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NUTRITION-RELATED KNOWLEDGE AND PERCEPTION ABOUT NUTRITIONAL STATUS AMONG STUDENTS AT FACULTY OF HEALTH UNIVERSITY OF NAHDLATUL WATHAN MATARAM

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Abstract

Increasing students' nutrition knowledge is an important goal which may improve their lifestyle. Adequate nutritional knowledge, perception, among adolescents are crucial to prevent health issues and consequently reduce the incidence of non-communicable chronic diseases, including obesity. This study aimed to know the level of Nutritional-Related Knowledge and Perception About Nutritional Status among students of University of Nahdlatul Wathan Mataram, Indonesia. Descriptive research with a cross-sectional research design was conducted in Faculty of Health, University of Nahdlatul Wathan in August 2025. The sample of this study was all health students from University of Nahdlatul Wathan batch 2025 who met the inclusion and exclusion criteria. The data was obtained through direct measurement and filling The Modified General Nutrition Knowledge Questionnaire (M-GNKQ questionnaire), The nutritional status of the students was assessed by calculating their body mass index (BMI) based on their self-reported weight and height. Weight perception questionnaire online. Our key findings revealed in this study, 290 students met the inclusion and exclusion criteria, with 55 male students and 235 female students. As many as 69.3% of students have normal nutritional status. The analysis of Nutritional-Related Knowledge shows that the students' knowledge regarding breakfast consumption, meat products consumption should be increased (88–89% correct answers). Of all of the students, only 48.4% can perceive body weight correctly. The rest, as much as 28.9% is exaggerating perception and 22.7% is reducing perception. The implications of this research are the knowledge of nutrition among the health students of Nahdlatul Wathan University is still quite low and there are still many students who mistakenly perceive their weight.

Keywords: Nutrition-related, knowledge, perception, nutritional status, adolescents.

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INTRODUCTION

Nutrition is essential for human health and happiness, acting as the base for ideal physical growth, mental abilities, and avoiding illnesses (Umekar & Joshi, 2024). Not getting enough nutrition can result in health issues, like long-lasting diseases that are not spread from person to person, including being overweight. (Verma et al., 2018). Indonesia is dealing with major nutrition problems, including the double burden of malnutrition, which includes both lack of proper nutrition and excessive nutrition

affecting the same group of people. (Maehara et al., 2019). Nutritional status perception is how they see their body weight. Usually, this view is categorized as underweight, healthy weight, overweight, or obese. (Sirirassamee et al., 2018). Many elements like social and personal characteristics, as well as environtment, impact how someone views their Nutritional Status. These factors include gender, Body Mass Index (BMI), race, income level, and how much they consume media. At present, individuals frequently hold incorrect beliefs regarding their weight. (Sirirassamee et al., 2018).

Nutrition knowledge is the capability of an individual to grasp details about what is in food, what the body needs to eat, and how it affects overall well-being. (Hamulka et al., 2018). This knowledge involves knowing about different food categories, what nutrients they contain, the nutritional requirements at various ages and health situations, and the good or bad impacts of specific foods. Lack of knowledge about nutrition can contribute to issues related to nutrition and lead to unhealthy eating patterns. The degree of understanding is a key focus and can significantly enhance people's eating habits and way of living while decreasing the number of obesity-related chronic diseases across their lifetime. (Hamulka et al., 2018). Understanding nutrition entails having information about food, nutrients, dietary guidelines, and safety measures regarding food. Young people who lack knowledge about proper nutrition should try to balance their nutrient intake with their requirements to prevent issues related to too little or too much nutrition. Being knowledgeable about nutrition can inspire individuals and encourage them to adopt healthier eating habits. Consequently, this can lead to improved nutritional health. Nonetheless, there are only a limited number of individuals who possess sufficient nutritional knowledge.

