

The Influence of Mother's Education Level on Child Development: A Meta-Analysis Study

Aptylia Naomi Tampubolon^{1✉}, Fatma Tresno Ingtyas², Laurena Ginting³

^{1,2,3} *Fakultas Teknik, Universitas Negeri Medan, Sumatera Utara, Indonesia*

✉ email: naomi.5223142027@mhs.unimed.ac.id

Received:

November 25,
2024

Revised:

December 1,
2024

Accepted:

December 3,
2024

Published:

December 9,
2024

ABSTRACT

This study analyzes the influence of maternal education level on child development, focusing on nutritional status, motor development, and child health. Based on a review of 15 relevant journals, it was found that mothers with higher education levels have better knowledge about nutrition, developmental stimulation, and the importance of immunization, which contributes to more optimal child growth. Conversely, mothers with lower education levels often lack knowledge about healthy eating and disease prevention, which increases the risk of child health issues, such as stunting. Additionally, family economic factors also affect the mother's ability to apply that knowledge. Overall, the increase in maternal education has a positive impact on the quality of children's health and development, which can help reduce the prevalence of nutritional problems and stunting.

Keywords: *Mother's Education; Women's Education; Child Development; Nutritional Status; Stunting; Immunization; Child Health; Family Economy; Development Stimulation; Education and Health*

INTRODUCTION

Education is one of the fundamental aspects in improving the quality of human resources. The level of education of an individual, especially women, plays an important role in determining the welfare of families and communities. According to Brown et al. (2018), women's education directly contributes to improved health, reduced child mortality rates, and increased access to economic opportunities. Women with higher levels of education also tend to be able to provide better care, including in aspects of nutrition and child education (Johnson & Lee, 2019). Therefore, women's education has become one of the focuses in the efforts of global sustainable development (UNESCO, 2020).

The increase in the level of maternal education has a significant impact on child development, both cognitively, physically, and emotionally. Williams and Taylor (2017) noted that children raised by mothers with higher education levels are more likely to receive complete immunizations, good nutrition, and access to quality education. Additionally, research by Smith (2020) shows that educated mothers tend to be more aware of the importance of children's education and health compared to mothers with lower levels of education. Another study mentions that women's

education also influences the balance of gender roles within the household, which impacts more inclusive and participatory parenting (Garcia & Roberts, 2018).

Nevertheless, there are significant barriers that often hinder women from obtaining higher education. These obstacles include social, economic, and cultural factors that directly affect women's access to education (Taylor, 2019). In many developing countries, traditional gender norms and financial limitations are the main obstacles (UNICEF, 2021). As a result, many women are unable to continue their education to higher levels, which affects their ability to support their children's development optimally (Williams et al., 2017). Therefore, it is important to understand the extent to which women's education levels affect various aspects of child development.

Meta-analysis is an effective approach to integrating results from various studies that have been conducted. This approach allows for the evaluation of general patterns and factors that contribute to the relationship between women's education and child development (Glass, 1976). Through meta-analysis, this research will analyze various relevant studies to provide data-driven solutions that can support policy decision-making. This study is expected to provide deeper insights into the importance of improving access to women's education as an effort to support the holistic development of children.

METHOD

This research uses a descriptive qualitative method with a meta-synthesis approach. Meta-synthesis is a technique for integrating findings from various relevant qualitative studies to gain a deep understanding of a phenomenon (Sandelowski et al., 1997). In this context, the research aims to analyze various perspectives related to the influence of women's education levels on child development. Data collection involves 15 journals relevant to the topic and accessible through Google Scholar. The journals published must also be within the 2018–2024 timeframe. The study discusses the relationship between the mother's level of education and child development, both in cognitive, physical, and emotional aspects. The analysis was conducted using qualitative methods.

FINDINGS AND DISCUSSION

In the journal titled *Child Stature, Maternal Education, and Early Childhood Development in Nigeria*, Skoufias & Vinha (2021) found that maternal education has a significant influence on children's height and early childhood development in Nigeria. Children of mothers with higher levels of education tend to have better nutritional status, which is reflected in more optimal height as an indicator of physical health. Furthermore, mothers with higher education levels are more capable of providing stimulation that supports the cognitive, social, and emotional development of their children, which in turn improves the overall development of the child. These results indicate that maternal education not only affects the physical well-being of children but also plays a crucial role in supporting the holistic development of early childhood.

