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## ***Level of Understanding of Nutrition Needs and Dehydration Status of Mataram Soccer Academy Students***

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### **Abstract**

This study aims to measure the level of understanding of the nutritional status and dehydration status of Mataram Soccer Academy students. Based on descriptive analysis data obtained, 18 athletes namely the aspect of knowledge with a value of 584 points with an average of 32.4% and aspects of attitude/behavior with a value of 447 points with an average of 24.8%. The level of understanding of the nutritional intake needs of Mataram Soccer Academy students in the knowledge aspect is in the very good category at 81%, in the attitude/behavior aspect it is in the good category at 68.89%, and overall is in the good category at 75.27%. 9 out of 18 Mataram Soccer Academy students are well hydrated or 50% of the total number of students are not dehydrated, then 9 of the next 18 students are not properly hydrated or 50% of the total number of students are mildly dehydrated, and 0 out of 18 students experience a lack of fluids or 0% of the total number of students experiencing severe dehydration. If you look at the assessment criteria for the results of data processing, the dehydration status of Mataram Soccer Academy students is included in the (enough) category with an average percentage of 50%. Understanding the nutritional intake needs of Mataram Soccer Academy students based on the knowledge aspect is in the very good category, this illustrates that Mataram Soccer Academy students already understand about fulfilling nutritional intake but not in practice in other words Mataram Soccer Academy students already understand enough but in application students are still not enough.

**Keywords:** Nutrition Intake, Dehydration Status, Mataram Soccer Academy

### ***INTRODUCTION***

Motion is a manifestation of the occurrence of muscle contractions, while to be able to contract muscles requires energy. To get energy, proper and balanced food consumption is needed for an athlete. Energy and nutrient requirements for athletes need to pay attention to the type of sport. In addition, it is necessary to pay attention to the stages in fulfilling nutrition in athletes such as fulfilling nutrition for training, competition and recovery periods. Another thing that needs to be considered is the variety of food, preferences and acceptability of athletes so that their intake is in accordance with the needs of athletes (Rizqi & Udin, 2018). Fulfillment of balanced nutrition plays an important role

in influencing one's health. One of the factors that can influence a person's nutritional state is nutritional knowledge and its application in daily life (Fitria et al., 2022). Nutrition in sports is the application of nutritional knowledge in daily eating arrangements that are focused on the metabolism of nutrients during competition, repair and building intensive training and optimizing show at the time of the match.

Nutritional status must be balanced so that growth or development does not occur because carrying out activities requires energy which is obtained from food that contains good and sufficient nutritional value (Salamah, 2019). Proper and balanced nutritional intake can be seen in terms of the quantity and quality of food that can produce optimal physical conditions, as well as provide sufficient energy for students during the training process. The physical conditions that must be possessed by athletes include: Strength, endurance, muscle endurance, speed, flexibility, balance, agility, coordination, accuracy and reaction (Shofia et al., 2021).

In improving the physical condition of students, they need to consume more food than someone who is not a student with a balanced composition of food nutrients. With good nutrition, sufficient energy will be available for physical performance which is beneficial for health, fitness, child growth and sports achievement development. The level of energy sufficiency is reflected in the amount of energy consumed by the body according to the level of its needs (Masodah & Afifah, 2022). Food that meets nutritional balance plays an important role for students who want to perform optimally in competitions. Food that does not meet the requirements and unbalanced nutrition may not perform optimally. Balanced food is food that contains calories in the following proportions: 60-7-% carbohydrates: 10-15% protein: 20-25% fat, and: enough vitamins, minerals and water (C Rismayanthi, 2015). Fulfillment of nutritional needs students need to know the levels of nutrients that can be a source of energy for the body. If it is wrong to regulate the nutritional needs of food, it can cause illness, glycogen and other problems.

Some of the critical points that are often encountered in athletes such as: eating in insufficient quantities, not knowing how much to eat, not consuming enough calories, choosing food that is not balanced and correct, not knowing much about nutrition, and energy intake is not suitable for competition (Lestari & Amin, 2019). This is what causes the need for student knowledge about good food to support student achievement. Factors of good and balanced nutritional status can influence and support an optimal performance. Arrangements to fulfill student nutritional intake need to know good nutritional status is needed to maintain fitness and health levels, help growth for children and support athlete achievement.

