Education for The Prevention of Poor Nutrition at Tugu Elementary School

Vanya Salsabila Khairunnisa[1], Asep Bayu Dani Nandiyanto [2]

1 Prodi Administrasi Pendidikan, Universitas Pendidikan Indonesia, Indonesia

2 Departemen Kimia, Universitas Pendidikan Indonesia, Indonesia

E-mail : vanya.salsabila19@upi.edu

ABSTRACTS

The purpose of this study was to provide education regarding the prevention of malnutrition in early childhood at Tugu Elementary School, Cihideung Village, Parongpong, Indonesia. The method used is a qualitative descriptive study, which describes the situation in the field with social activities by providing educational insight on the theme entitled prevention of malnutrition at an early age. This research was conducted on 18 3rd grade students of Tugu Elementary School, Cihideung Village, Parongpong, Indonesia. With an age range of 8-9 years. Respondents consisted of 8 boys and 10 girls. This research was conducted through 3 stages, namely (1) pre-test; (2) providing education through learning media; and (3) post-test. The results obtained from this study there is a change in children's habits in consuming nutritious foods that contain carbohydrates or protein. And it can also be seen from the results of the pre-test and post-test that there is an increase in each statement given. With this research, it is hoped children can sort and choose nutritious foods or not and also with this research, it is expected to reduce the problem of malnutrition.

Introduction

Nutrition is one of the determining factors for the quality of a nation's human resources. Nutrition is needed to shape humans to be healthy, smart, strong, and tough. In this case, the fulfillment of good nutrition must remain the mind-stream of national development. The poor nutritional state of the community will hinder the achievement of development goals (Maulina, 2012). One of the complex health problems is poor nutritional status. Problems caused by poor nutritional status are conditions that are not optimal for the growth and development of a child (Kusparlina, 2021). Malnutrition is the state of a person who is malnourished, or whose nutrition is below average. Malnutrition is a lack of nutrients such as protein, carbohydrates, fats, and vitamins needed by the body (Krisnansari, 2010). Malnutrition is still the cause of disease and child mortality. Although it often goes unnoticed, in 1990 more than 30% of children under five in the world were underweight. With a range of 11% (about 6.4 million people) in Latin America, 27% (31.6 million) in Africa and 41% (154.8 million) in Asia. The prevalence of low body weight continued to decline, from 42.6% in 1975 to 34.6% in 1975 to 34.6% in 1995 but cases of malnutrition did not decrease as expected (Siregar *et al.*, 2020). Toddler age itself is very vulnerable to health problems due to poor nutritional status. Given toddler age is the beginning of a child's growth and development. The impact of poor nutrition on toddlers is also quite diverse, including the increased risk of infectious diseases, inhibiting the growth and development of children, causing health problems during adolescence and adulthood and can even increase the risk of child death (Nugrahaeni, 2018). Malnutrition usually occurs in children under the age of 5 (five) years. Malnutrition is the most severe form of the chronic malnutrition process. Toddlers aged 12-59 months are an age group that is vulnerable to health and nutrition problems. At this age their needs increase,

while they cannot ask for and find food on their own and often at this age are no longer taken care of and the management is left to others so that the risk of malnutrition will be even greater. Children who are malnourished will experience a decrease in body resistance so that children are vulnerable to infectious diseases (Arisman, 2008). The impact of malnutrition is not only dangerous for sufferers, but in a wider scope has an impact on the continuity of the Indonesian generation. This condition is very likely to occur because the majority of people with malnutrition are children. If the malnutrition rate is not immediately suppressed, the infant and under-five mortality rate will also continue to increase. Even if there are survivors, the mental, physical and intellectual development of children who have a history of malnutrition will be disturbed (Wigati, 2009). Efforts to prevent the risk of malnutrition in children under five can be done through increasing aspects of knowledge, attitudes and behavior of mothers. It is hoped that mothers have sufficient knowledge and education related to nutrition so that mothers are able to behave and behave that support the achievement of goals including the importance of nutritional aspects for toddlers, the risk of malnutrition and preventive efforts that can be done, sources of nutrition and food fortification for toddlers, making food menus that are suitable for children. rich in nutrients, to food storage so as not to reduce nutritional value. (Lestari, 2022).

