



## **Factors Influencing Maternal Participation in Posyandu Activities in Sangkrah, Surakarta: An Analysis of Socio-Demographic Determinants**

**Emma Anastya Puriastuti<sup>1</sup>, Hardiningsih<sup>1\*</sup>, Dyah Krisnawati Satia Pratiwi<sup>1</sup>, Fresthy Astrika Yunita<sup>1</sup>**

<sup>1</sup> *Diploma 3 of Midwifery, Vocational School, Universitas Sebelas Maret, Indonesia*

*\* Corresponding author*

*E-mail: [hardiningsih@staff.uns.ac.id](mailto:hardiningsih@staff.uns.ac.id)*

### **ABSTRACT**

**Background:** Stunting remains a critical public health issue globally, particularly in Indonesia, where efforts to reduce its prevalence are ongoing. Posyandu (Integrated Service Posts) play a pivotal role in monitoring and preventing malnutrition among children.

**Objectives:** This cross-sectional study aimed to analyze the factors influencing maternal participation in Posyandu activities in the Sangkrah region of Surakarta, an area with unique socio-economic and cultural characteristics.

**Method:** Data were collected from 156 mothers with children under five years old using structured questionnaires and analyzed using SPSS.

**Results:** The findings indicated that younger mothers (<35 years) were 1.53 times more likely to actively participate in Posyandu compared to older mothers, though this was not statistically significant ( $p = 0.53$ ). Higher education levels were associated with a 1.43 times increase in Posyandu attendance, but this too lacked statistical significance ( $p = 0.61$ ). Employment status and the number of children were also analyzed, with working mothers and those with more than two children showing a non-significant decrease in Posyandu participation. Notably, distance to the Posyandu did not significantly affect participation rates ( $p = 0.73$ ), and knowledge about Posyandu's importance did not show a statistically significant impact on attendance ( $p = 0.63$ ).

**Conclusion:** These results highlight the complexity of factors influencing maternal participation in Posyandu activities. The lack of statistically significant findings suggests the need for further research with larger samples and qualitative methods to better understand the barriers to active participation. Addressing these factors is crucial for enhancing the effectiveness of Posyandu programs and reducing stunting rates in Indonesia.

**Keywords:** *maternal participation, posyandu attendance, stunting prevention*

---

## INTRODUCTION

---

Stunting is a chronic nutritional problem that negatively impacts children's physical and cognitive development, which in turn affects the quality of a nation's human resources. <sup>[1]</sup> In 2022, it was estimated that 148.1 million children worldwide were affected by stunting, with over half residing in Asia (52%). <sup>[2]</sup> In Indonesia, the prevalence of stunting has decreased from 27.7% in 2019 to 21.6% in 2022; however, this figure remains far from the government's target of reducing the prevalence to 14% by 2024. <sup>[3-6]</sup>

Despite various interventions, such as improving access to healthcare services, enhancing child-rearing practices, and providing nutritional education, community engagement—particularly among mothers in Posyandu activities—remains a challenge. Posyandu, as a decentralized community health service center, plays a crucial role in monitoring and preventing nutritional problems in children, including stunting. <sup>[7]</sup> The success of Posyandu activities heavily relies on the active participation of mothers in bringing their children for weighing and other health services.

Previous studies have shown that maternal participation in Posyandu activities is influenced by various factors, including mothers' knowledge of the importance of growth monitoring, family support, accessibility to healthcare facilities, and motivation from healthcare workers and Posyandu cadres. <sup>[8-9]</sup> Socioeconomic factors, such as education level and income, as well as local culture, also affect mothers' participation in Posyandu programs. <sup>[10]</sup>

However, more in-depth studies are needed to specifically identify the factors influencing maternal participation within local contexts, particularly in areas with high stunting prevalence. This research focuses on the work area of Puskesmas (Community Health Centers) Sangkrah in Surakarta, which has distinct socio-economic and cultural characteristics that

affect maternal participation in Posyandu activities. Therefore, the findings of this study are expected to provide more contextual and specific recommendations to enhance maternal participation in child nutrition monitoring at Posyandu.

While many studies have examined the factors influencing maternal participation in Posyandu activities, most of these studies tend to be general and do not account for the differences in local characteristics that may impact the outcomes. This research seeks to fill this gap by analyzing specific factors that influence maternal participation in child nutrition monitoring at Posyandu in the Puskesmas Sangkrah area of Surakarta. This approach is expected to yield more effective and relevant recommendations for improving maternal participation in Posyandu in this area.

The aim of this study was to analyze the factors influencing maternal participation in child nutrition monitoring at Posyandu. By understanding these factors, it is hoped that more effective strategies can be formulated to enhance maternal participation in Posyandu activities, ultimately helping to reduce stunting rates in Indonesia.

