RELATIONSHIP BETWEEN KNOWLEDGE AND FIBER CONSUMPTION WITH NUTRITIONAL STATUS TO THE EMPLOYEES OF BUMI PANUA HOSPITAL, POHUWATO REGENCY

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ABSTRACT

Basic Health Research (Riskesdas) 2018 states that the prevalence of obesity or overweight in adults over 18 has continued to increase from year to year since 2007. The formulation of the problem in this study is whether there is a relationship between knowledge and fiber consumption with the nutritional status of the employees of BumiPanua Hospital, Pohuwato Regency. The research aimed to determine whether there was a relationship between knowledge and fiber consumption with the nutritional status of the employees of BumiPanua Hospital, Pohuwato Regency.

This research is an observational study conducted with a quantitative approach with a cross-sectional design. This research was conducted for 2 months, from May to June 2020, at BumiPanua Hospital, Pohuwato Regency. The population in this study were 469 employees at BumiPanua Regional General Hospital, Pohuwato Regency, with a total sample of 47 employees. The data analysis technique used is the chi-square test.

The results of statistical tests show that there is no relationship between knowledge of fiber and the nutritional status of employees at BumiPanua Hospital of Pohuwato Regency, and there is a relationship between fiber consumption and the nutritional status of employees at BumiPanua Hospital, Pohuwato Regency.

The recommendation of the results of this study is the need to consume foods containing fiber in daily consumption with the main sources of plants, vegetables, cereals, fruits, nuts.

Keyword: fiber knowledge, fiber consumption, nutritional status.

INTRODUCTION

Everyone longs for health because it is the main asset in life, everyone definitely needs a healthy body, both physically and spiritually to support life's activities.

The increasing standard of living of people, especially in developed countries and big cities, brings changes to individual patterns. Changes in lifestyle also lead to changes in existing disease patterns, especially in diseases related to a person's lifestyle. This condition changes the number of cases of infectious diseases which were initially ranked first but now shifted to degenerative and metabolic diseases which rank at the top [1].

According to Aklima et al, the diet in big cities has changed from a traditional pattern that contains lots of carbohydrates and fiber to a modern pattern with high protein, fat, sugar, and salt content but is poor in fiber. This change in appetite tends to move away from the concept of a balanced diet so that it has a negative impact on health and nutrition. Diets high

in saturated fat and sugar, low in fiber will cause obesity problems, excess nutrition, and increase free radicals that can lead to degenerative diseases [1].

The best effort to reduce cases of degenerative diseases is through prevention. The best prevention is to change the main risk factors for degenerative disease, namely by improving diet and increasing physical activity. These risk factors increase along with lifestyle changes such as people's eating habits towards consumption of foods high in fat and sugar and types of work that do not expend much energy (sedentary) [2].

Increased affluence and more fast food are served, encouraging middle and upper-income families to consume more sugar and fat. This condition will lead to increased nutrition in this community group [3].

Basic health research (Riskesdas) 2018 states that the prevalence of obesity or overweight in adults over 18 has continued to increase from year to year since 2007. Based on the results of the 2018 Riskesdas, the Ministry of Health Research and Development Agency shows the prevalence of obesity has increased since the three Riskesdas periods, namely in 2007 10,5 %, 2013 14.8%, and 2018 21.8%. This number is taken from the results of a survey of 300,000 household samples throughout Indonesia conducted in Riskesdas. The indicator of obesity in adults is in people with a body mass index (BMI) above 27.0. Where the normal BMI is in the number 18.50 to 25.09. The highest obesity rate in adults over 18 is in North Sulawesi at 30.2%, the second position is in DKI Jakarta, followed by East Kalimantan and West Papua.

With the existence of fast food (fast food) and food delivery (message, delivery) via social media, nowadays people do not see any more whether the food ordered contains nutrients that are very important to be consumed without seeing the effects of consuming these foods, especially fiber content found in the food consumed. The factors that cause obesity are consuming foods that contain high blood sugar levels, high carbohydrates, and high-fat levels which can cause coronary heart disease, hypertension, and increased LDL cholesterol levels. Food sold on social media contains a lot of carbohydrates, fats, and sugars so that without realizing it, consuming too much of these foods will result in weight gain which affects the nutritional status of employees. From the observations I made, employees at BumiPanua Hospital often consume food sold on social media.

The results of the initial survey conducted on October 28, 2019, for employees at BumiPanua Hospital were 10 employees on fiber knowledge (definition, function, and types of fiber). The results of less fiber knowledge are 6 people, 2 people have enough fiber knowledge, 2 people have good knowledge. Less fiber consumption is 6 people, moderate fiber consumption is 1 person, good fiber consumption is 3 people, as well as nutritional status based on BMI, namely 2 people deficient nutritional status, 2 people good nutritional status, 6 people over nutritional status.

