JCNSP
https://journal.stikespemkabjombang.ac.id
Journal of Clinical Nursing Studies and Practice
Volume 02 Number 01
Mei 2026
e-issn: 3124-7466

THE RELATIONSHIP BETWEEN DIETARY PATTERNS AND NUTRITIONAL STATUS OF PRESCHOOL-AGED CHILDREN AT DAHLIA PGRI KINDERGARTEN MADYOPURO VILLAGE SUMOBITO

Leny Nur Azizah[1], Mamik Ratnawati[2]

1. Mahasiswa Program Studi Sarjana Keperawatan STIKES Pemkab Jombang
2. Dosen Program Studi Sarjana Keperawatan STIKES Pemkab Jombang

Submitted:
11 June 2026
Accepted:
12 June 2026

Cresponding Author:
Mamik Ratnawati
Stikes Pemkab Jombang
Jl. Padan wangi area sawah, Kecamatan Diwek, Kabupaten Jombang, Indonesia

Email:
azizahleni06@gmail.com

ABSTRACT

Nutritional status in preschool children is an important indicator for assessing health quality and growth. Nutritional problems among children remain a public health challenge, one of which is influenced by unbalanced dietary patterns. This study aimed to determine the relationship between dietary patterns and the nutritional status of preschool children at TK Dahlia PGRI, Madyopuro Village, Sumobito**.** This study employed a quantitative correlational analytic design with a cross-sectional approach. The population consisted of 46 preschool children, and all participants were selected using the total sampling technique. Data were collected using questionnaires and analyzed using the Spearman's Rank statistical test. The results showed that most respondents had good nutritional status (76.1%), and the majority had dietary patterns in the sufficient category (82.6%). The Spearman's Rank test revealed a p-value of 0.007 (< 0.05), indicating a significant relationship between dietary patterns and nutritional status. The correlation coefficient was r = 0.393, indicating a weak correlation. There is a significant relationship between dietary patterns and the nutritional status of preschool children. Inadequate dietary patterns may negatively affect children's nutritional status. Therefore, nutritional education for parents needs to be improved to support optimal growth and development of children.

Keywords: Dietary Patterns, Nutritional Status, Preschool Children

https://doi.org/10.33023/jikep.v11i3.3284

Introduction

Children's nutritional status is one of the key indicators reflecting the level of public health as well as the success of human resource development. According to the World Health Organization (WHO), in 2022 approximately 45 million children under five suffered from wasting and 149 million children suffered from stunting due to chronic malnutrition (WHO, 2023). These conditions indicate that malnutrition remains a global health challenge that impacts children's future growth, development, and productivity.

Preschool-aged children (3–6 years) are a vulnerable group prone to nutritional problems because they are in a phase of rapid growth and development. During this period, nutritional needs increase to support children's physical, cognitive, social, and emotional development (Zhang et al., 2021). Both insufficient and excessive nutrient intake can lead to growth disorders, impair learning ability, and increase the risk of chronic diseases in adulthood (Gibney et al., 2019).

In Indonesia, child nutrition remains a major concern. Data from the 2022 Indonesian Nutrition Status Survey (SSGI) show a prevalence of stunting at 21.6% and wasting at 7.7% (Indonesian Ministry of Health, 2022). In Jombang Regency, according to 2024 data from the DPPKB-PPA, there are still 3,633 children suffering from stunting. Sumobito Subdistrict is among the areas with a relatively high number of cases, and Madyopuro Village is recorded as having 46 preschool-aged children suffering from stunting. This situation indicates that child nutrition issues still require special attention, particularly regarding the factors that influence them.

One factor that plays a significant role in children's nutritional status is dietary patterns. Dietary patterns refer to daily food consumption habits that determine the body's intake of essential nutrients. An unbalanced diet—such as low consumption of fruits, vegetables, and animal protein, coupled with high consumption of foods high in sugar, salt, and fat—can lead to nutritional problems, including both malnutrition and overnutrition (Adriani & Wirjatmadi, 2020). Therefore, adopting a healthy diet is essential to support children's optimal growth and development.

Several studies have shown a link between dietary patterns and the nutritional status of preschool-aged children. A study (Temesgen et al., 2018) found that low dietary diversity is associated with an increased risk of stunting in children. Another study (Zhang et al., 2021) also showed that excessive consumption of foods high in sugar and fat is associated with an increased incidence of childhood obesity. In Indonesia, (Pramono et al., 2020) reported a significant association between dietary patterns and the nutritional status of children aged 4–6 years. However, research on the relationship between dietary patterns and nutritional status among preschool-aged children in the Madyopuro Sumobito village area remains limited, necessitating further study.

