

OVERVIEW OF STUDENT CHARACTERISTICS AND NUTRITIONAL STATUS AT UNIVERSITAS NEGERI MEDAN

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Received: Januari,15, 2024 Revised: Februari,15, 2024 Accepted: Maret,15, 2024

Abstract. Students' health and nutritional status are important aspects that affect their quality of life and academic performance. At Universitas Negeri Medan, there are diverse student characteristics that reflect different social, economic and cultural backgrounds. An in-depth understanding of college students' characteristics and nutritional status is important to design appropriate interventions to improve their health and well-being. This study aims to describe students' characteristics and nutritional status at Universitas Negeri Medan. This study used a descriptive qualitative method with a cross-sectional design. The sampling technique used stratified random sampling, with a total sample of 78 respondents selected based on certain criteria relevant to the research objectives. The research instruments were questionnaires, weight scales and microtoice. The questionnaire was used to find out data on the characteristics of respondents. Body weight scales and microtoice were used to determine the nutritional status of students. Data were collected through interviews, observations, and nutritional status measurements, including parameters such as Body Mass Index (BMI). The characteristics of the respondents showed that 69.2% of respondents were female with 100% of respondents in the late adolescent age category, and 52.6% of respondents were in the final semester of college. There are still many respondents (47.5%) who have abnormal nutritional status, which reflects the imbalance between nutritional intake and body needs. This study showed variations in individual characteristics and nutritional status, indicating the need for specific interventions to improve healthy nutrition awareness and behaviours among university students.

Keywords: Characteristics; College Students; Nutritional Status.

INTRODUCTION

Students' health and nutritional status are important aspects that affect their quality of life and academic performance. The transition to college represents a critical period in the lives of young adults, characterized by significant changes in lifestyle, responsibilities, and social dynamics. As young adults transition from structured environments, such as high school, to the more independent lifestyle of college, their dietary habits and nutritional choices often undergo significant changes. This period is often marked by a shift in dietary habits, which can have profound implications for the nutritional status of college students. This transition can also lead to various nutritional challenges, including undernutrition, obesity, and deficiencies in essential nutrients, which can adversely affect their physical and cognitive performance.

Research indicates that many college students exhibit unhealthy eating behaviors, such as low consumption of fruits and vegetables and high intake of fast food and sugar-sweetened beverages, largely due to the pressures of academic life and social influences (Mukigi & Brown, 2019; Wu et al., 2023). The pressures of academic life, combined with time

constraints and the allure of convenience, often lead students to prioritize quick and accessible food options over nutritious meals (Sulthonah et al., 2023; Ukegbu et al., 2017). Studies have shown that students living on campus tend to prepare fewer meals, which correlates with poorer dietary choices and increased intake of unhealthy foods (Almoraie et al., 2024). The autonomy that comes with college life can lead to dietary choices that prioritize convenience over nutritional value, exacerbating the risk of poor health outcomes (Hu et al., 2017).

Moreover, the unique characteristics of college students, including their psychological and social environments, play a significant role in shaping their dietary habits. For instance, the stress associated with academic demands and social adjustments can lead to emotional eating or neglect of healthy eating practices (Mukigi & Brown, 2019; Shen et al., 2020). Additionally, factors such as financial constraints and time management challenges further complicate students' ability to maintain a balanced diet, often resulting in food insecurity and reliance on less nutritious food options.

Research indicates that many college students struggle with maintaining a balanced diet due to factors such as limited cooking skills, financial constraints, and the pressures of academic life. For instance, a study by Yahia et al. highlights the association between nutrition knowledge and dietary fat consumption among college students, revealing that those with higher nutrition knowledge tend to make healthier dietary choices (Yahia et al., 2016). Furthermore, Gamba et al. discuss the feasibility of restaurant delivery services to improve food security among college students experiencing marginal food security, emphasizing the need for accessible and nutritious food options on campuses (Gamba et al., 2021).

