

## EVALUATION OF THE EFFECTIVENESS OF SCHOOL MEAL PROGRAM ON NUTRITIONAL STATUS AND LEARNING CONCENTRATION OF ELEMENTARY SCHOOL STUDENTS

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### **Abstract**

This study aims to examine the effectiveness of the school meal program in improving the nutritional status and learning focus of primary school students. The research method implemented in this study is the literature study method. The results suggest that school meal programs can play an effective role in tackling the problem of undernutrition and obesity among school children by providing access to balanced and wholesome meals. In addition, the findings indicated the continuation of food quality and quantity as determining factors in improving students' nutritional status and academic performance. The conclusion of this study emphasizes the importance of collaboration between schools, government and parents in supporting school meal programs. Investing in school meal programs will not only contribute to the improvement of children's nutritional status but also to increased academic focus and performance, which in turn, prepares a better foundation for their physical and academic future.

**Keywords:** Evaluation, Effectiveness, Food Program, Nutritional Status, Learning Concentration, Primary School.

### **Introduction**

The nutritional status of primary school children is an important indicator of their health and development. Many children who face nutritional problems often experience impaired growth, lack of energy, and difficulty concentrating in class. (Kim et al., 2022). Meeting nutritional needs during the developmental period is instrumental to ensure proper growth. A well-balanced diet strengthens the immune system, reducing the risk of illness or infection. In addition, nutritional intake supports brain development and intelligence, which in turn affects learning achievement and problem solving (Ahmad et al., 2022). (Ahmad et al., 2022).

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Malnutrition in children can have a serious impact on health, such as growth disorders, lack of energy, and even organ disorders. For this reason, parents or guardians need to ensure that children's diets are balanced, consisting of carbohydrates, proteins, fats, and vitamins and minerals. By providing adequate nutrition, we can help children grow and develop optimally according to their potential. (Saputra et al., 2021).

School meal programs are often used as a solution to improve nutritional status, especially for children from underprivileged families. However, the effectiveness of these programs still needs to be evaluated in depth. The relationship between nutrition and learning performance is of great concern in the world of education and health. (Djaga et al., 2022).. Children with good nutrition tend to be more focused and concentrated than those with nutritional problems. (Sulaiman, 2020).

School meal program evaluation research is highly relevant to improving children's health and education. A deeper understanding can be used as the basis for new policies in providing healthy food for students. (Y. N. Lestari et al., 2021)..

The Covid-19 pandemic has had a significant impact on child health and nutrition, especially in terms of access to healthy food. The importance of evaluating school meal programs has increased during this pandemic, especially in rural and urban areas. Research on school meal programs is essential to provide sustainable solutions (Mantutu et al., 2020).

Some of the criticisms of the school meal program include aspects of availability, quality and sustainability. Evaluation of the effectiveness of school meal programs needs to be done to identify potential improvements needed (Prinanta et al., 2024)..

Public awareness of the importance of child nutrition is increasing. Evaluation of school meal programs can be an important step to provide information that can support government decisions in providing healthy food for children. (Indra et al., 2021). The quality of education is strongly linked to children's health and nutrition. Evaluation of school meal programs is part of a holistic strategy to improve the quality of education through the provision of good nutrition. (Rachmat & Fajri, 2023).. Parents play a crucial role in ensuring that their children receive a good diet. School meal programs and their evaluation can also involve the role of parents as partners in improving children's nutrition and health. (A. Lestari, 2021).

Implementing a school meal program requires accurate and measurable data and information. Evaluating the effectiveness of school meal programs will contribute greatly to providing more reliable data. (I. Lestari et al., 2021).

Technology also plays an important role in facilitating the evaluation of school meal programs, for example by creating information systems and applications that can monitor and analyze the effectiveness of the program in real time. (Liemen et al., 2023)..

With the above background, research on evaluating the effectiveness of school meal programs on the nutritional status and learning concentration of primary school

students is important to address the need to improve the quality of children's health and education in Indonesia.

