ISSN:xxxx-xxxx

Proceedings of the 1st ACEH INTERNATIONAL CONFERENCE ON HEALTH Poltekkes Kemenkes Aceh November 10-11, 2024, Banda Aceh, Indonesia

EFFECTIVENESS OF FAMILY ASSISTANCE FOR TODDLERS WITH MOTHER CLASS ON WEIGHT GAIN AND CHANGES IN NUTRITIONAL STATUS OF TODDLERS

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ABSTRACT

Nutrition is one of the key determinants of high-quality human resources who are healthy, intelligent, and productive. Malnutrition and undernutrition in children under five remain major nutritional problems that require more serious attention. Nutritional issues in toddlers can hinder growth spurts. Causes of nutritional problems in toddlers include improper caregiving practices, such as giving prelacteal feeding to infants, not providing exclusive breastfeeding, and improper complementary feeding. The aim of this study is to assess the effectiveness of family assistance for toddlers through the mother class on weight gain and changes in nutritional status among toddlers in the working area of Samudra Health Center. A quasi-experimental one-group pretest-posttest design was used in the study involving 32 mothers of toddlers from the Samudra Health Center. Family assistance for toddler nutrition was provided, with data analysis conducted using paired t-test and Wilcoxon test.The research results for the variable of children's weight showed that the average weight during the pretest was 9.39 kg, and after the intervention, it increased to an average of 11.5 kg. The p-value obtained was 0.000, indicating that the assistance provided through the mother class is effective in increasing the weight of toddlers. For the variable of nutritional status, the p-value was 0.000, meaning that the assistance through the mother class is effective in improving the nutritional status of toddlers.

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Keywords: Family Assistance, mother class, nutritional status, weight,
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INTRODUCTION

National development aims to improve human resources. Nutrition is one of the determinants of the quality of human resources that are qualified, healthy, intelligent and productive. Undernutrition and malnutrition in children under five are still major nutrition problems that need more serious attention. The prevalence of both in children under five in Indonesia is still high (Alam & Bahar, 2021). Nutritional problems in toddlers will inhibit growth spurth. The causes of nutritional problems in toddlers include improper parenting, including prelacteal feeding in infants, not exclusive breastfeeding and the provision of complementary foods (MP-ASI) and additional food in toddlers that are not optimal. (Juhartini et al., 2022).

The impact of malnutrition on children's growth and development has been recognized by many. Malnutrition is not only a stigma to be feared, but it is certainly related to the impact on the socio-economy of the family and the country, in addition to the various consequences received by the child himself. Malnutrition affects many organs and systems, as it is often accompanied by deficiencies in the intake of other micro/macro nutrients that are necessary for the body. Poor nutrition will destroy the body's defense system against microorganisms and mechanical defenses so that it will be very easy to cause infection. (Efriani, 2022). Efforts have been made to improve nutrition, including the promotion of balanced nutrition including nutrition counseling at posyandu, food fortification, provision of additional food including complementary feeding, provision of nutritional supplements, monitoring and overcoming malnutrition. However, in reality, many families still have unhealthy nutrition behaviors. Therefore, it is necessary to change the behavior of families of toddlers who are malnourished using the mother class method. Family empowerment through this method was developed in an effort to eliminate cases of undernutrition or malnutrition. (Dahlia,2012).

Nutrition assistance is a support and service activity for families to recognize, prevent and overcome nutrition problems (undernutrition and malnutrition) of their family members. Assistance is carried out by paying attention, conveying messages, encouraging, inviting, providing solutions, delivering assistance, providing advice, referring, mobilizing and cooperating. (Hidayati et al., 2019). Mother class is a class of mothers who have children aged between 0 to 5 years together to discuss, exchange opinions, exchange experiences on the fulfillment of health services, nutrition and stimulation of growth and development. For families and toddlers this class is a means to make friends, ask questions and obtain important information including information

about exclusive breastfeeding, immunization, provision of complementary foods and balanced nutrition to toddlers, dental care, proper hand washing, diseases that are often experienced by toddlers and their prevention and monitoring toddler growth. For health workers, the Mother Toddler class is a medium to find out the health of toddlers, children and their families and establish a closer relationship between mothers of toddlers. (Indrayani et al.,2019)

METHODS

This type of research is quantitative analytic. The research design used was quasi experimental one group pretest posttest design to determine the effectiveness of family assistance for toddlers with mother class on weight gain and changes in nutritional status in toddlers in the working area of the Samudra health center. *The* population and sample of this study were all mothers of toddlers in the Samudra health center work area as many as 32 people. Pretest data collection was carried out before treatment was given, then family assistance with *mother class* about toddler nutrition and monitoring of PMT provision for toddlers, then posttest was carried out by looking at weight gain and changes in nutritional status of toddlers.

