Journal Of Nursing Practice
https://thejnp.org/
ISSN: 2614-3488 (print); 2614-3496 (online) Vol.9 No.2. January 2026. Page.315-324

Relationship between Food Availability and Nutritional Status of Children Aged 6–24 Months

Dwi Ernawati[1*], Intan Fazrin[2], Yovinka Maharani[3], Taufan Agung Prasetya[4], Qori Ila Saidah[5]
[1,3,4,5] *Department of Pediatric Nursing, Sekolah Tinggi Ilmu Kesehatan Hang Tuah Surabaya, Indonesia*
[2] *Department of Pediatric Nursing, Universitas STRADA Indonesia*
**Corresponding author: dwiernawati@stikeshangtuah-sby.ac.id*

ABSTRACT

Background: The growth and development period is the golden phase for toddlers; thus, providing adequate and balanced nutrition is essential to optimize their nutritional status. One of the factors influencing poor nutritional status is limited food availability.

Purpose: This study aims to analyse the relationship between food availability and the nutritional status of children aged 6–24 months in the Bulak Banteng Subdistrict, Surabaya.

Methods: This study employed a descriptive analytic design with a cross-sectional approach. The population consisted of all children aged 6–24 months in Bulak Banteng Subdistrict, totalling 146 toddlers. A total of 107 respondents were selected using simple random sampling. Food availability, was measured using the Household Food Insecurity Access questionnaire, and nutritional status, was assessed using anthropometric measurements. Data were analysed using the Spearman's rho test.

Results: The findings showed that most households were categorized as food secure, and most children had a good nutritional status. Statistical analysis revealed a significant relationship between food availability and nutritional status ($p = 0.001$, $\rho < 0.05$).

Conclusion: Food availability is significantly associated with the nutritional status of toddlers. Parents demonstrated the ability to maintain good nutritional status in their children; however, they are encouraged to actively participate in nutrition education programs, enhance their knowledge and skills in preparing nutritious meals, and regularly monitor their children's nutritional status.

Keywords: children aged 6-24 months, food availability, nutritional status

Received November 10, 2025; Revised December 12, 2025; Accepted January 3, 2026
DOI: https://doi.org/10.30994/jnp.v9i2.1001

ISSN: 2614-3488 (print); 2614-3496 (online) Vol.9 No.2. January 2026. Page.315-324

BACKGROUND

Child growth and development is a continuous process that begins at birth and continues until adulthood(Nardina et al., 2021). Nutritional status refers to an individual's condition that reflects the balance between nutrient intake from food and the body's metabolic requirements(Sohorah, 2024). Most previous studies have focused on the nutritional status of toddlers by examining factors such as dietary intake, history of infectious diseases, and household income. In contrast, food availability particularly in urban contexts has received limited scholarly attention. This gap is especially evident in studies conducted in large cities such as Surabaya, where parents generally have the capacity to provide sufficient and nutritious food. Consequently, the relationship between food availability and the nutritional status of toddlers in urban settings remains unclear and warrants further investigation but interviews conducted by the researcher in Bulak Banteng revealed that several parents are unable to provide adequate food at the household level to meet the nutritional needs of family members. This limitation is largely influenced by insufficient resources related to parental employment and income.

WHO reports that globally, 149 million children under five are classified as stunted, 45 million as wasted, and 37 million as overweight(Kenterian Kesehatan RI, 2022). According to the 2022 Indonesian Nutrition Status Survey (SSGI), the national prevalence of stunting among children under five is 21.6%, wasting 7.7%, underweight 17.1%, and overweight 3.5%. In East Java Province, the prevalence of stunting (height-for-age) is 19.2%, wasting (weight-for-height) 7.2%, underweight (weight-for-age) 15.8%, and overweight (weight-for-height) 3.6%. Meanwhile, the prevalence in Surabaya City is lower, with stunting at 4.8%, wasting 6.1%, underweight 7.5%, and overweight 3.4%(Kementrian Kesehatan RI, 2021). A preliminary study conducted at the Posyandu in Bulak Banteng, Surabaya, on November 8, 2024, identified 85 children (3.55%) with undernutrition who were undergoing 56 days of normal supplementary feeding. Additionally, 2.08% of children were categorized as overweight and 0.08% as stunted, both of whom also received PMT intervention. Interviews with parents of children aged 6–24 months revealed that household food availability remains insufficient to meet daily needs. The limitations were reflected in inadequate supplies of staple foods such as rice, limited dietary diversity like particularly in protein, fat, fiber, carbohydrates, water and low household purchasing power. Many parents work in informal or irregular employment with unstable income, and some families exhibit lifestyle patterns that are inconsistent with their economic capacity, placing them in the categories of mild to moderate food insecurity.

