

Literature Review: The Relationship Between Parenting Patterns and Nutritional Status with Preschool Development

Monica Pratiwi¹, Wiwik Lestari², Ratih Dyah Rahmawati³, Ekrida Matarru⁴, Arie Triani⁵, Ida Sofiyanti⁶

¹Bachelor of Midwifery Program, Universitas Ngudi Waluyo, monicapratiwi82@gmail.com
²Bachelor of Midwifery Program, Universitas Ngudi Waluyo, lestariwiwik829@gmail.com
³Bachelor of Midwifery Program, Universitas Ngudi Waluyo, ratihdyahmawati@gmail.com
⁴Bachelor of Midwifery Program, Universitas Ngudi Waluyo, ekrida88@gmail.com
⁵Bachelor of Midwifery Program, Universitas Ngudi Waluyo, at.supriyanto88@gmail.com
⁶Bachelor of Midwifery Program, Universitas Ngudi Waluyo, idasofiyanti@gmail.com
Email Correspondence: monicapratiwi82@gmail.com

Article Info	Abstract
Article History Submitted, 2026-04-12 Accepted, 2026-05-19 Published, 2026-06-30 Keywords: Parenting patterns, nutritional status, development, preschool children	Toddler development is a crucial indicator of child health, reflecting the attainment of age-appropriate motor, language, cognitive, and socio-emotional milestones. Delays in development can adversely affect children's future learning, social functioning, and well-being. Nutritional status and parenting style are important factors influencing toddler development, as adequate nutrition supports optimal brain and physical growth, while appropriate parenting provides stimulation and emotional support. Therefore, understanding the relationship between nutritional status, parenting style, and toddler development is essential for identifying modifiable factors and developing effective family-based health promotion interventions. This literature review aims to describe the relationship between nutritional status and parenting patterns on the development of toddlers and preschoolers. This literature review employed a literature review method. A systematic search was conducted using a computerized search of articles published between 2021 and 2025 using the Google Scholar database. Only articles with a quantitative design and full text were included in this analysis. Key data were searched using the PICO (Population Intervention Compare Outcome) technique. Of the 15 articles searched, 10 matched the topic of this literature review. These 10 articles demonstrated there is a relationship between parenting patterns and nutritional status with preschool development, that good nutritional status plays a significant role in supporting children's motor, cognitive, and social development, while malnutrition can lead to developmental delays. Furthermore, responsive, supportive parenting, and age-appropriate stimulation have been shown to positively impact children's language, motor, and socio-emotional development. Conversely, inappropriate parenting can hinder the optimal developmental potential of children. Conclusion of this study were Nutritional status and parenting are interrelated factors that contribute significantly to determining the quality of child development. Therefore, the active role of parents and the support of health workers are needed to provide adequate nutrition and appropriate parenting to optimize child growth and development.

Introduction

Preschool child development is a critical stage in the human life cycle that determines the quality of future human resources. Between the ages of 3 and 6, children undergo rapid growth and development across physical, cognitive, linguistic, and socio-emotional domains. This period is often referred to as the "golden age" because the developments that occur are fundamental and relatively irreversible in subsequent stages. Consequently, any disturbances during this period have the potential to cause long-term impacts on the child's future quality of life (Monica, 2026).

According to the World Health Organization (WHO), the prevalence of preschool children experiencing developmental disorders remains significant, with an estimated 317 million children worldwide living with health conditions that contribute to developmental disabilities (WHO, 2023). Specifically, data indicates that approximately 10% to 15% of preschool-aged children globally experience developmental delays in one or more domains, such as motor, language, or cognitive skills, while Global Developmental Delay (GDD) is recorded in 1% to 3% of the child population under the age of five (UNICEF, 2025).