Nutritional problems cannot be handled with short-term and sectoral policies and programs, let alone only in terms of food aspects. Nutritional problems must be addressed immediately through the implementation of proper nutrition policies as a whole. Many developing countries have succeeded in overcoming nutritional problems, such as Thailand, China, and Malaysia. They can solve nutrition problems completely and sustainably by making such short-term and long-term policy roadmaps (Ernawati, 2019). The case of malnutrition is still a serious problem in Indonesia where it often occurs in the group of children under five years old (Devianti *et al*., 2016). It is known until now that malnutrition continues to occur in Indonesia until now, especially in remote and remote areas. Malnutrition is what we usually know as malnutrition or Protein Energy Lack (PEM) which can cause illness and death in children and toddlers. Socio-economic factors including per capita income, parental education, mother's knowledge of nutrition and the number of members in the household are also indirectly related to the incidence of stunting. Income will affect the fulfillment of family nutrition and the opportunity to attend formal education. Low education accompanied by low knowledge of nutrition is often associated with the incidence of malnutrition (Sulistyawati, 2019).

Malnutrition if not addressed and handled will have an impact on death and chronic infection (Lestari *et al*., 2020). Malnutrition can be diagnosed through clinical symptoms, anthropometry and laboratory tests. Clinical symptoms of malnutrition vary depending on the degree and duration of protein and energy depletion, the age of the patient, modifications caused by the accompanying vitamin and mineral deficiencies. Clinical symptoms of mild and moderate malnutrition are not very clear, which is found only less growth such as underweight compared to healthy children. Mild malnutrition is often found in children from 9 months to 2 years, but can also be seen in older children. Impaired growth can be seen from reduced or stopped linear growth, decreased weight gain, stopped and sometimes decreased weight, decreased upper arm circumference, delayed bone maturation, normal or decreased weight-to-height ratio, normal or reduced skinfold thickness, mild anemia, reduced activity and attention when compared with healthy children, sometimes found skin and hair disorders. Severe malnutrition gives symptoms that are sometimes different, depending on the diet, seasonal fluctuations, sanitary conditions and population density. Severe malnutrition can be divided into kwashiorkor type, marasmus type and marasmic-kwashiorkor type. The kwashiorkor type is characterized by symptoms of looking very thin and/or edema on the instep of the legs to the whole body, changes in mental status, thin reddish hair like corn hair color, easy to remove without pain, loss, rounded and puffy face, droopy eyes, enlarged liver, a skin disorder in the form of pink patches

that expand and change color to blackish brown and peeling, whiny and fussy. The marasmus type is characterized by symptoms of looking very thin, face like an old man, whiny, cranky, wrinkled skin, sunken belly, thin, sparse and dull hair, prominent ribs, sagging buttocks and wrinkles. The marasmic-kwashiorkor type is a combination of several clinical symptoms of kwashiorkor-marasmus (Krisnansari, 2010).

