



**IMPLEMENTATION OF HEALTH EDUCATION PROGRAM ON DIARRHEA PREVENTION IN MOTHERS OF TODDLERS**

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**ABSTRACT**

Diarrhea is one of the main causes of death in toddlers and is a significant factor in cases of malnutrition in this age group. Government efforts to overcome health problems, especially infectious diseases, are realized through various programs, one of which is the role of the Public Health Center (Puskesmas) in controlling and eradicating diarrheal diseases. This study aims to determine the effectiveness of the health education program in reducing the incidence of diarrhea in toddlers at Posyandu Mawar Sunter, North Jakarta in 2024. This study used a quasi-experimental design with a pre-test-post-test only model. The sampling technique used total sampling with a sample size of 35 samples. The study was conducted at Posyandu Mawar Sunter, Jakarta in November-December 2024. The results of the Paired Samples Correlations test obtained a significant value of  $0.000 < \alpha$  value of 0.05, so it can be concluded that the health education program on preventing diarrhea in toddlers at Posyandu Mawar Sunter, North Jakarta in 2024 was very influential.

Keywords: diarrhea prevention; health counseling; knowledge

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**INTRODUCTION**

Diarrhea is one of the leading causes of death in children under five and is a significant factor in cases of malnutrition in this age group. Based on data from the World Health Organization (2023), diarrhea causes around 525,000 deaths of children under five each year, with a total of 1.7 billion cases per year among children. Diarrhea itself is defined as a condition of defecating more than three times a day with liquid-textured stools, which in some cases can be accompanied by mucus or blood (WHO, 2023). In addition, UNICEF (2024) reported that in 2022 there were 4 billion cases of diarrhea worldwide, with 2.2 million deaths, the majority of which occurred in children under the age of five (UNICEF, 2024). Based on the latest data from the 2020 Indonesian Nutritional Status Survey, the incidence of diarrhea reached 9.8%. Diarrhea is closely related to cases of stunting, where repeated infections in infants and toddlers can contribute to the condition. According to the 2020 Indonesian Health Profile, infectious diseases, especially diarrhea, are one of the main causes of death in children aged 29 days to 11 months. As in the previous year, diarrhea remained a major health problem in 2020, causing 14.5% of deaths in that age group. Meanwhile, in toddlers aged 12 to 59 months, diarrhea contributed 4.55% of the total death rate (Kemenkes RI, 2022). In North Jakarta, there was an increase in diarrhea cases of 10,689 cases, while at the Sunter Health Center, 95 cases of diarrhea in toddlers had been recorded by 2024. (Rekam Medik Puskesmas Sunter, 2024).

Diarrhea problem in Indonesia This problem can be controlled through integrated intervention efforts with a comprehensive sanitation approach. Providing access to proper sanitation facilities contributes to a decrease in diarrhea cases by 32%, while the habit of washing hands

with soap can reduce the risk by 45%. In addition, safe drinking water management at the household level can reduce the incidence of diarrhea by 39%. When these three interventions are combined, the incidence of diarrhea decreases by 94% (Kemenkes RI, 2023). According to Johan (2024) Diarrhea is one of the diseases related to environmental conditions and is still a major health problem in Indonesia. This is caused by the low quality of basic sanitation, poor physical environmental conditions, and lack of public awareness in implementing a clean and healthy lifestyle (Johan, 2024). As an effort to achieve this goal, the government has implemented several programs. In addition, the Minister of Health has launched a total sanitation movement, as well as a national hand washing campaign which was inaugurated by the coordinating minister for People's Welfare, The recent initiatives by the Minister of Health, including the total sanitation movement and the national handwashing campaign, are critical in addressing public health challenges associated with inadequate sanitation and hygiene. Children who do not have access to toilets have a higher rate of stunting compared to children who have better sanitation facilities (Ademas et al., 2021). The government's efforts to overcome health problems, especially infectious diseases, are realized through various programs, one of which is the role of the Community Health Center (Puskesmas) in controlling and eradicating diarrheal diseases. Therefore, further research is needed to understand the level of public knowledge regarding the implementation of optimal diarrhea management, according to their preferences. This is what underlies the author's choice of the title "How is the implementation of a health education program on diarrhea prevention in mothers of toddlers at Posyandu Mawar Sunter, North Jakarta in 2024".

**METHOD**

This study used a quasi-experimental design with a pre-test-post-test only model, Data analysis using paired sample t-test and shapiro wilk for normality test. The sample in this study was 35 respondents using the Total Sampling method. This study was conducted at Posyandu Mawar Sunter Jakarta in November-December 2024. The instrument used in this study is a questionnaire sheet adopted from previous research by Syania (2008) and has been developed and revalidated through reliability and validity tests. This questionnaire consists of several statements relating to the respondent's knowledge.