---

## METHODS

---

This study employed a quantitative approach with a cross-sectional analytical study design. This design was chosen because it allowed for the identification of relationships between the factors under investigation and maternal participation in Posyandu activities at a specific point in time. <sup>[9]</sup>

The research was conducted in the working area of Puskesmas Sangkrah, Surakarta City, over a six-months period, from June to December 2024. This location was selected due to the high prevalence of stunting in the area and the support from Puskesmas for the implementation of the study.

The population of this study included all mothers with children aged ≤

59 months in Surakarta City. The sample was drawn using purposive sampling, with inclusion criteria being mothers with young children, residing in the Puskesmas Sangkrah working area, and who had participated in child growth monitoring at the local Posyandu. The target sample size was 120 mothers, based on the minimum sample size calculation required for the planned statistical analysis.

Data collection was conducted through a survey method using a structured questionnaire designed to identify the factors influencing maternal participation in Posyandu activities. The questionnaire included questions related to demographics, knowledge of stunting, attitudes toward Posyandu, accessibility, and support from family and healthcare providers. The validity and reliability of the questionnaire were tested prior to use to ensure the quality of the collected data. [11]

The collected data were analyzed univariately to describe the characteristics of the respondents and bivariately using the chi-square test to identify relationships between the factors influencing maternal participation and child nutritional status. Subsequently, multivariate analysis using logistic regression was conducted to determine the dominant factors influencing maternal participation in child nutrition monitoring at Posyandu. [7-8] All analyses were performed using the latest version of SPSS statistical software.

This study received ethical approval from the Health Research Ethics Committee of Dr. Moewardi General Hospital with number 1.615/ IV/ HREC/ 2024. All respondents provided written informed consent to participate in the study, and the confidentiality of the collected data was ensured and used solely for research purposes.

## RESULT

The results of this study provide a comprehensive overview of the demographic characteristics of the respondents and examine the factors

influencing their participation in Posyandu activities. The analysis offers valuable insights into the relationships between various socio-demographic variables and maternal engagement in this essential community health service.

**Table 1.** Demographic characteristics of the respondents

Characteristics	Frequency (n)	Percentage (%)
Age		
• <35	121	77.6
• ≥35	35	22.4
Education		
• Basic	132	84.6
• Higher	24	15.4
Occupation		
• Housewives	101	64.7
• Employers	55	35.3
Number of children		
• ≤2	115	73.7
• >2	41	26.3
Knowledge		
• Good	142	91.0
• Enough	14	9.0
Attendance at the Posyandu		
• Yes	139	100.0
• No	17	0.0

The SPSS data analysis results reveal the demographic characteristics of the respondents and the factors influencing their participation in Posyandu activities. The majority of respondents were under 35 years old (77.6%), with only 22.4% aged 35 years or older. Most respondents had basic education (84.6%), while the remaining 15.4% had higher education. Regarding employment, 64.7% of respondents were housewives, while 35.3% were employed. Most respondents had two or fewer children (73.7%), while 26.3% had more than two children. Additionally, the majority of respondents had good knowledge about Posyandu

(91%), while the rest had only moderate knowledge (9%).

**Table 2.** The factors influencing attendance at Posyandu

Variables	OR	95% CI	p-value
Age	1.53	0.41-5.65	0.53
Education	1.43	0.36-5.75	0.61
Occupation	0.49	0.15-1.65	0.25
Number of children	0.50	0.12-2.05	0.34
Posyandu distance	0.83	0.29-2.38	0.73
Knowledge	1.59	0.07-4.97	0.63
Constant	0.66		0.84

Logistic regression analysis was conducted to assess the factors influencing attendance at Posyandu. The results showed that younger respondents (<35 years) were 1.53 times more likely to actively attend Posyandu compared to older respondents ( $\geq 35$  years), although this result was not statistically significant ( $p = 0.53$ ). Higher education levels were associated with a 1.434 times increase in Posyandu attendance, but this result was also not statistically significant ( $p = 0.61$ ). Employed respondents were 0.49 times less likely to be active compared to housewives, although this result was not significant ( $p = 0.25$ ). Respondents with more than two children were 0.501 times less likely to be active compared to those with two or fewer children, but this result was also not significant ( $p = 0.34$ ). Distance to Posyandu did not significantly affect the likelihood of participation ( $OR = 0.83$ ,  $p = 0.73$ ), and respondents with good knowledge were 1.59 times more likely to actively attend Posyandu, although this was not significant ( $p = 0.63$ ). The classification table indicates that this model could classify the respondents' participation status with 89.1% accuracy, although it was less effective in predicting non-participation.

