despite this progress, the figure remains above the WHO threshold of 20 percent that defines a public-health problem, and the government has set a target of 14.2 percent by 2029. National data also reveal that undernutrition tracks closely with maternal and household disadvantage, and children born to mothers who were undernourished or lived in poor households face a substantially higher risk of stunting (Fentia, 2020).

At the provincial level, East Java recorded a stunting prevalence of 14.7 percent in 2024, down from 17.7 percent in 2023 — the lowest in Java and second nationally only to Bali — yet in absolute terms the province still accounted for more than 400,000 stunted toddlers, among the highest counts in the country. Local monitoring reflects the same variability. Based on the Kedungkendo village health profile, stunting affected about 4 percent of toddlers (40 children) in 2021 and 4.5 percent (55 children) in 2022, declined to 2 percent in 2023, and rose slightly to 2.5 percent by September 2024, within a toddler population of approximately 100 children over the period. These fluctuations indicate that stunting persists as a local concern despite favorable provincial averages, and Kedungkendo is among the villages designated for stunting-reduction efforts in Sidoarjo.

Contemporary frameworks for understanding child undernutrition help to locate maternal nutrition within a causal hierarchy. In the widely used conceptual model, the immediate causes of stunting are inadequate dietary intake and recurrent infection; these are driven by underlying causes at the household level, namely food insecurity, inadequate maternal and child care, and an unhealthy environment; and these rest in turn on basic causes rooted in the socioeconomic and cultural context (Supariasa & Purwaningsih, 2019; Astutik et al., 2018). Within this hierarchy, a mother's nutritional status during pregnancy sits at the interface between underlying and immediate causes: it is shaped by household resources and care, and it acts directly on the biological process of fetal growth. Framing the problem in this way clarifies why maternal nutrition is a decisive and modifiable determinant of a child's later stature, and it directs attention to the antenatal period as the critical window for prevention.

The roots of stunting largely precede birth. Because linear growth faltering begins in the womb, maternal nutrition during pregnancy — sufficient energy, protein, and micronutrient intake, healthy gestational weight gain, and the prevention of anaemia and chronic energy deficiency — is decisive for fetal growth and birth size (Putri & Nuzuliana, 2020). This is why national strategy places strong emphasis on the first 1,000 days of life and on antenatal interventions such as iron-folic-acid supplementation, micronutrient provision, and routine screening of mid-upper-arm circumference and haemoglobin in pregnant women. A mother who is undernourished during pregnancy — indicated most commonly by a mid-upper-arm circumference below 23.5 centimetres, denoting chronic energy deficiency — is more likely to deliver a low-birth-weight infant, which in turn predisposes the child to growth faltering and stunting (Astutik et al., 2018).

Maternal nutritional status does not operate in isolation. Household income, parental education, and family size condition a mother's capacity to obtain a diverse, nutrient-rich diet, to attend antenatal care, and to adhere to supplementation, so that limited education can restrict nutrition knowledge and health-seeking behaviour (Najmah et al., 2024; Fauziah et al., 2024), while a larger number of dependents may dilute the resources available to each family member (Handayani et al., 2023). These upstream conditions, however, exert their influence on the child mainly through the mother's nutrition during pregnancy and the child's subsequent feeding, which together constitute the proximate pathway to linear growth.

Although the importance of maternal nutrition is well documented at the national level, village-level evidence linking a mother's nutritional status during pregnancy to her child's later growth remains limited, and locally grounded data are needed to target community interventions precisely and to inform the work of public-health nurses. This study therefore aimed to analyze the relationship between maternal nutritional status during pregnancy and the incidence of stunting among toddlers in Kedungkendo Village, Candi District, Sidoarjo Regency. The specific objectives were to identify the distribution of maternal nutritional status during pregnancy, to identify the incidence of stunting, and to analyze the relationship between the two.

METHOD

This study used a quantitative analytic design with a cross-sectional approach, in which the independent and dependent variables were assessed at a single point in time to examine their relationship (Nursalam, 2020). The research was conducted in Kedungkendo Village, Candi District, Sidoarjo Regency, East Java Province, from February to March 2025.