The instruments used in this study were booklets, observation sheets and weighing. The booklet contains compiled by researchers and a team of nutrition experts from the Health Office based on existing literature and contains nutrition in toddlers. Family assistance with mother class was carried out by the nutrition family assistance team from the Health Office and Puskesmas. The analysis used was paired t-test and Wilcoxon test. This research has been approved by the Research Ethics Commission of Poltekkes Kemenkes Aceh with the number: DP.04.03/12.7/062/2024.

RESULTS AND DISCUSSION

Research Results

Table 1.
Frequency Distribution of Respondents Characteristics Based on Age, Education, Occupation and Age of Children.

No	Karakteristik	Frequency	Percent
1	**Mother's Age (years)**		
	20-35	27	84.4
	>35	5	15.6
2	**Education**		
	Senior High school	22	68.8
	College	10	31.3
3	**Occupation**		
	Employed	10	31.3

	Not Employed	22	68.8
4	**Child's Age (month)**		
	0-24	11	34.4
	25-36	10	31.3
	37-60	11	34.4

Based on the table above, it is known that, in the characteristic of mother's age, the majority of mothers are between 20-35 years old, accounting for 84.4%. In the characteristic of education, most mothers have a high school (SMA/SMK) education, accounting for 68.8%. In the characteristic of employment, the majority of mothers are not working (housewives), accounting for 68.8%. In the characteristic of child's age, the majority of respondents have children aged between 0-24 months and 37-60 months, each accounting for 34.4%

Table 2.
Normality Test of Pretest and Posttest Data on Toddler Weight

NO	Weight	df	Sig.	Description
1	Pretest	32	0,955	Normal
2	Posttest	32	0,984	Normal

In Table 2, it is known that the pretest and posttest data on toddler weight are normally distributed, where the p-value is greater than 0.05. Therefore, the next test will use a parametric test, specifically the paired t-test.

Table 3.
Effectiveness of Mother Class Assistance on Toddler Weight Gain

No	Weight	N	Mean	Mean Difference	Sig.
1	Pretest	32	9,39	-2,10	0,000
2	Posttest	32	11,5		

The average weight of toddlers during the pretest was 9.39, and after the intervention, it increased to 11.5, with a mean difference of -2.10. The statistical test results showed a p-value of 0.000, indicating that the Mother Class assistance was effective in increasing toddler weight at the Samudra Health Center (in Table 3).

Table 4.
Effectiveness of Mother Class Assistance on Toddler Nutritional Status

No	Status Gizi		N	Mean Rank	Sum of Ranks	Sig.
1	Pretest-Posttest	Negative Ranks	0[a]	00.00	00.00	0,000

		Positive Ranks	32[b]	16.50	528.00	
		Ties	0[c]			
		Total	32			

Based on the table 4, it is known that in the negative ranks data, there were 0 respondents, which means no respondents experienced a decrease in nutritional status. In the positive ranks data, 32 respondents experienced an improvement in nutritional status with an average increase of 16.50. The statistical test results showed a p-value of 0.000 (< 0.05), indicating that the Mother Class assistance was effective in improving the nutritional status of toddlers at the Samudra Health Center.

Discussion

Effectiveness of Mother Class Assistance on Toddler Weight Gain

The study found that the average toddler weight during the pretest was 9.39, and after the intervention, it increased to 11.5, with a mean difference of -2.10. The statistical test yielded a p-value of 0.000, indicating that the Mother Class assistance was effective in increasing toddler weight at the Samudra Health Center. Nutritional issues in toddlers can hinder growth spurts. Causes of nutritional problems in toddlers include inappropriate parenting practices, such as giving prelacteal foods to infants, lack of exclusive breastfeeding, and suboptimal complementary feeding (Juhartini et al., 2022). Nutritional assistance is support and services provided to families to help them recognize, prevent, and address nutritional problems (such as undernutrition and malnutrition) within their family. Assistance involves attention, conveying messages, encouraging, inviting, providing solutions, offering help, giving advice, referring, mobilizing, and cooperating (Hidayati et al., 2019).

A study by Idyawati et al. found that, during the implementation phase, anthropometric measurements were conducted on 51 toddlers. Of these, 18 had poor nutrition and stunting. After providing family support and health education, it was found that mothers initially had adequate knowledge, which improved after the intervention. The average weight gain of toddlers was 0.8-1 kg (Idyawati et al., 2023). Astriyani's research indicated that before counseling, the average weight of 30 infants was 5.712 kg, and the total weight gain was 0.889 kg. The hypothesis showed that there was an effect of exclusive breastfeeding counseling on infant weight gain at a 5% significance level with a correlation effect value of 0.901. It was concluded that exclusive breastfeeding counseling had an effect on infant weight gain at the Karang Pule Health Center in 2017 (Astriyani, 2018).