## DISCUSSION

These results indicate that although there are associations between certain demographic and socioeconomic factors and attendance at Posyandu, none of the factors reached statistical significance in this model. This finding aligns with previous research, which suggests that younger mothers tend to be more active in Posyandu activities due to their involvement in early childhood care and openness to new health information.<sup>[12]</sup> The results related to education levels are also consistent with the theory that education can enhance health literacy and awareness of the benefits of preventive health services, although its impact on attendance behavior may vary.<sup>[13]</sup>

While the findings regarding employment status were not significant, they still support research indicating that employment can increase women's autonomy and decision-making related to healthcare services, although other socioeconomic factors may also play a role.<sup>[14]</sup> No statistical significance was found for the number of children, but other studies suggest that mothers with more children tend to have greater caregiving burdens and household responsibilities, which can reduce their participation in Posyandu activities.<sup>[15]</sup>

Distance to Posyandu, although often considered a barrier to accessibility, did not show a significant effect in this study, indicating that other factors, such as motivation or perceived benefits, may have a greater influence on attendance. Good knowledge of the importance and benefits of Posyandu is known to facilitate health-seeking behaviors, but in this study, these results did not reach statistical significance.<sup>[16]</sup>

## CONCLUSION

Overall, these findings highlight the complexity of factors influencing attendance at Posyandu, which may involve other unmeasured variables such as

cultural beliefs, social support, or the quality of healthcare facilities. Further research with larger sample sizes and qualitative approaches may provide a deeper and more comprehensive understanding of these factors.

#### ACKNOWLEDGEMENT

We would like to express our deepest gratitude to the Universitas Sebelas Maret for providing the opportunity and resources necessary to conduct this research under the Penelitian Mandiri Batch II program.

Furthermore, we wish to acknowledge the valuable contributions of the respondents from the Puskesmas Sangkrah community, whose participation made this study possible. Without their willingness to share their experiences and insights, this research could not have been completed.

Lastly, we are thankful for the unwavering support from all team members, whose encouragement helped us persevere through the challenges of this research project.

#### REFERENCES

1. UNICEF. (2022). *Laporan Tahunan Indonesia 2022*. www.unicef.or.id
2. UNICEF, WHO, World Bank. (2023). *Levels and trends in child malnutrition*
3. Kemenkes. (2022a). *Hasil Survei Status Gizi Indonesia (SSGI) 2022*
4. Kemenkes. (2022b). *Profil Kesehatan Indonesia 2022*
5. Kemenkes. (2023a). *Posyandu 2023*.
6. Kemenkes. (2023b). *Survei Kesehatan Indonesia Tahun 2023*
7. Pratiwi D, Yulian V. (2023). Peran Posyandu terhadap pencegahan stunting di Indonesia: sebuah studi literatur. *Prosiding Seminar Nasional Keperawatan Universitas Muhammadiyah Surakarta (SEMNASKEP)*, 5(2): 51-58
8. Firza D, A DA. (2022). Hubungan keaktifan ibu dalam posyandu dengan status gizi balita di Desa Sei Rotan. *Jurnal Kesehatan Masyarakat Indonesia*, 17(1): 45
9. Azizah EN, Wardhani RK. (2020). Gerakan kader Posyandu Sadar Stunting di Desa Ringinpitu Kecamatan Plemahan. *Journal of Community Engagement in Health*, 3(2): 229-232
10. Wardah R, Reynaldi F. (2022). Peran Posyandu dalam menangani stunting di Desa Arongan Kecamatan Kuala Pesisir Kabupaten Nagan Raya. *Jurnal Biology Education*, 10(1), 65–77.
11. Dwihestie LK, Hidayati RW. (2021). Pemberdayaan kader dalam upaya deteksi dini stunting di Kutu Kembangan Sidomulyo Bambanglipuro Bantul. *Jurnal Inovasi Abdimas Kebidanan (Jiak)*, 1(2), 55-59.
12. Rahman S, Rahman R, Islam MS, Nasrin S. (2020). Factors influencing the utilization of maternal health services among young mothers: evidence from a community-based study in Bangladesh. *BMC Public Health*, 20(1), 54.
13. Nutbeam D. (2020). Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century. *Health Promotion International*, 15(3): 259-267
14. Adebajo A, Akinwande MO, Johnson TO. (2021). Women's empowerment and utilization of maternal health services in Nigeria. *Journal of Women's Health*, 30(4): 512-520
15. Raven J, van den Broek N, Tao F. (2022). The influence of parity and household dynamics on maternal health service utilization: a study from

Rural China. *Maternal and Child Health Journal*, 26(2): 144-152

16. Gross M, Bailey A, Holtzman C. (2023). Health knowledge and its impact on health-seeking behaviors in rural settings: a case study. *Journal of Rural Health*, 39(1): 123-134