Vol. 13 No. 1 (2025) 76-82 *doi: 10.20473/jpk.V13.I1.2025.76-82*

Mini Poster Education on Toddler Nutrition Toward Mother's Knowledge and Attitudes in Batusari Brebes Village

Milhatul Azizah✉[1)], Rakhmat Susilo[1)]

[1] Undergraduate Nursing Study, Program, Faculty of Health Sciences, Muhammadiyah University Purwokerto, Purwokerto, Central Java, Indonesia 53181
✉Email: mieelhaaazizah124@gmail.com

ABSTRACT

***Background**: Nutrition is important to support the growth and development of toddlers. Toddlers are an age group that is very susceptible to nutritional disorders because, at the toddler age, the nutrition required is greater for growth and development.* ***Objectives**: This research aimed to determine the effect of educational mini posters on toddler nutrition on mothers' knowledge and attitudes in Batursari Village.* ***Methods**: This research used a quantitative design with a pre-experimental design, with one group, a pretest, and a post-test. There were 40 samples in the research of mothers with toddlers aged 1-5 years. Samples were taken using total sampling. The instrument used was a questionnaire and the test used was the Wilcoxon test.* ***Results**: The results of the Wilcoxon statistical test obtained a p-value of 0.000, which means p < 0.05, to determine the results of the intervention before and after being given education using mini-poster media. The results of the study showed that the average knowledge before being given the mini-poster intervention obtained a value of 4.70, after being given the mini-poster intervention the knowledge score was 9.53, and the average attitude score before being given the mini-poster intervention was 33.48 And after being given the mini-poster intervention the attitude score was 47.75.* ***Conclusion**: There is a difference in the effect of providing education to mothers of toddlers using media such as posters compared to providing education without using media.*
***Keywords**: Attitudes, Knowledge, Mini Poster, Mother's, Toddler Nutrition.*

INTRODUCTION

The World Health Organization (WHO) found that, in 2018, Indonesia was the third country with the highest prevalence in the Southeast Asian region of stunting under five after Timor Leste (50.5%), and India (38.4%) at 36.4%. In Indonesia, from 2014 to 2018, the number of children aged 0-59 months who experienced stunting tended not to experience significant changes, in 2014 the percentage was 28.9%, and in 2018 the percentage was 29.6% (Al Amin, 2017).

Based on data from the Indonesian Nutrition Status Survey (SSGI) released by the Ministry of Health, in 2022, the prevalence of stunting in Indonesia will decrease by 2.8% compared to 2021 from 24.4% to 21.6%. In 2018, the rate of malnutrition among children under five reached 3.9%, undernutrition was 13.8%, and stunting was 30.8% (Ministry of Health of the Republic of Indonesia, 2017). The same results show that, in 2019, the number of children under five with malnutrition reached 3.9%, malnutrition 13.8%, and stunting 27.67% (Siswati, 2022). In terms of the prevalence of obesity among children under five in Indonesia, the figure is 11.5%, and the country is ranked 21st in the world in this regard. Cases of malnutrition in Central Java Province were 3.7%, while malnutrition among toddlers decreased to 5.4%. According to the 2019 Central Java Province Health Profile information, the prevalence of underweight toddlers based on BB/TB in the Wonogiri Regency reached 3.0% (Han et al., 2022).

Toddlers must pay attention to their nutritional needs from an early age because this is the "golden period" for growth and development, and if disturbances occur during this period it will hurt the quality of the next generation (Abiyoga, 2019; Ironside & Spurlock Jr, 2014; Lipsey & Wilson, 2017). Toddlers with nutritional problems can experience delays in their growth and development as well as incomplete and protracted nutrition which is related to the health, growth, susceptibility to infectious infections, and intelligence of toddlers

Received: 05-02-2024, Accepted: 29-05-2024, Published Online: 05-03-2025

(Balasundaram & Avulakunta, 2021). Lack of nutrition education is one of the causes of the high rate of nutritional disorders among toddlers in Indonesia (Siswati, 2022). The nutritional status of toddlers can be influenced by mothers' lack of nutrition knowledge, and it is difficult for them to choose nutritious food for their children (Clark et al., 2020). Lack of nutrition knowledge can be a determining factor because of the mother's attitude or behavior when choosing food for toddlers, as well as toddlers' eating patterns which include the amount, type, and frequency that will influence toddlers' food intake and their nutritional status (Cook, 2011; McKinney, 2014).

