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The Effect Of Feeding Additional Food (PMT) Ice Cream Made From Tilapia On Weight Changes In Toddler Lack Of Nutrition In Ciakar Village, Cipaku District Ciamis District

Vira Nurhandayani [1]* Lia Herliana [2]* Sariestya Rismawati [3]*

[1,2,3] Politeknik Kesehatan Kemenkes Tasikmalaya
***Co-responding author:** viranurhandayani1985@gmail.com

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Abstract
Supplementary Feeding (PMT) is an intervention program for malnourished children to improve nutritional status according to their age. The prevalence of malnourished children in Indonesia has not changed since 2016-2017, which is 17.8% but in 2018, the prevalence fell to 13.8%. Objective: to determine the effect of tilapia fish on changes in toddler weight at the age of 12 months - 59 months. Method: This study used the Quasi-experimental with control group method with a totaling sample sampling technique of 36 toddlers with 18 toddlers in the experimental group and 18 toddlers in the control group. The data processing technique used the paired t-test with normal data distribution. Results: The results of the study showed a significant difference in toddler weight before and after being given tilapia ice cream with the group that was not given treatment. Where the results of the hypothesis test Weight before and after being given treatment sig.2- tailed <0.05 so that it can be concluded that there is a significant effect on the provision of tilapia ice cream in the experimental group. The sig 2-tailed value <0.05 in the control group so it can be concluded that there is also an effect on the control group without giving tilapia ice cream. So it can be concluded that there is an effect of giving tilapia ice cream on toddlers' weight before and after being given

INTRODUCTION

Nutritional problems in Indonesia have a big impact on Human Resources (HR), so special attention is needed. 1. One of the nutritional problems that often occurs in Indonesia is malnutrition. Toddlers (0-5 years) are the age group that most often suffers from malnutrition or are one of the community groups that are vulnerable to nutrition. The nutritional status of children is an important thing that every parent must know, because disorders that occur due to unbalanced nutritional requirements will cause irreversible damage. According to data from the World Health Organization (WHO) in 2017, the prevalence of malnourished children worldwide was 28.5% and in all developing countries it was 31.2%. The prevalence of malnourished children on the Asian continent is 30.6% and in Southeast Asia is 29.4%. Based on a report issued by UNICEF, the problem of malnutrition among children in Indonesia is estimated at 7.8 million, so UNICEF positions Indonesia as one of the Top 5 countries with a high number of children experiencing malnutrition 3. Nationally, based on Basic Health Research (Riskesdas) data, it is known that the prevalence of malnourished children in Indonesia has not changed since 2016-2017, namely 17.8%, but in 2018, the prevalence fell to 13.8% 4. Data in Ciamis district shows 2,361 malnutrition. 98 children in Cipaku District, 73 children in the Cieurih Community Health Center working area and 18 children in Ciakar Village. Nutritional problems that occur in toddlers can cause various problems negative impact on the child's subsequent development. The

short-term impacts of nutritional problems in toddlers include children experiencing impaired brain development; impaired intelligence level; disruption of physical growth and development; and the occurrence of metabolic disorders in the body. Apart from short-term impacts, there are long-term impacts of nutritional problems in toddlers, including decreased cognitive abilities and learning achievement; decreased body immunity, making it easy to suffer from disease; have a high risk of several diseases such as blood vessel and heart disease, diabetes mellitus, obesity, cancer, stroke, and disability in old age; as well as suboptimal work quality which will ultimately result in low economic productivity. The problem of nutrition in children needs to be a concern considering that Indonesia must continue to foster the competitiveness of human resources that can compete at regional and global levels. To answer nutritional problems, community awareness is needed in determining solutions to nutritional problems in their environment, especially those related to the utilization of local potential. The existence of local potential food and nutrition sources at affordable prices will really help the community improve the quality of nutrition. Several studies on the composition of tilapia fish report that it contains various amino acids, including glutamate, which can be a stimulus to increase appetite in children which can help improve nutritional status. The amino acid glutamate can influence brain function through the gut-brain-axis, which is a mechanism that can underlie the benefits of tilapia in improving the nutritional status of children with malnutrition and malnutrition. The author is interested in conducting research entitled The Effect of Providing Supplementary Food (PMT) Made from Tilapia Ice Cream on Changes in Body Weight in Malnourished Toddlers in Ciakar Village, Cipaku District, Ciamis Regency. Is there an effect of providing additional food made from tilapia ice cream on changes in body weight in malnourished toddlers in Ciakar Village, Cipaku District, Ciamis Regency? To determine the effect of giving tilapia fish on changes in the weight of toddlers at the age of 12 months - 59 months. The results of this study can be used as a study material to add insight and find out whether giving tilapia ice cream can increase body weight in underweight toddlers in Ciakar Village, Cipaku District, Ciamis Regency..