The nutritional status of college students is a critical area of research, particularly as it relates to their overall health, academic performance, and long-term well-being. Understanding the nutritional status of college students requires a multifaceted approach that considers individual characteristics, environmental influences, and broader societal factors. A complex interplay of personal, social, and environmental factors shapes college students' characteristics and nutritional status. Addressing these challenges is essential for fostering healthier lifestyles and improving overall well-being among this demographic. At Universitas Negeri Medan, a diverse student population reflects a wide range of social, economic, and cultural backgrounds, which can influence their nutritional status. Understanding these characteristics is essential for developing targeted interventions aimed at enhancing students' health and well-being. This study aims to provide a comprehensive portrait of the characteristics and nutritional status of college students at Universitas Negeri Medan.

METHOD

This study used a descriptive qualitative method with a cross-sectional design. The sampling technique used stratified random sampling, with a total sample of 78 respondents selected based on certain criteria relevant to the research objectives. Respondents are adolescents who are registered as active students in college. The age of respondents is 19-25 years old. The research instruments were questionnaires, weight scales and microtoice. The questionnaire was used to find out data on the characteristics of respondents, including age, gender, semester, residence, parent's education, parents's occupations, and parent's income.

Body weight scales and microtoice were used to determine the nutritional status of students. Data were collected through interviews, observations, and nutritional status measurements, including parameters such as Body Mass Index (BMI).

The research steps began with explaining the purpose and intent of the research to the respondents. If they were willing, they were asked to fill out and sign an informed consent form. The next step is to distribute questionnaires to respondents containing respondent identity data. After the identity data is filled in completely, then the respondent's weight and height are measured, to obtain Body Mass Index data. The last step is to analyze the data that has been collected. The data analysis used in this study was univariate. Univariate analysis is used to describe the characteristics and nutritional status of respondents. The results of data analysis are in the form of a frequency distribution of each variable, which is presented in percentage form.

RESULTS AND DISCUSSION

The results of data analysis are in the form of the frequency distribution of each variable, that is, the characteristics and nutritional status of respondents. Table 1 shows the percentage of respondents' characteristics consisting of gender, age, semester, residence, parents' education, occupation, and income.

Table 1. The characteristics of respondents

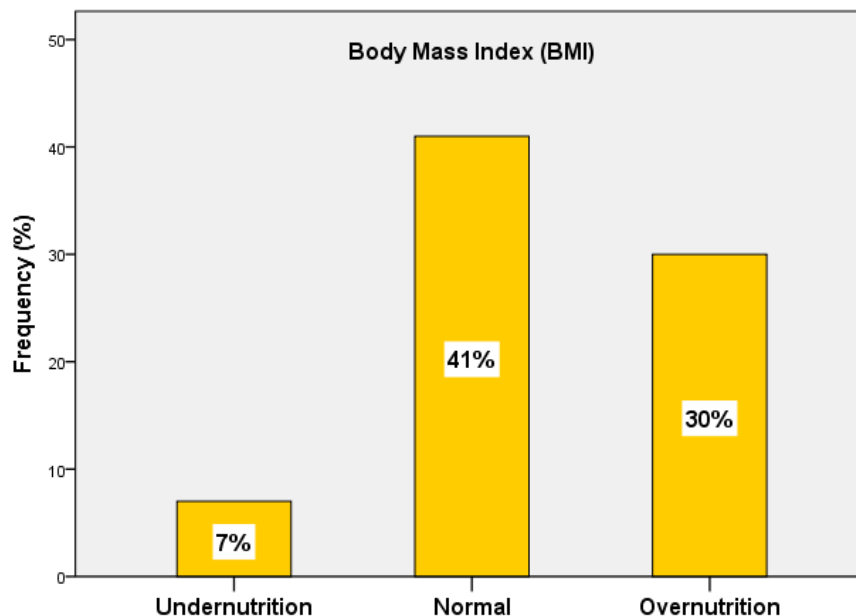
Variable	Category	N	(%)
Gender	Male	24	30.8
	Female	54	69.2
Age	<19 years old	0	0
	≥ 19 years old	78	100
Semester	early semester	5	6.4
	middle semester	32	41
	final semester	41	52.6
Residence	Boarding house	36	46.2
	With parents	33	42.3
	With relatives	9	11.5
Father's Education	No school	1	1.3
	Elementary School	5	6.4
	Junior High School	8	10.3
	Senior High School	43	55.1
	University	21	26.9
Mother's Education	Elementary School	3	3.8
	Junior High School	10	12.8
	Senior High School	42	53.8
	University	23	29.5
Father's Occupation	No work	12	15.4
	Farm worker	9	11.5
	Day labourer	2	2.6
	Services	4	5.1
	Civil servant	12	15.4
	Private employee	7	9
	trader/self-employed	26	33.3