Mothers' lack of understanding regarding nutrition in toddlers can result in a lack of nutritional intake needed by the toddler (Forh et al., 2022). Knowledge has a crucial role in shaping a person's behavior (Patel et al., 2018), including how they meet nutritional needs (Clifford et al., 2015; Hamulka et al., 2018). Previous research has indicated that when a mother has a limited understanding of nutrition, the food given to toddlers tends not to meet their needs and the impact can affect the toddler's health condition (Cheng et al., 2016; Ferreira-Maia et al., 2016; Vardanjani et al., 2015). Mothers who have wide access to various sources of information will tend to have richer knowledge regarding toddler nutrition compared to mothers who have limited knowledge. Mothers' knowledge about how to provide balanced nutritional intake for toddlers plays an important role. Such knowledge can guide mothers in monitoring the growth and development of toddlers by providing balanced food, according to the nutritional needs of the child. By maintaining a balance in nutritional intake, the nutritional condition of toddlers can be within the normal range and the incidence of malnutrition in children under five can be minimized (O'Brien et al., 2014; Savage et al., 2016; Verhage et al., 2018).

METHODS

Based on data collection, the respondent population in this study was 40 mothers who had babies aged 1 to 5 years. The research design used by this researcher is a pre-experimental method with a one-group pretest-posttest design with a total sampling technique. Total sampling is a sampling strategy where the entire population is represented in the sample. This research was carried out from October 2022 to July 2023 in Batursari Village, Sirampog District, Brebes Regency.

This research flow has three stages, namely: Preparation Stage, Implementation Stage, and Completion Stage. The preparation stage is the first step that must be taken to arrange permits in the Batursari sub-district. Then the next step is to consult with the head of the RT to determine the research schedule, the second stage is the implementation stage. At this stage, an initial test is carried out, namely a pretest on respondents to determine the mother's knowledge and attitudes toward toddler nutrition, the next step is to provide education using mini posters to respondents and the final step is giving a final test, namely a posttest, to respondents who have been given education through mini posters to find out the final results. The third stage is the final stage, after all the data have been collected, the data will be processed and analyzed and then a hypothesis test will be carried out to find out whether the hypothesis that has been made is accepted or rejected.

(pretest)	(intervention)	(posttest)
O_1	X	O_2

Information:

- O_1: Mother's knowledge and attitudes toward toddler nutrition before being given a mini poster educational intervention (Kusaka et al., 2016).
- X: Providing mini-poster educational interventions (Alam, 2019).
- O_2: Knowledge after being carried out and mothers' attitudes toward toddler nutrition after being given a mini poster educational intervention.

RESULTS AND DISCUSSION

Based on data collection and sample size in this study, 40 respondents had toddlers aged 1-5 years. Researchers observed respondents who had toddlers aged 1-5 years, then researchers gave a pretest of knowledge and attitudes to respondents with a questionnaire on mothers' knowledge and attitudes toward the importance of toddler nutrition on March 3-7 2023. Then education was

Received: 05-02-2024, Accepted: 29-05-2024, Published Online: 05-03-2025

conducted using mini posters for respondents on March 8-11, 2023, and finally a posttest was carried out on March 13-17, 2023, after providing education, researchers were able to see the development of respondents' knowledge of toddler nutrition.

Based on Rosdiana's (2022) research, a person's attitude is influenced by the source of information obtained. The right source of information will improve health behavior. The mother's attitude regarding nutrition at the age of 1-5 years will influence the mother's behavior in providing nutritional balance to the child. From the results of this research, health education influences mothers' attitudes about nutrition in children aged 1-5 years. This is because mothers who have received health education have a more positive attitude. Apart from that, before this research, mothers tended to be negatively aware that they did not want to participate in Posyandu activities and tended to be less likely to check their children's nutritional status at the Community Health Center. The lack of knowledge about nutrition in children also influences community attitudes. Therefore, there is a need for health education about nutrition to increase information and increase maternal awareness of children aged 1-5 years.

