

Differences in nutritional status in pre-school children At the Muara Fajar-Riau Community Health Center

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ABSTRACT

Nutritional status is a measure of success in fulfilling nutrition for pre-school children (aged 3-5 years) who come from the working area of the Muara Fajar-Riau health center and is indicated by body weight and age or an indicator in measuring the nutritional status of the community because malnutrition can result in Various diseases such as calorie and protein deficiency, vitamin A, anemia, iron and iodine nutrition and the nutritional status of pre-school age can be divided into four, namely: over, good, under and poor nutritional status. Researchers aim to determine differences in nutritional status in pre-school children in the Muara Fajar-Riau health center working area. The sampling technique used in this research was Proportional Sample, the sample size obtained from each health center was: At the Muara Fajar-Riau Community Health Center there are 50 children aged 3-5 years. The total sample is 50 children aged 3-5 years in the Muara Fajar-Riau area using Total Sampling, the type of research is the analytical method using the independent t-test which obtained a p value = 0.000 (< 0.05), a significant hypothesis means there is Differences in nutritional status of pre-aged children between Muara Fajar-Riau Community Health Center working areas. It is hoped that the community health center can increase efforts to improve nutrition programs, increase families' awareness of the nutrition of pre-school age children, monitor mothers who do not want to visit the nearest health service with their children, and conduct outreach by providing information on nutritional developments to mothers who have Pre-school age children to avoid nutritional disorders.

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1. INTRODUCTION

The aim of Health Development stated in the National Resilience System (SKN) is to achieve a healthy life for every Indonesian citizen so as to create an optimal level of public health. For this reason, efforts need to be increased to expand health services to the community in a comprehensive, integrated, equitable manner, with good quality and affordable costs. The success of health development plays an important role in improving the quality of competitiveness of the generation that has Human Resources.

One of the important things that the government strives for in increasing human resources is improving the nutrition of pre-school aged children and this is the basic pattern in creating children's growth and development (Soetjiningsih, 2013).

The nutritional status of pre-school children is an indicator in measuring the nutritional status of society because malnutrition can result in various diseases such as calorie and protein deficiency, vitamin A, iron and iodine anemia. To prevent poor nutritional status that may arise, the pre-school age group needs to receive primary attention in handling nutritional problems.

Community nutrition problems do not only concern health aspects, but also economic, socio-cultural aspects, and so on. The recent increase in cases of malnutrition among pre-school aged children in Indonesia has made policy holders aware to see more clearly that pre-school aged children as a

resource for the future actually have very big problems. Factors that cause malnutrition are, firstly, insufficient food and infectious diseases that children may suffer from. Second, food security in the family, parenting patterns, health services and environmental health, thirdly, factors such as the level of education, knowledge and skills of the family (Ministry of Health of the Republic of Indonesia, 2018).

Indonesia is currently experiencing problems of under-nutrition and over-nutrition, both of which are problems that are equally dangerous for the country. The problem of excess nutrition often occurs in urban areas with high economic levels, the diseases that arise are degenerative because food consumption patterns are low in fiber but high in protein and fat. Meanwhile, malnutrition often occurs in rural areas with low economic levels.

The economic crisis that hit Indonesia had a major impact on the food crisis in Indonesia. This has been estimated by the Indonesian Government to be a threat to food security and nutritional conditions in Indonesian society, especially the nutritional status of pre-school children (Ministry of Health, 2015).

National Development in Indonesia includes development in all aspects of national and state life. A healthy population is the basic capital of development and can play an effective and productive role in nation development. One of the many factors that influence the quality of human resources is nutritional status. There are several important roles of nutrition in developing the quality of human life, one of which is the nutritional status of pre-school children. Nutritional status in pre-school age children is closely related to high morbidity and mortality rates in pre-school age children. The good nutritional status of the population is a major contribution to the intelligent life of the nation and state. This will continue to improve the quality of population health and the level of population work productivity (Ministry of Health, 2015).

The factor of increasing population is not balanced by providing adequate food, nutritional problems arise due to various interrelated factors which include economic, social and cultural aspects, education and population. Therefore, handling or improving nutrition as a therapeutic effort is not only directed at nutritional or health disorders, but also towards other areas (Soekidjo, 2013). Factors that trigger the emergence of nutritional problems can differ between regions and between community groups, even the root of this problem can differ between pre-school age groups. General nutritional deficiencies (food lacking in quality and quantity) cause disturbances in the growth process, energy production, body defense, brain structure and function as well as the behavior of children who experience malnutrition (Almatsier,

Family income in order to improve the nutritional status of pre-school aged children is an important factor. Families who are classified as well off often experience food shortages at certain times. This concerns the opportunity to earn a living, food for a group of families, perhaps from farming and their own crops, from neighbors, relatives, or purchased from stalls, shops or markets. The low income is caused by unemployment or difficulty in obtaining the desired permanent job, apart from that it is also influenced by the large number of families.

