

# Relationship Of Mother's Knowledge About Protein Energy Malnutrition With Nutritional Status Of Preschool Children In Kristina Clinic Perumnas Sidikalang In 2021

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## ABSTRACT

Protein Energy Malnutrition (PEM) is one of the important nutritional disorders in Indonesia and other developing countries. One of the highest prevalence is found in children under five, one of which is caused by mother's knowledge. The purpose of this study was to analyze the relationship between mother's knowledge about protein energy malnutrition and the nutritional status of preschool children at the Clinic. The sample in this study were all mothers who had preschool-aged children who came to visit Kristina Clinic Perumnas Sidikalang in 2021 as many as 32 people. The results showed that the majority of respondents had good knowledge and the nutritional status of children was within normal limits, and there was a relationship between mother's knowledge of protein energy malnutrition and the nutritional status of preschool children with  $p = 0.001$ . The higher the mother's knowledge, the higher the child's nutritional status will be.

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## 1. Introduction

Protein Energy Malnutrition (PEM) is one of the most important nutritional disorders in Indonesia and other developing countries. The highest prevalence is found in children under five, mothers who are pregnant and breastfeeding. PE patients have various pathological conditions caused by lack of energy and protein in varying proportions. As a result of this deficiency, a PEM situation occurs at a mild to severe degree [1].

Protein Energy Malnutrition (PEM) is a state of malnutrition caused by low consumption of energy and protein in daily food so that it does not meet the nutritional adequacy rate. PEM itself can be classified into PEM without clinical symptoms and PEM with clinical symptoms. Broadly speaking, severe clinical signs of PEM are Marasmus, Kwashiorkor, and Marasmus-Kwashiorkor [2]. Based on the symptoms, PEM is divided into two types, namely mild PEM and severe PEM. The incidence of mild PEM is more common in the community, mild PEM often occurs in children during their growth period. Clinical symptoms that appear include interrupted or stopped linear growth, decreased or stopped weight gain, decreased upper arm circumference size, and stunted bone maturation. The z-score of body weight index according to height (W/TB) also shows normal or decreased values, normal or reduced skinfold thickness, and is usually accompanied by mild anemia. In addition, activity and concentration are reduced and sometimes accompanied by skin and hair disorders [3].

The preschool period is a *golden age* where the stimulation of all aspects of development plays an important role in developmental tasks that include motor, personal, social and language development. Preschool age is a phase that requires good nutritional status to support growth and development both physically, intelligently, and emotionally [4]. The measurement of nutritional status of children under five according to the Ministry of Health concerning Anthropometric Standards for Assessment of Child Nutritional Status is determined based on three indices, namely weight for age (W/A), height for age (H/A), and weight for height (W/H). The percentage of toddlers aged 0-59 months in Indonesia in 2018 based on the W/H index, namely very thin at 3.5% and thin at 6.7%. This condition tends to increase when compared to conditions in 2017, where the percentage of children under five is very thin by 2.8% and thin by 6.7%. [5].

Preschool children are in a period of rapid physical and psychological growth. Diet in preschool children plays an important role in the process of growth and development, because it requires foods that contain lots of nutrients. If the child's diet is not achieved properly then growth and development will be hampered. The stages of development of preschool age children are passive consumers, children will receive food intake from what is provided by their mother or caregivers

[6]. Several factors that influence the occurrence of malnutrition in Indonesia include the high rate of poverty, low environmental health, inadequate parenting patterns and low family access to basic level services [5].

Based on the data from the preliminary survey that the researchers conducted in the village of Hutaimbaru Sidikalang in 2020 on 8 pre-school children there were 2 short-skinned children, and 3 children with glazed eyes accompanied by *rheum*/ dark eyes and 3 children looked very thin and hair that thin, reddish like corn silk and distended belly. The results of the preliminary study through interviews show that there are mothers who still do not understand, understand the knowledge of nutrition and PEM and there are some who say that their children have difficult eating behavior, children prefer certain foods, especially snacks so that mealtimes are not on time. Based on this background, researchers are interested in conducting research on "The Relationship of Mother's Knowledge of PEM with the Nutritional Status of Preschool Children at the Kristina Clinic of Perumnas Sidikalang in 2021".

## 2. Methods

The study was conducted in March 2021. The study was conducted in the work area of the Kristina Clinic of Perumnas Sidikalang, Dairi Regency in 2021. The sample in this study was mothers who have preschool age children in the work area of the Kristina Clinic of Perumnas Sidikalang as many as 32 people.

## 3. Results

TABLE 1.  
DISTRIBUTION OF RESPONDENTS CHARACTERISTICS BY AGE, EDUCATION, OCCUPATION AND SOURCE OF INFORMATION MOTHERS WITH PRESCHOOL CHILDREN IN THE KRISTINA WORK AREA OF PERUMNAS SIDIKALANG CLINIC IN 2021

Characteristics		Frequency	Percentage (%)
Age	<20 years	0	0
	20-35 years	18	56.3
	> 35	14	43.8
<b>Total</b>		<b>32</b>	<b>100.0</b>
Education	elementary	0	0
	junior	4	12.5
	high school	23	71.9
	University	5	15.6
<b>Total</b>		<b>32</b>	<b>100.0</b>
Works	Housewife	18	56.3
	Farmer	2	6.3
	Self	4	12.5
	Private Employees	8	25
	Civil Servant/BUMN	0	0
<b>Total</b>		<b>32</b>	<b>100.0</b>
Sources of information	Health Workers	10	31.3
	Environment	4	12.5
	Media	6	18.8
	Internet	12	37.5
<b>Total</b>		<b>32</b>	<b>100.0</b>