Based on the explanation above, the author conducted a study about the Relationship between Knowledge and Fiber Consumption with Nutritional Status to0 the Employees of BumiPanua Hospital (RSBP) Pohuwato Regency.

RESEARCH METHOD

This study is an observational study conducted with a quantitative approach with a cross-sectional design because in this study the independent and dependent variables were observed at the same time.

This analytical study design aims to explain the knowledge of fiber and fiber consumption related to nutritional status. This study was conducted from May to June 2020 at BumiPanua Hospital, Pohuwato Regency. The population in the study was 469 employees at the BumiPanua Regional General Hospital, Pohuwato Regency, and a sample of 47 employees. The method of determining the sample is by systematic random sampling (Systematic Random Sampling). Data analysis used univariate and bivariate analysis.

THE RESULT OF THE RESEARCH
Description of the research location

In 2002, the General Hospital of Pohuwato Regency started its construction where Pohuwato still joined the main Regency, namely Boalemo. The building was originally located in Block Plan which is now the Health Office of Pohuwato Regency. In 2004 the construction location of RSUD of Pohuwato was moved to Botubilotahun Village, Marisa District. The hospital was inaugurated on April 6, 2006, by the Governor of Gorontalo under the name RSUD Pohuwato.

In 2011 RSUD Pohuwato has obtained a type/class as a Regional General Hospital with class C through the provisions of the Decree of the Minister of Health of the Republic of Indonesia Number: HK.03.05 / I / 1173/11 dated May 13, 2011, and has been accredited with the level of "PERDANA" with obtained an accreditation certificate from the Hospital Accreditation Commission (KARS) of the Ministry of Health of the Republic of Indonesia in Jakarta with certificate number: KARS-SERT / 287 / XII / 2016 dated December 21, 2016.

Univariate Analysis
1. Distribution of respondents' fiber knowledge

Tabel 1.
Distribution of fiber knowledge

Pengetahuan	N	%
Good	15	31,9
Enough	5	10,6
Less	27	57,7
Total	47	100,0

Source: Data processed (2020)

Based on the table above, it shows that of the 47 employees, most of them have less knowledge of fiber, namely 27 employees (57.5%), while for the good category 15 employees (31.9%) and sufficient category 5 employees (10.6%).

2. Distribution of respondents' fiber consumption

Table 2.
Distribution of fiber consumption

fiber consumption	N	%
Enough	27	57,5
Less	20	42,5
Total	47	100,0

Source: Data processed (2020)

Based on the table above, it shows that of the 47 employees, most of them consumed enough fiber, namely 27 employees (57.5%), and the rest consumed less fiber, namely 20 employees (42.5%).

3. Distribution of nutritional status

Tabel 3.
Distribution of nutritional status

Status gizi	N	%
Obesity	8	17,0
Fat	10	21,3
Kurus	1	2,1
Normal	28	59,6
Total	47	100,0

Source: Data processed (2020)

Based on the table above, it shows that of the 47 employees, most of them have normal nutritional status, namely 28 employees (59.6%), and the rest are overweight, 10 employees (21.3%), 8 employees (17.0%) are obese. , and 1 employee (2.1%) is underweight nutrition.

Bivariate Analysis

1. Relationship between knowledge and nutritional status

    Tabel. 4

    Relationship between knowledge and nutritional status of toddler

Knowledge	Nutritional Status				Total	p-value
	Obesity	Fat	Thin	Normal		
Good	3 (20,0%)	4 (26,7%)	0 (0,0%)	8 (53,3%)	15 (100,0%)	
Middle	3 (11,1%)	4 (14,8%)	1 (3,7%)	19 (70,4)	27 (100,0%)	0,360
Enough	2 (40,0%)	2 (40,0%)	0 (0,0%	1 (20,0%)	5 (100,0%)	
Total	8 (17,0%)	10 (21,3%)	1 (2,1%)	28 (59,7%)	47 (100,0%)	

Source: Data processed (2020)

Based on the table above, it shows that of the 15 employees who have good knowledge, most of them have normal nutritional status, namely 8 employees (53.3%), of the 27 employees who have moderate knowledge, most of them have normal nutritional status, namely 19 employees (70.4%), and of the 5 employees who have sufficient knowledge, most of them are overweight and obese, namely 2 employees each (40.0%).The statistical test results show that there are 9 (nine) cells with a frequency value of less than 5 (five), so to assess the relationship between these variables the value of the Exact Sig is used. (2-sided) i.e. 0.360. This value is greater than 0.05, so it can be concluded that there is no relationship between fiber knowledge and nutritional status of the employees at BumiPanua Hospital, Pohuwato Regency.