Nutritional parenting is a household practice that is realized by the availability of food and health care as well as other resources for children's survival, growth and development (Marian Zeitin, 2020). Nutritional parenting is the attitude and behavior of the mother or other caregiver in terms of closeness to the child, feeding, caring for, cleanliness, giving affection and so on. All of this is related to the mother's condition in terms of physical and mental closeness, nutritional status, general education, knowledge about good child care, role in the family or society and so on of the mother or child's caregiver (Soekirman, 2020).

The causes of malnutrition in pre-school children are usually caused by two things, namely directly, through the quality and quantity of food intake in children and infectious diseases and indirect causes through the family in meeting food needs. Between malnutrition status and infection there is a back and forth interaction. Infection can cause malnutrition through various mechanisms. The most important is the direct effect of systemic infection on tissue catabolism (Suharjo, 20105).

UNICEF data (2014) states that malnutrition due to micronutrient deficiencies is a very important nutritional problem because it affects more than 2 billion people in the world. Especially in developing and poor countries.

Based on data from the World Health Organization (WHO), Indonesia is classified as a country with a high status of malnutrition starting in 2013, which states that the incidence of malnutrition in pre-school children increased to 8.3% and malnutrition to 27.5%. In 2014, the prevalence of malnutrition could be grouped into 4 groups, namely low (under 10%), medium (10-19%), high (20-29%) and very high (30%). Using the WHO classification of malnutrition, in 2014 Indonesia was classified as a country with high malnutrition status because 5,119,935 (or 28.47%) of the 17,983,244 pre-school children in Indonesia were categorized as undernourished or malnourished. From 2015 to 2016, the incidence of malnutrition rose again to 8.8% and malnutrition to 28% (Nurasiyah, 2017). In 2017 to 2018, it was recorded that 4 million Indonesian pre-school aged children experienced malnutrition and 700,000 children fell into the malnourished category, showing that the prevalence of anemia throughout the world in pre-school aged children was 47.4% (approximately 293 million children) of the total population suffering from anemia. In 2019, nutritional problems can be demonstrated by the high incidence of malnutrition which shows that Indonesia's public health is the lowest in ASEAN, and is ranked 142nd out of 170 countries (Dina, 2019).

Data from the East Nusa Tenggara (NTT) Health Service in 2018 stated that the number of pre-school age children experiencing malnutrition reached 90,000 out of around 497 thousand pre-school children. As many as 12 thousand pre-school children experience malnutrition without clinical abnormalities and 167 toddlers experience malnutrition with clinical abnormalities (hunger edema or complications of marasmus and kwashiorkor) and 68 thousand pre-school children experience malnutrition.

Data from the Indonesian Ministry of Health states that nutritional problems, especially malnutrition, still occur in 77% of districts and 56% of cities in Indonesia. The data also states that in 2013 as many as 5 million pre-school age children (2.75%) experienced malnutrition, of which 3.5 million children (19.2%) were at the malnourished level and the remaining 8.3% were malnourished. bad (Ministry of Health, 2014).

Based on data from the Medan City Health Service in 2020, the total number of pre-school age children was 85,749. It was found that 447 of the pre-school children (0.6 percent) in the city were suffering from malnutrition, while another 6,545 (8.86 percent) were experiencing malnutrition. Pre-school age children who suffer from malnutrition or malnutrition are not only in the outlying areas but are spread throughout the sub-districts, such as at the Muara Fajar-Riau Community Health Center. Malnutrition or malnutrition is caused by parents' lack of knowledge about nutritious food so that pre-school children experience malnutrition (Ministry of Health, 2020).

Based on the results of a survey conducted at the Muara Fajar-Riau Community Health Center, there is a total population of 26,237 people and the number of heads of families in the Muara Fajar-Riau area is 5,180 families. In the Muara Fajar-Riau Health Center Area in 2020 there were 40 pre-school age children, while in the Muara Fajar-Riau Health Center Area in 2020 there were 60 pre-school age children. Of the 40 pre-school age children at the Muara Fajar-Riau Community Health Center in 2020, 10 pre-school age children experienced malnutrition and 30 pre-school age children experienced malnutrition. Meanwhile, illnesses in pre-school age children in the Muara Fajar-Riau Health Center Working Area were more likely to suffer from Acute Respiratory Tract Infections as many as 25 children (62%) and 15 children (38%) experienced Malabsorption (Muara Fajar-Riau Health Center Data, 2020).

2. METHOD

This research uses the cross sectional analytical method where the independent variable is crossed with the dependent variable to find out significant differences between the two variables (Kurniawan, 2018). The research was conducted in the Muara Fajar-Riau Community Health Center Working Area. The research was conducted from April to August 2023. The population in the study were children aged 3-5 years who came with their mothers and visited the Muara Fajar-Riau Community Health Center Working Area, totaling 50 children aged 3-5 years, using a collection technique sample using Total Sampling.