Nutritional status is an indicator of an individual's physical condition derived from the assessment of nutrient intake(Supardi et al., 2023). Food availability is a core component of food security, defined as the ability of households to obtain and access adequate food on a regular basis(Utami & KP, 2015). Insufficient food availability and low dietary intake directly affect nutritional status and may lead to adverse health outcomes. Young children, especially those under five years of age, are the most vulnerable to these nutritional and health risks (Sry et al., 2024).

OBJECTIVE

This study aims to analyse the correlation between food availability and the nutritional status of children aged 6–24 months in the Bulak Banteng Subdistrict, Surabaya.

ISSN: 2614-3488 (print); 2614-3496 (online) Vol.9 No.2. January 2026. Page.315-324

METHODS

Study Design and Sampling Criteria

The study employed a descriptive analytical study used cross-sectional approach in Bulak Banteng, Surabaya conducted from January to March 2025. The sampling technique in this study used probability sampling, namely simple random sampling. The respondent consisted of 107 children aged 6–24 months and mothers of children aged 6–24 months who were willing to participate in the study.

Instrument Research and Data Collection

Data collection was carried out by distributing questionnaires to the parents of children aged 6–24 months in Bulak Banteng, Surabaya City. The instrument used in this study consisted of a questionnaire on respondent characteristics, including name (initials), age, sex, child's weight, birth weight, child's height, mother's age, parental education, parental occupation, and total household income. The variable of food availability was measured using the Household Food Insecurity Access (HFIA) questionnaire. This instrument consists of 27 questions, which are scored based on the respondent's answers. The responses were assessed using a Likert scale with four categories: 1 = Food Secure, 2 = Mild Food Insecurity, 3 = Moderate Food Insecurity, and 4 = Severe Food Insecurity. The dependent variable, nutritional status, was measured using anthropometric assessments. For children aged 6–24 months, anthropometric measurements were taken using the weight-for-height indicator. The classification of nutritional status was as follows:1) < –3 SD = severely undernourished, 2)–3 SD to –2 SD = undernourished, 3) –2 SD to +1 SD = normal nutrition, 4) +1 SD = at risk of overweight, 5) +2 SD to +3 SD = overweight, and 6) +3 SD = obese.

Data Analysis and Ethical Consideration

Data were analyzed using univariate and bivariate analyses, with the Spearman's Rank correlation test with a significance value (p = 0.005). This study has obtained ethical approval from the Ethics Committee of Hang Tuah Institute of Health Sciences Surabaya, with approval number PE/01/I/2025/KEP/SHT, issued on January 21, 2025.

RESULTS

Respondent Demographic Data

The characteristics of the respondents consisted of age, sex, infant weight, birth weight, infant height, maternal age, parental education, parental occupation, and total household income.

Table 1. Frequency Distribution of Respondent Characteristics

No	Variable	(n)	%
1	**Birth Weight**		
	2kg-2,4kg	5	4.7
	2,5kg-2,9kg	28	26.2
	3kg-3,4kg	53	49.5
	≥3,5kg	21	19.6
2	**Infant Age**		
	6-8 month	13	12.1
	9-12 month	29	27.1
	13-24 month	65	60.7
3	**Gender**		
	Male	52	48.6
	Female	55	51.4

ISSN: 2614-3488 (print); 2614-3496 (online) Vol.9 No.2. January 2026. Page.315-324

