



Journal Physical Health Recreation (JPHR)

Volume 5 Nomor 1 ; November 2024

<https://jurnal.stokbinaguna.ac.id/index.php/JP>

e-ISSN : 2747- 013X

## Hubungan Antara Pola Konsumsi Junk Food Dengan Status Gizi Atlet Petanque FIKK UNM

### The Relationship Between Junk Food Consumption Patterns And Nutritional Status Of FIKK UNM Petanque Athletes

M. Rachmat Kasmad<sup>1</sup>

{m.rachmat.k@unm.ac.id<sup>1</sup>}

Program Studi Gizi Fakultas Ilmu Keolahragaan dan Kesehatan, Universitas Negeri Makassar, Jl. A. P. Pettarani, Tidung, Kec. Rappocini, Kota Makassar, Sulawesi Selatan 90222<sup>1</sup>

**Abstract** This study aims to determine the relationship between junk food consumption patterns and nutritional status in FIKK UNM petanque athletes. The independent variable in this research is consumption of junk food, while the dependent variable is nutritional status. The type of research used is quantitative with a cross sectional approach, taking place at FIKK UNM. The population in this study were all FIKK UNM petanque athletes, while the total sample was 22 athletes. Nutritional status was obtained using the BMI/U anthropometric index, and junk food consumption using the FFQ questionnaire. The data was then analyzed using the chi square statistical test. The results of the chi square statistical test were 0.232 ( $p < 0.05$ ). The conclusion of this research is that there is no significant relationship between junk food consumption patterns and the nutritional status of FIKK UNM petanque athletes.

**Keywords:** Junk Food Consumption, Nutritional Status, Adolescents

## 1 Introduction

It is necessary to pay attention to meeting the nutritional needs of adolescents because during this period there is an increase in nutritional needs to support physical and psychological growth and development (Hardiansyah & Supriasa, 2017). Nutritional status can be a measure of success in meeting the nutritional needs of adolescents (Salsabila, 2022). Nutritional status is the condition of the body as a result of consuming food and using nutrients. Nutritional status is divided into three, namely undernutrition status, good nutrition status and overnutrition status. Determining the nutritional status of adolescents can be done in several ways, one of which is by using the Body Mass Index (BMI) (Basar, 2020).

Food consumption in adolescents can have both positive and negative impacts on their nutritional status. Today's modern life, which is equipped with various facilities, allows changes in all aspects, including food consumption. Food consumption habits change to tend to choose foods that are easy, fast and practical. This phenomenon has resulted in the emergence of many restaurants and shops that provide fast food and drinks, which are usually called junk food (Aulia, Makmur, & Hamid, 2018).

Foods that are considered junk food are hamburgers, pizza and fried chicken which are liked by various groups, including teenagers. Several factors influence teenagers to choose to consume junk food, including skipping meals at home such as breakfast, so many choose to buy food out. As is known, junk food is easy to obtain, widely available in schools and residences. The taste of junk food is delicious and tasty, as well as fast and practical in terms of serving, so it doesn't take long to enjoy delicious food, and of course the hygienic packaging makes it popular with teenagers (Sempati, 2017).

The effect of junk food on the body is that it can affect the body's energy levels. Junk food contains large amounts of fat, and some of it accumulates in the body and contributes to obesity. High Body Mass Index (BMI/U) which describes overnutrition includes a pattern of high energy consumption and lack of physical activity which leads to a sedentary lifestyle (Izhar M, Ruwayda, 2020).

Adolescence is defined as a transition period from childhood to adulthood. This period is described by psychologists as a period full of pressure and tension, because the growth in maturity is only in the physical aspect, while the psychology is still immature (Basar, 2020).

According to Yulianingsih (2017), adolescence is a period of developmental transition between childhood and adulthood, which involves biological, cognitive and psychosocial changes. Adolescents will go through several stages, as follows:

- 1) early adolescence: age 11-13 years
- 2) Middle adolescence: 14-16 years old
- 3) late adolescence (Late adolescence): age 17-20 years

Nutritional status is a condition resulting from a balance between the intake of nutrients obtained from food and the need for nutrients needed for body metabolism. Each individual has different nutritional intake needs, this is related to age, gender, daily activities, body weight, and others (Ministry of Health, 2017).

The easiest way to assess a person's nutritional status is through anthropometric measurements because it is considered simpler, easier, can be done by anyone, and is quite thorough. The anthropometric data that is often used is body weight and height, while the anthropometric index that is often used to assess the nutritional status of adolescents is the body mass index according to age (Ministry of Health of the Republic of Indonesia, 2020).