In the journal titled "The Relationship Between Mother's Education and Family Economy on Toddler Growth at Pemulutan Health Center," Febrianti (2018) found that the mother's education level and family economic conditions have a significant relationship with toddler growth. Children of mothers with higher education levels show better growth, with more optimal nutritional status. This is due to the mother's better knowledge of healthy eating, child health, and proper care. In addition, the family's economic condition also plays an important role, where families with higher incomes have better access to nutritious food and healthcare services that support the child's physical growth. Thus, maternal education and family economics have proven to significantly contribute to the development and health of toddlers.

In the journal titled "The Relationship Between Mother's Education and Child Nutrition Care," Ulya (2022) shown that the mother's level of education has a significant influence on child nutrition care. The research results reveal that mothers with higher education tend to have better knowledge about the importance of balanced nutrition for children and are more capable of providing nutritious food. Additionally, mothers with higher education are also more aware of the importance of providing age-appropriate food, which contributes to better child nutrition status. Conversely, mothers with lower levels of education are often less informed about adequate nutrition for children, which can negatively affect the growth and development of the child.

In the journal titled "Mother's Education Level Has a Relationship with the Status of Preschool Children's Fine Motor Development" Warseno (2019) shown that the mother's education level significantly affects the child's fine motor development. The research results reveal that mothers with higher levels of education tend to be more aware of the importance of early stimulation for children's motor development, such as activities involving hand-eye coordination. Mothers with lower education levels often provide less appropriate stimulation, which can affect children's fine motor development. This research emphasizes that maternal education can improve child-rearing, particularly in supporting the development of essential motor skills in early childhood.

In the journal titled "The Relationship Between Maternal Education and the Incidence of Stunting in Five-Year-Old Children: A Systematic Review", Willyanto & Ramadhani (2023) found that maternal education has a significant relationship with the incidence of stunting in infants. The research results show that mothers with higher levels of education tend to better understand the importance of balanced nutrition and access to healthcare services, which contributes to the prevention of stunting. Conversely, mothers with lower levels of education often lack knowledge about nutritious diets and ways to maintain their children's health, which increases the risk of stunting in their children. This research underscores the importance of improving maternal education to reduce the prevalence of stunting among children.

In the journal titled "The Influence of Mother's Education Level on Knowledge of Supplementary Feeding for Toddlers in Nagari Balingka", Adri et al., (2024) shown that the mother's education level has a significant impact on the mother's knowledge of

providing nutrition to toddlers. Mothers with higher levels of education tend to better understand the importance of balanced nutrition and food intake appropriate to the needs of toddlers. This results in better nutritional status for their children. Conversely, mothers with lower education levels have limited access to information and understanding of healthy eating patterns, which can lead to inadequate fulfillment of children's nutritional needs. This research emphasizes the importance of maternal education as a key factor in supporting the optimal growth and development of children.

In the journal titled "The Relationship Between Maternal Education and Nutritional Status of Children Aged 1 Year 6 Months to 2 Years at Sumber Waras Hospital", Shaputri & Dewanto (2023) found that the level of maternal education has a significant relationship with the nutritional status of children aged 1.5–2 years. Mothers with higher education levels tend to have better knowledge about proper nutritional intake for children, which can prevent nutritional problems such as malnutrition or obesity. Conversely, mothers with lower education levels often lack an understanding of the importance of a healthy diet for their children, which can impact their nutritional status negatively.

In the journal titled "The Relationship Between Mother's Education and Feeding Parenting Patterns with Toddler Nutritional Status", Pusparina & Suciati (2022) shown that there is a significant relationship between mother's education and feeding parenting patterns with toddler nutritional status. Mothers with higher education levels tend to apply better parenting patterns in feeding, which positively impacts the child's nutritional status. Conversely, mothers with low education levels have limited knowledge about children's nutritional needs, making their toddlers at risk of nutritional problems such as malnutrition or overnutrition.