## **Research Methods**

The study conducted in this research uses the literature research method. The literature research method is an approach taken to collect and analyze existing information from various written sources such as scientific journals, books, theses, papers, and online articles. This method involves the process of searching, selecting, evaluating, and synthesizing information relevant to the research topic under study. (JUNAIDI, 2021); (Abdussamad, 2022); (Wekke, 2020).

## **Results and Discussion**

### **Nutritional status and the concept of evaluating the effectiveness of school meal programs**

Nutritional status is a condition of the body that reflects the intake of nutrients from the food consumed. Nutritional status can include an evaluation of the adequacy of nutrients needed for health, as well as an assessment of whether people are optimally nourished, undernourished, or malnourished. (Fitriana et al., 2023)..

The Ministry of Health defines nutritional status as a predetermined national standard for assessing whether or not a person is perfectly nourished. This definition provides clear guidance in assessing a person's nutritional condition. In addition, nutritional status can also be influenced by factors such as genetics, environment, socio-economics, diet, and behavior. (Demilew & Nigussie, 2020)..

Evaluating the effectiveness of a school meal program is an important process to determine the extent to which the program is successful in achieving its objectives and providing the expected benefits to students. Some of the concepts that can be used in evaluating the effectiveness of school meal programs include monitoring nutritional intake, the impact of the program on students' health and well-being, program sustainability, student participation, and the sustainability of the school meal program. (Hasan, 2022).

Monitoring nutrient intake is a key concept in evaluating the effectiveness of school meal programs. It involves measuring the quality, quantity and variety of food consumed by students. This evaluation is important to ensure that the school meal program can provide adequate nutrition for students' growth and development. (Liu et al., 2022).

The impact of the program on students' health and well-being also needs to be evaluated. This includes assessments of improved nutritional status, improved health, and improved concentration and academic performance. By evaluating these impacts, the extent to which the school meal program directly benefits students can be measured. (Edwarsyah & Hidayatullah, 2020).

In addition, the sustainability of the school meals program also needs to be evaluated to ensure the program continues to run in the long term. Evaluation of program sustainability involves factors such as government support, operational costs, and community participation in supporting the program.

Student participation in school meal programs is also an important concept in evaluating program effectiveness. By evaluating the level of student participation, it can be measured to what extent the school meal program has succeeded in attracting students to participate in the program. (Radiansyah et al., 2024)..

Finally, an evaluation of the effectiveness of the school meals program can also include an analysis of the sustainability of the program. Whether the program can be sustained in the long term without dependence on external resources that are not clear.

By combining these concepts, an evaluation of the effectiveness of a school meals program can provide a comprehensive picture of the extent to which the program benefits students and whether it should be continued or improved.

### **Evaluation of the effectiveness of the school meal program and its relationship with nutritional status and learning concentration of elementary school students**

The context of the text discusses the evaluation of the effectiveness of the school meal program, which includes aspects of nutritional status and student learning concentration. School meal programs in primary schools are considered capable of positively influencing these aspects if they are effective.

The first thing that needs to be considered in the evaluation is the nutritional intake of students through monitoring the nutrition provided. By knowing the program's contribution to meeting nutritional needs, it is possible to assess its effect on students' nutritional status which impacts their growth and health. The evaluation also looks at the effect of nutritional status on students' health, endurance, and learning focus. (Kaewpawong & Kusol, 2024)..

Effective school meal programs are also expected to increase the availability of energy for students. Through monitoring energy intake, it is known that the impact on students' learning concentration where adequate energy can maintain their focus and stamina at school. (Unmul et al., 2020).

In addition to nutritional aspects, the evaluation considers other factors such as the variety and quality of food, which affect student interest and acceptance, which in turn affects learning concentration. Nutritional programs are also considered to improve student attendance and its relationship with nutritional status, learning focus, and academic achievement. (Sogen, 2021).

Through a comprehensive evaluation, it is expected to identify the relationship between nutritional intake, body status and students' learning focus. Thus, factors that need to be improved so that the program provides optimal benefits for the nutritional status and learning concentration of students can be found.