The population comprised all toddlers aged one to five years residing in Kedungkendo Village, numbering 100 children according to village records. Because the population was small and finite, a total sampling (census) technique was applied, so that every eligible

unit was included and sampling error was minimized (Nursalam, 2020). The respondents were the 100 mothers of these toddlers. The inclusion criterion was mothers with a toddler aged one to five years who resided in the village, still held the maternal-and-child health handbook (buku KIA) from the index pregnancy, and were willing to participate; mothers who declined consent or whose antenatal records were incomplete were not included.

The independent variable was maternal nutritional status during pregnancy and the dependent variable was the incidence of stunting. Maternal nutritional status during the pregnancy that produced the index child was assessed retrospectively from the buku KIA, supplemented by a brief interview with the mother. The primary indicator was the mid-upper-arm circumference (MUAC) recorded during antenatal care, with gestational weight gain and the lowest antenatal haemoglobin used as supporting indicators where available. Nutritional status was classified into three ordinal categories: chronic energy deficiency (MUAC below 23.5 centimetres), normal (MUAC 23.5 to 28.4 centimetres with adequate weight gain and no anaemia), and over-nutrition (MUAC 28.5 centimetres or more or excessive gestational weight gain); the variable was treated as ordinal.

Stunting was determined from the child's standing height, measured with a microtoise to the nearest 0.1 centimetre, which was converted to a height-for-age z-score according to the WHO Child Growth Standards as adopted in the Indonesian anthropometric standards for children (Kementerian Kesehatan Republik Indonesia, 2020). A child was classified as of normal stature at a z-score of at least minus two standard deviations, as stunted between minus two and minus three standard deviations, and as severely stunted below minus three standard deviations; the variable was treated as ordinal.

Data collection combined direct anthropometric measurement of the children with extraction of maternal nutritional indicators from the buku KIA and brief interviews with the mothers or caregivers to clarify responses. The instruments were the microtoise, a MUAC tape, a structured data-extraction form for the antenatal records, and an informed-consent form.

Before analysis, the collected data were processed through editing, coding, data entry, cleaning, and tabulation. Editing checked each record for completeness and consistency; coding assigned numerical codes to the response categories of every variable; the coded data were entered into statistical software; cleaning verified the entries and reconciled missing or inconsistent values so that the nutritional-status categories were applied uniformly across respondents; and the cleaned data were then tabulated for analysis. The anthropometric measurement followed a standard procedure using a calibrated microtoise with the child in a correct upright position to reduce measurement error.

Data were analyzed in two stages. Univariate analysis summarized each variable as frequencies and percentages. Bivariate analysis used the Chi-square test to examine the relationship between maternal nutritional status and stunting; because more than one-fifth of the contingency-table cells had an expected count below five, Fisher's exact test was used to confirm the result. A p-value below 0.05 was considered statistically significant. The study observed standard research ethics: written informed consent was obtained after the aims and procedures were explained, participation was voluntary, respondents were identified only by code to preserve anonymity, and all information was kept confidential and used solely for research purposes.

RESULTS

A total of 100 mothers of toddlers participated. Their background characteristics and those of their children are summarized in Table 1. By child sex, girls predominated (61.0%) over boys (39.0%). The occupation of the household head was distributed fairly evenly across self-employment or entrepreneurship (35.0%), private-sector employment (33.0%), and government, military, police, or state-owned-enterprise employment (32.0%). Monthly income most often fell in the middle band of IDR 2,000,000–5,000,000 (57.0%), followed by more than IDR 5,000,000 (37.0%) and less than IDR 2,000,000 (6.0%). Most families owned both a house and a vehicle (59.0%), and most households comprised two to four members (66.0%). The household head most commonly held a diploma or bachelor's degree (57.0%), followed by junior or senior secondary education (36.0%) and primary education (7.0%). These characteristics describe the socioeconomic context within which maternal nutrition was situated.