2. The relationship between fiber consumption and nutritional status

    Table 5.

    The relationship between fiber consumption and nutritional status

fiber consumption	Status Gizi				Total	p-value
	Obesity	Fat	Thin	Normal		
Enough	1 (3,7%)	4 (14,8%)	0 (0,0%)	22 (53,3%)	27 (100,0%)	0,001
Less	7 (35,0%)	6 (30,0%)	1 (5,0%)	6 (70,4)	20 (100,0%)	
Total	8 (17,0%)	10 (21,3%)	1 (2,1%)	28 (59,7%)	47 (100,0%)	

Source: Data processed (2020)

Based on the table above, it shows that of the 27 employees who consume enough fiber, most of them have normal nutritional status, namely 22 employees (81.5%), and of the 20 employees who consume less fiber, most are obese, 7 employees. (35.0%).

The statistical test results show that there are 5 (five) cells with a frequency value of less than 5 (five), so to assess the relationship between these variables the value of the Exact Sig is used. (2-sided) which is 0.001. This value is greater than 0.05, so it can be concluded that there is a relationship between fiber consumption and the nutritional status of the employees at BumiPanua Hospital, Pohuwato Regency.

DISCUSSION
Knowledge

The results showed that of the 47 employees, most of them had less knowledge of fiber, namely 27 employees (57.5%), while for the good category 15 employees (31.9%) and enough category 5 employees (10.6%).

Knowledge about fiber that is less known by the employees of BumiPanua Hospital, Pohuwato Regency is that tofu contains more fiber than tempe. from the 47 employees who became respondents,

67% answered that tofu contains more fiber than tempe, while the most appropriate is that tofu has a fiber content of 0.1 grams while tempeh has a higher fiber content, namely 1.4 grams.

Knowledge about fiber that is widely known by the employees of BumiPanua Hospital, Pohuwato Regency is 1) It is also known as dietary fiber, and 2) fiber as an integral part of the food consumed daily with the main source of plants, vegetables. , cereals, fruits, nuts. So this can trigger an increase in fiber consumption for employees of BumiPanua Hospital, Pohuwato Regency.

Fiber Consumption

The results showed that of the 47 employees, most of them consumed enough fiber, namely 27 employees (57.5%), and the rest consumed less fiber, namely 20 employees (42.5%). Lack of fiber consumption in employees of BumiPanua Hospital due to the unbalanced diet of respondents, this is because the food consumed every day contains lots of carbohydrates, fats, and sugars, as well as irregular eating patterns and inaccurate selection of food ingredients in consuming food every day.

The fiber consumption of BumiPanua Hospital employees according to gender shows that women with sufficient fiber consumption (more than 77% RDA) are 64.1% more than men with sufficient fiber consumption (more than 77% RDA) which is 25.0 %.

The recommended fiber consumption based on the Regulation of the Minister of Health of the Republic of Indonesia Number 28 of 2019 concerning the Recommended Nutritional Adequacy Rate for Indonesian People based on age and gender categories are men aged 19-29 years: 37 gr, 30-49 years old: 36 gr, and 50-64 years old: 30 grams, while for women 19-29 years old: 32 grams, 30-49 years old: 30 grams, and 50-64 years old: 25 grams [4].

Nutritional Status

The results showed that of the 47 employees, most of them had normal nutritional status, namely 28 employees (59.6%), and the rest were obese, 10 employees (21.3%), 8 employees (17.0%) were obese, and 1 employee (2.1%) is underweight nutrition.

Comparison of nutritional status according to the gender of BumiPanua Hospital employees that there is almost the same incidence of obesity and obese both men and women, namely 37.5% of men experiencing nutritional status of obesity and obese, and 38.5% of women experiencing nutritional status obesity and overweight. Meanwhile, if seen from the incidence of obesity, women are more obese than men, namely 20.5% of women are obese and there is no incidence of obesity in men. This shows that women are more likely to be obese than men.

According to the Indonesian Ministry of Health, nutritional status can be calculated through the Body Mass Index (BMI). From the BMI calculation, nutritional status was assessed with the following classifications: Very thin, namely <17.00; Normal, namely 17.00-18.49; Grease, namely 25.10-27.00; Obesity, namely> 27.00; the ideal is 22.10 [2].