Posters are a publication medium that combines writing, images, or a combination of both to provide information to the public. According to the Big Indonesian Dictionary (KBBI), posters are placards placed in public places through announcements or advertisements. Posters are usually installed in busy and strategic areas. Due to its inviting nature, it is very important to place the poster in a place that is easily seen (Megawati, 2017).

Like other media for conveying information, posters also have characteristics, including:
1) Immediately attract attention when seen by people.
2) Use concise, concise, clear and easy-to-understand language.
3) Contains persuasive or invitational sentences.
4) Use drawings/sketches/paintings and color combinations.
5) Can leave an impression, even if read while passing by.
6) Installed on a flat surface and in a strategic location or a public place.
7) Consists of letters, numbers, symbols, images, or a combination thereof.
8) Designed on paper or cloth.

Poster Purpose:
1) So that mothers know about the activities or events that will be held.
2) To make products or services known and used by the public.
3) To remind mothers about things that must be done.
4) To remind mothers to avoid things that are detrimental to themselves and others.

Judging from the content inside, posters can be classified into several types, namely:
1) Commercial posters, namely posters created to offer goods or services.
2) Community service posters are posters that contain information to educate the general public about something.
3) Activity posters are a medium for telling about an activity that will be held.
4) Educational posters, namely posters that have the aim of educating the public, usually related to the world of education and installed in schools.

The results of the study showed the knowledge and attitudes of respondents who had toddlers aged 1-5 years who had been given the toddler nutrition mini poster intervention experienced an increase in knowledge and attitudes. So it can be concluded that knowledge and attitudes in reducing maternal knowledge and attitudes toward toddler nutrition in Batursari Village can increase if the behavior provided uses mini poster media.

The influence of toddler nutrition education mini posters on mothers' knowledge and attitudes, is achieved by which there are educational mini posters given to respondents. The results of the research show that there is an influence on mothers' knowledge and attitudes toward toddler nutrition, namely there is an influence and attitude toward the use of poster and video media (Nanlohy et al., 2021).

1. Univariate Analysis

a. Respondent Characteristics

Based on the characteristics of the respondents in this study, including age, occupation, and education in Batursari village.

Table 1. Frequency distribution of characteristics of mothers of toddlers.

Characteristics	N	%
Age		
20-25 years	13	32.5
26-30 years old	8	20.0
31-35 years old	10	25.0

Received: 05-02-2024, Accepted: 29-05-2024, Published Online: 05-03-2025

36-40 years old	9	22.5
Total	40	100
Work		
a. Housewife	19	47.5
b. Farmer	17	42.5
c. Trader	2	5.0
d. Teacher	2	5.0
Total	40	100
Education		
a. Elementary school	26	65.0
b. Junior High School	8	20.0
c. Senior High School	4	10.0
d. College	2	5.0
Total	40	100

Based on Table 2, the sample used in this study was 40 mother respondents who had toddlers aged 1-5 years. The largest number of respondents was 13 respondents aged 20-25 years (32.5), 10 respondents aged 31-35 years (25.0), nine respondents aged 36-40 years (22.5), and 26-30 years (20.0). The job characteristics of the respondents were mostly housewives with 19 respondents (47.5), farmers with 17 respondents (42.5), traders with two respondents (5.0), and teachers with two respondents (5.0). Educational characteristics were dominated by respondents, mostly elementary school, with 26 respondents (65.0). SMP as many as eight respondents (20.0). SMA has as many as four respondents (10.0) and two respondents (5.0) namely universities.

b. Pretest – Posttest Mother's Knowledge of Toddler Nutrition

Below are the results of data analysis of differences in mothers' knowledge level scores regarding toddler nutrition in Batursari Village before and after being given mini-poster education on toddler nutrition.

Table 2. Knowledge scores before and after being given the intervention.

