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Analysis of Factors Associated with Nutritional Status in School-Age Children at SD Negeri 10 Benteng Sidrap Regency

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Abstract

Nutrition is very important in growth and development. Good nutritional status requires more attention because poor nutritional status in children will affect mental, physical growth or thinking abilities, of course, will reduce the level of productivity and ability in adulthood. The aim of this research is to determine the factors associated with the nutritional status of school- age children at SD Negeri 10 Benteng Sidrap Regency. Quantitative research method with a cross sectional study design. The sample consisted of 158 students at SD Negeri 10 Benteng. Data was collected using questionnaires and measurements of body weight and height. Data analysis used the Chi Square Test with a 95% confidence level. The results of this study show that there is a relationship between income with p value = 0.000, knowledge about nutrition with p value = 0.000, parents' education with p value = 0.000, parents' occupation with p value = 0.025, students' snack habits with p value = 0,000, with the student's nutritional status. The conclusion is that the factors that influence nutritional status are income, knowledge about nutritional status, parental education, parental occupation, parental characteristics and snack habits.

Keywords: Factor Analysis, Nutritional Status, School Age Children, SD Negeri 10 Benteng

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1. Introduction

One of the pillars of public health is nutrition. Nutrition is a very important part of growth and development. Nutrition is closely related to intelligence and health. Therefore,

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nutrition is one of the determinants of the quality of human resources. Good nutritional status in children needs to receive more attention because when a child's nutritional status is poor it can hinder mental, physical growth and thinking abilities and of course will reduce work productivity and work performance in adulthood (Hikmawati, 2016).

A public health problem will be considered serious if the prevalence of malnutrition and malnutrition is between 20.0 -29.0 %, and is considered very serious if the prevalence is very high, namely ≥30 percent (WHO 2010). In 2013, nationally the prevalence of malnutrition and undernutrition in children was 19.6 % , which means that the problem of severe and undernutrition in Indonesia is still a public health problem approaching high prevalence. (RISKESDAS, 2013).

Currently, nutrition and health problems are problems that are still a phenomenon in Indonesia. According to the Ministry of Health, in the results of monitoring nutritional status in 2017, nationally, the prevalence of nutritional status of children aged 5-12 years based on the BMI/U index in 2017 was 3.4% malnourished and 7.5% undernourished. Among the 34 provinces in Indonesia, 32 provinces have characteristics of acute-chronic nutritional problems.

The nutritional status of elementary school children is still a very serious problem because it will continue into adulthood and have a negative impact on future health. This of course cannot be separated from students' knowledge, students' physical activity and students' food and snack consumption patterns. because if this goes well it can influence actions in terms of improving nutrition so that it can influence the level of growth and development of children which in the end can influence their health status and especially in terms of nutritional status.

2. Research Methods

This type of research is quantitative with a cross sectional design. Data collection and processing process. The data analysis process consists of univariate and bivariate analysis using the Chi Square test with alpha (α) 0.05. This research uses primary data obtained from questionnaires.

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3. Results and Discussion

a. Results

Table 1.
Distribution Frequency Status Nutrition in Children

Respondent Characteristics	Amount	Percentage
Status Nutrition :		
Very thin	17	10.8
Thin	29	18.4
Normal	55	34.8
Fat	48	30.4
Obesity	9	5.7
Total	158	100

Based on table 1 of the respondents sampled at SD Negeri 10 Benteng, the results of the respondents studied from the table above can be concluded that the distribution of children who experienced normal nutritional status was at most 55 students (34.8 %). Based on table 1 it can be seen from 158 respondents that found percentage the highest gender distribution was male - 84 students (53.2 %).

Table 2.
Frequency Distribution of Student Respondent
Characteristics and Characteristics Person Old Student SD Negeri 10 Benteng

Characteristics	Amount	Percentage
Respondent		
Type Sex:		
Man – man	84	53.2
Woman	74	46.8
Total	158	100
Money Pocket :		
Low ≤ IDR 5,000	51	32.3
Tall > IDR 5,000	107	67.7
Total	158	100
Knowledge :		
Not enough	94	59.5

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Pretty good	33	20.9
	31	19.6
Total	158	100
Activity Physique :		
Heavy	76	48.1
Light	82	51.9
Total	158	100
Education		
Parent		
Low	42	26.6
Tall	116	73.4
Total	158	100
Work		
Parent :		
Self-employed	81	51.3
Employee	77	48.7
Total	158	100
Income		
Parent		
Low ≤ IDR 3,500,000	85	53.8
Tall > IDR 3,500,000	73	46.2
Total	158	100

On the distribution of pocket money, more than half of the respondents Which own Money pocket > IDR 5,000 per day that is 107 student (67.7%). On distribution knowledge, most students had less knowledge as many as 94 students (59.5%). In the distribution of physical activity, the majority of students who had light physical activity were 82 students (51.9%).