Variable	Category	N	(%)
Mother's Occupation	Others	6	7.7
	Housewife	41	52.6
	Farm worker	7	9
	Day labourer	2	2.6
	Services	8	10.3
	Civil servant	7	9
	Private employee	5	6.4
	trader/self-employed	8	10.3
Parents' Income	< average minimum salary	45	57.7
	≥ average minimum salary	33	42.3

Table 1 reveals that the majority of respondents were female (69.2%). All respondents were ≥ 19 years old, meaning they were in their late teenage years. Most respondents (52.6%) were in their final semester, the seventh to eighth semester. Meanwhile, 41% of respondents were in the middle semester, namely semester three to semester six, and only 6.4% were in the early semester (the first two years of college). Most respondents were living in boarding house (46.2%) and living at home with their parents (42.3%), but there were some respondents living with other relatives (11.5%) such as grandmother, uncle, or aunt. Respondents who live in boarding houses or with other relatives, due to the distance of their homes from the campus, making it impossible for respondents to commute every day.

The next characteristic is the identity of the respondent's parents. The father's education was mostly a high school graduated (55.1%), and the mother's education was also mostly a high school graduated (53.8%). There were still 1.3% of parents who did not finish school, on the other hand, parents of respondents who graduated from college reached more than 26%. The most common occupation of the father was trader or self-employed (33.3%) followed by other occupations such as civil servant (15.4%) and farm labourer (11.5%). There were also 15.4% of fathers who did not work. As for the mother's occupation, the majority (52.6%) were categorized as a housewife. However, some mothers had jobs such as service workers (10.3%), traders (10.3%), and civil servants (9%). Parents' income is based on the Average Minimum Salaries of Medan City. There are still many parents who have salaries below the minimum wage (57.7%) compared to those who have salaries above the minimum wage (42.3%). Parents with salaries above the minimum wage have jobs such as civil servants and traders, while those below the minimum wage come from parents who are laborers and do not work.

The next data is a description of the nutritional status of the respondents. The nutritional status categories in this study are divided into undernutrition, normal, and overnutrition, which can be seen in Figure 1.



Figures 1. Body Mass Index in Participants

The results of the study in Figure 1 showed that most respondents had normal nutritional status (41%). This indicates that many respondents can fulfil their daily needs. In addition, this is thought to be due to parents' income above the minimum wage. A good income will affect a person in buying and choosing their foods. Numerous studies indicate that higher income levels correlate positively with improved nutritional outcomes. Income levels also influence dietary choices and the quality of food consumed. Gao et al. demonstrated that income growth contributes to improvements in nutritional status among Chinese adults by allowing for better food choices, as income rises, households tend to spend more on higher-quality food items, which positively affects their nutritional intake (Gao et al., 2020). Higher income not only enhances food purchasing power but also improves access to health services, which are essential for maintaining good nutritional status. Masdalena noted that children from higher-income families have better access to routine health check-ups and medical care, which are crucial for monitoring and promoting healthy growth and nutrition (Masdalena & Nadapdap, 2023).