Table 1. Background characteristics of respondents and their toddlers (n = 100)

Characteristic	Frequency (n)	Percentage (%)
Child's sex		
Male	39	39.0
Female	61	61.0

Occupation of household head		
Entrepreneur (self-employed)	35	35.0
Private-sector employee	33	33.0
Civil servant / military / police / SOE	32	32.0
Monthly income (IDR)		
< 2,000,000	6	6.0
2,000,000 – 5,000,000	57	57.0
> 5,000,000	37	37.0
Household assets		
Owns neither house nor vehicle	7	7.0
Owns one (house or vehicle)	34	34.0
Owns both house and vehicle	59	59.0
Number of family members		
More than four members	15	15.0
Two to four members	66	66.0
Fewer than two members	19	19.0
Education of household head		
Primary school (SD)	7	7.0
Junior/senior high (SMP/SMA)	36	36.0
Diploma / bachelor	57	57.0
Total	**100**	**100**

The distribution of maternal nutritional status during pregnancy is presented in Table 2. Most mothers had a normal nutritional status during pregnancy (49.0%), followed by over-nutrition (39.0%) and chronic energy deficiency (12.0%). Adequate nutritional status was therefore the dominant category in Kedungkendo Village, while roughly one in eight mothers had been in a state of chronic energy deficiency during pregnancy.

Table 2. Distribution of maternal nutritional status during pregnancy (n = 100)

Category	Frequency (n)	Percentage (%)
Chronic energy deficiency (CED)	12	12.0
Normal	49	49.0
Over-nutrition	39	39.0
Total	**100**	**100**

The incidence of stunting is shown in Table 3. Most toddlers were of normal stature (80.0%), while 14.0% were stunted and 6.0% were severely stunted. Overall, one in five children (20.0%) showed some degree of linear growth faltering, indicating that stunting, though not the majority condition, remained present in the village.

Table 3. Incidence of stunting among toddlers (n = 100)

Category	Frequency (n)	Percentage (%)
Severe stunting	6	6.0
Stunting	14	14.0
Normal	80	80.0
Total	**100**	**100**

The cross-tabulation of maternal nutritional status during pregnancy with the incidence of stunting is presented in Table 4. A clear gradient was evident. Among children of mothers who had experienced

chronic energy deficiency, only one-third were of normal stature (33.3%), whereas half were stunted (50.0%) and one in six was severely stunted (16.7%); taken together, two-thirds of these children showed growth faltering. By contrast, most children of mothers with normal (85.7%) and over-nutrition (87.2%) status during pregnancy were of normal stature, and the combined proportion with any stunting fell to about 14 percent and 13 percent, respectively. A small number of severely stunted children were nonetheless found among adequately nourished mothers, suggesting that maternal nutrition during pregnancy, while decisive, did not fully account for growth outcomes on its own.

Table 4. Cross-tabulation of maternal nutritional status during pregnancy and the incidence of stunting, n (%)

Maternal nutritional status	Severe stunting	Stunting	Normal	Total
Chronic energy deficiency	2 (16.7)	6 (50.0)	4 (33.3)	12 (100)
Normal	1 (2.0)	6 (12.2)	42 (85.7)	49 (100)
Over-nutrition	3 (7.7)	2 (5.1)	34 (87.2)	39 (100)
Total	**6 (6.0)**	**14 (14.0)**	**80 (80.0)**	**100 (100)**

Note. Percentages are calculated within each maternal-nutritional-status group (row percentages). Because 44.4% of cells had an expected count below five, Fisher's exact test was applied: Fisher's exact $p < 0.001$; Pearson $\chi^2(4) = 20.869$, $p < 0.001$.

The statistical tests confirmed the pattern. The Chi-square analysis yielded a value of 20.869 with four degrees of freedom, and because a substantial proportion of cells had low expected counts, Fisher's exact test was used, both giving $p < 0.001$. Since the p-value was below 0.05, the null hypothesis was rejected: there was a statistically significant relationship between maternal nutritional status during pregnancy and the incidence of stunting among toddlers in Kedungkendo Village.

DISCUSSION

The principal finding of this study is a statistically significant relationship between maternal nutritional status during pregnancy and the incidence of stunting among toddlers in Kedungkendo Village ($p < 0.001$). Although most mothers had a normal nutritional status during pregnancy and most children were of normal stature, stunting was concentrated among children of mothers who had experienced chronic energy deficiency, with two-thirds of these children showing some degree of growth faltering compared with roughly one-eighth among children of adequately nourished mothers. This gradient is consistent with national survey data, in which undernutrition tracks closely with maternal disadvantage (Badan Kebijakan Pembangunan Kesehatan, 2025), and with prior Indonesian studies reporting a significant association between maternal and household nutritional determinants and stunting (Sundewi et al., 2024; Hamzah, 2024; Fauziah et al., 2024).