METHOD

The type of research used is quantitative research with a quasi-experimental design with control group. Where, in this study there were two groups, namely the experimental group and the control group. These two groups are given the same pre-test, then the experimental group (X1) will be given treatment (X) while the control group (X2) will not be given treatment. After this, a post-test will be held on both groups, both the experimental group and the control group. Comparison of changes in pre-test and post-test results will show the effect of treatment on research results. The research was carried out in August-November 2024. Data collection was carried out for 4 weeks in September 2024. The place chosen by the author for this research is Ciakar Village, Cipaku District, Ciamis Regency. Population is a generalization area consisting of objects or subjects that have certain quantities and characteristics that are determined to be studied and then conclusions are drawn. 25. The population in this study was 36 toddlers in the Ciakar Village area, Cipaku District, Ciamis Regency with an experimental group of 18 toddlers and a control group of 18 toddler. The sample is part of the population that is the object of research. Sampling is an important step in research that involves the process of recovering a number of elements or individuals from a larger population26. Meanwhile, the sampling technique used in this research used the Total Sampling Technique. Total Sampling is a type of total sampling where in In this study, the sample consisted of 36 toddlers with 18 in the control group and 18 in the experimental group. A variable is a form determined by the researcher that is studied with a scheme so that information is obtained in the form of data and processed with statistics so that conclusions can be drawn. Research variables are an attribute or trait or value of a person, object or activity that has certain variations applied by the researcher to studied and then conclusions are drawn. The independent variable is a variable that influences other variables, meaning that if the independent changes food it will result in changes in other variables. In this study the independent variable is the provision of additional food with tilapia ice cream. The dependent variable is a variable that is influenced, meaning that the dependent variable changes due to changes in the dependent variable, namely the weight of malnourished toddlers. Parenting patterns are practices in the household that are realized by the availability of food, health care and other resources for survival, growth and development of children.

Tabel 1

Operational Definition

No	Definition Operational	Measuring instrument	How to Measure	Measure Results	Scale
1	Providing additional food with tilapia ice cream	Additional Food Consumption Control Card	By giving a tick (V) in each column provided every time a toddler receives and consumes additional food for 4 weeks with the recommended PMT consumption of ice cream	Observation sheet	-
2	Changes in body weight of malnourished toddlers	Digital scales	Assess the toddler's weight by seeing whether there is an increase or not after being given the tilapia ice cream PMT treatment for 4 Sunday.	Weight Measurement Results (kg)	Ratio

Data analysis is a technique or process carried out to simplify data into a form that is easier to read and understand. Univariate analysis in research with the variable of increasing the nutritional status of toddlers was carried out to determine the effect of providing PMT with tilapia ice cream. Data obtained from answers in the experimental group consisting of answers to weight gain and no weight gain. Bivariate analysis was carried out to determine whether there was a relationship between the dependent variable and the independent variable 28. In this study bivariate analysis was used to determine the difference in body weight in the experimental group and the control group before and after being given PMT tilapia ice cream. The data that researchers use is Ratio data which is included in the category of parametric inferential analysis with normal data distribution so that the difference test is carried out using the Paired T-Test. Guidelines or basis for decision making in the Paired T-Test can be done by looking at the "Paired T-Test" output table values from the SPSS data processing results. In making this Paired T-Test decision, we are guided by the criteria that if the 2-tailed Sig value is < 0.05 then Ho is rejected and Ha is accepted, conversely if the 2-tailed Sig value is > 0.05 then H0 is accepted and Ha is rejected. This measuring tool is in the form of a table that will be checked (V) when given PMT and given to toddlers every day. Digital scales are used to see the results of the intervention which will be evaluated every week within 1 month or 4 weeks. Data collection uses primary and secondary data sources. Primary sources are data sources that are directly obtained by data collectors, while secondary data is in the form of reports. Researchers make a permission letter to conduct preliminary studies at the place in question. Then, collect the data and write it down in the research background. In this study, researchers took preliminary study data from interviews (primary data) and from medical records (secondary data). Anthropometric measurements carried out using digital scales are used to see the results of the intervention which will be evaluated every week.

