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The Relationship Between Dietary Patterns And Nutritional Status Among Female Adolescents At SMK Negeri 8 Pekanbaru

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ABSTRACT

Nutritional status is one of the important indicators in determining adolescent health. Poor eating patterns can disrupt body metabolism, affect appetite, and impact energy balance, thus potentially altering nutritional status. This study aimed to determine the relationship between eating patterns and nutritional status among female adolescents at SMK Negeri 8 Pekanbaru in 2025. This research employed an analytic design with a cross-sectional approach. The study sample consisted of 184 female adolescents selected using a total sampling technique. Data on eating patterns were collected using a questionnaire, while nutritional status was measured based on Body Mass Index (BMI) according to WHO standards. Data analysis was carried out univariately and bivariately using the chi-square test with a significance level of 0.05. The findings showed a significant relationship between eating patterns and nutritional status among female adolescents at SMK Negeri 8 Pekanbaru. This means that adolescents with good eating patterns tend to have normal nutritional status, as proven by the research results with a p-value = 0.000 < 0.05. There is a significant relationship between eating patterns and nutritional status among female adolescents at SMK Negeri 8 Pekanbaru. Adolescents with poor eating patterns are more likely to have abnormal nutritional status.

Keywords : Dietary patterns, Nutritional status, Female adolescents.

INTRODUCTION

Adolescence is the transition from childhood to adulthood, a period of development in all aspects and functions leading to adulthood. Adolescence is a time when individuals first develop, displaying secondary sexual characteristics until they reach sexual maturity. Adolescence is a transitional period from childhood to adulthood, requiring higher nutritional intake. During adolescence, rapid growth (growth spurt) occurs, which affects body weight, bone mass, and physical activity. Therefore, adolescent nutritional needs must be met.(Permatasari, 2023)

Adolescence requires higher levels of nutrition due to the physical growth and development that occur during the transition from childhood to adolescence. Changes in lifestyle and eating habits affect both nutritional intake and needs. Eating habits in adolescents relate to food consumption, including food type, quantity, frequency, distribution, and food selection. Unhealthy eating habits are formed due to school children frequently buying snacks outside the home, which can impact their nutritional status.(Fasaliva, 2020).

Nutritional status is a state of health reflected in the balance between food intake and the body's nutritional needs. Nutritional status can be viewed from three perspectives: adequacy, deficiency, or excess of nutrients in a person's body. Good nutritional status occurs when a person has sufficient nutritional intake to meet the body's needs, allowing the body to function properly and healthily.(Widnatusifah et al, 2020).

Adolescents' dietary patterns will determine the amount of nutrients they obtain for growth and development. Furthermore, adolescents generally engage in higher levels of physical activity than other ages, requiring more nutrients. Adolescents with abnormal nutritional status have poor dietary patterns, particularly in certain food types. Their meal frequency and quantity are insufficient or do not meet the recommended balanced nutrition guidelines. Most adolescents do not eat enough food in sufficient quantities or portions, and their food types are not yet varied.(Rahayu & Fitriana, 2024).

According to*World Health Organization*(WHO) (2021)In the UK, the prevalence of overnutrition is 22% among male adolescents and 23% among female adolescents. In the United States, the prevalence of overnutrition among female adolescents aged 15-18 is 20.5%. In Indonesia, the prevalence of undernutrition among female adolescents aged 15-18 is 11.1% and the prevalence of overnutrition is 10.8%. The prevalence of balanced nutrition is 9.4%. Meanwhile, data from the World Health Organization (WHO) in 2021 stated that adolescents aged 15-18 worldwide have nutritional problems, namely: Nutritional status is a health condition reflected in the balance between food intake and the body's nutritional needs. Nutritional status can be seen from three aspects: adequacy, deficiency, or excess of nutrients in a person's body. Good nutritional status occurs when a person

has sufficient nutritional intake to meet the body's needs, so that the body can function properly and healthily.(Widnatusifah et al, 2020).

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Nationally in Indonesia in 2021 the prevalence of wasting among adolescent girls aged 15-18 years was 11.1% consisting of 3.3% very thin and 7.8% thin and the prevalence of obesity among adolescent girls aged 15-18 years in Indonesia was 10.8%,2 consisting of 8.3% fat and 2.5% very fat (obese). The prevalence of wasting among adolescents aged 15-18 years nationally was 9.4% (1.9% very thin and 7.5% thin) and the prevalence of obesity was 7.3% consisting of 5.7% fat and 1.6% obese.

The results of the 2022 Basic Health Research (Riskesdas) regarding the nutritional status of adolescents in Indonesia based on their age (15-18 years) showed that 1.4% experienced poor nutritional status, 6.7% experienced underweight nutritional status, 78.3% experienced good nutritional status, 9.5% experienced overweight nutritional status and 4.0% experienced obesity nutritional status. At the East Java provincial level, the nutritional status of adolescents aged 15-18 years was

categorized as very thin at 1.12%, underweight at 6.81%, normal at 75.68%, overweight at 11.32%, and obese at 5.06%.(Ministry of Health of the Republic of Indonesia, 2020).

Riau Province is one of 17 provinces with a prevalence of severely wasted and obese adolescents above the national prevalence. The prevalence of nutritional status in adolescents aged 15-18 years in Riau Province shows that 9.83% of adolescents are malnourished, consisting of 2.68% severely wasted and 7.15% underweight, while 17.44% of adolescents are overweight, consisting of 9.08% overweight and 8.36% obese. Data from the Riau Province Basic Health Research (Riskesdas) shows that adolescents aged 15-18 years in Pekanbaru City who have a nutritional status of 7.8% are underweight and the prevalence of overweight is 13.5%. This figure is close to the national prevalence of underweight and overweight nutritional status.(Ministry of Health of the Republic of Indonesia, 2020).