Before interpreting the association, the respondent profile itself merits comment. The predominance of girls among the toddlers is a demographic feature of this sample rather than a risk factor, although sex remains relevant because nutritional requirements and growth patterns differ between boys and girls. The relatively even spread of paternal occupations and the concentration of incomes in the middle band, combined with a majority of household heads holding a diploma or degree, together describe a community of broadly middle socioeconomic standing. This context is important because household resources and parental education shape a mother's access to a nutritious antenatal diet, framing the analysis as an examination of maternal nutrition within a generally stable community.

Understanding why maternal nutritional status is linked to stunting requires attention to the biological pathway through which it operates, because the association begins before birth. Chronic energy deficiency and anaemia in pregnancy, together with deficiencies of key micronutrients such as iron, zinc, and folate, restrict the supply of nutrients to the developing fetus and are associated with intrauterine growth restriction and low birth weight (Astutik et al., 2018). An infant who is already small at birth begins postnatal life at a disadvantage, and when adequate catch-up growth does not occur during the first two years, the deficit consolidates into stunting (Putri & Nuzuliana, 2020). Maternal nutritional status during pregnancy is therefore not a distal correlate but a proximate cause acting on the very process of linear growth, which explains the strength of the association observed here.

A second pathway is maternal education and knowledge, which conditions nutritional status itself. In this sample the household head most often held a diploma or degree, a level of education associated in the wider literature with a greater capacity to absorb health information and to translate it into appropriate antenatal and feeding practices (Najmah et al., 2024; Fauziah et

al., 2024). Better-educated caregivers are more likely to attend antenatal care, to adhere to iron supplementation, to practice exclusive breastfeeding, and to introduce appropriate complementary foods, all of which reduce the risk of stunting. Conversely, limited knowledge can constrain a mother's diet during pregnancy even when some income is available. A third pathway concerns family size: where more dependents share a fixed income, the food, time, and attention available to a pregnant mother and her child may be diluted, an effect noted in previous work reporting that children in larger households tend to be shorter than those in smaller ones (Handayani et al., 2023; Fentia, 2020).

It is instructive that a small number of severely stunted children were found even among adequately nourished mothers. This observation reinforces the view that favourable maternal nutrition during pregnancy is necessary but not sufficient for healthy growth. Adequate antenatal nutrition improves birth outcomes, but it does not guarantee that infant and young-child feeding after birth is optimal or that the child is protected from repeated infection (Handayani et al., 2023). The implication is that interventions cannot rely on improving pregnancy nutrition alone; they must also address knowledge, attitudes, and practices related to child feeding throughout the first 1,000 days.

A further underlying pathway links maternal nutritional status to stunting through the living environment and the burden of infection. Households with limited resources are less likely to have access to clean water, adequate sanitation, and hygienic conditions, and children in such settings experience more frequent episodes of diarrhoea and respiratory infection. Repeated infection increases nutrient losses, suppresses appetite, and diverts energy away from growth, while chronic gut inflammation can impair nutrient absorption even in the absence of overt illness (Supariasa & Purwaningsih, 2019). Because such conditions tend to cluster in households where mothers are also nutritionally disadvantaged, they compound the effect of poor antenatal nutrition and help explain why growth faltering was concentrated among children of chronically energy-deficient mothers in this study.

Household food security represents another underlying determinant closely tied to maternal nutrition. Food security exists when a family has reliable physical and economic access to sufficient, safe, and nutritious food, and its absence is more common in low-income households (Fentia, 2020). Where food is insecure, both the quantity and the diversity of the diet suffer, and families may shift toward inexpensive, energy-dense but nutrient-poor foods that do not meet the demands of pregnancy. Seasonal fluctuations in income and food prices can further destabilize intake at critical moments. Because a nutritionally adequate diet for the mother during pregnancy is the proximate requirement for healthy fetal growth, food insecurity offers a direct route by which limited resources are converted into maternal undernutrition, reinforcing the gradient observed in this study.