**RESULT**

Table 1.  
Respondent characteristics (n=35)

| Respondent characteristics | f  | %     |
|----------------------------|----|-------|
| <u>Age</u>                 |    |       |
| 26-35 years                | 15 | 42,9  |
| 36-45 years                | 20 | 57,1  |
| <u>Education</u>           |    |       |
| Junior High School         | 3  | 8,6   |
| Senior High School         | 21 | 60,0  |
| College                    | 11 | 31,4  |
| <u>Experience</u>          |    |       |
| Never                      | 15 | 42,9  |
| Ever                       | 20 | 57,1  |
| <u>Counseling</u>          |    |       |
| Not according to SOP       | 0  | 0     |
| According to SOP           | 30 | 100,0 |
| Total                      | 35 | 100   |

According to table 1, the frequency distribution of respondent characteristics consisting of 35 parents with toddlers experiencing diarrhea in the Posyandu Mawar Sunter area, North Jakarta, the majority were aged between 36-45 years, namely 20 respondents (57.1%). In

terms of education level, most had a high school education background of 21 respondents (60.0%). Based on experience, most had experienced diarrhea in children as many as 20 respondents (57.1%)

Table 2.  
Frequency distribution of mothers' knowledge before and after counseling at Posyandu Mawar Sunter, North Jakarta (n=35)

| Mother's knowledge | f  | %    |
|--------------------|----|------|
| Pretest            |    |      |
| Less               | 28 | 80,0 |
| Enough             | 7  | 20,0 |
| Good               | 0  | 0    |
| Post test          |    |      |
| Less               | 3  | 8,6  |
| Enough             | 25 | 71,4 |
| Good               | 7  | 20,0 |

Based on Table 2, it shows that mothers' knowledge about handling diarrhea in toddlers before being given counseling at Posyandu Mawar Sunter, North Jakarta was mostly lacking (80%), while mothers' knowledge after being given counseling about diarrhea at Posyandu Mawar Sunter, North Jakarta was mostly moderate (25 respondents (71.4%).

Table 3.  
Differences in parental knowledge levels regarding diarrhea management before and after receiving counseling at Posyandu Mawar Sunter, North Jakarta

|        |                     | Paired Differences |         | 95% Confidence Interval of the Difference | t        | df       | Sig. (2-tailed) |    |      |
|--------|---------------------|--------------------|---------|---|----------|----------|-----------------|----|------|
| Mean   | Std. Deviation      | Std. Error Mean    |         |   |          |          |                 |    |      |
| Pair 1 | Knowledge Pre -Post | -5,17143           | 2,13494 | ,36087                                    | -5,90481 | -4,43805 | -14,330         | 34 | ,000 |

Based on table 3, it is obtained that based on the paired samples test, the sig value (2-tailed) is  $0.000 < \alpha 0.05$ , meaning that the implementation of the parental knowledge counseling program in preventing diarrhea in toddlers at the Mawar Sunter Posyandu, North Jakarta has a very big influence, as evidenced by the mean value of -5.17143 with a std deviation of 2.13494.

## DISCUSSION

Based on the results of the study of the frequency distribution of respondent characteristics with 35 parents who have toddlers with diarrhea in the Posyandu Mawar Sunter area, North Jakarta, most of them are aged 36-45 years, as many as 20 respondents (57.1%). The results of this study are in line with the results of Pardjer's study (2023) which stated that most of the participants in the counseling on preventing diarrhea in toddlers are aged 36-45 years, as many as 54.5%. This demographic insight aligns with findings that emphasize the critical role of maternal knowledge and behavior in managing toddler health, particularly regarding diarrhea prevention. Research indicates that mothers' understanding of hygiene practices and their attitudes towards health interventions significantly influence the incidence of diarrhea in children (Idya et al., 2023; Putri et al., 2024; Tanjung, 2023). The mothers of the counseling participants are in the productive age category, where respondents need various information to prevent diarrhea in toddlers.

Based on the results of the study, relevant theories, and previous research, it can be concluded that mothers of productive age need various information to improve their family's welfare. Counseling conducted in the community tends to emphasize the curative aspects that have been provided so far, with a focus on delivering information about handling diarrhea (Hamadouk et al., 2021). This factor is influenced by the frequency of counseling and the communication methods applied. Most communication is done through counseling, without involving other media (Hao et al., 2020). Based on the research findings, the frequency distribution of respondent characteristics consisting of 35 parents with toddlers with diarrhea in the Posyandu Mawar Sunter area, North Jakarta, showed that the majority had a high school education level, namely 21 respondents (60.0%). According to Rosadi (2022) who stated that education in general has an impact on changing the way of thinking, acting, and making decisions. By pursuing higher education, individuals will have broader knowledge. Education itself is a process of guidance given to help someone understand various things. The higher a person's level of education, the easier it is for them to receive information and have more knowledge (Rosadi, 2022).