Table 3.
Distribution Frequency Types of Meals and Frequency of Meals

Characteristics	Amount	Percentage
Respondent		
Types of Carbohydrates		
Not enough	30	19

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Various		
Various	128	81
Total	158	100
Type Proteins :		
Not enough Various	112	70.9
Various	46	29.1
Total	158	100
Type Vegetable and fruit :		
Not enough Various	34	21.5
Various	124	78.5
Total	158	100
Carbohydrate Frequency :		
One More Time a Day from	50	31.6
Once a Day	108	68.4
Total	158	100
Frequency Proteins :		
One Time a day	86	54.4
More from Once a Day	72	45.6
Total	158	100
Frequency of Vegetables and Fruit		
One Time a day	104	65.8
More from Once a Day	54	34.2
Total	158	100

In the distribution of parental education, most students have educated parents height 116 student (73.4%) In the distribution of parents' work, Most students have parents who are self-employed, 81 students (51.3%). On the distribution of parental

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income, part big student own person low-income parents <Rp. 3,500,000 as many as 85 students (53.8%).

Based on table 3, it was found that the highest percentage of students consumed this type Eat carbohydrate diverse as many as 128 students (81%), eat protein less diverse as many as 112 students (70.9%), and as many as 124 students (78.5%) eat various types of vegetables and fruit. Meanwhile, the highest percentage of students who consumed carbohydrates more than once a day was 108 students (68.4%), the frequency of eating protein once a day was 86 students (54.4%), and the frequency of eating vegetables and fruit once a day was 104 students (65.8%).

Table 4.
Distribution Junk Frequency Food

JunkFood _	Amount	Percentage
More Than Once A day	59	37.3
One Times a day	99	62.7
Total	158	100

Based on table 4, it can be seen from 158 respondents that the highest percentage was found on student Which consume junk food once a day as many as 99 students (62.7%).

Table 5.
Distribution Frequency of Snacking Habits

Snacking habits	Amount	Percentage %
No Good	78	49.4
Good	80	50.6
Total	158	100

Based on table 5, it can be seen from 158 respondents that the highest percentage was found to be students who had good snacking habits, namely 80 students (50.6%).

Respondent Characteristics

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Based on table 5, the research results show that the male gender with abnormal nutritional status was 52 students (61.9%), while the normal nutritional status was 32 students (38.1%), and the female gender with abnormal nutritional status was 51 students (68.9%), while normal nutritional status was 23 students (31.1%). If you look at the results of this research, based on the chi square statistical test results, it shows that there is no significant relationship between gender and students' nutritional status because the p value is 0.450 > 0.05.

Based on the results of the research, it was found that respondents who had pocket money ≤ IDR 5,000 experienced abnormal nutritional status, namely 39 students (76.5%), while normal nutritional status was 12 students (23.5%), respondents who had pocket money > IDR 5,000 experienced abnormal nutritional status, namely 64 students (59.8%), while 43 students (40.2%) experienced normal nutritional status. If we look at the results of the Chi Square test, p value = 0.061, it can be concluded that there is no significant relationship between pocket money and nutritional status.

Pocket money is pocket money that students get every day. Pocket money for school age children at SD Negeri 10 Benteng ranges from < Rp. 5,000, up to Rp. 5,000 – Rp. 15,000. According to Munawarrah, Amminuddin & Hendrayati, 2013, the amount of pocket money will tend to consume more than teenagers who have little pocket money.

Pocket money influences the number of goods or other necessities needed by children, including buying food for consumption. In this research, it is known that the average student's pocket money is >Rp. 5,000,-, because the income of the student's parents also allows for quite high allowances.

Based on the results of the relationship between knowledge and nutritional status, it was found that respondents who had less knowledge experienced abnormal nutritional status, namely 78 students (83.0%), while 16 students (17.0%) had normal nutritional status.

