Oshada; Jurnal Kesehatan
https://nawalaeducation.com/index.php/O/index
Volume 1 Nomor 1, 2024
e-ISSN : 3047-017X
DOI : https://doi.org/10.62872/o.v1i1.111

Factors Affecting Nutritional Issues Among Elementary School Students

Dwi Siyamsih[1]
Sultan Thaha Saifuddin State Islamic University of Jambi, Indonesia
e-mail: sitiaisyahjambi0@gmail.com

Input	: 02 February 2024	Revised	: 14 February 2024
Accepted	: 19 February 2024	Published	: 24 February 2024

ABSTRACT

These nutritional issues are serious problems that affect public health globally. Deficiencies in certain nutrients such as iron, vitamin A, vitamin D or folic acid can lead to various health problems. In the study of factors affecting the nutritional problems of primary school students, researchers can use various research methods to understand the relationship between the factors that contribute to the nutritional problems. Observational Studies, Case Control Studies, These studies help in identifying risk factors that contribute to nutritional problems among primary school students. Secondary Data Analysis: Researchers can also use secondary data, such as national health survey data or school data, to analyze factors related to nutritional problems among primary school students. The results in this study show that the nutritional problems of primary school students are influenced by various factors, including home environment, nutrition knowledge, diet, access to nutrition resources, and nutrition education at school. Efforts to improve students' nutritional status require a holistic approach through interventions involving parents, schools and the community as a whole.

Keywords: *Problems, Nutrition, Primary School Students.*

INTRODUCTION

Human resources (HR) refers to all individuals who work for an organization or company and are one of the most important assets in achieving organizational goals and success. Human resources also include individuals' levels of education, training, and work experience. The higher the level of education and experience, the greater the individual's contribution to the organization. It is important to recognize diversity in human resources, including differences in cultural background, gender, and others. Promoting fairness and inclusivity in the workplace can improve individual well-being and overall organizational performance.

Human resources also include aspects of individuals' physical and mental well-being. Employees who are physically and mentally healthy tend to be more productive, perform well, and contribute positively to the work environment. Nutrition refers to the process of receiving, absorbing, and using nutrients by the

body for growth, development, and maintenance of optimal bodily functions. This includes all the nutrients needed by the body, including carbohydrates, proteins, fats, vitamins, minerals, fiber, and water. Good nutrition is important for maintaining health and well-being, as well as preventing various diseases and health problems.

Nutrition is the process by which the body receives, absorbs, and uses nutrients to maintain optimal health and performance. Nutrients are substances needed by the body for growth, development, and organ function. Good nutrition is essential for maintaining a healthy body and preventing various diseases. Strong nutrition provides the energy needed for daily activities, strengthens the immune system, supports optimal growth and development, and maintains the health of vital organs.

Nutrition refers to all the nutrients needed by the body to perform various vital functions, such as growth, tissue maintenance, and organ function. Adequate nutrition is essential for overall health and well-being. Good nutrition includes a balanced intake of nutrients, including carbohydrates, proteins, fats, vitamins, minerals, and water. Each type of nutrient plays an important role in maintaining the body's health, from providing energy for daily activities to supporting the immune system.

Carbohydrates are the body's main source of energy and are found in foods such as cereals, bread, rice, and pasta. Protein is the building block for constructing and repairing body tissues and is important for metabolic processes. Foods that contain protein sources include meat, fish, eggs, and dairy products. Fat is a reserve source of energy and is important for the absorption of certain vitamins. Good fats are found in foods such as avocados, nuts, olive oil, and oily fish. Vitamins and minerals are needed in small amounts but are important for maintaining good health. They are involved in various bodily functions, such as bone formation, maintaining the immune system, and regulating metabolism. Foods rich in vitamins and minerals include fruits, vegetables, and dairy products. Water is essential for keeping the body hydrated and performing various physiological functions. Dehydration can disrupt the body's fluid balance and lead to dehydration. Learning about nutrition helps in making healthy food choices and understanding their impact on long-term health.