Rahayu et al.'s study found that before education, the average weight was 12.030 kg, and after education, it was 13.44 kg. The significance value (p-value = 0.000) was $\leq \alpha = 0.05$, meaning H0 was rejected and Ha was accepted. This

indicates that nutritional education for mothers effectively impacted the weight of toddlers with nutritional issues at KB Mardani, Kendal District (Rahayu et al., 2019).

Paramashanti and Sulistyawati's research showed that the average toddler weight in the intervention group increased significantly from 9.17±1.89 before the intervention to 9.27±1.79 after the intervention (p=0.04). Developmental disorder scores decreased from 1.32±0.75 to 0.42±0.61 (p=0.00). Interventions, including educational packages on nutrition and development, growth stimulation, and supplementary feeding through community feeding centers (CFC), significantly improved the weight and development of underweight toddlers (Astria Paramashanti, 2018).

Providing Mother Class assistance on toddler nutrition and supplementary feeding offers new information to mothers, allowing them to focus more on child nutrition and development. Poor nutritional status in toddlers is not only due to inadequate parenting practices but also due to factors such as family economic conditions, knowledge, and maternal behavior. Therefore, this assistance can provide new information and knowledge to mothers to improve toddler nutrition and increase weight.

Effectiveness of Mother Class Assistance on Toddler Nutritional Status

The study found that in the negative ranks data, there were 0 respondents, meaning no respondents experienced a decrease in nutritional status. In the positive ranks data, 32 respondents experienced an improvement in nutritional status with an average increase of 16.50. The statistical test yielded a p-value of 0.000 (< 0.05), indicating that Mother Class assistance was effective in improving the nutritional status of toddlers at the Samudra Health Center. Nutritional status is the body's condition resulting from the balance between nutrients consumed daily and the body's needs for normal metabolic processes (Sitasari et al., 2022). Nutritional status is one of the measures of an individual's condition based on the food consumed and the use of nutrients in the body. Nutritional status is categorized into three categories: undernutrition, normal nutrition, and overnutrition (Akbar et al., 2021).

Mother Class is a class where mothers with children aged 0 to 5 years discuss, exchange opinions, and share experiences about health services, nutrition, and growth stimulation. For families and toddlers, this class provides a way to make friends, ask questions, and obtain important information, including exclusive breastfeeding, immunization, complementary feeding, balanced nutrition, dental care, proper handwashing, common illnesses and their prevention, and monitoring toddler growth. For health workers, the Mother Class serves as a medium to understand the health of toddlers, mothers, and their families, and to build closer relationships with mothers and their toddlers (Indrayani et al., 2019).

Idyawati et al.'s study showed that during the implementation phase, anthropometric measurements were conducted on 51 toddlers. Out of these, 18

toddlers had poor nutrition and stunting. After providing family support and health education, it was found that mothers initially had sufficient knowledge, which improved after the intervention. The average weight gain of toddlers was 0.8-1 kg (Idyawati et al., 2023).

Roficha et al.'s research found a relationship between knowledge, education, employment, and income with toddler nutritional status. This means that mothers with good knowledge have toddlers with good nutritional status, as these mothers actively seek information on their child's nutritional needs, improving their toddlers' nutritional status (Roficha & Suaib, 2018). Masri et al.'s study showed that the average weight was 6.9 kg before providing supplementary feeding. After one month of intervention, the average weight was 7.3 kg, 7.7 kg after two months, and 8.2 kg after three months. In the intervention group with a combination of supplementary feeding and nutritional counseling, the average initial weight was 6.9 kg, with weight increases to 7.3 kg in the first month, 7.9 kg in the second month, and 8.3 kg in the third month. Supplementary feeding alone did not significantly affect nutritional status based on weight-for-age (p=0.078).

However, the combined intervention of supplementary feeding and nutritional counseling significantly affected nutritional status in children aged 6-24 months (p=0.008), but there was no significant difference between supplementary feeding alone and the combined intervention on nutritional status for this age group (p=0.356) (Masri et al., 2021).

CONCLUSION

Based on the research results and discussion in this study, it can be concluded that there is effectiveness in the Mother Class assistance regarding toddler weight gain and changes in nutritional status

ACKNOWLEDGEMENT

The author would like to extend their gratitude for the completion of this research to the respondents, the Head of the Aceh Utara Health Office, the Head of the Health Center, the Center for Research and Community Service, and the Director of Poltekkes Kemenkes Aceh.

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