## **Evaluation of the Effectiveness of the School Meal Program on the Nutritional Status and Learning Concentration of Elementary School Students**

School meal programs have long been implemented in various countries as an effort to improve the nutritional quality of learners, with the hope of positively affecting their concentration and learning achievement. These programs are designed to provide balanced and nutritious meals during the classroom learning process, ensuring that each student receives adequate nutrition to support their learning. Assessing the effectiveness of this program, especially for primary school students, is important to understand the real impact it has on learners' nutritional status and learning focus. (Sulaiman, 2020).

In this evaluation, the assessment of students' nutritional status is the main focus. Nutritional status was measured through indicators such as students' height, weight and nutritional intake. The results showed an improvement in the nutritional status of most students who participated in the school meal program. (I. Lestari et al., 2021). This improvement can be seen from the balanced nutritional intake that directly contributes to their physical growth and development. This factor provides a strong basis that the school meal program has played an important role in improving the quality of students' nutritional intake. (Mantutu et al., 2020).

Then, in relation to learning concentration, studies show that there is a positive relationship between improved nutritional status and students' concentration and learning achievement. Students who are well-nourished tend to have better learning focus during learning. This is because adequate nutrition provides the energy needed for the brain to focus, absorb and process information effectively. This assessment found that school meal programs were able to improve students' cognitive abilities as measured by improved academic test scores and observations of learning behavior in the classroom. (Indra et al., 2021).

However, school meal programs also face a number of challenges in their implementation. Issues such as availability of resources, quality of food ingredients, and students' food preferences are some of the factors that can affect the effectiveness of the program. Assessments show that not all students show significant improvement, indicating differences in response to the program that may be influenced by these factors. (A. Lestari, 2021).

In response to the evaluation results, it is important for program organizers to make adjustments and continuous improvements. Efforts to develop a varied and attractive menu for students, while still paying attention to nutritional aspects, are steps that can help increase the success of the program. In addition, conducting socialization sessions on the importance of nutrition for concentration and learning to students and

parents can also help increase awareness and success of the program. (Y. N. Lestari et al., 2021)..

In conclusion, the evaluation of the effectiveness of the school meal program on the nutritional status and learning concentration of primary school students showed positive results. The program successfully improved students' nutritional status and learning focus, which indirectly contributed to improved academic performance. However, to achieve more optimal results, continuous efforts are needed to improve the quality of the program and adjust to existing challenges.

### **Factors affecting the effectiveness of school meal programs**

The effectiveness of a school meal donation program depends on interconnected factors; an understanding of these factors can help in the planning and implementation of a successful program. The main determining factor is the quality and quantity of food served (Liemen et al., 2023).. Nutritionally balanced meals are necessary to support children's growth and development, but they are also important to keep them focused and energized throughout their time at school. Interesting menu variations can increase students' enthusiasm to consume the food provided, so that the nutritional goals of the program can be achieved more effectively. (Kwak, 2020).

The second factor is the affordability of the program for all students. An effective school meal program should be open to all students without exception, including those from families with limited purchasing power. Cross-support or free and paid meal programs are essential in ensuring that no student goes hungry while in the school environment. Affordability does not only mean the ease of obtaining food, but also includes locations and schedules that allow all students to benefit from the program. (Fitriana et al., 2023)..

Third, the participation and support of various parties including teachers, school staff, parents, and the local community greatly influence the success of the program. Education on the importance of good nutrition for health and learning can increase awareness and support for school meal donation programs. Working with nutrition experts to develop healthy menus, training for school caterers, and involving parents in program planning can help ensure that the food served not only meets nutritional standards, but is also appealing to students. (Sicherer, 2020).

Finally, continuous monitoring and evaluation is key to ensuring that the school meal donation program remains adaptive to the needs of students. Through direct feedback from students, parents and school staff, programs can continuously improve efficiency and effectiveness. Collecting data on student attendance, academic achievement and health levels can help identify the link between nutrition and learning outcomes and aid in decision-making regarding future program development. (Demilew & Nigussie, 2020).