Infant and young-child feeding practices mediate much of the risk that carries over after birth. Exclusive breastfeeding for the first six months supplies optimal nutrition and immune protection, and its continuation alongside appropriate complementary foods from six to twenty-four months is critical for sustaining linear growth (Dewi & Primadewi, 2021). Delayed, insufficient, or nutritionally poor complementary feeding leaves children short of the energy, protein, and micronutrients they require during a period of rapid growth. Mothers who were well nourished in pregnancy and who have adequate knowledge can more readily provide animal-source foods, fruits, and vegetables that support growth, whereas constrained households may rely on cheaper, less nutrient-dense staples (Putri & Nuzuliana, 2020). The quality of feeding therefore represents a practical point at which the advantage of good maternal nutrition is either sustained or lost.

The relationship observed in this study also has implications that extend across generations. Stunting in early childhood is associated with reduced cognitive capacity, poorer educational attainment, and lower economic productivity in adulthood, and stunted girls may themselves grow into mothers of shorter stature and poorer nutritional reserves who are at higher risk of delivering low-birth-weight infants (Putri & Nuzuliana, 2020). In this way, maternal undernutrition and child stunting can reinforce one another in a cycle that transmits poor growth from one generation to the next. Interrupting this cycle is one of the strongest arguments for investing in the nutrition of women before and during pregnancy, since the returns accrue not only to the individual child but to national human-capital development.

The strength and direction of the association found here converge with a growing body of Indonesian research. Studies conducted in diverse settings have likewise reported significant relationships between maternal and household nutritional determinants and stunting, with disadvantaged mothers consistently bearing a higher burden (Sundewi et al., 2024; Hamzah, 2024). The very small p-value obtained in the present analysis, together with the marked contrast between the two-thirds prevalence of growth faltering among children of chronically energy-deficient mothers and the far lower prevalence among children of well-nourished mothers, indicates that the association is unlikely to be a chance finding despite the modest sample. At the same

time, the presence of stunting across all nutritional-status groups echoes reports that improving one determinant alone is insufficient and must be paired with behaviour-focused nutrition support (Fauziah et al., 2024).

These findings have practical value that extends beyond Kedungkendo. They support a nutrition-sensitive strategy for community nursing and public-health practice: strengthening antenatal nutrition through iron-folic-acid supplementation, routine screening of mid-upper-arm circumference and haemoglobin, and dietary counselling during pregnancy, while simultaneously investing in child nutrition through promotion of exclusive breastfeeding and counselling on complementary feeding. For public-health nurses in particular, the results affirm the importance of identifying and prioritizing nutritionally vulnerable pregnant women for early, preventive, family-centred support during the first 1,000 days of life.

For community nursing practice, the results underline the value of routine antenatal and growth monitoring as tools for early detection. Regular measurement of mid-upper-arm circumference in pregnancy and monthly weighing at the integrated health post (Posyandu) allow nurses and cadres to identify at-risk mothers and faltering growth before problems become entrenched, to flag vulnerable families for closer follow-up, and to deliver targeted counselling on maternal and infant nutrition (Najmah et al., 2024). Positioning the nurse as an educator and case-finder during the first 1,000 days translates the statistical association reported here into concrete preventive action. Because the burden fell disproportionately on children of undernourished mothers, prioritizing these families for home visits and individualized support represents an efficient use of limited community resources.

Several limitations should be acknowledged. The cross-sectional design establishes association rather than causation, and although the exposure (maternal nutrition during pregnancy) temporally precedes the outcome, its retrospective assessment from the buku KIA may introduce recall and record-completeness bias (Nursalam, 2020). Maternal nutritional status was captured primarily through mid-upper-arm circumference, which does not fully represent dietary quality or micronutrient status. Finally, the study was confined to a single village with a modest sample, and the low expected cell counts that required Fisher's exact test reflect the small number of stunted children. Future research should adopt longitudinal or case-control designs, incorporate direct and prospective measures of maternal nutritional status such as serial mid-upper-arm circumference, haemoglobin, and dietary intake, and include multiple sites to strengthen generalizability.