Parameter	Mean elementary school	Min	Max
Knowledge Pretest	4.70 1.682	2	8
Knowledge Posttest	9.53 640	8	10

Based on Table 2, the results of the pretest analysis above, the average value is 4.70 the minimum value is 2 and the maximum value is 8. The posttest value is 9.53 with a minimum value of 8 and a maximum value of 10.

Table 3. Pretest – posttest knowledge categories.

Category	Pretest	Posttest
	n %	n %
Good	2 5.0	40 100.0
Enough	19 47.5	0 0
Not enough	19 47.5	0 0
Total	40 100.0	40 00.0

Based on Table 3, the results show that the level of knowledge before and after the intervention is carried out is different; this is proven by the results of the pretest and posttest which are in the increasing category. The good category which initially had two (5.0%) respondents became 40 (100.0%) respondents, the sufficient category which initially had 19 (47.5%) respondents became 0 (0%) respondents and the poor category which initially had 19 (47.5%) respondents became 0 (0%) respondents.

c. Posttest Mother's Attitudes toward Toddler Nutrition

Below are the results of data analysis of differences in mothers' attitude scores toward toddler nutrition in the Batursari sub-district before and after being given mini-poster education on toddler nutrition.

Table 4. Attitude scores before and after being given the intervention.

Parameter	Mean elementary school	Min	Max
Attitude Pretest	33.48 2,309	28	39
Attitude Posttest	47.75 1,056	46	50

Based on Table 4, the results of the pretest analysis above show the average value is 33.48, with a minimum value of 28 and a maximum value of 39. The posttest value has an average value of 47.75 with a minimum value of 46 and a maximum value of 50.

Based on Rosdiana's (2022) research, a person's attitude is influenced by the source of the information obtained. The

Received: 05-02-2024, Accepted: 29-05-2024, Published Online: 05-03-2025

right source of information will improve health behavior. The mother's attitude regarding nutrition at the age of 1-5 years will influence the mother's behavior in providing nutritional balance to the child. From the results of this research, there is an influence of health education on mothers' attitudes about nutrition in children aged 1-5 years. This is because mothers who have received health education have a more positive attitude. Apart from that, before this research, mothers tended to have a negative awareness that they did not want to take part in Posyandu activities and tended to be less likely to check their children's nutritional status at the Community Health Center. Community attitudes are also influenced by the lack of knowledge about nutrition in children. Therefore, there is a need for health education about nutrition to increase information and increase maternal awareness of children aged 1-5 years.

Table 5. Pretest - posttest attitude categories.

Category	Pretest	Posttest
	n %	n %
Good	11 27.5	40 100.0
Enough	29 72.5	0 0
Not enough	0 0	0 0
Total	40 100.0	40 100.0

Based on Table 5, the results show that attitudes before and after the intervention were carried out had differences; this was proven by the results of the pretest and posttest which had increased categories.

The good category, which initially had 11 (27.5%) respondents, became 40 (100.0%) respondents, the sufficient category, which initially had 29 (72.5%) respondents, became 0 (0%) respondents and the poor category, which initially had 0 (0%) respondents, became 0 (0%) respondents.

2. The influence of toddler nutrition mini poster education on mothers' knowledge and attitudes.
   a. Normality test

      The normality test aims to determine whether the data population is regularly distributed or not. In this work, the normality test was carried out after a sample of pretest and posttest, and the results were calculated using the Shapiro-Wilk test with sig>0.05. The pretest and posttest normality tests of the research sample produced the following anticipated results.

Table 6. Pretest and posttest normality test results.

	Results	Normal Criteria	Conclusion
Score before education mini poster knowledge	059	>0.05	Normal
Score after being given mini poster knowledge education	000	>0.05	Abnormal
Score before education mini poster attitude	064	>0.05	Normal
Score after being given mini attitude poster education	000	>0.05	Abnormal

Based on Table 6, it is known that the pretest knowledge value is 0.59, posttest knowledge 0.00, and pretest attitude 0.64, posttest attitude 0.00. This shows that the knowledge pretest sig >0.05 is normally distributed, the knowledge posttest sig <0.05 is abnormally distributed and the attitude pretest sig >0.05 is normally distributed, and the attitude posttest sig <0.05 is distributed abnormally.