Relationship between Knowledge and Nutritional Status

The results showed that from the 15 employees who had good knowledge, most of them had normal nutritional status, namely 8 employees (53.3%), the 27 employees who had moderate knowledge, most of them had normal nutritional status, namely 19 employees (70.4%). and the 5 employees who have sufficient knowledge, most of them are obese and obese nutrition status, namely 2 employees each (40.0%).

The results of statistical tests showed that there was no relationship between fiber knowledge and the nutritional status

of the employees at BumiPanua Hospital, Pohuwato Regency. The results of this study are equal to the results of a study conducted by Baiti which showed that there was no relationship between knowledge and nutritional status of adolescent girls at SMK Batik 2 Surakarta [5]. The results of this study differed from the results of a study conducted by Maharani et al, which showed that there was a relationship between the knowledge and nutritional status of adolescents in MTSN 2 Bengkulu [6].

Dietary fiber does not contain nutrients but provides health benefits, namely controlling body weight or obesity, overcoming diabetes, preventing gastrointestinal disorders, colon (large intestine) cancer, and reducing blood cholesterol levels and cardiovascular disease [7]. Thus, knowledge of fiber is very good to control body weight and especially to overcome the potential for obesity to occur.

The level of a person's nutritional knowledge will affect attitudes and behavior in food selection which in turn will affect the nutritional condition of the person concerned. According to Soekirman, nutrition knowledge can be done with nutrition education programs conducted by the government. Nutrition education programs can influence the knowledge, attitudes, and behavior of sees people on their eating habits. It will also affect a person's nutritional status [8].

Relationship between Fiber Consumption and Nutritional Status

The results showed that of the 27 employees who consumed enough fiber, namely (57.5%) with normal nutritional status, 22 employees (81.5%), and of the 20 employees (42.5%) who consumed less fiber, most of them are obese nutritional status, namely 7 employees (35.0%).

The statistical test results show that there is a relationship between fiber consumption and the nutritional status of the employees at BumiPanua Hospital, Pohuwato Regency. The results of this study are equal to the results of a study conducted by Maharani et al which showed that there is a relationship between fiber consumption and the nutritional status of adolescents in MTSN 2 Bengkulu [6]. The results of this study are different from the results of a study conducted by Baiti which shows that there is no relationship between fiber consumption and the nutritional status of adolescent girls at SMK Batik 2 Surakarta [5].

Seeing the above, it is suspected that the respondent's irregular consumption pattern. Currently, the pattern of consumption is westernized (Western Style Diet) or better known as fast food and processed food. If processed and ready-to-eat food is more suitable for consumption, there will be an imbalance in the intake of nutrients and essential components. Too low fiber care for a long time will affect health, obesity, and degenerative disease attacks. Some factors influence the selection of food items to be consumed, how to select, process, and consume fiber source foods correctly and appropriately, and how to compile a healthy fibrous diet [9].

The function of fiber turns out to involve bile acids. If you consume high fiber, the excretion of bile acids will remove more cholesterol and fat which is excreted with feces. In this case, the function of fiber is to prevent the reabsorption of bile acids, cholesterol, and fat, so that fiber is said to have a hypolipidemic effect which is very beneficial for the diets of hypercholesterolemic sufferers which can develop into atherosclerosis and impaired heart function [10].

Soluble fiber, such as pectin and some hemicelluloses can hold water and can make a thick liquid in the digestive

tract. So that food is rich in fiber, the time it is digested is longer in the stomach, then the fiber will attract water and give you a longer feeling of fullness, thus preventing you from consuming more food. Foods with high crude fiber content usually contain low calories, sugar content, and low fat, and can help reduce the incidence of obesity [7].

In addition to having a positive effect on health, dietary fiber also has a negative effect, so that food fiber should not be consumed excessively and as a reference for the recommended fiber requirement, which is 30 grams/day [7].

CONCLUSION

Knowledge of fiber for the employees of BumiPanua Hospital, Pohuwato District is 57.5% in the poor category, 31.9% in the good category, and 10.6% in the moderate category. Fiber consumption for employees of BumiPanua Hospital, Pohuwato Regency is enough 57.5%, and 42.5% less. Nutritional status of employees of BumiPanua Hospital, Pohuwato Regency employees, namely normal nutritional status of 59.6%, 21.3% fat, 17.0% obese, and 2.1% thin. There is no relationship between fiber knowledge and the nutritional status of the employees at BumiPanua Hospital, Pohuwato Regency. There is a relationship between fiber consumption and the nutritional status of the employees at BumiPanua Hospital, Pohuwato Regency.

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