Respondents who had sufficient knowledge experienced abnormal nutritional status, namely 22 students (66.7%), while normal nutritional status was 11 students (33.3%). And respondents who had good knowledge experienced abnormal nutritional

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status, namely 3 students (9.7%), while 28 students (90.3%) had normal nutritional status. The Chi Square test results obtained p value = 0.000, so there is a significant relationship between knowledge and nutritional status. From the results of the analysis, values are also obtained OR = 0.054, meaning that students who have poor knowledge are 0.054 times more likely to experience abnormal nutritional status than students who have good knowledge. Meanwhile, the results of the analysis also obtained a value of OR = 0.022, meaning that students who have sufficient knowledge are 0.022 times more likely to be at risk of experiencing abnormal nutritional status than students who have good knowledge.

This is because good knowledge means students can know what Based on the results of the relationship between physical activity and nutritional status, it was found that respondents who had heavy physical activity experienced abnormal nutritional status as many as 47 students (61.8%), while as many as 47 students (61.8%) had normal nutritional status. 29 students (38.2%). Meanwhile, respondents who had light physical activity experienced abnormal nutritional status, namely 56 students (68.3%), while 26 students (31.7%) had normal nutritional status. If we look at the results of the Chi Square test, p value = 0.494, it can be concluded that there is no significant relationship between physical activity and nutritional status.

This research is in line with Retno and Dewi's 2017 research entitled “The Relationship between Nutritional Knowledge, Physical Activity and Diet on the Nutritional Status of Adolescents in Purwosari Laweyan Subdistrict, Surakarta".

Characteristics of Respondents' Parents

Based on the research results table, it shows that the parents of students with low education had abnormal nutritional status as many as 38 students (90.5%), while 4 students (9.5%) had normal nutritional status. And the parents of students with higher education had abnormal nutritional status as many as 65 students (56.0%), while 51 students (44.0%) had normal nutritional status. The results of the analysis also obtained a value of OR = 7.454, meaning that parents of students who have low education have a 7.454 times greater risk of their children experiencing abnormal nutritional status compared to parents of students who have higher education.

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The results of the analysis also obtained a value of OR = 0.443, meaning that parents of students who have self-employed jobs have a 0.443 times greater risk of their children experiencing abnormal nutritional status compared to parents of students who have employee jobs.

4. Conclusion

In this research, based on research that has been carried out at SD Negeri 10 Benteng by looking at factors related to the nutritional status of elementary school students, conclusions can be drawn based on research. Relationship between respondent characteristics (Gender, Pocket Money, Knowledge of Balanced Nutrition, and Physical Activity) with the Nutritional Status of school age students at SD Negeri 10 Benteng. It was found that only knowledge of balanced nutrition had a relationship with nutritional status, while gender, pocket money and physical activity had no relationship with nutritional status. (Gender p value 0.450, Pocket Money p value 0.061, Knowledge of Balanced Nutrition p value 0.000, and Physical Activity p value 0.494).

Based on research on the relationship between the characteristics of the respondent's parents (Parents' Education, Parents' Occupation, Parents' Income) with the Nutritional Status of school age students at SD Negeri 10 Benteng. It was found that all three were related to nutritional status, namely parental education, parental employment, and parental income. (Parental Education p value 0.000, Parental Occupation p value 0.025, Parental Income p value 0.000).

Based on research on the relationship between type of food and nutritional status of school age at SD Negeri 10 Benteng. It was found that there was no relationship between the type of food and nutritional status. (Type of Carbohydrate p value 0.084, Type of Protein p value 0.578, Type of Vegetables and Fruit p value 0.892).

Based on research on the relationship between eating frequency and nutritional status at school age at SD Negeri 10 Benteng. It was found that there was no relationship between eating frequency and nutritional status. (Carbohydrate Frequency p value 0.694, Protein Frequency p value 0.850, Vegetable and Fruit Frequency p value 0.805).

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1. Based on research on the relationship between junk food consumption and the nutritional status of school age at SD Negeri 10 Benteng. It was found that there was no relationship between junk food consumption and nutritional status with a p value of 0.990.
2. Based on research on the relationship between students' snack habits and the nutritional status of school age at SD Negeri 10 Benteng. It was found that there was a relationship between students' snack habits and nutritional status with a p value of 0.000.

5. Compliance with ethical standards

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Disclosure of conflict of interest

This research collaboration is a positive thing for all researchers so that conflicts, problems and others are absolutely no problem for all writers.

Statement of informed consent

Every action we take as authors is a mutual agreement or consent.

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