Nutrition improvement refers to efforts to increase adequate nutrient intake for individuals, families, or populations as a whole. The main goal of nutrition improvement is to improve health and well-being through balanced and nutritious food consumption. It is important to ensure that communities have adequate access to nutritious food. This may involve improving access to healthy food sources, including expanding the reach of fresh food markets, supporting local farmers, and providing food assistance to families in need. Nutrition improvement also involves promoting healthy feeding practices, especially during critical periods such as lactation and complementary feeding for infants and young children. Monitoring and evaluation of individual and

population nutritional status is important to determine the effectiveness of nutrition improvement programs. Data obtained from nutrition surveys can be used to identify nutritional problems and design appropriate interventions. Nutrition improvement is an important component in efforts to improve overall health and quality of life, as well as reduce the risk of nutrition-related diseases such as malnutrition and obesity.

School children's nutrition is very important because their growth and development period is a critical time for forming healthy eating habits and influencing their health and academic performance. School children need adequate nutrition to support their physical, cognitive, and emotional growth. Adequate nutrition helps them stay focused, active, and participate in learning and extracurricular activities. A balanced diet is key to ensuring school children get all the nutrients they need. This includes consuming foods from all food groups, such as fruits, vegetables, grains, proteins (e.g., meat, fish, nuts), and dairy products. Breakfast is a very important meal for school children because it provides the energy needed to start the day well. A healthy breakfast should contain a mixture of complex carbohydrates, protein, healthy fats, fiber, vitamins, and minerals. School children should avoid foods and drinks that are high in added sugar, saturated fat, and low in fiber, as well as fast food, which tends to be low in nutrients. It is important to ensure that school children are well hydrated. Dehydration can interfere with their concentration and learning performance. School children should drink water regularly throughout the day. Development and growth during school age is a broad and complex topic, covering various physical, cognitive, emotional, social, and moral aspects.

During school age, children experience rapid physical growth, including increases in height, weight, and organ development. School-age children undergo significant cognitive development, such as the ability to think abstractly, solve problems, and manage information in more complex ways. Emotional development during school age involves experiencing mood swings, anxiety, and learning to manage emotions in healthy ways. School-age children learn to build complex social relationships with their peers, develop social skills, and understand social norms. School children begin to understand moral concepts such as justice, empathy, and responsibility. Intellectual growth during school age involves the development of interests, talents, exploration of fields of knowledge, and academic skills.

The data for this report was obtained through a nutrition survey conducted by the Jambi Provincial Health Office from June to September 2023. The sample consisted of elementary school students from various districts/cities in Jambi Province. Of the 3,000 students surveyed, based on their growth index, 10 percent were classified as underweight, 70 percent as normal weight, and 20 percent as overweight. The average daily intake of fruits and vegetables was 2 servings. Thirty percent of students consumed low-nutrient or fast food more than twice a week, while 40 percent of students consumed sugary drinks daily.

Malnutrition occurs when the body does not get enough nutrients to meet its functional needs. The direct causes of malnutrition can vary depending on individual, environmental, and social factors. One of the main causes of malnutrition is a lack of intake of foods containing essential nutrients such as protein, carbohydrates, fats, vitamins, and minerals. This can be caused by limited access to nutritious foods, poverty, or an inability to afford sufficient food. Consuming foods high in saturated fats, added sugars, or processed foods that are low in nutrients can disrupt the body's nutritional balance, leading to excess energy but a lack of essential nutrients. Malnutrition can have various characteristics that indicate an imbalance of nutrients in the body. Malnutrition often causes significant weight loss, especially if the condition persists over a long period of time.

In children, malnutrition can cause serious physical growth retardation and cognitive development. In children, malnutrition can cause serious physical growth retardation and cognitive development. Malnutrition can disrupt overall body function, including a weakened immune system, increased risk of infection, and disruption of vital organ function. Malnutrition can affect physical appearance, including dull, dry, and brittle skin and hair. Deficiencies in iron, vitamin B12, or folic acid can cause anemia, characterized by a decrease in red blood cells or hemoglobin in the blood. Malnutrition can cause cognitive impairment, including difficulty concentrating, decreased memory, and learning problems.