The World Health Organization (WHO) reported that in 2022, more than 390 million children and teenagers between the ages of 5 and 19 were classified as overweight. (Umekar & Joshi, 2024). The rate of children and adolescent overweight between 5 and 19 years old grew significantly from 8% in 1990 to 20% in 2022. A research project conducted with college students in Michigan, United States found that their average level of knowledge about nutrition was 66±13.4 SD. In contrast, only about 11.6% of college students in Indonesia have a good understanding of nutrition. Data from the Basic Health Research by the Ministry of Health of the Republic of Indonesia in 2018 indicates that 1.9% of teenagers aged 13-15 were seriously underweight, 6.8% were underweight, 75.3% were of normal weight, 11.2% were overweight, and 4.8% were considered obese.

Adolescence is a time when the body goes through important changes, starting from puberty around the ages of 10 to 19. Young people, especially students, are often overlooked when it comes to nutrition programs. Understanding food and nutrition is essential for adolescent as it helps them deal with the complicated food world, from buying nutritious foods for cooking healthy dishes to knowing

what ingredients are in their meals and how nutrients impact their health. Yet, many adolescents lack the necessary knowledge about food and nutrition to make healthy choices in their diet. (Brown et al., 2021). This could be linked to how people view the group seen as strong and untouchable. This group needs support too since they are moving into being adults. In addition, young people have similar chances of facing nutrition issues as teenagers, but they also deal with adult nutrition challenges that could affect their future. If they lack the knowledge to find, comprehend, and use basic information about food and nutrition to make good eating choices, their diets are lacking and do not match the guidelines for proper health (Azevedo Perry et al., 2017). Especially for students in health sciences, grasping information about nutrition and how they view it is very important. These aspiring healthcare workers will play a key role in offering dietary advice and encouraging healthy habits in their communities.

Students from the Faculty of Health at Nahdlatul Wathan University, class of 2025, have not yet learned about nutrition, which means their understanding of it is quite basic. Because of this, it is important to conduct this research to evaluate how much new students know about nutrition. Furthermore, these students are not used to determining their Body Mass Index and recognizing their nutritional status accurately. Hence, this study intends to explore how they view their weight and to find out if their understanding of their weight aligns with their true nutritional status. This study has never been conducted within the Faculty of Health of Nahdlatul Wathan University, so this study will contribute new insights regarding nutritional knowledge and nutritional status perception among students of Faculty of Health of Nahdlatul Wathan University.

METHODS

This study is a descriptive investigation that uses a cross-sectional approach. The participants in this study are first-year students enrolled in the Faculty of Health at Nahdlatul Wathan University who satisfy the study's requirements. To be included in the study, participants must agree to take part in the complete research process and sign a consent form. Students who do not finish the questionnaire completely or are pregnant or less than six months postpartum are excluded from the study. The method used for selecting participants is purposive sampling.

The information gathered in this research is primary data, which includes age, gender, Body Mass Index (BMI), understanding of nutrition, and views on nutritional status. Age and gender data are collected through consent forms and by asking participants to complete online surveys. Understanding of nutrition is assessed using the Modified-General Nutrition Knowledge Questionnaire (M-GNKQ), which has eleven sections, each focused on various aspects of nutrition knowledge. (Kliemann et al., 2016). Kliemann et all have determined that M-GNKQ serves as a reliable tool for measuring

understanding of nutrition. The questionnaire was filled out by the students through a Google Form. Every student took the survey on their own. The study took place while classes were in session.

Once participants have finished the questionnaire, the researcher computes each participant's score. By calculating their body mass index (BMI) using the weight and height they provided themselves, the students' nutritional health was evaluated. To establish classifications (underweight, normal weight, overweight, and obesity), BMI values were contrasted with BMI percentiles for age and sex. Subsequently, all data undergoes analysis through a univariate test employing SPSS version 23.

RESULTS AND DISCUSSION

Subject characteristics of students at the Faculty of Health, Nahdlatul Wathan University, looked at in this research included gender, age, and nutritional condition (body mass index for their age). The total number of participants was 290 students from the Faculty of Health, Nahdlatul Wathan University. Most of the students in this research were 19 years old, with the youngest being 17 years and the oldest at 21 years.