RESULTS AND DISCUSSION

The data results obtained during the research in the experimental and control groups will be described in this sub-chapter. The characteristics of the respondents in this study were 36 toddlers in the Ciakar Village area, Cipaku District, Ciamis Regency with a case control of 18 toddlers consuming other complementary foods.

Tabel 2

Characteristics of Respondents Based on Gender

Gender	Amount	%
man	24	66,7
Woman	12	33,3
Total	36	100

24 respondents were male (66.7%) and 12 female respondents (33.3%). Univariate analysis uses descriptive statistical methods to describe the parameters of each variable. These parameters can be seen from the middle value (mean, median, mode), and dispersion value (variance, standard deviation, range). Bivariate analysis was carried out to test the hypothesis and find out whether there was an increase in body weight before and after being given the implementation of tilapia ice cream in the experimental group. Bivariate analysis identification was carried out using the paired t-test because the data distribution was normal. The normality test is carried out to see whether the data obtained is normally or not normally distributed. Testing the normality of weight data before and after treatment in the experimental and control groups used the Shapiro Wilk test because the number of respondents was <100 with the help of SPSS software. Based on the prerequisite tests for statistical analysis, information was obtained that the data was normally distributed. Therefore, the use of parametric statistical test analysis in the form of a t-test was carried out with the help of SPSS software. To find out whether Ho or Ha is accepted or rejected, it is done based on testing criteria, namely if the Sig.2-tailed value is > 0.05 then Ho is rejected. Meanwhile, if Sig.2-tailed < 0.05 then Ha is accepted. This research was conducted to determine the effect of giving tilapia ice cream on the weight gain of toddlers in the working area of Ciakar Village, Cipaku District, Ciamis Regency. Respondents in the implementation of the research were 36 toddlers. 18 toddlers as the experimental group and 18 toddlers as the control group. The distribution of research data consisted of 24 male toddlers (66.7%) and 12 female toddlers (33.3%). With the age characteristics of 1 year there were 8 people (22.2%), 2 years there were 10 people (27.8%), 3 years amounted to 9 people (25%), and 4 years amounted to 9 people (25%). The research was carried out for 4 weeks with the process before being given tilapia fish ice cream, toddlers were weighed first, after this the toddlers were given tilapia ice cream once per week, so that toddlers were given 4 cups of tilapia ice cream for 4 weeks. The control group during the research process was not given tilapia ice cream, only given family food with a predetermined menu. The results of pre and post intervention body weight measurements in the experimental and control groups showed that there was an increase in body weight in all respondents. Based on the research results, information was obtained that there was a change in the weight of toddlers before and after being treated with tilapia fish ice cream. It can be seen from the difference in the average value before and after being given tilapia ice cream. The average weight of toddlers before being given tilapia ice cream was 9.63 kg and the average after being given tilapia ice cream was 9.97 kg. Information obtained from the results of data processing in the control group also had an increased average value where the weight of toddlers in the control group without being given tilapia ice cream was 10.9 kg at a distance of 4 weeks. The toddlers were weighed again and experienced an average increase. body weight is 10.99 kg. The nutritional composition per 100 grams of ice cream that stands out is 207 kcal energy, 4 grams protein and 12.5 grams fat. Ice cream is a food that contains fat, protein, carbohydrates, vitamins and minerals. According to SNI, ice cream is a type of semi-solid food made by freezing ice cream powder or a mixture of milk, animal or vegetable fat, sugar and with or without other permitted food ingredients.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion :

Based on the results of research on "The Effect of Providing Additional Food Ice Cream Made from Tilapia Fish on Changes in Body Weight in Malnourished Toddlers" it can be concluded that:

1. There was an increase in body weight in all experimental groups after being given additional food with ice cream made from tilapia fish.
2. There was weight gain in the entire control group without giving tilapia ice cream.

3. The difference in average body weight in the experimental group is greater than in the control group. Thus, providing additional food made from tilapia is effective in increasing the weight of toddlers.
4. Hypothesis test results: Body weight before and after treatment, sig.2-tailed value <0.05, so it can be concluded that there is a significant effect on giving tilapia ice cream to the experimental group. The 2-tailed sig value was <0.05 in the control group so it can be concluded that there was also an effect in the control group without giving tilapia ice cream.

Suggestions :

Community health centers can facilitate parents and cadres in increasing knowledge regarding choosing foods with high protein for nutritional toddlers less and processing the food to make it more interesting, so that it is attractive to toddlers. Choosing tilapia ice cream is an alternative that can be given as a snack or additional food for toddlers.

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