METHODOLOGY

In researching the factors that influence nutrition problems among elementary school students, researchers can use various research methods to understand the relationship between the factors that contribute to these nutrition problems. Observational Studies: This method involves direct observation of elementary school students to identify eating patterns, eating habits, physical activity, and environmental factors that may affect their nutritional status. Observations can be conducted directly at school or at home. Case-Control Studies: This method compares students with nutritional problems with students who have normal nutritional status. This research helps identify risk factors that contribute to nutritional problems among elementary school students. Secondary Data Analysis: Researchers can also use secondary data, such as national health survey data or school data, to analyze factors related to nutritional problems in elementary school students. This secondary data can provide additional insight into trends and patterns of nutritional problems at the population level. The data for this report was collected from school health records, interviews with educators and parents, and the results of a nutrition survey conducted by the Jambi City Health Office.

RESULTS AND DISCUSSION

This nutritional problem is a serious issue that affects public health worldwide. Deficiencies in certain nutrients, such as iron, vitamin A, vitamin D,

or folic acid, can cause various health problems. Overweight and obesity: These conditions are caused by consuming high-calorie foods and a sedentary lifestyle. Iron deficiency in food can cause anemia, which is characterized by a decrease in the number of red blood cells or hemoglobin in the blood.

Nutrition problems can be caused by several factors, including an unbalanced diet, limited access to nutritious food, economic conditions, poor eating habits, and a lack of knowledge about good nutrition. Solving nutrition problems requires joint efforts from individuals, communities, governments, and related organizations to improve access to nutritious food, educate people about the importance of a balanced diet, and encourage changes in people's behavior in choosing and consuming food. Nutrition problems are an imbalance between the nutritional intake required by the body and the nutritional intake actually consumed by the body. Nutrition problems can be caused by a deficiency or excess of certain nutrients.

Classically, nutrition is associated with physical health (energy supply, development, maintenance of body tissues, regulation of vital bodily processes). Today, nutrition is not only associated with health, but also with a person's economic potential, as nutrition is related to brain development, learning ability, and work productivity. In Indonesia, among other factors, nutrition is considered one of the important drivers of development, particularly in terms of human resource development.

Nutrition is a measure of a person's physical condition that can be determined from the food consumed and the use of substances in the body. Nutritional status is a condition caused by the balance between the intake of nutrients from food and the nutritional requirements needed for the body's metabolism. Each individual requires a different intake of nutrients depending on their age, gender, daily activities, weight, and so on.

A. Classification of Nutrients According to Requirements

1. Carbohydrates

Carbohydrates, also known as starch, flour, or sugar, are substances composed of carbon (C), hydrogen (H), and oxygen (O). In the body, carbohydrates are burned to produce energy or heat. One gram of carbohydrates produces four calories. Depending on the size of the carbohydrate molecule, they can be divided into three types of carbohydrates: monosaccharides, disaccharides, and polysaccharides. Carbohydrates are a necessary source of energy for work, respiration, and other purposes. Carbohydrates are mainly found in plants, such as rice, corn, potatoes, wheat, and sweet potatoes.

2. Protein

Protein is a chemical compound containing the elements C, H, O, N, and sometimes P and S. Depending on the source or origin, protein is divided into plant-based protein, such as nuts, tofu, tempeh, soybeans, and wheat, and animal-based protein, such as meat, eggs, milk, cheese, and fish. One gram of protein provides 4 calories. Protein is necessary for the

formation and repair of all body tissues, such as blood, enzymes, hormones, skin, hair, and nails.

3. Fat

Fat is a chemical compound containing the elements C, H, and O. It is commonly found in side dishes (fatty meat) and oils (cooking oil). One gram of fat contains nine calories in the body. The main function of fat is to provide energy to the body. Fat is also a solvent for various vitamins, namely vitamins A, D, E, and K. Foods that are high in fat provide a feeling of fullness for a long time, and fat also gives food a savory taste.