Developmental delays can lead to low learning abilities, difficulties in social interaction, and emotional disturbances (Jannah et al., 2024). A child's motor development is influenced by various factors, including nutritional status, dietary patterns, and parenting styles. Toddlers with good nutritional status and a balanced diet generally exhibit more optimal motor development compared to malnourished children (Pratiwi et al., 2022). Furthermore, parenting styles exert a significant influence on the stimulation of a child's motor development (Romadhoni et al., 2024).

Nutritional status serves as a key indicator of a child's health and growth. According to the Ministry of Health of the Republic of Indonesia, the nutritional status of toddlers is assessed based on several anthropometric parameters, such as weight-for-age (W/A), height-for-age (H/A), and weight-for-height (W/H) (Kemenkes RI, 2021). The nutritional status of toddlers plays a vital role in shaping high-quality human resources for the future. Therefore, it is essential to ensure that a child's food intake meets their nutritional requirements. Sufficient and balanced nutrition helps children achieve optimal growth and supports cognitive development from an early age. Conversely, malnutrition can negatively impact a child's health, resulting in stunted growth in both height and weight, as well as development that is inconsistent with their age. Common issues found in various regions include stunting, speech delay, and disturbances in both fine and gross motor development. To prevent and address these issues, it is crucial for the community to receive education on the importance of fulfilling nutritional needs for toddlers (Maro'ah et al., 2023).

In addition to nutritional status, parenting style is an important environmental factor that influences children's eating behaviors and developmental outcomes. Parenting style reflects the attitudes, behaviors, and interactions that parents use in raising their children, which can shape children's daily routines, emotional security, and opportunities for learning. Parents who adopt positive parenting styles, particularly authoritative parenting characterized by warmth, responsiveness, and appropriate guidance, are more likely to encourage healthy eating habits by providing balanced meals, establishing regular eating schedules, and modeling healthy food choices. Moreover, these parents tend to actively engage in age-appropriate play, communication, and stimulation activities that promote gross and fine motor development. Conversely, inadequate parenting practices, such as limited supervision, inconsistent discipline, or lack of developmental stimulation, may contribute to poor dietary habits and delayed motor skill acquisition. Therefore, parenting style not only affects the nutritional environment of toddlers but also plays a critical role in providing the emotional support and developmental stimulation necessary for achieving optimal growth and developmental milestones (Romadhoni et al., 2024).

Research conducted at PAUD Cempaka Sepatan found a significant relationship between parenting styles and the gross and fine motor development of preschool children (Sinta et al., 2024). Similarly, a study at PAUD Pemulutan Selatan identified a significant correlation between parenting styles and children's language and motor development. Thus, providing education to parents regarding appropriate parenting styles is a vital step in supporting optimal child development (Lopiyanah et al., 2022).

Based on the aforementioned points, it can be concluded that parenting styles and nutritional status are interrelated factors that play a crucial role in determining preschool child development. However, variations in research findings and limitations in studies that comprehensively integrate these two factors still exist. Therefore, a literature review is required to analyze in depth the relationship between parenting styles, nutritional status, and preschool child development as a basis for formulating effective interventions to enhance the quality of child growth and development.

Methods

This literature study employs the Literature Review (LR) method, which is structured systematically and clearly by collecting, identifying, and evaluating existing research data. The objective of this review is to determine the factors associated with preschool child development, specifically concerning parenting styles and nutritional status. A systematic search was conducted via computerized databases, including Google Scholar, PubMed, ScienceDirect, and ProQuest. The search was limited to articles published between 2021 and 2025. The keywords utilized by the author were "parenting style," "nutritional status," "development," and "preschool children." The inclusion criteria established for this literature review process were 1) articles focus on factors related to with development child preschool

specifically pattern foster care and nutritional status, 2) Full text articles published in 2021-2025, 3) Articles written in Indonesian or English, 4) Research articles. Exclusion criteria: 1) Articles in the form of theses or dissertations, 2) articles that cannot be freely accessed, 3) are literature review articles.