4	**Exclusive Breastfeeding**		
	Breastfed	88	82.2
	Not Breastfed	19	17.8
5	**Infant weight**		
	5Kg-5,9Kg	2	1.9
	6Kg-6,9Kg	13	12.1
	7Kg-7,9Kg	23	21.5
	8Kg-8,9Kg	26	24.3
	9Kg-9,9Kg	19	17.8
	≥10Kg	24	22.4
7	**Infant Height**		
	45-60 cm	3	2.8
	60,5-70 cm	26	24.3
	70,5-80 cm	50	46.7
	80,5-90 cm	26	24.3
	90,5-100 cm	2	1.9
	100,5-110 cm	0	0
8	**Mother's Age**		
	≤25 years	36	33.6
	26 -30 years	38	35.5
	31 -34 years	19	17.8
	≥35 years	14	13.1
9	**Number of Household Members**		
	<2–4 persons	59	55.1
	5–8 persons	43	40.2
	>8 persons	5	4.7
10	**Mother's Highest Educational Attainment**		
	Not Complete Primary School	5	4.7
	Primary School	26	24.3
	Junior High School	16	15.0
	Senior High School	45	42.1
	Higher Education	15	14.0
11	**Mother's Occupation**		
	Housewife		
	Civil Servant/Military/Police	87	81.3
	Private Sector Employee	1	0.9
	Others	16	15.0
		3	2.8

ISSN: 2614-3488 (print); 2614-3496 (online) Vol.9 No.2. January 2026. Page.315-324

12	**Father's Occupation**		
	Unemployed	0	0
	Civil Servant/Military/Police	5	4.7
	Private Sector Employee	82	76.6
	Others	20	18.7
13	**Total Household Income**	27	25.2
	500,000–1,500,000 IDR	34	31.8
	>1,500,000–2,500,000 IDR	20	18.7
	>2,500,000–3,000,000 IDR	26	24.3
	≥3,500,000 IDR		

Table 1 describes the distribution of respondents, showing that the largest category of birth weight was 3–3.4 kg, with 53 respondents (49.5%). The majority of infants were aged 13–24 months of 65 respondents (60.7%). Most infants were female, with 55 respondents (51.4%). Exclusive breastfeeding was predominantly reported as "Breastfed," with 88 respondents (82.2%). The most common age of complementary feeding initiation was 6 months of 90 respondents (84.1%). The largest infant weight category was 8–8.9 kg, with 26 respondents (24.3%), while the most common infant height category was 70.5–80 cm, with 50 respondents (46.7%).

The majority of mothers were aged 26–30 years, totalling 38 respondents (35.5%). Most households had <2–4 family members 59 respondents (55.1%). The most common maternal education level was senior high school, with 45 respondents (42.1%). Most mothers were housewives, with 87 respondents (81.3%), while most fathers worked in the private sector, 82 respondents (76.6%). The most common household income category was >1,500,000–2,500,000 IDR, with 34 respondents (31.8%).

Table 2. Relationship Between Food Availability and Nutritional Status of children aged 6–24 months

Food Availability	Severe under weight		Under weight		Normal		At Risk of Over Weight		Overweight		Obese		Total	
	f	%	f	%	f	%		%	f	%	f	%	F	%
Food Secure	0	0	2	2.3	80	9	2	2.3	1	1.2	1	1.2	86	100
Mild Food Insecurity	0	0	2	100	0	0	0	0	0	0	0	0	2	100
Moderate Food Insecurity	2	11.8	15	88.2	0	0	0	0	0	0	0	0	17	100
Severe Food Insecurity	0	0	2	100	0	0	0	0	0	0	0	0	2	100
Total	2	1.9	21	19.6	80	74.8	2	1.9	1	1.9	1	1.9	107	100

The value of the statistic test with *Spearman* 0,001 (a=<0,05)

The Spearman rank test showed a significance value of 0.001 (<0.05), indicating a significant correlation between food availability and the nutritional status of children aged 6–24 months