Apart from being a source of energy, this type of exercise also requires a supply of fluids to ensure good hydration status to support energy metabolism processes (Lubis et al., 2021). Hydration knowledge is very important for an athlete, because athletes need knowledge of how to be able to replace body fluids during exercise or exercise to maintain their hydration status (Ghalda et al., 2019). Hydration is defined as the balance of fluids in the body and is an important requirement for ensuring the metabolic function of the body's cells. Meanwhile, dehydration is a lack of fluids in the body or an imbalance in body fluids caused by an imbalance in the intake and output of the fluids themselves (Ghalda et al., 2019). Dehydration is excessive loss of body fluids due to inadequate fluid replacement due to intake that does not meet body needs and increased water expenditure (Putriana & Dieny, 2014). Various studies show that dehydration will have a negative impact on health, including one's stamina and memory. (Haetami et al., 2022).

The amount of energy expended in sports results in fatigue before the match is over. Fatigue occurs as a result of excessive excretion of fluids from the body as a result of sweating and not balanced with fluid consumption which can cause an athlete to become dehydrated and reduce performance, resulting in a decrease in athlete performance. (Pradana et al., 2022). Athletes who exercise in hot temperatures for a long time will increase their body temperature above normal. As a result, a lot of fluid comes out through sweat, as an indication of the mechanism for reducing body temperature. This body mechanism can trigger dehydration (Fadlilah et al., 2021). When exercising, reduced body fluids through sweat and water vapor in the breathing process, even if only by 2-3%, can cause a decrease in performance of up to 10% (Dieny & Putriana, 2016).

Mataram Soccer Academy is a soccer school located in the city of Mataram and is active in fostering early childhood football. Training is carried out 4 days a week with a training schedule starting at 16.00 WITA where for the Mataram area at that time what if in normal weather conditions the temperature can reach - + 34 degrees Celsius. In each practice session students are given the opportunity to water break 2 times. To prevent dehydration during activities or sports, it is recommended to drink 150-250 ml of water every 10-20 minutes (Pratama & Rismayanthi, 2019). In general, the fluids recommended for athletes are mineral water, electrolyte drinks, drinks containing carbohydrates, and drinks containing protein (Penggali et al., 2019). Based on the description of nutritional status and dehydration, this study aims to measure the level of understanding of nutritional status and dehydration status of Mataram Soccer Academy students. This was done because research on the level of understanding of nutritional status and dehydration status in soccer school students in Mataram in particular and West Nusa Tenggara in general has never

been done so it is hoped that the results of this research can later become a reference for coaches and administrators of soccer schools and branch coaching. another sport.

### ***METHOD***

The method used in this research is descriptive research method. The population in this study were Mataram Soccer Academy players under the age of 16, namely 18 players. The instruments used to collect data in this study were questionnaires and urine checks. Questionnaires are part of a list of written questions about a particular problem with space for an answer for each question. The questionnaire is the equation of the questionnaire. The existence of a questionnaire is to facilitate analysis in collecting data on something. This assessment questionnaire was prepared with 4 alternative answers with a score of each, namely strongly agree (score 4), agree (score 3), disagree (score 2), and very less (score 1).

The urine check test in this study uses urine color to measure short-term dehydration because it is practical and easy to use to practically determine a person's dehydration status. The results of measuring urine color come from examining the color of urine, it is said to be dehydrated if the urine color scale is 4-8 and is said to be not dehydrated if the urine color scale is 1-3 (Pertiwi, 2015). The sample was taken using a clear glass bottle, urine color examination was carried out using PURI (Self Urine Check) with a urine color chart.

The data collection technique used was a survey by giving a questionnaire. According to (Maidiana, 2021) the survey method is research that collects information from a sample by asking through a questionnaire or interview so that later it describes various aspects of the population and uses a questionnaire as a basic data collection tool.

Data analysis techniques in this study used quantitative descriptive data analysis techniques. The calculation of descriptive statistics uses percentage descriptive statistics, because those included in descriptive statistics include the presentation of data through tables, graphs, diagrams, circles, pictograms, calculations means,modus,median, calculation of deciles, percentiles, calculation of the average calculation of the spread of data,standard deviation, and percentage (Putri et al., 2021:32).

### ***RESULTS AND DISCUSSION***

The results of the descriptive analysis were obtained with the help of the SPSS application and are presented in the following table:

**Table 1. Descriptive Analysis**

N O	Frequency	Aspect	Mark		Amount	Tarif - Tarif
			Min	Max		
1	18	Knowledge	1	4	584	32,4
2		Attitude/Behavior	1	4	447	24,8
		<b>TOTAL</b>			1031	57,2

Based on the table above, it can be seen that the total values obtained by data from 18 athletes are the knowledge aspect with a value of 584 points with an average of 32.4 and the attitude/behavior aspect with a value of 447 points with an average of 24.8 which is then carried out calculation to find the percentage of each - each aspect.