How to calculate BMI can be calculated using the following formula:

$$IMT = \frac{Body\ Weight\ (kg)}{Height\ (m)^2}$$

The results of the BMI calculation are then classified based on gender and calculated by determining the z-score value. The anthropometric standards for assessing the nutritional status of children and adolescents issued by the Indonesian Ministry of Health (2020) are taken from WHO standards using z-score values. Z-score is a standard score in the form of a person's score distance from the group mean in Standard Deviation units. How to calculate the z-score value using the following formula:

$$Z - score = \frac{IMT Real - IMT Median Buku Rujukan}{Nilai Simpang Baku Rujukan}$$

Then, based on the results of calculating the z-score value, it will be classified based on the following indicators:

Junk food is a term for food that is low in nutrition, which has a high calorie content, but is low in other nutrients. The informal term junk food, which means junk food, was coined in 1972 by Michael Jacobson, a scientist from Washington DC. This name is given because junk food contains high calories, saturated fat, trans fat, sodium, glucose and additives such as MSG (monosodium glutamate), but is low in dietary fiber and micronutrients such as vitamins and minerals (Irawan, 2022).

The names fast food and junk food tend to be considered the same, even though these two types of food are different. Fast food is defined as food that is served quickly, while junk food is food that has limited nutritional content. Even though some fast food is considered junk food, not all fast food is food that does not contain the nutrients the body needs, such as junk food (Irawan, 2022). According to Mahdiah et al. (2014) there are two types of junk food, namely western junk food and local junk food. The foods included in western junk food are fried chicken, sausages, nuggets, donuts, ice cream and soft drinks. Meanwhile, foods included in local junk food are meatballs, fried noodles, fried rice, batagoor, satay, martabak and soto (Utami, 2020). A person's average consumption of junk food can be determined using the FFQ questionnaire. Based on Ministry of Health Regulation no. 30 of 2013, a person is considered to have a relatively high junk food consumption pattern if their sugar intake is more than 50 g/day, salt more than 2000 mg/day, and total fat more than 67 g/day (Arvia & Sumarmi, 2024).

According to research by Suryani, Sulastrri, & Hasrinurhidayat (2020), the results show that there is no relationship between junk food consumption and nutritional status. This is different from research conducted by Izhar (2020) and Amalia, Sulastrri & Semiarty (2016) which shows the results of a link between junk food consumption and nutritional status. Rajveer and Monica (2012) stated that excessive and long-term consumption of junk food can result in various kinds of health problems such as obesity, diabetes, and others because junk food tends to have high calorie content, sugar, salt, saturated fat and contains various types of junk food. food additives (additives) such as MSG and tartazine, and low in other nutrients such as vitamins, minerals and fiber (Widyawati, 2022).

## 2 Method

This type of research uses quantitative research. Quantitative research is systematic research into a phenomenon by collecting data that can be measured using statistical analysis. This research is used to examine a certain population or sample, sampling techniques are

generally carried out randomly, data collection uses research instruments, and statistical data analysis with the aim of testing predetermined hypotheses (Abdullah, et al, 2021).

According to Arikunto (2006), the population is the entire research subject (Yulianingsih, 2017). The population in this study were all FIKK UNM petanque athletes. Sample, the sample is part of the population which is included in the number and characteristics of the population (Irawan, 2022). The sample in this study were all petanque athletes. A sampling technique where the number of samples is the same as the population. The reason for taking total sampling was because the population was less than 100.

a. Univariate Analysis

Univariate analysis was used to explain the variables in the research. The display of the results of variable analysis with categorical data, in the form of frequencies and percentages, will be presented in table form.

b. Bivariate Analysis

Bivariate analysis is needed to look for correlations between variables and prove research hypotheses. Data analysis used to determine the correlation between junk food consumption and nutritional status used the chi square test. The chi square test is a statistical technique used to test the relationship between two variables and measure the strength of the relationship between the two variables.

### 3 Result

1. Univariate Analysis

a. Characteristics of Research Respondents

Table 1. Characteristics of Respondents Based on Gender for FIKK UNM Petanque Athletes

<b>Jender</b>	<b>N</b>	<b>%</b>
Man	13	59.1
Women	9	40.9
<b>TOTAL</b>	<b>22</b>	<b>100</b>

Based on table 4.1, it shows the characteristics of respondents based on gender, namely, respondents with male gender were 13 respondents (59.1%) and respondents with female gender were 9 respondents (40.9%).

