

Are the Early Children's School Meals Diverse, Nutritious, Balanced, and Safe?

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ABSTRACT

Building children's understanding and habits in consuming diverse, nutritious, balanced, and safe foods is not an easy thing. Early Childhood Education institutions or in Indonesia called Early Childhood Education are an environment that has a role and influence on various developments, behaviors, and habits of children after the family. In the concept of food security, the food that must be consumed and most easily socialized is the *B2SA (Beragam, Bergizi, Seimbang, dan Aman)* concept in Bahasa, or Diverse, Nutritious, Balanced and Safe. The research was conducted through a survey in six Early Childhood Education in Serang City and 52 early age Children. The research found that children's meals already contain various food elements, but the children may not get the safe intake. None of the six schools had a food security policy, especially those that regulated diverse, nutritious, balanced, and safe foods.

Keywords: *Diverse, Nutritious, Balanced and Safe Meals, Food Security*

1. INTRODUCTION

Early childhood is the most important age in shaping children's potential. The potential for physical, spiritual, language, emotional, intellectual, and art development and skills are developed better when they are cultivated from an early age. Nutrition plays an important role in the growth and development of early childhood. Malnutrition in this golden period will result in health problems, failure to thrive or stunting, and low intelligence of children. Parents, communities, schools, and the government have a shared responsibility in fulfilling children's nutrition.

Building children's understanding and habits in consuming diverse, nutritious, balanced, and safe foods is not an easy thing. Early Childhood Education institutions or in Indonesia called Early Childhood Education are an environment that has a role and influence on various developments, behaviors, and habits of children after the family. Including eating habits. Food consumption for early childhood at school can be seen during snack time activities. The snack time activity is one of the moments where children take a break from learning activities to enjoy food and drinks that are brought from home or provided by the school's catering.

At this time early childhood is known as "neophobic eaters" which means that children have to try different types of food as often as possible before becoming predisposed to certain types of food [1]. Snack time activities certainly always involve parents, because no matter what the children consume, they are prepared by parents from home, or even though they come from school, parents still know what their children eat. Nutritional problems cannot be separated from the food issue of a country or region. Nutrition is not only the responsibility of the head of the family to replenish nutrients family members, but also about how the state comes to ensuring the state food security and nutrition.

The term "food security and nutrition" acknowledges the importance of nutrition for achieving food security but maintains the traditional focus on food availability, access, and stability [2]. Food security according to Law of the Republic of Indonesia Number 18 of 2012 Article 1 Point 4 is a condition for the fulfillment of food for the state to individuals, which is reflected in the availability of sufficient food, both in quantity and quality, safe, diverse, nutritious, evenly distributed, and affordable and not contrary to the religion, belief, and culture of the community, to live a healthy, active and productive life in a sustainable manner [3]. Law of the Republic of

Indonesia Number 18 of 2012 also states that food is everything that comes from biological sources of the agricultural, plantation, forestry, fishery, animal husbandry, water, and water products, both processed and unprocessed which are designated as food or drink for human consumption, including food additional materials, food raw materials and other materials used in the processes of the preparation, processing and / or manufacture of food and beverages [3].

In the concept of food security, the food that must be consumed and most easily socialized is the B2SA (Beragam, Bergizi, Seimbang, dan Aman) concept in Bahasa, or Diverse, Nutritious, Balanced and Safe [5]. Applying the concept of diverse, nutritious, balanced, and safe eating does not have to be in the form of foods that are expensive and delicious, but the most important thing is that they are diverse, nutritious, balanced (food pyramid), and are safe from additives and substances that are harmful to the body.

In 2019, Indonesia was ranked 62 out of 113 countries with a score of 62.6 based on the Global Food Security Index which is measured in terms of food availability, affordability, food safety, and quality [6]. For the National Food Security Index, the score of Banten Province is 74.7 and is ranked 11th out of 34 Provinces, while for Serang City the IKP score is 61.4, which is ranked 88th out of 98 cities in Indonesia [6]. The Food Security Index for Serang City is slightly above other cities with the lowest 5 ranks, 94 to 98, which are categorized as food vulnerable [6].

