



OVERVIEW OF NUTRITIONAL STATUS AMONG FEMALE STUDENTS

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ABSTRACT

The problem of nutritional imbalance in adolescent girls. Factors such as an unbalanced diet, low awareness of the importance of nutrition, and a sedentary lifestyle contribute to this nutritional problem. Poor nutritional status negatively impacts physical growth and development and mental health. Objective: to explore the nutritional status of students at SMA Plus Kopi Colol. Methods: The research method used was descriptive quantitative involving 51 female students as respondents. Data were collected through measurements of height, weight, abdominal circumference, and upper arm circumference. Data analysis was performed using descriptive statistics. Results: The results showed that all respondents were female. A small proportion of respondents had undernutrition as well as chronic energy deficiency. This shows that it is necessary to handle nutritional problems in female students at SMA Plus Kopi Colol. The participation of health workers and schools is needed to overcome nutritional problems in female students. Conclusion: More specific and targeted health intervention program planning related to nutritional status is needed to improve the health and well-being of SMA Plus Kopi Colol students.

Keywords: female; nutrition; students

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INTRODUCTION

Nutritional status in adolescent girls refers to their nutritional and health conditions as influenced by food intake, nutrient absorption, and physical growth. Nutritional status includes various parameters such as adequate levels of energy, protein, vitamins and minerals needed to support optimal body function and development (Green et al., 2013). Adolescent girls in this period require adequate nutrition to support body growth, reproductive organ development, and bone health (Wassie et al., 2015). Increased nutritional requirements are in line with the intense growth phase, so it is important to ensure that food intake is balanced, contains essential nutrients, and meets the specific needs of adolescent girls (Kim et al., 2014).

Nutritional status in adolescent girls is influenced by a number of factors involving diet, lifestyle and socio-economic factors. Dietary aspects, which include the type and amount of food intake, as well as the frequency of consumption, are the main factors that influence nutritional status (Li et al., 2018). In addition, an active lifestyle or conversely, a lack of

physical activity, can play a role in energy balance and metabolism (Hadush et al., 2015). Socio-economic factors, such as family income level, accessibility to nutritious foods and nutrition education, also play a key role. Dietary disorders, such as a tendency towards unbalanced diets or disordered eating behaviors, can negatively impact nutritional status (Srinivasan et al., 2017). In addition, biological factors such as rapid pubertal growth and increased nutritional requirements also affect the nutritional status of adolescent girls (Putri Milenia & Herdhianta, 2022).

Under- or over-nutrition in adolescent girls can have a serious impact on their health and development. Undernutrition in adolescent girls can lead to health problems such as anemia, impaired growth, and low immunity. Lack of nutritional intake especially during the growth period can affect cognitive function, bone strength and the development of reproductive organs (Karahan et al., 2020). On the other hand, being overnourished or overweight can increase the risk of diseases such as diabetes, cardiovascular disease and other health problems (Hadush et al., 2015). In addition to the physical impact, unbalanced nutritional status can affect mental well-being, triggering self-appearance issues, low self-esteem and the risk of eating disorders (Green et al., 2013).

Addressing poor or over-nutrition in adolescent girls requires a holistic approach involving education, promotion of healthy lifestyles and community support (Lisevick et al., 2021). To address poor nutritional status, nutrition education programs focused on adolescent girls and their families can improve understanding of the importance of balanced nutrition (Kim et al., 2014). Campaigns to improve the accessibility of nutritious food, especially for families with economic limitations, can also help address the issue of poor nutritional status. Meanwhile, to address overnutrition, it is important to promote active lifestyles, motivate participation in physical activities, and raise awareness of the importance of healthy food choices (Hadush et al., 2021). Psychosocial support programs can also help adolescent girls develop a positive relationship with their bodies and establish healthy eating behaviors (Ojo et al., 2019). Collaboration between educational, health and community institutions can create a supportive environment for prevention and intervention efforts to address unbalanced nutritional status in adolescent girls. Based on this, the author is interested in conducting research on the description of nutritional status in adolescent girls in East Nusa Tenggara.