*Level of Understanding of Nutrition Intake of Mataram Soccer Academy U-16 Students*

Based on the table above, it can be seen that the total value obtained from 18 students is the knowledge aspect with a value of 584 points with an average of 32.4 and the attitude/behavior aspect with a value of 447 points with an average of 24.8 which is then carried out calculation to find the percentage of each aspect as in the following table:

**Table 2. Level of Understanding of Nutrition Intake**

NO.	Rated aspect	Gain Score	Assessment	
			Total Shoes	Percentage %
1	Aspects of Knowledge	32,4	40	81%
2	Aspects of Attitude/Behavior	24,8	36	68,89%
	<b>Total Shoes</b>	<b>57,2</b>	<b>76</b>	<b>75,27%</b>

From the table above, the researchers concluded that the level of understanding of the nutritional needs of Mataram Soccer Academy students in the knowledge aspect was in the "very good" category at 81%, in the attitude/behavior aspect it was in the "good" category at 68.89%, and in terms of overall are in the "good" category of 75.27%. The following shows the results of the frequency analysis for each question/statement item

Students who stated that nutritious food was very important in supporting body fitness for students, 4 students with a percentage of 22.2% agreed and 14 students with a percentage of 77.8 stated that they strongly agreed. Eating 3 times a day makes the body weight normal, students who 11 students agreed with this statement with a percentage value of 61.1% and 7 students who strongly agreed with a percentage value of 38.9%. Fast food (kfc, burgers, instant noodles etc.) are healthy foods, students who disagree are 1 person with a percentage value of 5.6%, students who agree are 9 people with a percentage value

of 50%, and students who express very agree amounted to 8 people with a percentage value of 44.4%. Eating vegetables every day makes the body healthy and not easily sick, 12 students who agree with a percentage value of 66.7% and students who strongly agree are 6 people with a percentage value of 33.3%. Packaged drinks are healthier than mineral water, students who disagree with this statement are 1 person with a percentage value of 5.6%, students who say "agree" are 11 people with a percentage value of 61.1%, and students who state "strongly agree" amounted to 6 people with a percentage value of 33.3%.

Vegetables can meet the body's fluid needs to avoid dehydration, this statement is positive so that it gets the value that students who stated "agree" with this statement totaled 8 people with a percentage value of 44.4% and students who stated "strongly agreed" totaled 10 people with percentage value of 55.6%. Substances needed by the body that come from food are called nutrition and it was found that 16 students agreed with this statement with a percentage value of 88.9% and 2 students who stated "strongly agreed" with a percentage value of 11.1%. Healthy food is food that tastes good, this statement is negative so that the input value has been changed first and the scores of students who express disagreement with this statement are 14 people with a percentage value of 77.8%, students who state "strongly agree" are 4 people with a percentage value of 22.2%. Carbohydrates are substances that function as a form of energy, 7 students who agreed with a percentage value of 38.9% and students who strongly agreed were 11 people with a percentage value of 61.1%. Peanuts, tofu and tempeh are foods that contain vegetable protein, 14 students agreed with this statement with a percentage of 77.8% and 4 students who strongly agreed with a percentage value of 22.2%.

2-3 hours before the game I eat snacks (bread, crackers or biscuits), 17 students agree with this statement with a percentage value of 94.4% and 1 student who strongly agrees with a percentage value of 5.6 %. Every day I eat vegetables, 13 students agree with this statement with a percentage value of 72.2% and 5 students who strongly agree with a percentage value of 27.8%. Before the match, the drink that I consumed was water / sports drink, 16 students who agreed with this statement with a percentage value of 88.9% and students who strongly agreed were 2 people with a percentage value of 11.1%. I do not like to eat fruit, students who disagree with this statement are 4 people with a percentage value of 22.2%, students who strongly agree are 2 people with a percentage value of 11.1%, students who agree are 12 people with percentage value of 66.7%. Soft drink is my drink during practice, students who stated that it was very lacking with this statement amounted to 1 person with a percentage value of 5.6%, students who disagreed amounted to 16 people

with a percentage value of 88.9%, students who agreed amounted to 1 person with percentage value of 5.6%.

In between sports I drank coffee, students who stated that they were very lacking with this statement amounted to 1 person with a percentage value of 5.6%, students who expressed disagreement amounted to 1 person with a percentage value of 5.6%, students who agreed amounted to 7 people with a percentage value of 38.9%, students who strongly agreed amounted to 9 people with a percentage value of 50.0. I often experience cramps during training and during matches, students who stated that they were very lacking with this statement amounted to 1 person with a percentage value of 5.6%, students who expressed disagreement amounted to 15 people with a percentage value of 83.3%, students who stated "agree" totaled 2 people with a percentage value of 11.1%. Headaches and dry mouth often occur during practice, students who stated that they were very lacking with this statement amounted to 2 people with a percentage value of 11.1%, students who stated that they did not agree amounted to 16 people with a percentage value 88.9%. Every day I drink milk, this statement is positive so it gets the following value. There were 14 students who agreed with this statement with a percentage value of 77.8% and students who strongly agreed were 4 people with a percentage value of 22.2%.