In conclusion, the effectiveness of a school meal donation program depends not only on the quality of the food provided, but also on affordability, community support, and ongoing program adaptation and evaluation. This multifaceted approach can support the achievement of school nutrition goals while meeting the needs and preferences of students.

### **The relationship between nutritional status and learning concentration of elementary school students**

The nutritional status of primary school children is directly related to their ability to concentrate and learn. Good nutrition is the most important foundation for brain growth and development and cognitive function. Essential elements such as protein, essential fatty acids, vitamins and minerals play an important role in the formation and maintenance of brain cells, neurotransmitters and neural structures. If a child has a fit nutritional status, his or her body can support the biological processes needed for focus, memory, and information processing - key components in the learning process. (Hasan, 2022).

Conversely, lack of adequate nutrition can lead to malnutrition, which has a devastating impact on a student's learning capacity. Children who are malnourished-either due to a lack or excess of nutrients-often show reduced academic performance. For example, iron deficiency, which is essential for the transport of oxygen in the body, can cause anemia and lead to fatigue and decreased focus. Lack of other nutrients such as iodine, folic acid, and vitamin B12 can also reduce mental function and concentration, thus affecting students' ability to focus during class time. (Liu et al., 2022).

Environmental and socioeconomic factors often play a role in determining a child's nutritional status. Access to healthy and nutritious food is sometimes a challenge for families with low economic conditions, leaving children from these families at risk of nutritional problems. (Edwarsyah & Hidayatullah, 2020). On the other hand, poor diets such as excessive fast food consumption can lead to overweight or obesity among children, which is also associated with reduced cognitive ability. Thus, interventions that focus on improving the quality and quantity of nutrients consumed by primary school children could be key to supporting optimal nutritional status and good learning focus (Radiansyah et al., 2024)..

School meal programs that meet nutritional standards and nutrition education in primary schools can play a major role in addressing concentration issues related to nutritional status. Such initiatives not only help ensure that children get a lunch that meets their energy and nutritional needs, but also help teach them about the importance of healthy food. Nutrition education that starts early can equip students with the knowledge to make wiser food choices, which in turn supports better physical and mental health throughout their lives. (Antipolo et al., 2023). Thus, improving

nutritional status through appropriate interventions can improve children's focus and learning capacity in primary school and provide a solid foundation for future learning.

## Conclusion

An evaluation of the effectiveness of school meal programs on the nutritional status and learning focus of primary school students revealed good results. The main conclusion is that an appropriate school meal program can markedly improve the nutritional status of primary school children. This improvement in nutritional status, in turn, has a direct effect on improving students' learning focus and ability. This suggests a direct link between adequate nutrition and academic achievement.

In this study, it was clear that students who received balanced nutrition through the school meal program showed improvements in cognitive test scores and academic performance when compared to those who did not benefit from the program. This confirms the importance of access to foods that provide all the essential nutrient groups in the school environment. Based on the results of the study, children who consumed nutritious foods at school were better able to focus on learning tasks, experienced improved memory, and showed better problem-solving skills.

Another conclusion is that school meal programs can be an effective way to address nutritional health issues such as undernutrition or overweight and obesity among school children. By providing food choices that are rich in vitamins, minerals and other nutrients, the program plays an important role in reducing the incidence of nutritional deficiencies that can interfere with children's focus and learning. Consistency in the quality and quantity of food provided also ensures that all children have an equal opportunity to get the nutrition they need to learn effectively.

Based on the results, it is recommended that schools, governments and parents work together to support and invest in school meal programs. This could include increased budgets for school meals, stricter quality control, and nutrition education integrated into the school curriculum. Collaboration between school policies and support from families at home is essential to enforce the importance of nutrition and healthy eating in school children. These conclusions suggest that through effective school meal programs, there can be nutritional and educational improvements that benefit children as a whole, forming a healthier and smarter generation.

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