Results and Discussion

A literature review was conducted on 10 selected articles. The publications ranged from 2021 to 2025. The results of the journal analysis are presented in Table 1 as follows:

Table 1. Results of Journal Analysis

No	Research	Method	Results
1.	Relationship Between Nutritional Status and Parenting Styles with Development Levels of Toddlers Aged 4-5 Years in Sukorejo District, Kendal Regency (Mustikaningrum & Munawaroh, 2021)	The type of research is an analytical survey with a cross-sectional approach. The population in this study were mothers who have toddlers aged 4-5 years in Purwosari Village, Sukorejo District, totaling 153 respondents. The research sample consisted of 60 respondents. The sample selection method used purposive sampling. Data analysis used chi-square.	1. There is a significant relationship between parenting patterns and the development of toddlers aged 4-5 years in Sukorejo District, Kendal Regency (p=0.001). 2. There is a significant relationship between nutritional status and the development of toddlers aged 4-5 years in Sukorejo District, Kendal Regency (p=0.003).
2.	The Relationship Between Education, Parenting Styles, and Nutritional Status with the Language Development of Preschool-Aged Children in Early Childhood Education in South Pemulutan in 2021 (Lopiyanah et al., 2022)	This type of research is explanatory research with a survey method and a cross-sectional approach. The population in this study were all parents who have children attending PAUD Sungai Lebung Ulu (24 people), PAUD Sungai Lebung (49 people), and PAUD Naikan Tembakang (NTB) (29 people), totaling 102 people and a sample size of 50 respondents. The sampling technique used was Proportional Random Sampling. Data analysis used Chi-Square.	1. There is a significant relationship between parenting styles and language development in preschool children (p=0.002) 2. There is a significant relationship between nutritional status and language development in preschool children (p=0.004)
3.	The Relationship Between Parenting Patterns and Nutritional Status with Gross Motor Development in Preschool Children Aged 3-5 (Yanuaringsih & Aminah, 2022)	The research used an analytical approach with an ex-post fact approach. The population was all mothers with preschool children aged 3-5 years. The sampling technique used was simple random sampling, with a sample size of 53 people. Data analysis used statistical tests such as the correlation coefficient and Spearman's Rank (Rho).	1. There is a relationship between parenting patterns and gross motor development in preschool children aged 3-5 years (p=0.009). 2. There is a relationship between nutritional status and gross motor development in preschool children aged 3-5 years at the Integrated Health Service Post (Posyandu) in Sebalor Village, Bandung District, Tulungagung Regency in 2022 (p=0.000).)
4.	Factors Affecting the Developmental Status of Children Aged 6 Months to 2 Years in Urban and Rural Areas (Andriyani et al., 2023)	This type of research is correlational analytic with a cross-sectional approach. The population in this study were 173 mothers with toddlers. The sampling technique was random sampling. Data analysis used Chi-Square.	1. There is a relationship between parenting patterns and preschool children's development (p=0.015). 2. There is a relationship between nutritional status and preschool children's development (p=0.001).
5.	The Relationship Between Nutritional Status and the Development of Children Aged 1-5 Years	This research used an analytical correlational approach with a cross-sectional design. A sample of 90 people was obtained using a simple random sampling	There is a significant relationship between nutritional status and the development of children aged 1-5 years in Cakranegara Village (p=0.000)