3. RESULTS AND DISCUSSION

Frequency Distribution of Respondents Based on Age and Gender in the Community Health Center Work Area Muara Fajar-Riau

Table 1. Frequency Distribution of Respondents Based on Age

NO	Respondent Identity	Muara Fajar-Riau Community Health Center	Fajar-Riau Health Center
		F	%
1 Age (Months)			
1.	36 – 40	31	62
2.	41 – 60	18	36
3.	> 60	1	2
2 Gender			
1.	Man	17	34
2.	Woman	33	66
Total		50	100

It can be seen that the majority of respondents in the Muara Fajar-Riau Community Health Center data were aged 36 - 40 months, 31 respondents (62%) and 33 respondents (66%) were female.

Frequency Distribution of Respondents Based on Nutritional Status in the Community Health Center Work Area Muara Fajar-Riau

Table 2. Frequency Distribution of Respondents Based on Nutritional

No	Nutritional status	Muara Fajar-Riau Community Health Center	Fajar-Riau Health Center
		F	%
1.	More Nutrition	0	0
2.	Good Nutrition	5	10
3.	Malnutrition	10	20
4.	Malnutrition	35	70
Total		50	100

It can be seen that the majority of respondents' nutritional status in the Muara Fajar-Riau Community Health Center data is malnourished, 35 children (70%) and the minority of respondents' status is good nutrition, 5 respondents (10%).

Bivariate Analysis of Nutritional Status of Pre-School Age Children in Community Health Center Working Areas Muara Fajar – Riau

Table 3. Bivariate Analysis of Nutritional Status of Pre-School Age Children

Public health center	Mean	elementary school	S.E	P Value	N
Muara Fajar-Riau	3.60	0.670	0.095	0,000	50

It can be seen that the average nutritional status of respondents in the Muara Fajar-Riau Health

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Center working area is 3.60 Zscore value with a standard deviation of 0.670 Zscore value, with a standard deviation of 0.638 Zscore value. The statistical test results obtained a value of $p = 0.000$ ($\alpha = < 0.05$), meaning that the significant hypothesis H_0 was rejected or there was a difference in the average nutritional status of respondents in the Muara Fajar-Riau Health Center working area.

Based on the nutritional status of respondents obtained in the Puskesmas work area Muara Fajar-Riau obtained the majority of respondents' nutritional status was in the poor nutritional status category with 35 respondents (70%), and the minority had good nutritional status with 5 respondents (10%).

Based on the results of basic health research, in North Sumatra, the prevalence rate of nutritional status of pre-school aged children is still relatively high at the level of malnutrition (14.3%) and malnutrition (8.4%) in pre-school aged children (Riskseddas, 2017).

Test results statistics using the independent t-test obtained a value of $p = 0.000$ ($\alpha = < 0.05$), the significant hypothesis means that there is a difference in the nutritional status of pre-school age children between the working areas of the Community Health Center Muara Fajar-Riau. The results of research conducted by Mustafa in 2019 between the Sawang and Meuraksa Health Center work areas in Banda Aceh City with a total of 75 respondents showed that health services greatly influence the nutritional status of pre-school children.

Insufficient basic health services can cause nutritional disruption and affect the health and nutritional levels of pre-school children (Filmer, 2013). The results of interviews conducted by researchers showed that the condition of Puskesmas services in Muara Fajar-Riau, namely the Puskesmas service center, the facilities and infrastructure are inadequate in accordance with the number of heads of families who have pre-school age children in the Muara Fajar-Riau area, the lack of posyandu cadres or medical personnel in the field of nutrition so there is less monitoring of mothers who have pre-school age children to visit with their children to the nearest health service, and the government's lack of attention in providing additional food assistance for pre-school age children from lower middle class families (interview with nutrition medical staff at Muara Fajar-Riau Community Health Center, 2023). There is a government program to address the nutrition of pre-school aged children, namely increasing efforts to improve community nutrition, which is one of the mandatory health efforts implemented by every health center. Nutrition improvement program efforts include posyandu and nutrition-aware families. One form of operation that is very feasible to implement immediately is training and refreshing posyandu cadres. Cadres as the foundation of community and family empowerment need to be equipped with knowledge and skills so that it is hoped that outreach and counseling in the fields of health, nutrition and child development can be further improved.

The duties of Posyandu cadres are carried out, namely preparing and carrying out all activities at the Posyandu by recording the weighing results of pre-school aged children every month, demonstrating the provision of vitamin A and additional food (PMT Recovery) for pre-school aged children and outside the Posyandu, carrying out outreach visits to homes and monitoring so that mothers are more active in visiting the nearest health services with their children. Implementation of counseling in every health center to create intelligent and independent Nutrition Aware Families (Ministry of Health, 2016).

4. CONCLUSION

Based on the results of research regarding differences in nutritional status among pre-school children at the Muara Fajar-Riau Community Health Center in 2023, the following conclusions can be drawn. The majority of respondents who visited the working area of the Muara Fajar-Riau Community Health Center were in the poor nutritional status category, namely 35 children (70%). The results of statistical tests using the independent t-test obtained a value of $p = 0.000$ ($\alpha = < 0.05$), meaning that the significant hypothesis H_0 was rejected or there was a difference in the average nutritional status of respondents in the Muara Fajar-Riau Community Health Center working area.

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