Based on a preliminary study, the author is interested in conducting research on the relationship between dietary patterns and the nutritional status of preschool-aged children at the Dahlia PGRI Madyopuro Sumobito Preschool.

Methods

This study is a quantitative, analytical-correlational study. It employs a cross-sectional approach and uses the Spearman's rank correlation test for data analysis. The study population consisted of 46 respondents. The sampling method used in this study was total sampling, resulting in a sample of 46 respondents.

The inclusion criteria for this study are as follows: parents willing to serve as respondents to complete the questionnaire and healthy children not currently on a special diet. Meanwhile, the exclusion criteria for this study are: children with chronic illnesses.

The variables examined in this study consist of an independent variable—dietary patterns—and a dependent variable—the nutritional status of preschool-aged children. These variables were measured using a questionnaire containing 5 items of general information about the parents and 30 questions regarding the child's dietary patterns, as well as an observation sheet recording the child's body weight (BW) measurements. The data analysis methods used in this study were univariate and bivariate analyses. The Spearman rank test was used to determine the relationship between the two variables.

Results and Discussions

Based on research conducted on January 28, 2026, at Dahlia PGRI Madyopuro Sumobito Preschool, data was collected and subsequently categorized into general data and specific data.

Table 1.1 General data on cross-tabulation by dietary patterns

characteristics	Categories						Total	
	Poor		Adequate		Good			
	f	%	*f*	%	*f*	%	*f*	**%**
1. Patent Age								
a. Late adolescence 17-15 years	0	0,0	20	90,0	2	9,1	22	100,0
b. Early adulthood 26-35 years	3	12,5	18	75,0	3	12,5	24	100,0
c. Late adulthood 36-45 years	0	0,0	0	0,0	0	0,0	0	0
2. Educational Level								
a. Elementary education	0	0,0	2	50,0	2	50,0	4	100,0
b. Secondary education	3	8,1	31	83,8	3	8,1	37	100,0
c. College	0	0,0	5	100,0	0	0,0	5	100,0

3. Number of Children								
a. 1 - 2 children	3	7,9	31	81,6	4	10,5	38	100,0
b. 2 - 3 children	0	0,0	0	0,0	0	0,0	0	0,0
c. 3 - 4 children	0	0,0	0	0,0	0	0,0	0	0,0
d. 4 - 5 children	0	0,0	7	87,5	1	12,5	8	100,0
4. Job								
a. Not working	1	7,7	9	69,2	3	23,1	13	100,0
b. Working	2	6,1	29	87,9	2	6,1	33	0,0
5. Child's Gender								
a. Male	1	3,7	21	77,8	5	18,5	27	100,0
b. Female	2	10,5	17	89,5	0	0,0	19	100,0

Table 1.1 shows that nearly all (90.9%) children with adequate dietary patterns have parents in their late teens (17–25 years old). Nearly all (83.8%) children with adequate dietary patterns have parents with a high school education. Nearly all (81.6%) children with adequate dietary patterns have parents with 1–2 children. Nearly all (87.9%) children with adequate dietary patterns have working parents. And nearly all (77.8%) children with adequate dietary patterns are male.

Table 1.2 Distribution of Children's Nutritional Status at Dahlia Madyopuro Sumobito Preschool.

No	Nutritional Status	Frequency (n)	Percentage (%)
1.	Severe malnutrition (<-3 SD)	1	2,2
2.	Moderate malnutrition (-3 to <-2 SD)	9	19,6
3.	Normal nutrition (-2 to +2 SD)	35	76,1
4.	Overnutrition (>+2 SD)	1	2,2
Total		46	100,0

Table 1.2 shows that nearly all respondents (76.1%) have good nutritional status.

Discussion

Based on Table 1.1, the majority of children's dietary patterns fall into the "adequate" category (90.9%), with most parents in the late adolescent age group (17–25 years). This figure indicates that the respondents are predominantly parents in their productive and reproductive prime. In general, this age group is considered well-prepared to fulfill their parenting roles, particularly in meeting the nutritional needs of preschool-aged children. From a theoretical perspective, the age of parents—particularly mothers—is an indirect factor influencing the quality of parenting and nutritional fulfillment (WHO, 2022). It states that parents in their productive years (20–35 years) possess greater physical and psychological maturity, are more capable of making decisions, and are more open to both receiving and applying information regarding health and nutrition compared to those who are too young or too old. Based on the above facts and theories, the researcher assumes that while parents over the age of 30 play a supportive role in meeting children's basic needs, maturity alone does not guarantee optimal parenting quality. Without a solid understanding of nutrition and healthy eating habits within the family environment, nutritional needs will not be fully met. Therefore, nutrition education remains crucial for parents of all age groups.