The results of research conducted byKawatu (2022)with the title "The relationship between eating patterns and nutritional status in adolescents aged 15-18 years at the Al-Yusufiah Islamic Boarding School, Angkola Muaratais District" the results of the study showed that there was a relationship between eating patterns and nutritional status in adolescents aged 15-18 years with a P value = 0.000. With the majority of thin adolescent nutritional status, namely 39 people (65.0%) and the minority of normal adolescent respondents' nutritional status, namely 21 people (35.0%).

The results of the research above are not much different from the research conducted byRafika (2019)With the title "The relationship between eating patterns and nutritional status in adolescents at Surulangun State Senior High School, Rawas Ulu District, Muratara Regency," the results of this study show that 24% of adolescents at Surulangun State Senior High School experience poor nutritional status and eating patterns.

METHOD

This research is quantitative. The research design used in this study is descriptive correlative. By using a cross-sectional approach, meaning that all variables included in the effect will be studied and collected simultaneously, namely to determine the

relationship between eating patterns and nutritional status in adolescents at SMK Negeri 8 Pekanbaru. The research instrument used is a questionnaire. This questionnaire has been tested for validity and reliability beforehand to determine whether the questionnaire is suitable for use in this study.

RESULTS AND DISCUSSION

Based on the research that has been conducted, the following data was obtained:

Table 1. Distribution of Characteristics of Grade X and XI Students at State Vocational School 8 Pekanbaru

Characteristics	Frequency (N)	Presentation (%)
15 years	61	33.2
16 years	66	35.9
17 years	57	31.0
147 cm	2	1.1
153 cm	14	7.6
155 cm	92	50.0
157 cm	56	30.4
159 cm	17	9.2
160 cm	3	1.6
45 kg	34	18.5
55 kg	92	50.0
65 kg	36	19.6
75 kg	22	12.0
Total	184	100.0

Based on table 1, it was found that the age characteristics with the majority of respondents aged 16 years, namely 66 (35.9%) respondents. 61 (33.2%) respondents were 15 years old, and 57 (31.0%) other respondents were 17 years old. The height characteristics of the majority of respondents with a height of 155 cm were 92 (50.0%) respondents, the least with a height of 147 cm were 2 (1.1%) respondents. The weight characteristics of the majority of respondents with a weight of 55 kg were 92 (50.0%) respondents, the least with a weight of 75 kg were 22 (12.0%) respondents.

Table 2. Frequency Distribution of Eating Patterns in Female Adolescents at State Vocational School 8 Pekanbaru

Dietary habit	Frequency (n)	Presentation (%)
Good	60	32.6
Currently	80	43.5
Not enough	44	23.9
Total	184	100.0

Based on table 2, it was found that the majority of respondents had a moderate diet, namely 80 (43.5%), then respondents with a good diet were 60 (32.6%) and respondents with a poor diet were 44 (23.9%).

Table 3. Frequency of Nutritional Status in Female Adolescents at State Vocational School 8 Pekanbaru

Nutritional status	Frequency (n)	Presentation (%)
Thin	34	18.5
Normal	92	50.0
Fat	36	19.6
Obesity	22	12.0
Total	184	100.0

Based on table 3, it was found that the majority of respondents with normal nutritional status were 92 (50.0%), then respondents with overweight nutritional status were 36 (19.6%), respondents with thin nutritional status were 34 (18.5%) and respondents with obesity nutritional status were 22 (12.0%).

Table 4. The Relationship between Dietary Patterns and Nutritional Status in Female Adolescents at State Vocational School 8 Pekanbaru

Dietary habit	Nutritional status				Total	α
	Thin	Normal	Fat	Obesity		

	N	%	N	%	N	%	N	%	N	%	P Value	
Good	5	8.3	38	63.3	13	21.7	4	6.7	60	100		
Currently	16	20.0	42	52.5	16	20.0	6	7.5	80	100	0,000	0.05
Not enough	13	29.5	12	27.3	7	15.9	12	27.3	44	100		
Total	34	18.5	92	50.0	36	19.6	22	12.0	184	100		

Based on table 4, it was found that out of 60 respondents with a good diet, there were 5 (8.3%) respondents with thin nutritional status, 38 (63.3%) respondents with normal nutritional status, 13 (21.7%) respondents with overweight nutritional status, and 4 (6.7%) respondents with obesity nutritional status. Of the 80 respondents with a moderate diet, there were 16 (20.0%) respondents with underweight nutritional status, 42 (52.5%) respondents with normal nutritional status, 16 (20.0%) respondents with overweight nutritional status, and 6 (7.5%) respondents with obesity nutritional status. Of the 44 respondents with a poor diet, there were 13 (29.5%) respondents with underweight nutritional status, 12 (27.3%) respondents with normal nutritional status, 7 (15.9%) respondents with overweight nutritional status, and 12 (27.3%) respondents with obesity nutritional status.

Based on the results of the chi-square test using a computerized system, the p-value results show 0.000 <0.05, meaning that there is a relationship between eating patterns and nutritional status in female adolescents at SMK Negeri 8 Pekanbaru in 2025.

CONCLUSION

From the results of the research conducted by the researcher, it can be concluded that there is a significant relationship between eating patterns and nutritional status

in female adolescents at SMK Negeri 8 Pekanbaru, which means that if adolescents have good eating patterns, they will also have normal nutritional status, as evidenced by the results of the study with a p-value = 0.000 <0.05.

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