The key to the success of a nation is superior human resources born from superior early childhood. Therefore, stimulation at this time is the main key in optimizing growth and various aspects of children's development, including stimulating the habit of consuming adequate food, both in quantity and quality, safe, diverse, nutritious, equitable, and affordable or known as diverse, nutritious, balanced and safe. The snack can be interpreted as consuming energy other than breakfast, lunch, and dinner [7]. The essence of this snack is also in line with the statement by Chaplin and Smith [8], that snacking as food or drink is eaten between main meals. So, the essence of a snack is the food or drink that is consumed between breakfast, lunch, or dinner.

In the learning process in snack time is usually done after the core activity time or in between the two core activity times. Snack time is a time of rest for children after the child completes core activities by consuming food and drinks. Early childhood who are growing and developing have large energy needs and small stomachs, therefore food consumption for children must exceed the standard of three meals a day. Snack time is a time of rest for children after the child completes core activities by consuming food and drinks. Early childhood who are growing and developing have large energy needs and small stomachs, therefore food consumption for children must exceed the standard of three meals a day. Snack

time can also be an important time to introduce a variety of new foods and the ingredients of these meals.

Healthy food is food that contains nutrients. Meanwhile, the nutrients themselves are substances that are needed by the body. These nutrients are carbohydrates, proteins, and fats. Then also vitamins and minerals which are very beneficial for the child's body. The best snacks are those that are rich in nutrients, carbohydrates, and protein, including vitamins A and C. The purpose of this study was to find out whether the children's food brought by parents or provided by catering was diverse, nutritious, balanced, safe, and does the Early Childhood Education institution have a policy related to food security.

2. METHOD

The research was conducted through a survey in six Early Childhood Education institutions in Serang City, both formal and non-formal Early Childhood Education. Data were collected using a questionnaire filled out by the teacher and the Early Childhood Education Principal. Data on children's food consumption that is diverse, nutritious, balanced, and safe were collected from 52 children's meals brought by their parents or provided by schools/catering in one day based on teacher observations. Also, the data of the Food Security Policy at school was taken from 6 school principals in Serang City. The data were analyzed descriptively in the form of a percentage.

3. RESULT

Based on the results the observation on 52 children showed that 100% of children consumed foods containing carbohydrates and animal protein. Children who consume different foods every day, and consume enough water as much as 92.6%. As many as 94.2% of children have consumed vegetables, fruit, and vegetable protein. This data is obtained using an instrument that has indicators of diverse, nutritious, balanced, and safe meals.

For the diverse and nutritionally balanced aspects, the above percentages illustrate that children's food consumption is diverse, nutritious, and balanced. For the aspect of safe food consumption, the results of 52 children showed that 44.2% of children still consumed fried foods and foods with high levels of salt, sugar, and flavor. Also, 26.9% of children still consume fast food or packaged foods. More data sources with diverse children's backgrounds in the future are still needed to get other possibilities in the results of the study, however, these 52 children data can illustrate that there are still many parents or school food providers (catering) who have not provided safe intake for children. The following is data related to foods consumed by children (Table 1).

In supporting the food security program launched by the government, this study also collects data in the form of whether or not there are school policies or regulations

Table 1. Consumption of diverse, nutritious, balanced, and safe children's meals in Early Childhood Education

No.	Statement	Answer (%)		
		Yes	No	Maybe
1.	Children consume different foods every day at school	96.2	3.8	-
2.	Children consume enough water at school	96.2	1.9	1.9
3.	Children consume foods containing carbohydrates at school	100	-	-
4.	Children consume vegetables at school	94.2	1.9	3.8
5.	Children consume fruit at school	94.2	1.9	3.8
6.	Children consume animal protein at school	100	-	-
7.	Children consume vegetable protein at school	94.2	1.9	3.8
8.	Children consume foods that are fried / high in salt / flavoring / high in sugar at school	44.2	55.8	-
9.	Kids used to wash hands with soap before eating	96.2	3.8	-
10.	Children consume fast food / instant / packaged food at school	26.9	73.1	-
11.	Children know healthy food and unhealthy food	92.3	7.7	-