4. Mineral

Minerals are organic compounds that play an important role in the body. The elements of minerals are carbon (C), hydrogen (H), oxygen (O), and nitrogen (N). In addition, minerals also contain other chemical elements, namely calcium (Ca), chloride (CO), iron (Fe), magnesium (Mg), phosphorus (P), potassium (K), sodium (Na), and sulfur (S). Minerals are needed by the body as building blocks and protective substances. They are abundant in side dishes or vegetables. For example, iron (Fe) is found in spinach, kale, and katuk, eggs, and other green vegetables.

5. Vitamins

Vitamins are organic compounds found in very small amounts in food and play a very important role in metabolic reactions involving proteins, fats, and carbohydrates. Based on their properties, vitamins are classified into two types: fat-soluble vitamins (vitamins A, D, E, and K) and water-soluble vitamins (vitamins B and C). Vitamins are a group of substances that regulate growth and maintain life. Each vitamin has a specific function in the body.

6. Water

Water is the largest component in the human body structure, accounting for approximately 60-70% of an adult's body weight, making it essential for the body. Water is a very important substance for human life and its function cannot be replaced by other compounds. The functions of water are to form body fluids, transport nutrients, regulate body heat, and transport oxidation waste from within the body.

Primary school age children are in the final stage of childhood, most of whom are between six and twelve years old. Primary school age is marked by children starting elementary school, as well as the beginning of a new chapter in their lives that can influence and change their knowledge and attitudes. School-age children have relatively greater needs than younger children because they grow faster during this period, especially in terms of height. The nutritional needs of boys and girls also differ, as boys engage in more physical activity and therefore require more protein and iron. This age group is referred to as school-age children, who typically receive a lot of attention and engage in many activities outside the home, often causing them to forget to eat. To meet

their physical needs and facilitate their learning at school, it is important to pay attention to their nutritional intake.

Children's energy requirements are based on their energy needs for basal metabolism, growth rate, and activity. Children's protein requirements include tissue maintenance, changes in body composition, and the formation of new tissue. The most important function of protein in children is growth, because protein deficiency results in slow growth and the inability to achieve normal health and growth. Fat is a nutrient that acts as a source of energy, aids in the absorption of various vitamins, and provides taste and satisfaction in food. In addition, fat plays a role in growth, especially in cell membrane and brain cell components. Fats that are important for children's growth and development are linoleic acid and alpha-linoleic acid. In addition, there are vitamins and minerals that the body needs in smaller amounts than protein, fat, and carbohydrates, but are very important for the body. Both regulate the balance between the body's functioning and overall health.

There are many health problems that occur in elementary school children, but the most common is nutritional imbalance. Nutritional problems can occur due to several factors, such as age, gender, parental education, infectious diseases, and family income. Malnutrition is a health condition that occurs due to a deficiency or imbalance of nutrients needed by the body for growth, development, activity, thinking, and everything related to life.

Malnutrition usually begins with a long-term low intake of energy and protein. According to the Ministry of Nutrition and Health, malnutrition is divided into two categories. The first category consists of primary malnutrition, such as deficiency of certain essential nutrients, for example vitamin C deficiency, which causes patients to experience symptoms of scurvy. The second category concerns secondary malnutrition, such as diseases caused by nutrient absorption or metabolic disorders.

Malnutrition or poor nutrition will have a negative impact on physical and mental growth. There will be delays in growth and development that are difficult to cure. In addition, children who suffer from malnutrition will have more limited opportunities to learn, work, and behave compared to normal children. More serious consequences of malnutrition are disabilities, diseases, and death. If malnutrition persists for a long time, it will lead to chronic malnutrition. In this situation, kwashiorkor and marasmus can occur, usually accompanied by other diseases such as diarrhea, infections, digestive disorders, upper respiratory tract infections, anemia, and others.

Nutritional problems among elementary school students are influenced by various factors, including home environment, nutritional knowledge, eating patterns, access to nutritional sources, and nutrition education at school. Efforts to improve students' nutritional status require a holistic approach through interventions involving parents, schools, and the community as a whole.

CONCLUSION

The results of this study indicate that the nutritional problems of elementary school students are influenced by various factors, including the home environment, nutritional knowledge, eating patterns, access to nutritional sources, and nutrition education at school. Efforts to improve the nutritional status of students require a holistic approach through interventions involving parents, schools, and the community as a whole.