Malnutrition whose causes are very complex, the handling of the problem of malnutrition requires a comprehensive approach, including healing and recovery for children who have been malnourished, prevention and improvement for undernourished children, and maintaining or maintaining normal or well-nourished children (Gracediani, 2014). Basically, the measurement of BW/TB or BW/U is an initial effort to determine cases of malnutrition that occur. However, the BB/TB indicator is considered to have advantages from the aspect of accuracy of suspected nutritional problems compared to the measurement of BW/U. Measurements using the BB/TB indicator will compare the mass/weight compared to the toddler's height more describing the physical condition of the toddler being measured (Septiani, 2017). Handling malnutrition is closely related to a nation's strategy in creating healthy, intelligent, and productive human resources. Efforts to increase resources begin by handling the growth of children as part of the family with good nutrition and care, with a healthy family environment, the presence of infectious or other infectious diseases can be avoided and primary health services are very decisive in shaping children who are protected from malnutrition. At a macro level, it takes firmness of strategy, regulation and coordination from the government with the health office as well as public awareness of the dangers arising from cases of malnutrition that afflict children (Gumelar, 2018). One of the government programs to reduce cases of malnutrition contained in the National Medium-Term Development Plan (RPJMN) 2005-2009, namely reducing the malnutrition rate from 8.5% to 5%, and malnutrition requiring 100% treatment is one of the output indicators of the 2010 Ministry of Health strategic plan 2014 (Mawarni, 2016). In the Regulation of the Minister of Health of the Republic of Indonesia Number 23 of 2014 concerning Efforts to Improve Nutrition, Article 5 explains that the Government is in charge and responsible for: (a). Develop and establish policies in the field of nutrition; (b). Coordinate, facilitate and evaluate nutrition awareness surveillance on a national scale; (c). Carry out the prevention of malnutrition on a national scale; (d). Regulating, fostering, and supervising the implementation of the mandatory affairs of efforts to improve nutrition; (e). Strive to fulfill the adequacy and improvement of nutrition in the community, especially in poor families, vulnerable to nutrition, and in emergency situations; (f). Increase public knowledge and awareness of the importance of nutrition and its effect on improving nutritional status (Lisang, 2017). Various strategies have been developed for the prevention and control of the problem of undernutrition and malnutrition that were found, namely by implementing prevention efforts through a comprehensive approach, which prioritizes health promotion (advocacy, atmosphere building and community empowerment) and prevention efforts in the form of treatment and recovery activities for people with malnutrition. (Aidha, 2017). Efforts to improve community nutrition are aimed at improving the nutritional quality of individuals and communities through, among others (a) improving food consumption patterns, and (b) increasing access and quality of nutrition services (Riska *et al.*, 2021). The current generation of alpha really needs to be considered, especially in providing nutrition, because they will be the successors in the future (Rismantio *et al.*, 2020).

As for research that is still related to the theme being studied, namely research conducted by Zuhrina Aidha (2017) with the title "Analysis of the Implementation of Community Empowerment in Health Promotion Strategies and Its Effect on Community Participation in Prevention of Malnutrition in Toddlers in Helvetia District, Medan" in the journal The research explained that the implementation of atmosphere building activities in preventing malnutrition in toddlers was not optimal because the implementation of direct health promotion in the community was rarely carried out. The atmosphere

building activities that are felt by the community are in the bad category and significantly the atmosphere building activities that are carried out well will have the opportunity to affect the increase in community participation in preventing malnutrition in children under five. Therefore, when the implementation of activities does not go well among the community which causes the absence of good direction, education is carried out through elementary school children. Based on this previous research, the author will discuss the prevention of malnutrition in Tugu Elementary School.

The purpose of this study is to provide education to 3rd grade elementary school students to be able to prevent malnutrition and also provide direction to always pay attention to nutrition in the food consumed. The method used is to make observations through a questionnaire which will be filled out by 18 3rd grade students of Tugu Elementary School. The novelties of this research are (1) Introducing the types of malnutrition and their characteristics using pictures, (2) Introducing some of the causes of malnutrition, and (3) Explaining how dangerous malnutrition is and how to prevent it.

Methods

a. Research Subject

The subjects of this study were early childhood with an age range of 8-9 years who attended Tugu Elementary School, Cihideung Village, Parongpong District, West Bandung Regency, Indonesia. Respondents in this study amounted to 18 people, consisting of 8 boys and 10 girls.

b. Research Design Analysis

Research data were collected by distributing questionnaires to 3rd grade elementary school students at Tugu Elementary School, Cihideung Village. The stages in data collection were (i) distributing pre-test questionnaires; (ii) provide education and also provide a few questions and answers; and (iii) distributing post-test questionnaires.

The data processing approach used is a qualitative approach. We made 20 pre-test and post-test questions, and **Table 1** is about pre-test and post-test. The questions made include statements that focus on children's knowledge of malnutrition such as causes, prevention, types and characteristics.

Table 1. Pre-test and Post-test Questions

Put a tick (√) on the answer that you think is appropriate.