According to the analysis, most of the parents of toddlers at Posyandu Mawar, North Jakarta are mothers with high school education so they are able to receive information better than those with basic education. Counseling parents of children under five has been shown to improve their understanding of diarrhea management and prevention (Lwin & Putra, 2018). Before the counseling, many parents did not know how to manage and prevent diarrhea in children under five. However, after receiving counseling materials, they were able to understand the information provided and answer the questionnaire well (Zulfiana et al., 2023). Based on the results of the study of the frequency distribution of the characteristics of respondents with 35 parents who have toddlers with diarrhea in the Posyandu Mawar Sunter area, North Jakarta, most of them have experience, most of them have experienced children with diarrhea as many as 20 respondents (57.1%). Parents have experienced in handling toddlers with diarrhea as many as 55.3%. This shows that parents have had experience in carrying out actions in diarrhea in toddlers. According to Kaunang (2022) Experience with knowledge refers to how a person's experience influences the understanding, processing, and application of knowledge in life or work. This experience usually has a significant impact on how a person interprets information and forms new knowledge (Kaunang & Mantiri, 2022).

The researcher's analysis is that direct experience allows someone to understand knowledge more deeply. For example, a mother who has experienced diarrhea in her baby may better understand the importance of maintaining food, hand and environmental hygiene than someone who only learns it from theory or counseling. Knowledge often becomes more useful when applied in real situations. Experience can help someone translate theory into practice, such as applying the concept of family support in increasing patient compliance with treatment. Research consistently demonstrates that robust family support significantly correlates with improved adherence to medical regimens across various conditions. For instance, Al-Muchtari highlights that increased caregiver burden can diminish family support, leading to lower compliance among hemodialysis patients (Al-Muchtari et al., 2023). Based on bivariate analysis of parental knowledge before and after receiving counseling on handling diarrhea in toddlers at Posyandu Mawar Sunter, North Jakarta, it is known that the average parental knowledge before counseling was 12.57 with a standard deviation of 2.090. Meanwhile, after receiving counseling, the average parental knowledge increased to 17.74 with a standard deviation of 2.852. The results of the statistical test showed a p value <0.05 (0.000), which indicated a significant difference in the level of parental knowledge before and

after being given counseling on handling diarrhea in toddlers at Posyandu Mawar Sunter, North Jakarta.

The mothers received counseling on handling diarrhea in toddlers, their knowledge increased initially in the moderate category to a good category. This shows that the knowledge of parents of toddlers increases with the provision of counseling. According to Swarjana (2022) Counseling is a field of social science that studies the methods and processes of change that occur in individuals and communities, with the aim of achieving better changes according to expectations (Swarjana & SKM, 2022). Information about diarrhea and how to handle it is conveyed through counseling activities that aim to empower the community so that they are able to overcome health problems independently. Rahmad and Nurwahidah further emphasize that structured counseling on Clean and Healthy Living Behavior (PHBS) positively influences community behaviors towards diarrhea prevention (Rahmad & Nurwahidah, 2022). Counseling activities are usually carried out at integrated health posts, where it is hoped that they can lead to changes in the target's health behavior. Various media such as posters, leaflets, and flipcharts are used in the counseling process, but the flipcharts used are still incomplete, and community organizations have not been widely involved in these counseling activities. In addition, other research highlights that many caregivers do not have sufficient knowledge about home management techniques, such as the use of Oralit, which is very important to prevent dehydration during episodes of diarrhea (Ndou et al., 2021; Uddin et al., 2020). Researchers can conclude that effective counseling in the community can be achieved if it uses media that is fun and able to attract the attention of participants. So far, counseling has focused more on a curative approach, with the community receiving more information related to diarrhea treatment. The success of counseling is influenced by the frequency and communication techniques applied. Mostly, counseling uses counseling techniques without being supported by other media. Therefore, for diarrhea counseling, it is better to use more varied media so that the community can participate more actively

## **CONCLUSION**

The implementation of a health education program on diarrhea prevention for mothers of toddlers at Posyandu Mawar Sunter, North Jakarta, was shown to improve mothers' understanding in handling diarrhea. There was a significant change in mothers' knowledge before and after the counseling, indicating that health education plays a role in improving understanding of the prevention and management of diarrhea in toddlers.

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