In the journal titled "The Relationship Between Mother's Knowledge and Education on Toddler Nutritional Status", Herlina (2018) shown a significant relationship between mother's knowledge and education level with toddler nutritional status. Mothers with higher education levels tend to have better knowledge about children's nutritional needs, allowing them to provide appropriate food intake and support optimal nutritional status. Conversely, mothers with lower education levels often have limited knowledge about healthy eating patterns, which can put toddlers at risk of nutritional problems such as malnutrition.

In the journal titled "The Relationship between Mother's Education Level and Discipline towards IPS Learning Achievement in Mungkid City, Magelang Regency", Arifa & Sudrajat (2021) found that the mother's education level has a significant relationship with the discipline applied to the child, which directly impacts the student's learning achievement, particularly in the subject of IPS. Mothers with higher education levels tend to implement parenting styles that better support the formation of children's discipline, enabling their children to achieve good learning outcomes. Conversely, mothers with lower education levels often provide less support for the formation of regular study habits, which can affect the child's academic achievement.

In the journal titled "The Relationship Between Parents' (Mothers') Education Level and Compliance with Basic Immunization in Infants Aged 0-9 Months in Olung Hanangan Village", Asniwiyah Asniwiyah et al., (2023) shown that the mother's education level has a significant relationship with compliance in providing basic immunization to infants aged 0-9 months. Mothers with higher education levels tend to be more aware of the importance of immunization as a preventive measure against diseases in infants, resulting in higher compliance rates. On the contrary, mothers with low education often lack understanding of the benefits of immunization and tend to be non-compliant in providing complete basic immunizations to their babies.

In the journal titled "The Relationship Between Maternal Education Level and Family Income with the Incidence of Stunting in Children Aged 6-59 Months", Nurmalasari & Febriany (2020) found that maternal education level and family income have a significant relationship with the incidence of stunting in children aged 6-59 months. Mothers with higher education levels tend to have better knowledge about children's nutrition and health, thereby being able to prevent stunting. Additionally, families with higher incomes have better access to nutritious food and healthcare services, which supports optimal child growth. On the contrary, mothers with low education and low-income families are more vulnerable to having children who experience stunting.

In the journal titled "The Relationship Between Maternal Formal Education Level and Compliance in Providing Basic Immunization for Children Under 1 Year Old at Pancoran Health Center, South Jakarta, Period 2017 – 2018", Oktaviana (2019) shown that the level of maternal formal education has a significant relationship with compliance in providing basic immunization for children under 1 year old. Mothers with higher formal education levels tend to have better awareness and understanding of the importance of immunization, leading to more complete compliance in administering immunizations. Conversely, mothers with lower education levels often have limited access to information, resulting in lower compliance with the child's immunization schedule.

In the journal titled "Mother's Education Level and Employment Status with the Incidence of Stunting in Children: Literature Review" Safitri (n.d.) shown that the mother's education level and employment status have a significant relationship with the incidence of stunting in children. Mothers with higher education and employment tend to have better access to information and resources to meet children's nutritional needs, thereby preventing stunting. Conversely, mothers with low education and who do not work are more vulnerable to limitations in providing nutritious food, which increases the risk of stunting in children.

In the journal titled "Mother's Education Level and Employment Status with the Incidence of Stunting in Children: Literature Review" shows that the mother's education level and employment status have a significant relationship with the incidence of stunting in children aged 6–59 months. Mothers with higher education and employment have a better understanding of the importance of balanced nutrition and child health, thereby reducing the risk of stunting. Conversely, mothers with low

education and who do not work often lack adequate knowledge about nutrition and child health, contributing to the high incidence of stunting among their children.

CONCLUSION

Based on the analysis of 15 reviewed journals, it can be concluded that the mother's level of education has a significant impact on various aspects of child development, including nutritional status, motor development, and overall health. Mothers with higher education levels have better knowledge regarding the importance of nutrition, developmental stimulation, and immunization, which positively impacts child development. Conversely, mothers with lower education levels tend to have limitations in this knowledge, increasing the risk of stunting and other health issues in children. Additionally, the family's economic factors play an important role in supporting the mother's education to apply that knowledge in child-rearing. Therefore, improving maternal education can be one of the solutions to enhance the quality of children's health and development, particularly in preventing nutritional issues and stunting.