METHOD

This study used a descriptive research design to describe and analyze the nutritional status of female students at SMA Plus Kopi Colol. The sample of this study was female students at SMA Plus Kopi Colol. Inclusion criteria involved schoolgirls who were actively attending school and gave consent to participate in the study. Exclusion criteria involved students who had certain health conditions that could affect nutritional status. The research location was at SMA Plus Kopi Colol. The sample in this study was 51 female students of SMA Plus Kopi Colol. Data collection involved measuring height, weight, abdominal circumference, and upper arm circumference. Normal values used as a reference are based on general standards, such as BMI values (18.5-24.9 kg/m²), abdominal circumference (<80 cm for women), and upper arm circumference (>23.5 cm).

Ethical principles applied included autonomy, justice, beneficence, non-maleficence, and data confidentiality. The principle of autonomy was maintained by providing comprehensive information to female students at SMA Plus Kopi Colol and seeking informed consent before participation. Fairness was observed in the selection of a fair sample, ensuring good representation of the schoolgirl population. The principle of beneficence was realized through

the benefits of the study that could improve understanding of the nutritional status of schoolgirls, supporting health efforts. Non-maleficence was upheld by ensuring the safety of participants during data collection. Data confidentiality was maintained through secure data processing and storage, as well as reporting results in aggregate without identifying individuals, to protect the privacy of research participants. Data analysis was conducted using descriptive statistics, namely univariate analysis. This analysis will provide a clear picture of the nutritional status of female students at SMA Plus Kopi Colol.

RESULTS

The findings of the research results related to nutritional status screening in students of SMA Plus Kopi Colol are described in tabular form. Table 1 illustrates the distribution of respondents based on gender and age. In terms of gender, all respondents were female, totaling 51 respondents (100%). Meanwhile, in terms of age, most respondents were 17 years old, reaching 18 respondents (35.29%) (Table 1).

Table 1.
Respondent characteristics (n= 51)

Characteristics		f	%
Gender	Male	0	0
	Female	51	100
Total		51	100
Age	15 years	10	19.61
	16 years	12	23.53
	17 years	18	35.29
	18 years	11	21.57
Total		51	100

The activity of Aksi Bergizi Remaja Manggarai Timur targeted 51 adolescent girls. Data interpretation showed that of the 51 adolescent girls who participated in the activity, 9.80% had a body mass index per age indicating poor nutritional status, 11.76% experienced undernutrition, and 1.96% faced overweight and obesity problems. A total of 27.45% of the total respondents had chronic energy deficiency. However, on a positive note, none of the adolescent girls were centrally obese. From this data, it can be concluded that there are real challenges in nutrition among the adolescent girls involved in the activity. Factors causing anemia and chronic energy deficiency in adolescent girls were identified to involve insufficient administration of blood supplement tablets, poor diet, and lack of rest. Therefore, there is a need for focused prevention and intervention efforts to improve the nutritional and health status of adolescent girls in this environment, taking into account the identified factors (table 2).

Table 2.
Nutritional Status of Respondents (n=51)

Nutritional interpretation			
No	Examination indicator	%	f
1	Poor nutrition	5	9,80
2	Lack of nutrition	6	11,76
3	Normal	38	74,51
4	Overweight	1	1,96
5	Obese	1	1,96
Interpretation of chronic energy deficiency			
No	Examination indicator	%	f
1	Chronic energy deficiency	14	27,45
2	Normal	37	72,55
Interpretation of abdominal circumference			
No	Examination indicator	%	f
1	Central obesity	0	0,00
2	Normal	51	100,00

DISCUSSION

The results showed that there were still a number of female students at SMA Plus Kopi Colol who had undernourished status and chronic energy deficiency (CED). Measurement data on height, weight, abdominal circumference, and upper arm circumference revealed that some female students had values below the established normal limits. This phenomenon indicates a nutritional problem that needs serious attention. Continued efforts to improve nutritional understanding, promotion of a balanced diet, and provision of better access to nutritious foods may need to be strengthened (Ozyigit et al., 2018). Appropriate intervention measures need to be considered to improve nutritional status and reduce the risk of undernutrition, particularly in terms of undernutrition and SEZ among female students at SMA Plus Kopi Colol. The findings provide a basis for planning more effective and targeted health programs to improve the well-being of female students in this educational setting (Karahan et al., 2020).