DISCUSSION

The results of the study show that among 107 respondents, most households fell into the food-secure category with a total 86 respondents (80.4%), meanwhile, 2 respondents (1.9%) were categorized as having mild food insecurity, 17 respondents (15.9%) as having moderate food insecurity, and 2 respondents (1.9%) as having severe food insecurity. The study further found that 2 respondents (1.9%) experienced mild food insecurity within the last four weeks. Both of these mothers were housewives and household food security is known to influence the occurrence of stunting in young children. This condition contributes to families concerns about their ability to provide diverse foods at home. Parental income plays an essential role in determining children's nutritional status. Respondents with limited financial allocation for meeting their children's nutritional needs tended to prioritize other household necessities such as education and healthcare for other family members(Devi Endah Saraswati, 2025). Parental occupation plays an important role in a family's ability to meet food availability. Mothers who do not work depend solely on the father's income to fulfill household needs, which include not only food but also clothing and housing. This situation influences the mother's ability to purchase food ingredients according to the available resources, which may affect the child's daily dietary intake. Appropriate feeding practices include early initiation of breastfeeding, exclusive breastfeeding, timely introduction of complementary foods, and the consumption of foods rich in iron and vitamin A. Inconsistencies or inadequacies in these practices have been identified as major contributors to malnutrition and infant mortality in developing countries(Darcho et al., 2025). Malnutrition requires serious attention; therefore, early assessment of children's nutritional status and enhanced health education for mothers regarding breastfeeding, complementary feeding, and the preparation of balanced nutritious meals are essential to break the cycle of malnutrition from an early age(Darcho et al., 2025)

The results of the study showed that 17 respondents (15.9%) were categorized as having moderate food insecurity within the past four weeks. Based on respondents' answers to question number 3 regarding the consumption of foods with limited variety, 12 respondents reported "sometimes" (3–10 times in the last four weeks), and 2 respondents reported "often" (>10 times in the last four weeks). Household food security influences the incidence of stunting among two-year-old children after adjusting for child age, dietary diversity, maternal education, maternal nutritional knowledge, and parental occupation(Utami & KP, 2015). Providing food with limited variety indicates that the family has poor access to adequate food. The greater the diversity of foods consumed, the more nutrients are obtained. Diverse foods supply various essential nutrients, including carbohydrates, proteins, fats, vitamins, and minerals.(Irnani & Sinaga, 2017). With greater variety in the foods provided, toddlers are less likely to become bored with their meals and their nutritional needs can be met more easily. The fact that the respondents' homes are located near a market should, in principle, facilitate access to affordable, diverse, and nutritious food ingredients. With mothers' skills in food preparation, these ingredients can be transformed into varied and appealing menus for toddlers, ensuring adequate and balanced nutrient intake.

The results of the study showed that 2 respondents (1.9%) were categorized as having severe food insecurity within the past four weeks. Both respondents had low maternal educational backgrounds, with the mothers having completed only primary school (SD) and junior high school (SMP). This finding is supported by previous research(Hoar et al., 2022) which explains that

ISSN: 2614-3488 (print); 2614-3496 (online) Vol.9 No.2. January 2026. Page.315-324

mothers with low educational attainment have limited access to nutritional knowledge. This becomes a fundamental reason underlying how mothers manage available household resources to obtain food ingredients. A mother's educational level influences her knowledge in utilizing existing resources; the higher the education level, the easier it is for the mother to receive and understand information related to the importance of providing nutritious foods to improve the child's nutritional status. Moreover, mothers with higher education tend to have greater initiative to expand and deepen their understanding of proper food preparation practices.

Conversely, lower maternal education affects a mother's knowledge, ability to understand, and willingness to accept information regarding the importance of nutritious food to improve the nutritional status of her child. In reality, some mothers with low educational backgrounds tend to follow the guidance of older family members when preparing meals and often underestimate which foods are appropriate or inappropriate for toddlers. Foods high in sugar are sometimes perceived as suitable for children. Reformulation of children's food products aimed at reducing sugar content and promoting the use of minimally processed ingredients is essential. A longitudinal study in Germany demonstrated that high sugar consumption in infancy is correlated with excessive sugar intake in later childhood. Therefore, policies supporting the production of minimally processed foods and clear nutritional labelling are urgently needed. The implementation of front-of-package warning labels serves as an accountability measure for food manufacturers and as a protective mechanism to safeguard children's rights to healthy food access(Karupaiah, 2024)