No.	Statement	Correct	Wrong
1.	Malnutrition occurs due to lack of protein and carbohydrates.		
2.	The occurrence of malnutrition due to frequent eating vegetables.		
3.	Vitamins are important for the prevention of malnutrition.		
4.	Having learning difficulties is one of the symptoms of poor nutrition.		
5.	Is the child's weight & height below the growth limit (average) is a symptom of malnutrition.		
6.	Eating regularly is the cause of poor nutrition.		
7.	A clean environment is one of the factors causing malnutrition.		
8.	Malnutrition has several types.		
9.	Malnutrition cannot be prevented.		
10.	Swelling in the stomach is one of the		

No.	Statement	Correct	Wrong
	signs of poor nutrition.		
11.	On average, this malnutrition is experienced by children.		
12.	Always eat fruits and vegetables is one of the preventions of malnutrition.		
13.	Paying attention to nutritional intake needs to be considered.		
14.	When symptoms of malnutrition occur, you should consult a doctor.		
15.	Eating carelessly is one of the preventions of malnutrition.		
16.	Foods that contain carbohydrates are not a deterrent to malnutrition.		
17.	Must eat foods that contain protein.		
18.	Eating rice and bread is not a prevention of malnutrition.		
19.	Having a clean environment is one of the preventions of malnutrition.		
20.	Malnutrition is different from stunting.		

RESULTS AND DISCUSSION

The research method used is descriptive qualitative method through 3 stages, namely (1) pre-test, (2) socialization through learning media, and (3) post-test. We will conduct socialization to 18 3rd grade elementary school children about malnutrition prevention education. This will provide information that nutritious foods containing protein, nutrients, and vitamins are good for health, and will avoid malnutrition in the hope of increasing their interest in consuming nutritious foods. **Table 2** shows the results of respondents' answers regarding the questionnaires that have been distributed, along with their explanations.

Table 2. Results of the pre-test and post-test answers answered by the 3rd grade students of Tugu Elementary School in Cihideung Village.

No.	Pre-test	Post-test	Descriptions
1.	88,9%	100%	16 children (88,9%) answered correctly and 2 children (11,1%) answered incorrectly, after doing the post-test 18 children (100%) answered correctly.
2.	72,2%	100%	13 children (72,2%) answered correctly and 5 children (27,8%) answered incorrectly, after doing the post-test 18 children (100%) answered correctly.
3.	83,3%	100%	15 children (83,3%) answered correctly and 3 children (16,7%) answered incorrectly, after doing the post-test 18 children (100%) answered correctly.
1.	66,7%	94,4%	12 children (66,7%) answered correctly and 6 children (33,3%) answered incorrectly, after doing the post test 17 children (94,4%) answered correctly and 1 child (5,6%) answered incorrectly.
2.	50%	88,9%	9 children (50%) answered correctly and 5 children (50%) answered incorrectly, after doing the post test 16 children (88,9%) answered correctly and 2 children (11,1%) answered incorrectly.
3.	77,8%	88,9%	14 children (77,8%) answered incorrectly and 4 children (22,2%) answered correctly, after doing the