Poor or excess nutritional status in female students can be influenced by a number of multifactorial factors (Samimi et al., 2016). These factors include an unbalanced diet, low nutrition awareness, and accessibility to nutritious foods. Adopting a less active lifestyle or spending too much time in front of electronic screens can also contribute to suboptimal nutritional status (Wu et al., 2021). Socio-economic factors such as family income level, parental education, and social environment can also play a role in determining the diet and lifestyle of female students (Bail et al., 2022). In addition, the influence of mass media and social pressure related to ideal body image can often affect the eating behavior of female students (Samimi et al., 2016).

The impact of poor or excessive nutritional status in female students can have a significant effect on their health and well-being (Arends et al., 2017). Girls with poor nutritional status are at risk of impaired growth, decreased immunity, and health problems such as anemia. On the other hand, over-nutrition can lead to the risk of metabolic diseases, diabetes and heart health problems (Ojo et al., 2019). In addition to the physical impacts, unbalanced nutritional status can affect mental well-being, increase the risk of eating disorders, and affect girls' body image and self-esteem. Thus, it is important to understand and address nutritional status issues in female students, paying special attention to aspects of their physical and mental health to ensure optimal development and well-being (Hardy et al., 2021). Appropriate prevention and intervention efforts need to be implemented to achieve a balanced nutritional status and

support the holistic growth and development of female students (Christoph et al., 2016; Mahoney et al., 2019).

Addressing poor or excessive nutritional status in female students requires holistic efforts involving educational approaches, promotion of healthy lifestyles, and community support. Focused nutrition education programs can help improve schoolgirls' understanding of the importance of a balanced diet and adequate nutrient intake (Fram et al., 2022; Mahoney et al., 2019). Promotion of healthy lifestyles, including regular physical activity and good eating habits, needs to be strengthened to encourage healthy behaviors in daily life. Collaboration with schools and families is also important to create a supportive environment for nutritious food choices at home and at school (Saif et al., 2020). In addition, the government and health institutions need to play a role in increasing people's accessibility to nutritious food through supportive policies and programs (Chiang et al., 2022; Zheng et al., 2023). These efforts, if implemented comprehensively, are expected to reduce the prevalence of poor or excess nutritional status in female students and improve their overall health and well-being.

Schools play a crucial role in addressing poor or overnutrition among schoolgirls through various preventive and intervention efforts. First, the implementation of nutrition education programs integrated into the curriculum can increase girls' understanding of the importance of balanced nutrition (Chiang et al., 2022). Schools can also create a healthy eating environment, provide nutritious food choices in the canteen, and provide education on good food choices (Fram et al., 2022). Planned physical activity and sports programs can encourage active lifestyles, support physical health, and help address the issue of overnutrition (Mahoney et al., 2019). Collaboration with parents is also important, involving them in nutrition-related school programs and providing information on good diet at home (Lyzwinski et al., 2019; Zurita-Ortega et al., 2018). In addition, schools can be facilitators for individual or group nutrition counseling for students with special needs.

CONCLUSION

The results showed that out of 51 students of SMA Plus Kopi Colol, 9.80% had a body mass index per age that showed poor nutritional status, 11.76% had a deficient nutritional status, and 1.96% faced overweight and obesity problems. A total of 27.45% of the total respondents experienced chronic energy deficiency. The results showed that there were no adolescent girls who were centrally obese. Based on this study, the researcher found that there are still SMA Plus Kopi Colol who experience nutritional status problems. The implication of this study is that there is a foundation for schools and health workers to overcome nutritional status problems in female students at SMA Plus Kopi Colol. Recommendations for further research are the need for research on factors that affect nutritional status in female students at SMA Plus Kopi Colol.

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