The results of the study showed that among children aged 6–24 months, 21 respondents (19.6%) were categorized as having underweight. The Z-score measurements indicated that all toddlers with undernutrition had Z-scores below –2 SD. Several toddlers experienced weight loss because their bodies had not fully recovered from illnesses suffered in the preceding weeks. These children exhibited poor appetite, requiring additional time for mothers to meet their nutritional needs and improve their nutritional status. A history of infectious disease affects a toddler's nutritional status, as reduced appetite and discomfort lead to reluctance to consume the provided foods, ultimately resulting in a shift toward undernutrition(Sohorah, 2024). A weakened immune system in toddlers increases their susceptibility to illness. Episodes of illness that are not accompanied by adequate nutritional intake may lead to a decline in nutritional status, which in turn disrupts the child's growth and development processes(Andriani et al., 2015) . Improvements in the nutritional status of toddlers with undernutrition are not solely attributed to increased caloric intake, but are more likely due to reduced energy requirements as a result of improved pulmonary function and decreased inflammation, as well as enhanced intestinal absorption, allowing the child's condition to gradually improve.(Enaud et al., 2025). It is essential for healthcare providers to prioritize the management of illnesses experienced by malnourished infants and to follow up with adequate caloric intake to support the improvement of their nutritional status.

The results of the study showed that among children aged 6–24 months, 2 respondents (1.9%) were categorized as having severe undernutrition. Based on the demographic data, both children did not receive exclusive breastfeeding due to inadequate breast milk production when they were born. Infants who do not receive exclusive breastfeeding have a three-fold higher risk of experiencing undernutrition or severe undernutrition compared to those who are exclusively breastfed.(Hosang & Umboh, n.d.). Exclusive breastfeeding plays a crucial role in meeting an infant's nutritional needs. (Andriani et al., 2015) Insufficient breast milk production often leads mothers to rely exclusively on infant formula to meet their babies' nutritional needs. While formula feeding can serve as an alternative, exclusive dependence on formula particularly when not administered according to recommended

guidelines may compromise the adequacy of nutrient intake. Moreover, inadequate lactation is frequently associated with early introduction of complementary foods before the recommended age of six months. Early complementary feeding can increase the risk of digestive disturbances, allergic responses, and imbalance in nutrient composition. Infants who do not receive age-appropriate and adequate nutrition face a heightened risk of growth faltering, underweight, or even malnutrition. Nutritional deficits during early life have long-term consequences for physical growth, cognitive development, and immune function. Therefore, optimizing breastfeeding practices, strengthening maternal education, and ensuring continuous monitoring of infant feeding patterns are essential strategies to prevent nutritional deterioration and promote healthy developmental outcomes(Supardi et al., 2023). Another factor contributing to malnutrition among infants is the mother's own history of undernutrition. Children born to mothers who experienced Severe Acute Malnutrition (SAM) during childhood have been shown to be twice as likely to develop acute malnutrition and stunting compared with children whose mothers had no such history. This phenomenon reflects the intergenerational transmission of malnutrition, in which the long-term biological and developmental consequences of a mother's early-life undernutrition extend to her offspring, further exacerbated by disadvantaged socioeconomic environments. The evidence highlights the need for public health programs that provide long-term follow-up and support for individuals who survived childhood malnutrition, from adolescence through adulthood, in order to break the cycle of intergenerational malnutrition (Chimanuka et al., 2025)

The Spearman's rank test with p value of 0.001, indicating a statistically significant relationship between food availability and the nutritional status of children aged 6–24 months at Posyandu Kenanga 2, 3, 4, 6, and 8 in the Bulak Banteng area of Surabaya. The correlation coefficient was −0.885, reflecting a strong negative association between the two variables. This finding implies that the direction of the relationship is inverse: households with adequate and stable food availability are more likely to have children with good nutritional status, whereas households categorized as experiencing severe food insecurity tend to have children with poor or deficient nutritional status. The results further show that the majority of respondents were classified as food-secure, which corresponded to a higher prevalence of normal nutritional status among their children. These findings are consistent with previous studies reporting that household food security plays a critical role in determining child nutritional outcomes(Rahmah et al., 2020) which states that households experiencing food insecurity are 3.3 times more likely to have infants with undernutrition or severe undernutrition compared to food-secure households. Nutritional status is an assessment of the body's condition based on the adequacy of nutrient intake consumed and utilized by the body(Oktaviana et al., 2024).