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TABLE 2.  
FREQUENCY DISTRIBUTION OF RESPONDENTS' KNOWLEDGE ABOUT PROTEIN ENERGY MALNUTRITION AT PERUMNAS SIDIKALANG KRISTINA CLINIC IN 2021

Knowledge	Frequency	Percentage (%)
Good	26	81.2
Enough	6	18.8
Less	0	0
<b>Total</b>	<b>32</b>	<b>100.0</b>

TABLE 3.  
FREQUENCY DISTRIBUTION OF NUTRITIONAL STATUS OF PRESCHOOL CHILDREN AT KRISTINA CLINIC PERUMNAS SIDIKALANG IN 2021

Nutritional Status	Frequency	Percentage (%)
More	3	9.4
Normal	26	81.3
Less	3	9.4
<b>Total</b>	<b>32</b>	<b>100.0</b>

TABLE 4  
RELATIONSHIP OF MOTHER'S KNOWLEDGE ABOUT PROTEIN ENERGY MALNUTRITION WITH NUTRITIONAL STATUS OF PRESCHOOL CHILDREN AT KRISTINA CLINIC PERUMNAS SIDIKALANG IN 2021

Knowledge of	Children's Nutritional Status						Total	P Value	
	More		Normal		Less				
	n	%	n	%	n	%			
Good	0	0	23	88,5	3	11.5	26	100	<b>0.001</b>
Enough	3	50	3	50	0	0	6	100	
Less	0	0	0	0	0	0	0	0	
<b>Total</b>	<b>3</b>	<b>9.4</b>	<b>26</b>	<b>81.3</b>	<b>3</b>	<b>9.4</b>	<b>32</b>	<b>100.0</b>	

## 4. Analysis And Discussion

### Mother's Knowledge about Protein Energy Malnutrition in Kristina Clinic PERUMNAS Sidikalang in 2021

The results showed that the knowledge of mothers about PEM in pre-school children at the Kristina Clinic of Perumnas Sidikalang, Dairi Regency in 2021, with good knowledge of 26 people (81.3%), with sufficient knowledge of 6 people (18.8%) and lack of knowledge were not found in the cases. Knowledge is everything that is known based on the experience gained by humans, the knowledge process consists of three aspects, namely the process of obtaining information, the transformation process, and the evaluation process [7]. According to Notoatmodjo himself, knowledge is largely influenced by education, sources of information, socio-cultural, environmental, experience and age [8].

Characteristics of respondents can affect respondents' knowledge about PEM such as education. The results showed that the majority of respondents were at the high school level of 71.9% and 15.6% in higher education. Respondents with high school education and above are considered to be able to receive various information about nutrition knowledge either from school lessons or from other sources such as television, radio, health magazines, counseling from health workers during posyandu activities. The existence of health information about nutrition can increase respondents' knowledge about PEM.

The results of the study regarding the age of the respondents showed that many respondents aged between 21 to 35 years were 56.3% and over 35 years were 43.8%. Notoatmodjo said that age affects a person's knowledge (Notoatmodjo, 2014). The more mature the age, the level of ability and maturity in thinking and receiving information is better than those who are still young or immature.

### **Nutritional Status of Preschool Children at Kristina Clinic PERUMNAS Sidikalang in 2021**

The results showed that most of them were in good nutritional status as much as 81.3%, over nutrition by 9.4% and under nutrition by 9.4% using the W/H indicator. These results indicate that there are still children of preschool age with nutritional problems. Adequate knowledge of mothers is very important to maintain the nutritional status of children [9], children at this age are also known as passive consumers, where children receive the type of food served by their mother. Children aged up to 3 years are also in the age range where children are vulnerable to nutritional problems, for that mothers must strictly control their child's food intake [10].

### **Relationship of Mother's Knowledge about Protein Energy Malnutrition with Nutritional Status of Preschool Children at Kristina Clinic PERUMNAS Sidikalang in 2021.**

The results of the statistical test *Chi square* to assess the relationship of mother's knowledge about PEM with nutritional status of preschool children at Kristina Clinic Perumnas Sidikalang in 2021 obtained p value = 0.001 so that it can be concluded that mother's knowledge about PEM will be related to the nutritional status of preschool children. A mother's knowledge about PEM is expected to be able to apply it to choose the appropriate menu for consumption by her child. The level of knowledge of a person's nutrition is very influential on attitudes and behavior in food selection which in turn will affect the nutritional state in question [11].

Mothers who have good knowledge about the existence of special foods for their babies, and make sure that special foods are available for their children to consume tend to have babies or children with good nutrition [12], by mother's knowledge about nutrition. In the results of research by Susanti, et al. in 2014, there was a tendency that the better the level of knowledge of a mother's nutrition, the better the nutritional status of her child, and the results of statistical tests obtained a significant relationship [13]. Mother's level of knowledge will change her nutritional status. The higher the knowledge of maternal nutrition, the better the nutritional status.

According to the researcher's assumption, that the knowledge of the majority of respondents is well-informed, this shows that the level of knowledge of mothers is very influential in food choices which will then affect the nutritional state of children, mothers who have good knowledge will tend to have children with good nutrition. This means that the nutritional status of children is strongly influenced by the mother's knowledge. With the good level of knowledge of mothers about PEM in pre-school children, it is hoped that mothers maintain the knowledge that has been obtained and the knowledge that has been obtained so that it can be applied to children about how to prevent the occurrence of PEM and also learn and apply more about how to maintain nutritional patterns in pre-school children so that they can help better growth and development, so that children become smart, healthy and creative.

## **5. Conclusion**

There was a relationship between mother's knowledge of protein energy malnutrition and the nutritional status of preschool children.

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