Table 2. Food Security Policy in Early Childhood Education Serang City

No.	Question	Answer (%)		
		Yes	No	Maybe
1.	Do you know what "Food Security" is?	100	-	-
2.	Does your institution have rules for parents/caterers regarding the food that must be brought for children?	66,7	16,7	16,7
3.	Does your agency free parents/caterers to provide any food menu for children?	50	50	-
4.	Does your institution allow parents/caterers to provide children with fast food?	33,3	66,7	-
5.	Does your institution prohibit parents/caterers from providing food high in salt/sugar/oil?	33,3	50	16,7
6.	Do you give any warning or advice to parents or caterers who provide children with instant food or high salt/sugar/oil?	83,3	16,7	-
7.	Do you give any warning or advice to parents or caterers who provide the children with the same food every day?	100	-	-
8.	Is there a healthy eating program at your institution?	100	-	-
9.	Do you have healthy food learning material that is stored and played by children in the classroom?	66,7	33,3	-
10.	Is there a particular theme that talks about Banten foods in the curriculum?	50	33,3	16,7

related to food security, especially diverse, nutritious, balanced, and safe foods in 6 Early Childhood Education in Serang City. Research also found that 100% of Early Childhood Education Principals know about Food Security, but only 83.3% of respondents have the correct answer about the concept of Food Security (instrument item 2). Furthermore, 66.7% of Early Childhood Education have regulations regarding what foods parents/caterers must prepare as children's supplies but do not specify the type of official regulations (for example meal schedules, regulations, food and beverage standard operating procedures, or others).

For other pre-research findings regarding the schedule of healthy eating programs at school in a month (instrument item 4), as many as 33.3% of respondents had a healthy eating program 4 times and 2 times a month, while 16.7% of respondents had a healthy eating program. 1 and 3 times a month. The following data is data related to Food Security Policy in Early Childhood Education, Serang City (Table 2).

4. DISCUSSION

Nutritional needs are indeed an interesting topic to discuss. The results of this study showed that there was 100% of children consumed food containing carbohydrates and animal protein. Carbohydrates and protein are important in child development, namely as a source of energy and building materials. Lack of these

two substances can cause growth problems in children since they are the main substances that the body needs [9].

The nutritional content of the food consumed by children is also very diverse and can be said to be feasible even though it is still a catering service provider that has not provided balanced nutrition. This is what parents need to pay attention to choosing children's menus. As a result of research by Handini et.al which states that there is a positive influence between diet and nutritional status of early childhood [10]. This dietary pattern also shows the importance of the knowledge of parents and teachers on children's nutritional needs as the result of research by Fitriana et.al which states that parents' knowledge of children's nutritional needs determines the presentation and formation of food [11].

Apart from parents, of course, the school plays an important role in determining food for early childhood when using student food supply facilities. The results showed that not all respondents, namely the Early Childhood Education School, knew about food security. This shows that the issue of fulfilling children's nutrition in schools still needs to be improved, as was the result of research by Kristianto et.al which stated that the nutritional content and food safety of children in schools still need to be improved [12].

Food security aspects consist of food availability, food access, food utilization [4]. Food availability is the ability to have a sufficient amount of food for basic needs. Access to food is the ability to have the resources, economically and physically, to obtain nutritious food. The utilization of food is the ability to use food ingredients correctly and appropriately proportionally. Thus, a country or region is said to be successful in developing food security if there is an increase in food production, smooth food distribution, and consumption of food that is safe and nutritionally adequate for the entire community.

The important role of schools in determining children's food and nutritional adequacy also triggers the policies implemented by each school. The results of this study indicate that the majority of Early Childhood Education schools have regulations on the presentation and selection of food from schools and that must be prepared by children. This regulation shows the importance of the involvement of parents and schools in determining children's nutritional intake [13]. Evaluation of policies and programs to fulfill child nutrition needs to be carried out continuously to classify various food categories [14].

5. CONCLUSION

School meals for early childhood age already contain various food elements, containing carbohydrates, animal and vegetable protein, vegetables, fruits, enough water, but there are still many high levels of oil, sugar, salt, flavoring, and instant food. Children may not get a safe intake. None of the six schools studied had a food security policy, especially those that regulated diverse, nutritious, balanced, and safe foods. More data sources with diverse children's backgrounds in the future are still needed to find other possibilities in the research results. Schools must also be strict in implementing food-related regulations that must be prepared by parents or food service providers for children at school.

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