Table 2. Characteristics of Respondents Based on Age of FIKK UNM Petanque Athletes

<b>Age</b>	<b>n</b>	<b>%</b>
17 Year	3	13,7
18Year	19	86,3
<b>TOTAL</b>	<b>22</b>	<b>100</b>

Based on table 4.2, it shows the characteristics of respondents based on age, namely, 3 respondents aged 17 years (13.7%) and 19 respondents aged 18 years (86.3%).

a. Research Distribution

Table 3. Distribution of Respondents Based on Junk Food Consumption Patterns among FIKK UNM Petanque Athletes

<b>Consumption Junkfood</b>	<b>n</b>	<b>%</b>
Low	12	54,5
<b>currently</b>	<b>8</b>	<b>36,3</b>
Tall	2	09,1
<b>TOTAL</b>	<b>22</b>	<b>100</b>

Based on table 4.4, it shows the frequency distribution of respondents based on junk food consumption patterns, where there are 12 respondents with low junk food consumption patterns (54.5%), 8 respondents with moderate junk food consumption patterns (36.3%) , and respondents with high junk food consumption patterns were 2 respondents (09.1%).

#### 1. Bivariate Analysis

Tabel 4. Results of Analysis of the Relationship between Junk Food Consumption and Nutritional Status FIKK UNM Petanque Athletes

<b>Consumption Junk Food</b>	<b>Nutritional Status Category</b>					<b>Total</b>	<b>%</b>	<b>P-value</b>
	Malnutrition	Malnutrition	Good Nutrition	More Nutrition	Obesity			
Low	0	8	2	2	0	<b>12</b>	<b>54,5</b>	<b>0,232</b>
currently	1	0	5	1	1	<b>8</b>	<b>36,3</b>	
Tall	0	0	2	0	0	<b>2</b>	<b>09,1</b>	
<b>Total</b>	<b>1</b>	<b>8</b>	<b>9</b>	<b>3</b>	<b>1</b>	<b>22</b>	<b>100</b>	

Table 4. above illustrates the relationship between junk food consumption and nutritional status where there are 12 respondents (54.4%) with low junk food consumption patterns, where there are 8 respondents with poor nutritional status, 2 respondents with good nutritional status, 2 respondents with better nutritional status. Then there were 8 respondents with moderate junk food consumption patterns (36.3%), where there was 1 respondent with poor nutritional status, 2 respondents with good nutritional status, 1 respondent with over nutritional status, and 1 respondent with obese nutritional status. Respondents with high junk food consumption patterns were 2 respondents (09.1%) of which there were 2 respondents with good nutritional status.

The results of the chi square statistical test using SPSS version 29 showed that there was no relationship between junk food consumption patterns and the nutritional status of FIKK UNM petanque athletes with a p-value (0.232).

## 4 Discussion

Characteristics based on the gender of respondents in this study were dominated by male athletes, namely 13 respondents (59.1%) and female respondents were 9 respondents (40.9%). Gender can determine the energy and nutritional needs of teenagers, where male teenagers have higher energy needs than female teenagers. According to Fikawati et al (2017) in adolescent boys there is an increase in muscle mass, while in adolescent girls there is an increase in fat mass.

There are differences in food consumption between men and women. Apart from the fact that there are differences between the energy needs of men and women, men tend to like foods that are high in fat, carbohydrates, protein, sugar and alcohol, while women prefer foods such as fruit, vegetables and low-fat products so it is not surprising that deficiencies occur. macronutrients in women are more common (Ramonda, Yudanari & Choiriyah, 2019).

Characteristics based on the age of respondents in this study were dominated by 3 respondents aged 17 years (13.7%) and 19 respondents aged 18 years (86.3%). According to WHO (2018), the age of the respondents in this study falls into the late teenage age group. Adolescents are a group that is vulnerable to nutritional problems. This is caused by an increase in the need for energy and nutrients which is balanced by rapid physical growth. According to Fikawati et al (2017), the daily nutritional needs of adolescents are the highest compared to other life cycles. Fulfillment of nutrients that do not meet the needs of adolescents can cause nutritional problems in adolescents (Hardiansyah & Supariasa, 2017).

Excessive consumption of junk food has negative effects on health which can cause various kinds of disorders and diseases for the body. Health problems that can occur are obesity or excess nutritional status as well as the risk of diseases such as diabetes mellitus, cancer, dyslipidemia and cardiovascular disease. This can be caused by an imbalance of nutrients contained in junk food, which is high in calories, fat, sodium, glucose and additives and low in fiber and micronutrients such as vitamins and minerals. (Izhar, 2020)

Based on the results of the chi square statistical test analysis regarding the relationship between junk food consumption patterns and the nutritional status of FIKK UNM petanque athletes seen from the p-value, if the p-value  $< 0.05$  then it is declared a significant relationship. Based on the results of this research, the p-value was found to be 0.232, which means there is no significant relationship between junk food consumption and the nutritional status of FIKK UNM petanque athletes. The majority of subjects in this study had normal nutritional status with low junk food consumption patterns.

## 5 Conclusion

Based on the results of the data and discussion from this research, it can be concluded that there is no significant relationship between junk food consumption patterns and the nutritional status of FIKK UNM petanque athletes ( $p=0.232$ ).

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