The results of the study showed the knowledge and attitudes of respondents who had toddlers aged 1-5 years who had been given the toddler nutrition mini poster intervention experienced an increase in knowledge and attitudes. So it can be concluded that knowledge and attitudes in reducing maternal knowledge and attitudes toward toddler nutrition in Batursari Village can increase if behavior is given using mini poster media.

   b. Bivariate Test

      This study uses the Wilcoxon Signed Rank Test statistic for this bivariate test. Information

Received: 05-02-2024, Accepted: 29-05-2024, Published Online: 05-03-2025

from the results of the Wilcoxon test is as follows:

Table 7. Distribution of mothers' knowledge and attitudes before and after being given mini poster education on toddler nutrition.

Group	N	Z value	p-value
Pretest-posttest knowledge	40	-5,542	000
Pretest-posttest attitude	40	-5,524	000

Based on the results of the Wilcoxon test in Table 7, in the pretest-posttest, mothers' knowledge and attitudes toward toddler nutrition obtained a p-value significance of 0.000 (< 0.05), and the hypothesis in this study Ha was accepted and Ho was rejected, which means there is an effect of mini poster education. toddler nutrition on mothers' knowledge and attitudes in Batursari Village, Sirampog District, Brebes Regency.

For research on the Effect of Toddler Nutrition Mini Poster Education on Mothers' Knowledge and Attitudes, where mini posters were given to respondents, the results of the research showed that there was an influence on mothers' knowledge and attitudes toward toddler nutrition. This research is in line with previous research (Nanlohy et al., 2021), namely the influence and attitudes toward posters and videos.

Intervention in obtaining maternal knowledge and attitudes after providing intervention with education about health is likely to be done through various types of media, one of which is media that combines elements of images and sound when conveying messages or information. The advantage of using this type of media is that it provides a clearer picture and effectively increases our ability to remember information because it is more interesting and easier to remember posters (Lestari & Sundayani, 2020).

The limitations of this research were that it was conducted door to door. Sometimes respondents are not at home or are doing other work. The researchers also had difficulty finding the address of each respondent. When taking photos for documentation, many respondents were embarrassed to be photographed or didn't even want to be photographed.

CONCLUSION

Based on the results of the studies and analyses that have been carried out, it can be concluded that the age characteristics of most of the respondents who were discussing of research on an educational mini poster are between 20-25 years old. Mothers' knowledge of toddler nutrition before being given a mini-poster education had a mean of 4.70 and the mean after being given a mini-poster education was 9.53. This means an increase of 4.83 in the average attitude of mothers toward toddler nutrition before being given a mini-poster education was 33.48 and the average after being given a mini-poster education was 47.75. The results show that providing intervention using mini-poster media is more effective in increasing the mother's knowledge and attitudes toward toddler nutrition compared to interventions not using mini-poster media as evidenced by the results of the Wilcoxon test.

REFERENCES

Abiyoga, A. (2019). Hubungan Antara Keaktifan Ibu Dalam Kegiatan Posyandu Dengan Status Gizi Balita. *Jurnal Medika: Karya Ilmiah Kesehatan*, *4*(1), 1–9.

Al Amin, M. (2017). Klasifikasi kelompok umur manusia berdasarkan analisis dimensifraktal box counting dari citra wajah dengan deteksi tepi canny. *MATHunesa: Jurnal Ilmiah Matematika*, *5*(2).

Alam, T. G. M. R. (2019). Comparative analysis between pre-test/post-test model and post-test-only model in achieving the learning outcomes. *Pakistan Journal of Ophthalmology*, *35*(1).

Balasundaram, P., & Avulakunta, I. D. (2021). *Human growth and development*.

Cheng, E. R., Park, H., Wisk, L. E., Mandell, K. C., Wakeel, F., Litzelman, K., Chatterjee, D., & Witt, W. P. (2016). Examining the link between women's exposure to stressful life events prior to conception and infant and toddler health: the role of birth weight. *J Epidemiol Community Health*, *70*(3), 245–252.