No.	Pre-test	Post-test	Descriptions
			post-test 16 children (88,9%) answered incorrectly and 2 children (11,1%) answered correctly.
4.	83,3%	16,7%	15 children (83,3%) answered incorrectly and 3 children (16,7%) answered correctly, after doing the post-test get the same result as the pre-test.
5.	88,9%	100%	16 children (88,9%) answered correctly and 2 children answered incorrectly, after doing the post-test 18 children (100%) answered correctly.
6.	27,8%	88,9%	13 children (72,2%) answered incorrectly and 5 children (27,8%) answered incorrectly, after doing the post-test 16 children (88,9%) answered incorrectly and 2 children (11,1%) answered correctly.
7.	66,7%	100%	12 children (66,7%) answered correctly and 6 children (33,3%) answered incorrectly, after doing the post tet 18 children (100%) answered correctly.
8.	66,7%	100%	12 children (66,7%) answered correctly and 6 children (33,3%) answered incorrectly, after doing the post tet 18 children (100%) answered correctly.
9.	66,7%	100%	12 children (66,7%) answered correctly and 6 children (33,3%) answered incorrectly, after doing the post-test 18 children (100%) answered correctly.
10.	94,4%	100%	17 children (94,4%) answered correctly and 1 child (5,6%) answered incorrectly, after doing the post-test 18 children (100%) answered correctly.
11.	94,4%	100%	17 children (94,4%) answered correctly and 1 child (5,6%) answered incorrectly, after doing the post -test 18 children (100%) answered correctly.
12.	55,6%	27,8%	10 children (55,6%) answered correctly and 8 children (44,4%) answered incorrectly, after doing the post-test 5 children (27,8%) answered correctly and 13 children (72,2%) answered incorrectly.
13.	61,1%	16,7%	11 children (61,1%) answered correctly and 7 children (38,9%) answered incorrectly, after doing the post-test 3 children (16,7%) answered correctly and 15 children (83,3%) answered incorrectly.
14.	88,9%	100%	16 children (88,9%) answered correctly and 2 children answered incorrectly, after doing the post-test 18 children (100%) answered correctly.
15.	72,2%	77,8%	13 children (72,2%) answered correctly and 5 children (27,8%) answered incorrectly, after doing the post-test 4 children (22,2%) answered correctly and 14 children (77,8%) answered incorrectly.
16.	61,1%	100%	11 children (61,1%) answered correctly and 7 children (38,9%) answered incorrectly, after doing the post-test 18 children (100%) answered correctly.
17.	61,1%	100%	11 children (61,1%) answered correctly and 7 children (38,9%) answered incorrectly, after doing the post-test 18 children (100%) answered correctly.

From **table 2**, it can be seen that there is an increase in education to prevent malnutrition. This can be seen from every answer to the statement that has been given. Although there are some

statements whose answers are not 100% understood, but at least they are improved from the previous results. Although the results of this study showed some satisfactory results, but with direct activities with examples of bringing their own lunches, it was seen that there were already some children who paid attention to what was eaten according to what had been taught previously. Indeed, it would be better to continue to do counseling on the prevention of malnutrition, so that students know more things. With nutrition counseling, a person can understand the importance of food and nutrition so that they can behave and act according to nutritional norms (Komara, 2019).

Then, after the education counseling on preventing malnutrition was carried out, it could be seen from the results of each pre-test that on average there was still a lack of knowledge on preventing malnutrition, but after this counseling the post-test results increased. Each statement has its own meaning and purpose, there are those regarding the definition, types, characteristics, and also the nutritional content that must be present in the human body.

This education counseling on prevention of malnutrition is carried out to reduce the number of malnutrition in Indonesia, so that children in Indonesia can pay attention to the nutrition they need to consume, the main target is grade 3 children at SD Negeri Tugu which is used as a place for counseling. Then, the rest hope that the government can pay more attention to the nutrition or nutrition consumed by children aged under five and toddlers, especially those who will become the nation's successors in the future.

CONCLUSION

It can be concluded that education on prevention of malnutrition through power point and cardboard learning media as teaching aids resulted in an increase in the knowledge of 3rd grade students at Tugu Elementary School, Cihideung Village. This can happen because the use of learning media is very influential on students' interest in a new material, it can be seen from each post-test result which always increases in each statement.

ACKNOWLEDGE

REFERENCE

Aidha, Z, (2017). Analisis implementasi pemberdayaan masyarakat dalam strategi promosi Kesehatan dan pengaruhnya terhadap partisipasi masyarakat dalam pencegahan gizi buruk pada balita di kecamatan Helvetia Medan. *Jurnal Jumantik, 2*(2), 31-41.

Devianti, M, (2016). Peningkatan status gizi balita dengan gizi buruk melalui pemberian formula 100. *Jurnal Kebidanan dan Kesehatan Tradisional, 1*(1), 1-99.

Ernawati, A, (2019). Analisis implementasi program penanggulangan gizi buruk pada anak balita di puskesmas Jakenan kabupaten Pati. *Jurnal Litbang*, *15*(1), 39-50.

Krisnansari, D, (2010). Nutrisi dan gizi buruk. *Jurnal Mandala of Health*, *4*(1), 60-68.