#### *Student Dehydration Status*

**Table 3. Dehydration status**

NO.	Category/Group	Assessment	
		Frequency	Percentage %
1	Well Hydrated	9	50%
2	Not Well Hydrated	9	50%
3	Experiencing a Fluid Deficiency	0	0%
	<b>Total Shoes</b>	<b>18</b>	<b>100%</b>

Based on the table above, it can be seen that 9 of the 18 Mataram Soccer Academy students were well hydrated or 50% of the total number of students were not dehydrated, then 9 of the next 18 students were not properly hydrated or 50% of the total number of students experienced mild dehydration, and 0 out of 18 students experienced a lack of fluids or 0% of the total number of students experienced severe dehydration. If you look at the assessment criteria for the results of data processing, the dehydration status of Mataram Soccer Academy students is included in the (enough) category with an average percentage of 50%.

The level of understanding of the need for nutritional intake and the dehydration status of Mataram Soccer Academy students based on the results of the analysis shows that the level of understanding of the need for nutritional intake of students is in the good category. Proper and balanced nutritional intake can be seen in terms of the quantity and quality of food that can produce optimal physical conditions and provide sufficient energy for students during the training process. Meeting the nutritional needs of students needs to know the levels of nutrients that can be a source of energy for the body. If it is wrong to regulate the nutritional needs of food, it can cause illness, glycogen and other problems. The need for student knowledge about good food certainly influences student achievement.

Understanding of students' nutritional intake needs based on aspects of behavior/attitude is in the good category, but this does not illustrate that all students understand about fulfilling nutritional intake because not all students pay attention to nutrition and are able to apply it. Before identifying the provision of nutrition or nutrition, students must know the good nutritional status to maintain a degree of fitness and health which is carried out by means of direct inspection and indirect examination. Directly covers *anthropometry*, *biochemistry*, clinical and biophysical, while indirectly covering consumption surveys, vital statistics, and ecological factors. After knowing the new nutritional status students can determine their nutritional status needs. Each student will have different nutritional intake needs, so that the nutritional intake needs of students will be adjusted to their individual needs.

In areas that have football schools or academy, students still do not have a nutritionist or staff sports nutritionist who can recommend the need for nutritional intake and fulfillment of good nutrition for students. So besides that nutritionist, Coaches also have an important role to help maximize student achievement. The trainer must know how to check the nutritional status of students, determine calories in and calories out so the trainer can inform students about how students can meet the needs of a balanced nutritional intake. But in reality, there are rarely trainers who understand how to check students' nutritional status, check calories in and calories out as well as nutritional intake needs for students so that students only estimate nutritional intake needs for their bodies. As a result, students' understanding of nutritional intake needs is less than optimal.

A student is not only required to exercise and rest on time, but students must also pay attention to nutritional intake needs by managing a diet with good and balanced nutrition. For this reason, apart from being a trainer, parents must also be smart in providing food for their children, because parents are another factor in supporting student success in achieving achievements. Besides nutritionist, trainers and parents must really understand,



understand, and have a good scientific background about the nutritional intake needs of students, if the coach already understands it will be easy to adjust a good training program for students. So that for the application of nutritional intake needs for students do not have to use services nutritionist.

Judging from the results of checking urine for fluids in the body, it can be seen that not all students can meet fluid needs so that students experience physiological changes that cause dehydration. When doing physical exercise, students will not realize that their bodies are losing electrolytes and water simultaneously. There are still many students who are not aware of the importance of consuming water and how much fluid is needed by the body when doing physical exercise. As for hydration before doing sports activities, namely 400 to 600 ml of water or sports drinks about 4 hours before doing activities, during sports drink 100 to 200 ml of water every 15-20 minutes if less than 1 hour and after doing sports activities check body weight and urine color to determine dehydration status (Ashadi, 2015).

### **CONCLUSION**

Understanding the nutritional intake needs of Mataram Soccer Academy students based on the knowledge aspect is in the very good category, this illustrates that Mataram Soccer Academy students already understand about fulfilling nutritional intake but not in practice in other words Mataram Soccer Academy students already understand enough but in application students are still not enough. Due to the limitations of the research, it was not detected for sure the reason why students did not apply it as well as their understanding, but there were several things that influenced it, namely the economic situation of the family, parents' knowledge of student nutrition, and trainer's knowledge.

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