REFERENCES

Arisman, M. B. (2004). *Gizi dalam kehidupan.* EGC.

Anderson, J. W., Baird, P., Davis, R. H., Ferreri, S., Knudtson, M., Koraym, A., Waters, V., & Williams, C. L. (2009). Health benefits of dietary fiber. *Nutrition Reviews, 67*(4), 188–205.

Badan Pusat Statistik Provinsi Jambi. (2023). *Statistik kesehatan Provinsi Jambi tahun 2023.*

Berk, L. E. (2019). *Child development* (10th ed.). Pearson.

Black, R. E., Allen, L. H., Bhutta, Z. A., Caulfield, L. E., de Onis, M., Ezzati, M., Mathers, C., & Rivera, J. (2008). Maternal and child undernutrition: Global and regional exposures and health consequences. *The Lancet, 371*(9608), 243–260.

Black, R. E., Victora, C. G., Walker, S. P., Bhutta, Z. A., Christian, P., de Onis, M., Ezzati, M., Grantham-McGregor, S., Katz, J., Martorell, R., & Uauy, R. (2013). Maternal and child undernutrition and overweight in low-income and middle-income countries. *The Lancet, 382*(9890), 427–451.

Bucher, C. A., et al. (2018). Child and adolescent development and behavioral health. In *Essentials of public health biology: A guide for the study of pathophysiology.* Jones & Bartlett Learning.

Caulfield, L. E., de Onis, M., Blössner, M., & Black, R. E. (2004). Undernutrition as an underlying cause of child deaths associated with diarrhea, pneumonia, malaria, and measles. *The American Journal of Clinical Nutrition, 80*(1), 193–198.

Dinas Kesehatan Provinsi Jambi. (2023). *Laporan survei gizi siswa sekolah dasar tahun 2023.*

Gropper, S. S., Smith, J. L., & Groff, J. L. (2016). *Advanced nutrition and human metabolism.* Cengage Learning.

Harahap, H. T. D., Tanjung, R. D. S., & Nasution, F. (2023). Hubungan pengetahuan ibu tentang asupan gizi 1000 hari pertama kehidupan dengan tumbuh kembang anak. *Jurnal Keperawatan Priority, 6*(1), 19–28.

Ibnu, F. (2001). *Penilaian status gizi.* EGC.

Killen, M., & Smetana, J. G. (Eds.). (2006). *Handbook of moral development.* Psychology Press.

Mahan, L. K., Raymond, J. L., & Escott-Stump, S. (2016). *Krause's food & the nutrition care process.* Elsevier Health Sciences.

Mubarak, W. I. (2001). *Kebutuhan dasar manusia.*

Ng, M., Fleming, T., Robinson, M., Thomson, B., Graetz, N., Margono, C., Mullany, E. C., et al. (2014). Global, regional, and national prevalence of overweight and obesity in children and adults during 1980–2013: A systematic analysis for the Global Burden of Disease Study 2013. *The Lancet, 384*(9945), 766–781.

Piaget, J. (2014). *The psychology of intelligence.* Routledge.

Shrimpton, R., Rokx, C., & Stunting, B. W. G. (2013). Economic impacts. In *Disease control priorities in developing countries* (3rd ed., Vol. 2, pp. 47–68). The International Bank for Reconstruction and Development/The World Bank.

Smolin, L. A., & Grosvenor, M. B. (2017). *Nutrition: Science and applications.* John Wiley & Sons.

Stevens, G. A., Finucane, M. M., De-Regil, L. M., Paciorek, C. J., Flaxman, S. R., Branca, F., Peña-Rosas, J. P., Bhutta, Z. A., & Ezzati, M. (2013). Global, regional, and national trends in haemoglobin concentration and prevalence of total and severe anaemia in children and pregnant and non-pregnant women for 1995–2011. *The Lancet Global Health, 1*(1), e16–e25.

Whitney, E. N., & Rolfes, S. R. (2016). *Understanding nutrition.* Cengage Learning.