Table 1.1 shows that 83.8% of children have dietary patterns categorized as adequate when their parents have a high school education. This indicates that the majority of parents already possess the basic ability to read, process information, and receive health education, including information related to children's dietary patterns. In theory, parents' educational level exerts significant influence over their knowledge, attitudes, and actual practices regarding children's feeding. According to UNICEF (2021), higher educational levels correlate directly with better nutrition literacy, enabling parents to better understand the importance of dietary variety and to select and prepare nutritious foods. In line with this, (Sari et al., 2022) in the Journal of Public Health revealed that mothers with a secondary education or higher tend to have significantly better feeding practices than mothers with lower levels of education. Based on the above facts and theories, the researchers hypothesize that the predominance of secondary education among respondents explains why children's dietary patterns largely remain in the "adequate" category and have not yet reached the "good" category. This phenomenon indicates that formal education alone is insufficient. Applied and sustained nutrition education is needed, as parents may know that children must eat but do not yet fully understand the composition and quality of a balanced diet.

Based on Table 1.1, it is evident that the majority of children (81.6%) with adequate dietary patterns come from families with 1–2 children. These data indicate that the majority of respondents have relatively small families. This situation allows parents to devote more attention to and better meet the needs of each child, including in terms of food logistics. According to family resource theory, an increase in the number of children reduces the share of resources such as food, time, and attention. Conversely, children from small families have a much greater chance of receiving adequate nutritional intake (Pratiwi et al., 2020). Based on the above facts and theories, the researchers hypothesize that a family structure with 1–2 children in this study serves as a protective factor against the risk of nutritional problems. Nevertheless, the fact that dietary status is still predominantly categorized as "adequate" suggests that the main constraint lies not in the quantity or number of children, but rather in parents' habits and level of understanding regarding nutrition.

According to Table 1.1, 87.9% of children with adequate dietary patterns have working parents. This figure reflects the socioeconomic conditions of the respondents, the majority of whom work in the informal sector with irregular incomes.

Parents' employment is closely correlated with income, household-level food security, and consistency in providing nutritious meals (UNICEF, 2021). Families with irregular incomes tend to be vulnerable to limited dietary variety, even though children's basic caloric needs remain met.

(Handayani et al., 2021) also emphasize that parents' occupations are directly linked to the quality of food consumption among preschool-aged children. Based on the above facts and theories, the researchers hypothesize that while parents' professions (such as farming) do provide direct access to self-sufficient food sources, this does not automatically guarantee the quality of children's diets. Limited dietary variety and a lack of food preparation skills are the primary factors why children's dietary patterns remain in the "adequate" category.

Table 1.1 shows that 77.8% of children with an "adequate" dietary pattern were boys. The gender distribution in this study was fairly balanced, so variations in dietary patterns and nutritional status were not dominated by either gender. Theoretically, the nutritional needs of preschool-aged boys and girls are nearly the same, with only a slight difference in total energy requirements. According to the WHO (2022), fluctuations in nutritional status influenced by gender are typically driven more by social factors and parenting practices (gender discrimination in feeding) than by biological factors. Based on the above facts and theories, the researchers assume that gender does not have a significant influence on children's dietary patterns in this study. This indicates that parents provide equal treatment and portion sizes without distinguishing between boys and girls. On the other hand, the preschool years are a time when children begin to show independence and personal preferences (picky eating), which often pose a unique challenge for parents. A parent's lack of firmness or inconsistency in guiding their child will reinforce picky eating behavior, causing the child to become stuck in a monotonous eating pattern. Therefore, researchers emphasize the importance of parents taking an active role in accompanying their children during meals, gradually introducing a variety of new foods, and fostering the habit of eating together as a family to improve the quality of children's diets.