Food availability refers to an individual's ability to access sufficient and appropriate food. When food availability is not adequately met, nutrient intake becomes insufficient, which in turn negatively impacts a person's nutritional status. In this context, young children are the most vulnerable group and are at the greatest risk of experiencing adverse health consequences resulting from inadequate nutrient intake(Sry et al., 2024). Families with adequate and diverse food access tend to have children with better nutritional status. Adequate dietary diversity must be supported by good-quality foods that provide balanced nutrition in each portion, including carbohydrates, proteins, fiber, fats, vitamins, and minerals, all of which are essential for optimal growth and development in young children. Access to a well-balanced diet is strongly influenced by household income, and mothers who often serve as the primary managers of family meals must possess sufficient nutritional knowledge to implement balanced menus that meet the dietary needs of the household, particularly those of young children. Parental involvement and the support of local health

workers in providing nutrition education and planning targeted intervention programs are also critical to improving child nutritional status (Chuc et al., 2019). The limitations of this study include the relatively small number of respondents, who were recruited only from several *posyandu* in Bulak Banteng. Therefore, the findings may not fully represent the overall characteristics of household food security and the nutritional status of under-five children across the entire Bulak Banteng area. In addition, this study did not examine multifactorial relationships. Next research is expected to conduct more comprehensive studies exploring various factors influencing the nutritional status of under five children in Surabaya.

CONCLUSION

Food availability is significantly associated with the nutritional status of children aged 6–24 months in Bulak Banteng, Surabaya. Improved household food availability corresponds to better nutritional outcomes among young children. Parental employment, household income, and maternal education are crucial determinants of a child's nutritional status, as these factors influence the family's ability to provide diverse and nutritious foods. Additionally, a mother's history of childhood malnutrition contributes to the risk of undernutrition in her children, reflecting the intergenerational nature of malnutrition.

Nurses' role in improving the health status of malnourished children and in supporting efforts to enhance child nutrition within their coverage areas. Public health initiatives that include promotive and preventive strategies, particularly programs designed to monitor and support individuals who have survived childhood malnutrition, are essential. These efforts must involve parents actively to effectively break the cycle of malnutrition and promote optimal growth and development among children.

ACKNOWLEDGMENT

The authors would like to express their sincere gratitude to all parties who contributed to the completion of this study. Special appreciation is extended to the Center for Research, Development, and Community Service of Hang Tuah College of Health Sciences Surabaya for the financial support, facilities, and research permissions provided. The authors express their gratitude to Bulak Banteng Community Health Center, Surabaya, as well as all participating mothers and children who generously took part in this research.

CONFLICTS OF INTEREST

Researchers no own conflict interest in implementation research

REFERENCES

Andriani, R., Wismaningsih, E. R., & Indrasari, O. R. (2015). *Hubungan Pemberian ASI Eksklusif Dengan Kejadian Status Gizi Kurang Pada Balita Umur 1 – 5 TAHUN*. 44–47.

Chimanuka, C., Zalinga, C. C., Neven, A., Amani, G., Mwene-batu, P., Wells, J., Dramaix, M., Donnen, P., & Balaluka, G. B. (2025). *Nutritional status of children aged 6 – 59 mo born to mothers treated for severe acute malnutrition in childhood : an observational Lwiro cohort study in Democratic Republic of Congo*. *September*.

Chuc, D. Van, Hung, N. X., Trang, V. T., Linh, D. V., & Khue, P. M. (2019). *Nutritional Status of Children Aged 12 to 36 Months in a Rural District of Hungyen Province , Vietnam*. *2019*(2017). https://doi.org/10.1155/2019/6293184.

Darcho, S. D., Bayisa, F. S., & Nimani, T. D. (2025). *Prevalence of appropriate feeding practices and nutritional status among infant and young children aged 0 – 23 Months attending public hospitals in Harar town , eastern Ethiopia , 2024 : An institutional-based cross-sectional study*. *32*(January), 1–6.

Devi Endah Saraswati, F. P. H. (2025). Breastfeeding and Supplementary Food Patterns on The

Nutritional Status of Toddlers. *Kebidanan, Prodi Insan, Istek Husada, Cendekia Timur, Jawa*, *11*(2). https://journal.stikespemkabjombang.ac.id/index.php/jikep/article/view/1876/1093.

