

NUTRITIONAL STATUS OF TEACHERS AT SEKOLAH ALAM NURUL ISLAM

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Abstract

Sekolah Alam Nurul Islam provides snacks and lunch facilities for teachers working there. Anthropometric status can describe the condition of adequate energy and protein intake. Identification of nutritional status can also be used as a reference in determining the nutritional adequacy of food served. This study's objective is to determine the nutritional status of teachers at Sekolah Alam Nurul Islam. This was an observational study involving 98 subjects at Sekolah Alam Nurul Islam, Yogyakarta. This study was conducted in June 2019. Nutritional status was observed based on anthropometry. Bodyweight and height were measured directly using microtoice and digital body scale, then the data was used to calculate the body mass index (BMI). BMI was categorized as underweight when <18.5, normal if 18.5-25, and overweight if >25. Total of 47.96% were of normal nutritional status. An abnormal nutritional status consists of 6.12% with underweight nutritional status and 45.92% with overweight nutritional status. Most teachers have normal and overweight nutritional status. This data was considered in calculating the nutrition adequacy in the food service in schools.

Keywords : food service; nutritional status; teacher; anthropometric status

1. INTRODUCTION

Teachers are human resources in schools who are also responsible for educational activities for students in schools. Teacher plays an important role in achieving the quality of education, mainly determined by the learning process. Health factors become one of the factors that affect teacher performance [1].

One health indicator that is nutritional status, is a concern on work nutrition because it plays an important role in increasing work productivity. Fulfillment of nutritional adequacy of workers while working is one form of application of occupational safety and health requirements as part of efforts to improve the health status of workers [2].

Nutritional status assessment is needed to determine nutritional status, determine both nutritional needs and nutritional adequacy, and plans for providing nutrition interventions. Assessments of anthropometric status are appropriate for large populations and can monitor the difference in nutritional status [3]. On the other hand, nutritional status is used to determine dietary needs, and ultimately it can also determine the nutritional adequacy in community group.

Sekolah Alam Nurul Islam carries out educational activities for students in kindergarten, elementary and junior high schools. Food is held every working day, providing facilities of snack and lunch for employees, teachers, and students. The food service at Sekolah Alam Nurul Islam is included in the organization of institutional food, so it is necessary to calculate the nutrition adequacy to accommodate the nutrition requirement of customer.

The purpose of this study was to provide an overview of the nutritional status of teachers at Sekolah Alam Nurul Islam. The results of the study can be used to evaluate the nutritional status of

teachers, considerations in determining the food portion for teachers, and as an evaluation of the foodservice.

2. METHODS

This study was an observational study with a cross-sectional design. Data were collected in July 2019 at Sekolah Alam Nurul Islam, Yogyakarta. Subjects were 98 people, who were teachers in Kindergarten, Elementary, and Junior High Schools. Bodyweight and height were measured directly using microtoice and digital body scale, then the data was used to calculate the body mass index (BMI). BMI was categorized as underweight when <18.5 , normal if $18.5-25$, and overweight if >25 [4]. This research was part of "Oyster Mushroom Based Pleurotus (*Pleurotus ostreatus*) Product Development as an Alternative to Monosodium Glutamate", which has received an Ethical Clearance from the Komisi Etik Penelitian Kesehatan, Universitas Respati Yogyakarta with Number No. 146.3 / FIKES / PL / V / 2019.

3. RESULTS AND DISCUSSION

The subjects were dominated by elementary school teachers, which was 53.06%. The number of teachers in primary schools is quite significant given a large number of class divisions for elementary school students. The majority of sexes are female, which is 62%. Total of 47.96% was of normal nutritional status. An abnormal nutritional status consists of 6.12% with underweight nutritional status and 45.92% with overweight nutritional status. Characteristics of respondents were seen in Table 1.

Table 1. Characteristics of Respondents

Characteristics	n=98	%
Units		
Kindergarten	29	29.59
Elementary School	52	53.06
Junior High Schools	17	17.35
Sex		
Male	36	36.73
Female	62	63.27
Nutritional Status		
Underweight	6	6.12
Normal	47	47.96
Overweight	45	45.92
Length of work		
< 1 year	0	0
≥ 1 year	98	100

Nutritional status describes the fulfillment of nutritional needs obtained from the intake and use of nutrients by the body. *Riset Kesehatan Dasar* results show an increase in the proportion of overweight in adults. The proportion in Yogyakarta showed a number close to the national number of around 21.8 % [5]. Nutritional status assessment in this study used anthropometric status assessment. Anthropometric status assessments can describe changes in nutritional status, but were less sensitive and cannot detect effects on nutritional status in a short time. The anthropometric status also has not been able to

identify specific nutritional deficiencies. However, anthropometric status can reflect past exposures, current processes, or future events [3].

Results of this study indicate a high proportion of overweight teachers in the Sekolah Alam Nurul Islam. Several other studies involving school teachers also showed the number of subjects with overweight. A study involving teachers in Semarang stated that 80.4% had a BMI ≥ 25 [6]. Study on teachers in SMP Negeri 1 Dramaga Kabupaten Bogor showed that 51.4% of subjects had obesity with 31.4% of subjects included in level I obesity and 20% of subjects included in level II obesity category. As many as 20% of subjects have overweight nutritional status. Subjects who had normal nutritional status were 22.9% and 5.7% had underweight nutritional status [7].

Risk factors for obesity in adults are thought to originate from lifestyle changes, including eating patterns and lack of physical activity. Eating patterns affect the type of food and the number of calories that enter the body. Therefore, eating habits must be balanced with physical activity so that there is a match between the incoming energy and the energy used [8]. Sekolah Alam Nurul Islam is a school with a natural concept so that it allows physical activity in the school. Decreased physical activity can be caused by a large number of sedentary behaviors at work and at home. The low level of physical activity was also caused by increased use of transportation.

Obesity could trigger degenerative diseases. Obesity is associated with metabolic syndrome, type 2 diabetes, hypertension, heart disease, reproductive health, and cancer [8]. Other studies also mention a relationship of physical activity with risk factors for obesity. Physical activity and gender significantly influence blood cholesterol levels. Food fiber and fat intake have a significant effect on blood cholesterol levels [9]. Gender, age, marital status, ethnicity, occupation, smoking, alcohol intake, family history of overweight and obesity, sleeping habits after the meal in the evening, following weight reduction methods were significant factors associated with nutritional status of adults [10].

Nutritional status can describe the results of a previous eating habit. An eating pattern that caused obesity, were higher energy of foods consumption, high in fat, high in mono carbohydrates, and low in fiber [8]. All subjects have worked for more than one year, so it can be said that all subjects have received food from school during the work period. Sekolah Alam Nurul Islam provides snack and lunch facilities for employees, teachers, and students at the school. The high proportion of teachers who are overweight can be used as an evaluation of ongoing food management. However, there are many other risk factors for obesity, which were not examined in this study.

Determination of nutritional status can also used as a consideration in determining the adequacy of nutrition in the administration of food [11]. Nutrition adequacy were used as a reference for the types of dishes and portions that were served to consumers in the foodservice. The serving of food provided can be used as an education media for food consumption because the food served were adjusted to the nutritional adequacy of the customer.

4. CONCLUSION

Most teachers have normal and overweight nutritional status. This data was considered in calculating the nutrition adequacy in the food service in schools.

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