Table 1.2 shows that the majority of children (76.1%) have good nutritional status, reflecting parents' success in meeting their children's daily nutritional needs. However, the issue of malnutrition has not been fully resolved, as cases of undernutrition, severe malnutrition, and mild overnutrition are still found. Theoretically, nutritional status during the preschool years is crucial because children are undergoing rapid physical growth and cognitive development. (WHO, 2022) emphasizes that optimal nutrition during this phase plays a vital role in building immunity, learning capacity, and long-term health. Conversely, nutritional imbalances—whether under- or overnutrition—risk hindering growth and development and triggering various diseases in the future. According to UNICEF (2021)—and supported by research by Rahmawati et al. (2022) and Wahyuni et al. (2023)— a child's nutritional status is influenced not only by daily food intake but also by the complex interplay of parenting practices, parental education levels, socioeconomic conditions, and a history of infectious diseases that interfere with nutrient absorption. Based on

the above facts and theories, the researchers assume that meeting the nutritional needs of preschoolers is not merely a matter of ensuring that children eat until they are full, but must also take into account the quality and balance of their diet so that children are protected from the risks of both obesity and malnutrition. Therefore, continuous collaboration between families, health workers, and educational institutions is needed to routinely monitor children's growth and provide practical nutrition education to parents.

Conclusion

1. The dietary patterns of children at Dahlia PGRI Madyopuro Sumobito Kindergarten are mostly in the "adequate" category (82.6%).
2. The nutritional status of children at Dahlia PGRI Madyopuro Sumobito Kindergarten is mostly in the "good" category (76.1%).
3. There is a relationship between dietary patterns and the nutritional status of children at Dahlia PGRI Madyopuro Sumobito Kindergarten.

Recommendations

1. Educational institutions are encouraged to support the development of healthy eating habits by monitoring children's packed lunches and providing basic education on healthy foods to raise nutritional awareness.
2. Healthcare institutions are encouraged to improve the quality of education and research related to child nutrition by enhancing course materials, fieldwork, and support for student research activities. In addition, universities are also encouraged to collaborate with the community as a means of applying scientific knowledge, so that research findings can provide tangible benefits in efforts to improve children's nutritional status.
3. Respondents are encouraged to pay closer attention to their children's eating habits by providing nutritionally balanced, varied meals appropriate for their age. Additionally, respondents are encouraged to regularly monitor their children's growth and establish regular eating habits to support optimal nutritional status.

References

World Health Organization (WHO). (2020). Child Growth Standards. https://www.who.int/tools/child-growth-standards

Zhang, Y., et al. (2021). Dietary patterns and obesity risk among preschool children in China: A cross-sectional study. *Public Health Nutrition*, 24(5), 1023-1031. https://doi.org/10.1017/S1368980020004567

Gibney, M. J., Lanham-New, S. A., Cassidy, A., & Vorster, H. H. (Eds.). (2019). *Introduction to human nutrition* (3rd ed.). Wiley-Blackwell. https://doi.org/10.1002/9781119477024

DESA KITA.CO. (2025). Waduh! Kasus Stunting di Jombang Masih Tinggi, Ini Deretan Desa Dapat Perhatian Khusus dari Pemkab. 22 Maret 2025. https://desakita.co/uncategorized/7967/waduh-kasus-stunting-di-jombang masih-tinggi-ini-deretan-desa-dapat-perhatian-khusus-dari-pemkab/

Profil Kesehatan Kabupaten Jombang 2024. BPS Jombang. https://jombangkab.bps.go.id/publication/2024/01/15/profil-kesehatan-jombang-2024.html.

Adriani, M., & Wirjatmadi, B. (2020). Peranan gizi dalam siklus kehidupan.

Temesgen, H., et al. (2018). Dietary diversity and stunting among preschool children in Ethiopia: A community-based cross-sectional study. *BMC Nutrition*, 45

Zhang, J., Wang, H., Wang, Y., Xue, H., & Wang, Z. (2021). Dietary patterns and obesity among preschool children in China. Nutrients, 13(5), 1631. https://doi.org/10.3390/nu13051631

Pramono, A., Dewi, I., & Yunitasari, E. (2020). Hubungan pola makan dengan status gizi anak usia prasekolah. Jurnal Kesehatan Masyarakat.

World Health Organization. (2022). Guideline on Nutrition and Child Health.

UNICEF. (2021). The State of the World's Children: Nutrition.

Sari, D., et al. (2022). Pendidikan ibu dan praktik pemberian makan balita. Jurnal Kesehatan Masyarakat.

Pratiwi, N., et al. (2020). Jumlah anak dan status gizi balita. Jurnal Ilmu Gizi dan Dietetik.

Handayani, S., et al. (2021). Pekerjaan orang tua dan konsumsi pangan balita. Jurnal Gizi Indonesia.

Rahmawati, L., et al. (2022). Determinan status gizi balita. Jurnal Kesehatan Masyarakat.

Wahyuni, R., et al. (2023). Pola makan anak usia prasekolah. Jurnal Gizi dan Kesehatan.