According to the data distribution, it was found that there were 19 students categorized as obese, 30 students as underweight, 201 students as having a normal weight, and 40 students as overweight. The majority of the students are categorized as having a normal nutritional status.

Table 1. Characteristics of students Faculty of Health, Nahdlatul Wathan University

Characteristics	Total	Percentage (%)
Sex		
Female	235	81.1
Male	55	18.9
Age		
17 years old	10	3.4
18 years old	76	26.2
19 years old	120	41.3
20 years old	60	20.6
21 years old	24	8.2
Nutritional Status		
Underweight	30	10.3
Normal	201	69.3
Overweight	40	13.7
Obese	19	6.5

Table 2. Distribution of students Faculty of Health, Nahdlatul Wathan University answering correctly question of the nutrition related-knowledge questionnaire

Nutrition related-knowledge questionnaire	% of correct answers
Question	

How many meals should adolescents eat a day?	74
Which meal eaten regularly is particularly important for well-being at school?	88
How often should children and adolescents eat fruit and vegetables?	50
Which products contain more dietary fiber?	64
How many servings of milk and/or dairy products should adolescents consume a day?	37
Which type of meat and/or meat products is most recommended for consumption?	89
How often should adolescents eat sea fish?	67
Which products should replace sweets?	86
Which products contain a lot of salt?	82
What is the recommended amount of water consumption for adolescents?	45

The understanding of nutrition among students is quite good as there is helpful information available to them about this topic. Resources like social media that provide nutrition-related content are fairly accessible, allowing students to be well-informed about healthy eating. The highest percentage of correct responses came from questions about which meat products are good to eat, with 89 percent of students answering correctly, and what meal should be eaten in the morning, with 88 percent correct. However, the least correct answers were found in questions like "How many servings of milk or dairy should young people have each day? " which received only 37 percent correct, and "What is the advisable amount of water intake for teenagers? " with just 45 percent correct.

Table 3. Distribution of body weight perception congruency among students Faculty of Health, Nahdlatul Wathan University

Perception congruency	**Total**	**Percentage**
Accurate perception	140	48.4
Overestimation perception	84	28.9
Underestimation perception	66	22.7
Total	**290**	**100**

Among the entire group of students, 66 of them perceive they are underweight, 140 consider themselves to be of average weight, and 84 see themselves as overweight. Most students view their weight as average. The overall findings about how students see their body weight show that they are able to accurately recognize their nutritional condition, which corresponds with the actual measurements. From all the students who have an incorrect view of their nutritional status, 84 believe they are overweight, and 66 perceive they are underweight.

In this research, it was discovered that 69.3% of students fall into the category of having a normal Body Mass Index (BMI). This conclusion comes from a study carried out among students at health colleges, specifically at King Khalid University (KKU) (Alhazmi et al., 2021), students identified as frequent participants (53.6%) fell within the standard BMI range. This research also suggests that student life is marked by quick decisions, leading to alterations in eating habits and exercise routines due to the influence of friends and media. As a result, college students form a unique group that is at risk for various issues associated with BMI such as obesity, being overweight, and being underweight. (Alhazmi et al., 2021). According to a study carried out adolescent from two regions in Indonesia, it was found that one in ten Indonesian adolescent suffers from malnutrition. This issue arises from a mix of personal, family, and community influences. Young people often have inconsistent eating patterns, which increases the chance of facing nutritional issues. Poor eating habits among adolescent include snacking too often, missing meals—especially breakfast—eating at irregular times, consuming fast foods, and not eating enough fruits and vegetables. These habits can lead to an intake of food that doesn't meet their nutritional requirements, resulting in either undernutrition or overnutrition. Fast food is particularly troublesome as it is typically high in calories and fats but low in fiber, contributing to weight gain.