Enaud, R., Languepin, J., Lagarrigue, M., Arrouy, A., Macey, J., Bui, S., & Dupuis, M. (2025). *Dietary intake remains unchanged while nutritional status improves in children and adults with cystic fi brosis on Elexacaftor / Tezacaftor / Ivacaftor*. *50*, 76–82.

Hoar, A., Aspatria, U., & Toy, S. M. (2022). Study of Household Food Security in Fafoe Village West Malaka District, Malaka Regency 1. *Jurnal Pangan Dan Gizi Kesehatan*, *11*(2), 155–168.

Hosang, K. H., & Umboh, A. (n.d.). *Hubungan Pemberian Makanan Tambahan terhadap Perubahan Status Gizi Anak Balita Gizi Kurang di Kota Manado*.

Irnani, H., & Sinaga, T. (2017). Pengaruh pendidikan gizi terhadap pengetahuan, praktik gizi seimbang dan status gizi pada anak sekolah dasar. *Jurnal Gizi Indonesia (The Indonesian Journal of Nutrition)*, *6*(1), 58–64. https://doi.org/10.14710/jgi.6.1.58-64.

Karupaiah, T. (2024). *Monitoring commercially available complementary foods for the infant and young child in Southeast Asia : accountability and the way forward*. *120*(April), 281–282.

Kementrian Kesehatan RI. (2021). *Buku Saku Hasil Studi Status Gizi Indonesia (SSGI) Tingkat Nasional, Provinsi, dan Kabupaten/Kota Tahun 2021*.

Kenterian Kesehatan RI. (2022). *Pedoman Pelaksanaan Stimulasi, Deteksi, Dan Intervensi Dini Tumbuh Kembang Anak Di Tingkat Pelayanan Kesehatan Dasar*. Kemenkes.

Nardina, E. A., Astuti, E. D., Suryana, Hapsari, W., Hasanah, L. N., Mariyana, R., Sulung, N., Triatmaja, N. T., Simanjuntak, R. R., Argaheni, N. B., & Rini, M. T. (2021). *Tumbuh Kembang Anak*. Yayasan Kita Menulis.

Oktaviana, D., Pranata, G. K. A. W., Sumarmi, S., & Kamriana, K. (2024). Status Gizi Dan Infeksi Cacing Pada Anak Di Perdesaan Indonesia. *Jurnal Ilmiah Keperawatan (Scientific Journal of Nursing)*, *10*(1), 209–216. https://doi.org/10.33023/jikep.v10i1.1876.

Rahmah, R., Arifin, S., & Hayatie, L. (2020). Hubungan Ketersediaan Pangan dan Penghasilan Keluarga dengan Kejadian Gizi Kurang dan Gizi Buruk pada Balita di Wilayah Kerja Puskesmas Beruntung Raya. *Homeostasis*, *3*(3), 401–406.

Sohorah, S. (2024). *Buku Ajar Penentuan Status Gizi* (M. Nasrudin (ed.); 1st ed.). PT. Nasya expanding Management.

Sry, A., Nababan, V., Demitri, A., Jairani, E. N., Yulita, Y., Gulo, Y., Jalan, A., Sumarsonono, K., Medan, K., & Medan, H. (2024). *Hubungan Ketersediaan Pangan Dan Hygiene Sanitasi Terhadap Kejadian Stunting Pada Anak Usia 24-59 Bulan di Wilayah Kerja Puskesmas Ulu Moro ' o Prodi S1 Gizi , Institut Kesehatan Helvetia , Medan , Indonesia Indikator yang digunakan untuk mengidentifikasi*. *2*(3).

Supardi, N., Sinaga, T. R., Fauziah, Hasanah, L. N., Fajriana, H., Parliani, Puspareni, L. D., Atjo, N. M., Maghfiroh, K., & Humaira, W. (2023). *Buku Gizi pada Bayi dan Balita*. Yayasan Kita Menulis.

Utami, N. H., & KP, D. S. (2015). Ketahanan Pangan Rumah Tangga Berhubungan Dengan Status Gizi Anak Usia Di Bawah Dua Tahun (Baduta) Di Kelurahan Kebon Kalapa, Kecamatan Bogor Tengah, Jawa Barat. *Gizi Indonesia*, *38*(2), 105. https://doi.org/10.36457/gizindo.v38i2.184.