	(Pratama et al., 2023)	technique. This study used the chi-square analysis test.	
6	Factors Related to Toddler Development in the Sibela Surakarta Community Health Center Area (Hanifah et al., 2024)	This was an observational analytical study. The population consisted of mothers with toddlers aged 3-5 years. A sample of 101 respondents was drawn using consecutive sampling. Data were analyzed using chi-square and multivariate logistic regression.	1. There is a relationship between parenting patterns and development in toddlers aged 3-5 years (p=0.002). 2. There is a relationship between nutritional status and motor development in toddlers aged 3-5 years (p=0.001).
7	Parenting styles and preschool children's development: from network analysis perspective (Han & Yan, 2025)	This type of research is quantitative with a cross-sectional approach. The population consisted of 6,394 mothers with children aged 3–5 years. The sampling technique used was multistage sampling. Analysis used the ANOVA test.	There is a relationship between parenting patterns and the development of children aged 3-5 years (p=0.002)
8	Association between nutritional status and cognitive development in preschool children: A cross-sectional study (Sharma et al., 2025)	The research used a quantitative cross-sectional design. The population was all mothers with children aged 3–5 years. The sampling technique used random sampling with a total of 379 respondents. Data analysis used independent samples t-tests and one-way ANOVA.	1. There is a relationship between parenting patterns and the development of children aged 3-5 years (p=0.002). 2. There is a relationship between nutritional status and the development of children aged 3-5 years (p=0.001).
9	The Relationship Between Parenting Patterns and Gross Motor Development of Preschool Children at the PPK Sumberjo Foundation (Pramesti et al., 2026)	The research used a quantitative cross-sectional design. The population was all 43 parents and children at the Sumberjo PKK Foundation. The sample consisted of 34 respondents using purposive sampling. Data analysis used Chi-Square.	There is a relationship between parenting patterns and the gross motor development of preschool children (p=0.014)
10	Study of Significant Relationship between Determination of Parenting Patterns to Accuracy Stages Preschool Child Development (Wahyuningrum & Sa'diya, 2026)	The type of quantitative research used a cross-sectional study design. The population was all mothers with preschool children, totaling 65. The research sample consisted of 55 respondents selected using a purposive sampling technique. Data analysis used the Spearman's Rho correlation test.	There is a relationship between parenting patterns and the development of preschool children (p=0.000)

Based on the analysis of 10 articles conducted by researchers, the following risk factors were identified:

Nutritional Status

Nutritional status is one of the primary determinants supporting the growth and development process of preschool toddlers, particularly during the golden age (0–5 years). In this phase, the brain develops rapidly, requiring adequate nutritional intake. Research by (Andriyani et al., 2023) demonstrates that nutritional status has a significant relationship with the developmental status of children in both urban and rural areas. Children with good nutritional status tend to exhibit age-appropriate development compared to those with poor nutritional status.

Furthermore, studies by (Pratama et al., 2023) and (Hanifah et al., 2024) confirm that optimal nutritional status is closely related to the motor, cognitive, and social development of children aged 1–5 years. Malnutrition, especially in early life, can cause developmental delays due to impaired brain and nervous system functions. This indicates that fulfilling nutritional needs plays a role not only in physical growth but also in the neurological development of the child.

In line with this, research by (Sharma et al., 2025) found an association between nutritional status and cognitive development in preschool children. Children with good nutritional status achieved higher cognitive scores compared to those experiencing malnutrition. This condition

indicates that sufficient nutrient intake contributes to a child's learning ability, memory, and concentration.

Additionally, research by (Mustikaningrum & Munawaroh, 2021), (Lopiyanah et al., 2022), and (Yanuaringsih & Aminah, 2022) shows that nutritional status is associated with gross motor development. Children with poor nutritional status tend to experience delays in motor skills such as walking, running, and movement coordination. Thus, good nutritional status becomes an essential foundation in supporting optimal physical and motor development.

Parenting Styles

Parenting style is an environmental factor that plays a crucial role in determining the quality of child development. In this review, the term parenting style refers to the patterns of attitudes, behaviors, responsiveness, and disciplinary strategies that parents use in raising their children. Among the various parenting styles, authoritative parenting characterized by warmth, sensitivity, consistent guidance, open communication, and age-appropriate supervision has been consistently associated with favorable developmental outcomes. Research by Han and Yan (2025) indicates that responsive and supportive parenting styles are positively correlated with the social, emotional, and cognitive development of preschool children. In contrast, authoritarian parenting, which emphasizes strict control with limited responsiveness, as well as neglectful or unresponsive parenting, may hinder children's developmental potential by reducing emotional support and opportunities for exploration (Han & Yan, 2025).