Lestari, D, (2022). Upaya pencegahan risiko gizi buruk pada balita*:* Literature Review, *Jurnal Ilmial Universitas Batanghari Jambi, 22*(1), 532-536.

Nugrahaeni, D, (2018). Pencegahan balita gizi kurang melalui penyuluhan media lembar balik gizi*, Jurnal Universitas Airlangga*: 113-124.

Komara, Z. Z., Pramuditha, R., Widartika., Moviana, Y., and Surmita. (2019). Pendidikan gizi seimbang dengan media video lagu terhadap pengetahuan dan perilaku siswa sekolah dasar. *Jurnal Riset Kesehatan Poltekkes Kemenkes Bandung*, *11*(2), 60-66.

Sulistyawati, A, (2019). Faktor risiko kejadian gizi buruk pada balita di dusun Teruman Bantul. *Jurnal Kesehatan Madani Medika*, *10*(1), 13-19.

Septiani, W, (2017). Implementasi program pencegahan dan penanggulangan gizi buruk pada balita di wilayah puskesmas Siak Hulu III. *Jurnal Keskom*, *3*(4), 145-152.

Wigati, T, (2009). Fenomena gizi buruk pada keluarga dengan status ekonomi baik: sebuah studi tentang negative deviance di Indonesia. *The Indonesian Journal of Public Health*, *5*(3), 89-93.

Kusparlina, E, (2021). Pengaruh pelatihan terhadap pengetahuan tentang gizi buruk dan inter-professional collaboration. *Jurnal Pendidikan Tambusai (Tunas-Tunas Riset Kesehatan), 11*(2), 131-137.

Siregar, Y. (2020). Gambaran pengetahuan ibu tentang pencegahan gizi buruk dengan pemenuhan nutrisi di lingkungan V kelurahan Medan Labuhan. *Jurnal Ilmiah Keperawatan Imelda*, *6*(1), 86-92.

Gumelar, I, (2018). Peran dinas kesehatan dalam menanggulangi gizi buruk anak di kecamatan Ngamprah kabupaten Bandung Barat. *Jurnal Academia Praja*, *2*(1), 60-77.

Lisang, A, (2017). Implementasi program penanggulangan gizi buruk pada anak bawah lima tahun pada dinas Kesehatan kabupaten Donggala provisi Sulawesi Tengah. *e-Jurnal Katalogis, 5*(2), 14-25.

Maulina, N, (2012). Interaksi pemerintah dan masyarakat dalam implementasi program penanggulangan gizi buruk di kota Surabaya: Kajian biopolitik. *Jurnal Politik Muda, 2*(1), 147-157.

Masro, A., Edison, E., and Gracediani, L. (2013). Implementasi penanggulangan gizi buruk di wilayah kerja puskesmas sungai Limau kabupaten Padang Pariaman. *Jurnal Kesehatan Masyarakat Andalas*, *8*(1), 15-20.

Riska, N. (2021). Edukasi gizi yang sehat untuk pencegahan stunting di kelurahan Benda Baru kecamatan Pamulang Tanggerang Selatan. *Sarwahita*, *18*(01), 11-27.

Ilmiati, I., Jamhary, J., and Lestari, R. I. (2020). Pengendalian Kualitas Kesehatan dalam Upaya Penanggulangan Gizi Buruk pada Balita: Literatur Review. Dinamika Kesehatan*: Jurnal Kebidanan dan keperawatan*, *11*(1), 272-280.

Ismail, Z., Kartasurya, M. I., and Mawarni, A. (2016). Analisis implementasi program penanggulangan gizi buruk di puskesmas wilayah kerja dinas kesehatan Kota Sorong Provinsi Papua Barat. *Jurnal Manajemen Kesehatan Indonesia*, *4*(1), 20-26.

Nelloh, L. A. M., Lukas, M., Indira, P. D., Kurniawan, R., and Rismatio, R. (2020). Penerapan edukasi gizi buruk pada generasi alfa sebagai penerus generasi milenial di Tanjung Priok Jakarta. *Journal of Sustainable Community Development (JSCD)*, *2*(2), 89-93.