CONCLUSION AND SUGGESTION

Maternal nutritional status during pregnancy was significantly associated with the incidence of stunting among toddlers in Kedungkendo Village; although most mothers were adequately nourished during pregnancy and most children were of normal stature, growth faltering was concentrated among children of mothers who had experienced chronic energy deficiency. Because a mother's nutrition during pregnancy programmes fetal growth and shapes a child's subsequent feeding, reducing stunting requires nutrition-sensitive action that combines antenatal nutritional support with child-feeding education and services delivered during the first 1,000 days of life. By providing village-level evidence of this relationship, the study contributes locally grounded knowledge that can guide community nursing and public-health interventions in comparable settings and support the national effort to accelerate the reduction of stunting.

REFERENCES

Astutik, A., Rahfiludin, M. Z., & Aruben, R. (2018). Faktor risiko kejadian stunting pada anak balita usia 24–59 bulan (Studi kasus di Wilayah Kerja Puskesmas Gabus II Kabupaten Pati). Jurnal Kesehatan Masyarakat, 6(1), 409–418.

Badan Kebijakan Pembangunan Kesehatan. (2025). Hasil Survei Status Gizi Indonesia (SSGI) 2024. Kementerian Kesehatan Republik Indonesia.

Dewi, N. L. M. A., & Primadewi, N. N. H. (2021). Kejadian stunting pada balita usia 12–36 bulan. Jurnal Kesehatan, 9(1), 55–60.

Fauziah, N., Rahmawati, A., & Lestari, D. (2024). Hubungan status ekonomi keluarga dan pengetahuan keluarga dengan kejadian stunting. Journal of Public Health Innovation, 5(1), 140–147.

Fentia, L. (2020). Faktor risiko gizi kurang pada anak usia 1–5 tahun dari keluarga miskin. Penerbit NEM.

Hamzah, S. (2024). Hubungan status ekonomi keluarga dengan kejadian stunting pada balita di wilayah kerja Puskesmas Onggunoi. Watson Journal of Nursing, 2(2), 27–31.

Handayani, R., Putri, A. S., & Nugroho, T. (2023). The influence of family income and parenting styles on stunting prevention. Journal of Public Health Research and Development, 15(2), 134–140.

Kementerian Kesehatan Republik Indonesia. (2020). Peraturan Menteri Kesehatan Republik Indonesia Nomor 2 Tahun 2020 tentang Standar Antropometri Anak. Kemenkes RI.

Kementerian Kesehatan Republik Indonesia. (2022). Profil Kesehatan Indonesia 2022. Kemenkes RI.

Najmah, N., Andarini, S., & Rahmiwati, A. (2024). Identifikasi pengetahuan, perilaku, dan sikap ibu terhadap pencegahan balita stunting di Desa Burai, Sumatera Selatan. Jurnal Kesehatan Masyarakat Indonesia, 19(1), 28–33.

Nursalam. (2020). Metodologi penelitian ilmu keperawatan: Pendekatan praktis (5th ed.). Salemba Medika.

Putri, R., & Nuzuliana, R. (2020). Penatalaksanaan efektif dalam rangka peningkatan pertumbuhan anak pada kasus stunting. Jurnal Kesehatan Vokasional, 5(2), 110–123.

Sundewi, N. K. A., Widyani, N. M., & Ariani, N. K. (2024). Hubungan status sosial ekonomi dengan kejadian stunting pada balita melalui program PTMGRMD. Jurnal Penelitian Perawat Profesional, 6(6), 3125–3132.

Supariasa, I. D. N., & Purwaningsih, H. (2019). Faktor-faktor yang mempengaruhi kejadian stunting pada balita di Kabupaten Malang. Karta Rahardja: Jurnal Pembangunan dan Inovasi, 1(2), 55–64.

UNICEF, WHO, & World Bank Group. (2023). Levels and trends in child malnutrition: Key findings of the 2023 edition of the joint child malnutrition estimates. World Health Organization.

UNICEF, WHO, & World Bank Group. (2025). Levels and trends in child malnutrition: Joint child malnutrition estimates, 2025 edition. World Health Organization.