The busy schedules that health students face might leave them with little time for physical activity, leading to low exercise levels that can impact their nutritional health. Overall, health students usually come from good socioeconomic backgrounds and have solid educational qualifications. Having a better socioeconomic status and educational background is linked to a higher risk of obesity. Furthermore, the demanding studies of medical students, which include challenging classes and strict exam timelines, can lead to stress. This stress can affect their nutritional health. A study conducted in the Arab Gulf Region supports this, revealing that 20.1% and 12.9% of college students were found to be overweight and obese, respectively. (Alhakbany et al., 2018). These findings were supported by Alazayani et al. and others who noted that almost 20% of medical students had excess weight, and over 10% were classified as obese. (Alzayani & Hamadeh, 2015).

According to the typical score for nutrition knowledge, students are able to answer correctly 45% of the time, with the best score being 88%. This contrasts sharply with a study done on students in Australia, where the average correct answers for the GNKQ questionnaire was 87%. A separate study that looked at both nutrition and Engineering students showed different outcomes. Nutrition students had an average correct answer rate of 87% on the GNKQ questionnaire, while Engineering students had a score of 77%.(Thompson et al., 2021). The variations in results related to nutrition understanding are affected by factors like Body Mass Index (BMI), gender, education level, and exposure to media. When health students lack knowledge about nutrition, it can hinder their ability to

give good advice on nutrition and meal planning to their patients, resulting in poor management of dietary issues. This research looked into the understanding of food and nutrition among teenagers in the CMA of London, Ontario, Canada. The findings indicated that the average scores for knowledge were quite low, showing an overall average score of 54.6%, with food knowledge averaging at 59.8% and nutrition knowledge at 52.2%. It's possible that nutrition knowledge scores were lower because this area requires a more detailed grasp of how food nutrients impact health. These low scores align with previous studies and imply that teenagers might lack the essential food and nutrition knowledge to make healthy eating choices. (Brown et al., 2021).

The results of the body weight perception assessment indicate that 48.4% of students can accurately perceive their body weight. This is similar to research conducted in Ghana, where 41.7% self-perceived themselves accurately. Whereas 10.6% of normal weight participants underestimated their weight status, over half (58.3%) of overweight/obese participants were able to perceive their body weight according to their actual Body Mass Index (BMI) (Mogre et al., 2015). Another study conducted on Adolescent in China also showed similar results, where 60.77% students rightly matched their body mass index (BMI) with self-perceived weight (Song et al., 2022).

Different elements affect misunderstandings about body weight. For adolescent, mental health has an impact on how they see their body weight. Additionally, the way individuals view their weight and experience teasing about it is strongly linked to risky health behaviors, especially in those who are of average weight or overweight, but this relationship is not evident in those who are underweight. The influence of weight teasing and personal weight perception is more significant on adolescent health behaviors than their actual body weight. This highlights the need for greater focus and actions to lessen bullying and biases regarding weight among teenagers. The misunderstanding of body weight in this research is due to the fact that these students are newcomers who lack information about how to accurately determine Body Mass Index (BMI). This is supported by the M-GNKQ questionnaire about BMI that was administered to the students.

CONCLUSION

The majority students have a regular eating pattern and good nutrition, but a few face issues like being obesity or underweight. Their understanding of nutrition is not very good. Among the topics, milk is the hardest to understand, while knowing about breakfast is the easiest. Also, there's a gap between how students see their own weight and their real nutrition situation. Some think they are heavier or lighter than they actually are. This is because they don't know how to properly measure body mass index, as shown by the low number of correct answers in the nutrition knowledge test. So, it's important to help students better understand nutrition and body weight. We need to encourage a

healthy view of their own body and create a sense of responsibility for learning basic health information through university health programs.

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DECLARATION OF INTEREST STATEMENT

The authors declare that they have no conflict of interests. for this research were obtained from LPPM Nahdlatul Wathan University.

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