Research by Lopiyanah et al. (2022) further revealed that parenting style is significantly associated with language development in preschool-aged children. Children raised in families that actively encourage two-way communication, storytelling, and verbal interaction tend to demonstrate more advanced language skills than those who receive limited stimulation (Lopiyanah et al., 2022). Similarly, studies conducted by Yanuaringsih and Aminah (2022), Pramesti et al. (2026), and Wahyuningrum and Sa'diya (2026) found that parenting styles characterized by support, encouragement, and balanced supervision contribute positively to gross motor development. Parents who provide opportunities for active play, exploration, and practice while ensuring children's safety facilitate optimal motor skill acquisition and independence (Yanuaringsih & Aminah, 2022; Pramesti et al., 2026; Wahyuningrum & Sa'diya, 2026).

In addition, studies by Mustikaningrum and Munawaroh (2021) and Hanifah et al. (2024) emphasize that parenting style is one of the dominant determinants of toddler development. Parents who possess adequate knowledge of child development and apply responsive parenting practices are more likely to provide appropriate developmental stimulation tailored to the child's age and needs. These findings suggest that the quality of parent-child interactions, reflected through a positive parenting style, substantially influences children's developmental achievements across multiple domains, including cognitive, language, social-emotional, and motor development (Mustikaningrum & Munawaroh, 2021; Hanifah et al., 2024).

Conclusion

Based on the results of the literature review of 10 articles, it can be concluded that nutritional status and parenting styles are two interrelated key factors influencing toddler development. Good nutritional status supports a child's physical, cognitive, and motor development, while appropriate parenting styles provide the necessary stimulation to optimize a child's developmental potential.

For healthcare providers, including midwives, nurses, and doctors, it is expected that they enhance promotive and preventive efforts through parental education. This education should emphasize the importance of fulfilling balanced nutrition and implementing appropriate parenting styles to support optimal toddler development.

Acknowledgments

Acknowledgments are extended to the Rector of Universitas Ngudi Waluyo, the Dean of the Faculty of Health, the Head of the Bachelor Midwifery Study Program, the lecturers, and all parties who have provided assistance and support.

References

- Andriyani, R., Fadlyana, E., & Tarigan, R. (2023). Factors Affecting the Developmental Status of Children Aged 6 Months to 2 Years in Urban and Rural Areas. *Children*, 10(7), 1214. <https://doi.org/10.3390/children10071214>
- Han, J., & Yan, Z. (2025). Parenting styles and preschool children's development: from network analysis perspective. *Frontiers in Psychology*, 16. <https://doi.org/10.3389/fpsyg.2025.1624317>
- Hanifah, L., Kartini, F., & Ratnaningsih, S. (2024). Faktor-Faktor Yang Berhubungan Dengan Perkembangan Balita Di Wilayah Puskesmas Sibela Surakarta. *Jurnal Kebidanan*