However, the main concern is that the data in Figure 1 reveals that there are still quite a several respondents who are undernutrition (7%) and overnutrition (30%). The nutritional status of college students is a critical area of study, given the unique lifestyle changes and challenges they face during this transitional phase of life. The nutritional status of adolescents is influenced by a multitude of factors that encompass individual, familial, social, and environmental dimensions. Undernutrition and overnutrition in adolescents can be caused by many factors. Based on this study, the income of parents and residence can be a contributing factor to student nutrition problems. The relationship between income and nutritional status is further complicated by socioeconomic inequalities. Studies have shown

that malnutrition is more concentrated in less economically developed areas, as highlighted by Singh et al., who found an inverse relationship between economic development and child malnutrition in India (Singh et al., 2019). Research has shown that families with lower incomes often struggle to afford a diverse and balanced diet, leading to undernutrition and related health issues. For instance, Wondiye et al. found that a monthly income of less than \$20 was significantly associated with undernutrition among the elderly in Ethiopia, echoing findings from similar studies that highlight the negative impact of low income on nutritional status (Wondiye et al., 2019).

Respondents who experienced nutritional problems were suspected of living in a boarding house, so their diet and access to food were not good. The lifestyle of adolescents living in boarding houses can also contribute to their nutritional status. Hendrarto et al. found that sedentary behavior, which is common in boarding environments, can lead to nutritional imbalances, including anemia and other deficiencies (Hendrarto et al., 2022). Living arrangements significantly influence the nutritional status of college students. Research by Syihab et al. found that students living at home exhibited healthier eating habits compared to those residing in dormitories or boarding houses (Syihab et al., 2019). A study by Calista et al. highlighted that adolescents in boarding schools in Tanzania experienced a monotonous diet lacking essential micronutrients such as iron, zinc, and calcium, which are crucial for growth and development (Nicholaus et al., 2020). This inadequacy can lead to a coexistence of both undernutrition and overnutrition, complicating the overall nutritional status of adolescents.

Other factors that can cause nutritional problems are diet, physical activity, rest patterns, and also psychosocial. Dietary habits established during adolescence significantly impact nutritional status. Research by Siriky et al. indicates that poor dietary intake is associated with the development of overweight and obesity in adolescents, highlighting the importance of healthy eating patterns during this critical growth period (Siriky et al., 2021). Online food consumption habits, lack of calcium intake, and excessive energy intake can lead to overnutrition in adolescents (Y. Sandy et al., 2023; Y. D. Sandy et al., 2023). Physical activity levels are closely linked to nutritional status. Heikkilä et al. found that participation in sports clubs positively influences adolescents' dietary habits, suggesting that active lifestyles promote healthier eating patterns (Heikkilä et al., 2021). Conversely, sedentary behaviors, often exacerbated by screen time and social media, can lead to poor dietary choices and increased risk of obesity. Psychosocial factors, including stress and mental health, can impact dietary behaviors among adolescents. Shawon et al. highlighted the relationship between psychological distress and unhealthy eating behaviors, indicating that mental health support is essential for promoting better nutritional outcomes (Shawon et al., 2023).

CONCLUSION

The characteristics of the respondents showed that most of respondents were female with all of respondents in the late adolescent age category, and more than half of respondents were in the final semester of college. There are still many respondents who have abnormal nutritional status (undernutrition and overnutrition), which reflects the imbalance between nutritional intake and body needs. The characteristics and nutritional status of college students at Universitas Negeri Medan reflect a complex interplay of various

factors that influence their health and well-being. The study highlights the urgent need for specific interventions aimed at improving nutritional awareness and behaviors among university students. By addressing these issues, educational institutions can significantly contribute to the overall health and academic success of their students, fostering a healthier campus environment that supports their personal and academic development.

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