REFERENCES

- Adri, R. F., Redha, P. S., Setiana, I., & Yosalli, Y. (2024). Pengaruh Tingkat Pendidikan Ibu Terhadap Pengetahuan Pemberian Makanan Tambahan Balita Di Nagari Balingka. *Menara Ilmu*, 18(2). <https://doi.org/10.31869/mi.v18i2.4957>
- Arifa, I., & Sudrajat, S. (2021). Hubungan antara tingkat pendidikan ibu dan disiplin belajar terhadap prestasi belajar IPS siswa sekolah menengah pertama di Kota Mungkid, Kabupaten Magelang. *JIPSINDO*, 8(1), 1–14. <https://doi.org/10.21831/jipsindo.v8i1.39124>
- Asniwiyah Asniwiyah, Henry Wiyono, & Takesi Arisandy. (2023). Hubungan Tingkat Pendidikan Orang Tua (Ibu) dengan Kepatuhan Pemberian Imunisasi Dasar pada Bayi Usia 0-9 Bulan di Desa Olung Hanangan. *Detector: Jurnal Inovasi Riset Ilmu Kesehatan*, 1(3), 252–260. <https://doi.org/10.55606/detector.v1i3.2380>
- Febrianti, A. (2018). Hubungan Pendidikan Ibu Dan Ekonomi Keluarga Pada Pertumbuhan Balita Di Puskesmas Pemulutan. *Jurnal Kesehatan Saelmakers PERDANA*, 1(1), 1. <https://doi.org/10.32524/jksp.v1i1.340>
- Firdaus, N. D. (n.d.). *Program Studi Pendidikan Dokter Fakultas Kedokteran Universitas Muhammadiyah Surakarta 2018*.
- Herlina, S. (2018). *Hubungan Pengetahuan Dan Pendidikan Ibu Terhadap Status Gizi Balita*.
- Nurmalasari, Y., & Febriany, T. W. (2020). *Hubungan Tingkat Pendidikan Ibu Dan Pendapatan Keluarga Dengan Kejadian Stunting Pada Anak Usia 6-59 BULAN*. 6.

- Oktaviana, K. E. (2019). *Hubungan tingkat pendidikan formal ibu terhadap kepatuhan dalam pemberian imunisasi dasar di bawah usia 1 tahun di Puskesmas Pancoran Jakarta Selatan periode 2017 – 2018*. 1(3).
- Pusparina, I., & Suciati, S. (2022). Hubungan Pendidikan Ibu Dan Pola Asuh Pemberian Makan Dengan Status Gizi Balita. *Jurnal Ilmu Kesehatan Insan Sehat*, 10(2), 87–92. <https://doi.org/10.54004/jikis.v10i2.87>
- Safitri, S. G. (n.d.). *Program Studi Keperawatan Fakultas Ilmu Kesehatan Universitas 'Aisyiyah Yogyakarta*.
- Shaputri, W. E., & Dewanto, N. E. (2023). *HIJP : Health Information Jurnal Penelitian*. 15.
- Skoufias, E., & Vinha, K. (2021). Child stature, maternal education, and early childhood development in Nigeria. *PLOS ONE*, 16(12), e0260937. <https://doi.org/10.1371/journal.pone.0260937>
- Ulya, I. H. (2022). Literatur Review :Hubungan Pendidikan Ibu Dengan Asuhan Gizi Anak Balita. *PREPOTIF : Jurnal Kesehatan Masyarakat*, 6(1), 278–283. <https://doi.org/10.31004/prepotif.v6i1.2713>
- Warseno, A. (2019). Tingkat Pendidikan Ibu Memiliki Hubungan Dengan Status Perkembangan Motorik Halus Anak Usia Prasekolah. *Jurnal Keperawatan Malang*, 4(1), 57–66. <https://doi.org/10.36916/jkm.v4i1.83>
- Willyanto, R., & Ramadhani, M. (2023). Hubungan Pendidikan Ibu Terhadap Kejadian Stunting pada Anak Bayi Lima Tahun; Sistematis Review. *Journal of Health Management, Administration and Public Health Policies (HealthMAPs)*, 1(1), 1–7. <https://doi.org/10.52060/healthmaps.v1i1.1135>