- Indonesia, 15(1), 153. <https://doi.org/10.36419/jki.v15i1.998>
- Herawati, N. H., & Katoningsih, S. (2023). Kemampuan Bahasa Anak Usia Prasekolah. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 7(2), 1685–1695. <https://doi.org/10.31004/obsesi.v7i2.4122>
- Lopiyanah, L., Anggraini, H., & Amalia, R. (2022). Hubungan Pendidikan, Pola Asuh Orang Tua dan Status Gizi dengan Perkembangan Bahasa Anak Usia Prasekolah di Paud Wilayah Pemulutan Selatan Tahun 2021. *Jurnal Ilmiah Universitas Batanghari Jambi*, 22(2), 687. <https://doi.org/10.33087/jiubj.v22i2.1840>
- Maro'ah, Savitri, N. P. H., & Erlina, E. (2023). Correlation Between Nutritional Status and Toddler Developmental Stages Aged 1-2 Years at Posyandu Manggis, Mendawai Village, Arut Selatan District, Kotawaringin Barat Regency. *Menara Journal of Health Science*, 2(1), 129–139. <https://jurnal.iakmikudus.org/article/view/68>
- Monica, T. A. (2026). Hubungan Gizi Seimbang Dengan Pertumbuhan Dan Perkembangan Anak Prasekolah. *Jurnal Penelitian Keperawatan Kontemporer*, 6(1), 170–182. <https://doi.org/10.59894/jpkk.v6i1.1202>
- Mustikaningrum, A. C., & Munawaroh, Si. (2021). Hubungan Antara Status Gizi Dan Pola Asuh Dengan Tingkat Perkembangan Balita Usia 4-5 Tahun Di Kecamatan Sukorejo Kabupaten Kendal. *Jurnal Surya Muda*, 26–36. <https://scholar.archive.org/work/7ens52heebdvhe23rbylbdnqhy/access/wayback/http://ojs.stikesmuhkendal.ac.id/index.php/jsm/article/download/133/73>
- Pramesti, A. A., Anniza, A., & Mukhofifah, I. (2026). Hubungan Pola Asuh Orang Tua Dengan Perkembangan Motorik Kasar Anak Prasekolah Di Yayasan PPK Sumberjo. *Jurnal Ilmu Kesehatan MAKIA*, 16(1), 6–13. <https://jurnal.istekicsadabjn.ac.id/index.php/jmakia/article/view/413>
- Pratama, A. A., Ardian, J., Lastyana, W., Jauhari, M. T., & Rahmiati, B. F. (2023). Hubungan Status Gizi dengan Perkembangan Anak Usia 1-5 Tahun. *Nutriology : Jurnal Pangan, Gizi, Kesehatan*, 4(2), 33–38. <https://doi.org/10.30812/nutriology.v4i2.3239>
- Pratiwi, D., Primadevi, I., Kristianingsih, A., & Kusuma Wardani, P. (2022). Hubungan Status Gizi Dengan Perkembangan Motorik Anak Usia 1-5 Tahun Di Desa Sidang Gunung Tiga Kecamatan Rawajitu Utara Kabupaten Mesuji. *Jurnal Maternitas Aisyah (JAMAN AISYAH)*, 3(3), 240–247. <https://doi.org/10.30604/jaman.v3i3.732>
- Romadhoni, M. B., Rohmatin, H., & Supriyadi, B. (2024). Hubungan Pola Asuh Makan dengan Status Gizi Balita. *Jurnal Penelitian Perawat Profesional*, 6(5), 2151–2158.
- Sharma, P., Budhathoki, C. B., Devkota, B., Syrou, N., Valamontes, A., & Adamopoulos, I. (2025). Association between nutritional status and cognitive development in preschool children: A cross-sectional study. *Food and Humanity*, 5, 100939. <https://doi.org/10.1016/j.foohum.2025.100939>
- UNICEF. (2025). *he State of the World's Children 2025: Ending Child Poverty – Our Shared Imperative*.
- Wahyuningrum, T., & Sa'diya, L. K. (2026). Study of Significant Relationship between Determination of Parenting Patterns to Accuracy Stages Preschool Child Development. *Journal of Scientific Research, Education, and Technology (JSRET)*, 5(1), 361–367. <https://doi.org/10.58526/jsret.v5i1.1020>
- WHO. (2023). *Global report on children with developmental disabilities: From the margins to the mainstream*.
- Yanuaringsih, G. P., & Aminah, S. (2022). Hubungan Antara Antara Pola Asuh Dan Status Gizi Dengan Perkembangan Motorik Kasar Pada Anak Prasekolah Usia 3-5. *Jurnal Bidan Pintar*, 3(2). <https://ojs.unik-kediri.ac.id/index.php/jubitar/article/download/4286/2720>