Received: 05-02-2024, Accepted: 29-05-2024, Published Online: 05-03-2025

Clark, C., Crumpler, C., & Notley, H. (2020). Evidence for environmental noise effects on health for the United Kingdom policy context: a systematic review of the effects of environmental noise on mental health, wellbeing, quality of life, cancer, dementia, birth, reproductive outcomes, and cognition. *International Journal of Environmental Research and Public Health*, *17*(2), 393.

Clifford, D., Ozier, A., Bundros, J., Moore, J., Kreiser, A., & Morris, M. N. (2015). Impact of non-diet approaches on attitudes, behaviors, and health outcomes: A systematic review. *Journal of Nutrition Education and Behavior*, *47*(2), 143–155.

Ferreira-Maia, A. P., Matijasevich, A., & Wang, Y.-P. (2016). Epidemiology of functional gastrointestinal disorders in infants and toddlers: a systematic review. *World Journal of Gastroenterology*, *22*(28), 6547.

Forh, G., Apprey, C., & Agyapong, N. A. F. (2022). Nutritional knowledge and practices of mothers/caregivers and its impact on the nutritional status of children 6–59 months in Sefwi Wiawso Municipality, Western-North Region, Ghana. *Heliyon*, *8*(12).

Hamulka, J., Wadolowska, L., Hoffmann, M., Kowalkowska, J., & Gutkowska, K. (2018). Effect of an education program on nutrition knowledge, attitudes toward nutrition, diet quality, lifestyle, and body composition in Polish teenagers. The ABC of healthy eating project: Design, protocol, and methodology. *Nutrients*, *10*(10), 1439.

Han, S., Zhang, A., Xie, Y., & Liu, Y. (2022). Construction of Family-School-Unity Mental Health Education Model for Students in Higher Vocational Colleges under the Background of" Internet+". *2022 3rd International Conference on Education, Knowledge and Information Management (ICEKIM)*, 75–78.

Ironside, P. M., & Spurlock Jr, D. R. (2014). Getting serious about building nursing education science. In *Journal of Nursing Education* (Vol. 53, Issue 12, pp. 667–669). SLACK Incorporated Thorofare, NJ.

Kusaka, M., Matsuzaki, M., Shiraishi, M., & Haruna, M. (2016). Immediate stress reduction effects of yoga during pregnancy: One group pre–post test. *Women and Birth*, *29*(5), e82–e88.

Lipsey, M. W., & Wilson, D. B. (2017). The efficacy of psychological, educational, and behavioral treatment: Confirmation from meta-analysis. *Quantitative Methods in Criminology*, 65–93.

O'Brien, B. C., Harris, I. B., Beckman, T. J., Reed, D. A., & Cook, D. A. (2014). Standards for reporting qualitative research: a synthesis of recommendations. *Academic Medicine*, *89*(9), 1245–1251.

Patel, B., Parets, S., Akana, M., Kellogg, G., Jansen, M., Chang, C., Cai, Y., Fox, R., Niknazar, M., & Shraga, R. (2018). Comprehensive genetic testing for female and male infertility using next-generation sequencing. *Journal of Assisted Reproduction and Genetics*, *35*(8), 1489–1496.

Savage, J. S., Birch, L. L., Marini, M., Anzman-Frasca, S., & Paul, I. M. (2016). Effect of the INSIGHT responsive parenting intervention on rapid infant weight gain and overweight status at age 1 year: a randomized clinical trial. *JAMA Pediatrics*, *170*(8), 742–749.

Vardanjani, A. E., Reisi, M., Javadzade, H., Pour, Z. G., & Tavassoli, E. (2015). The Effect of nutrition education on knowledge, attitude, and performance about junk food consumption among students of female primary schools. *Journal of Education and Health Promotion*, *4*(1), 53.

Verhage, C. L., Gillebaart, M., van der Veek, S. M. C., & Vereijken, C. M. J. L. (2018). The relation between family meals and health of infants and toddlers: A review. *Appetite*, *127*, 97–109.

Received: 05-02-2024, Accepted: 29-05-2024, Published Online: 05-03-2025