

The Influence of Peer Support on the Nutritional Status of Adolescents at Madrasah Tsanawiyah in Sleman Regency

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Abstract

Overnutrition or obesity is a condition of increased body weight due to the accumulation of body fat, which is not only experienced by adults, but also by children and adolescents. The prevalence of overnutrition in adolescents continues to increase every year. One of the contributing factors is changes in diet, which are strongly influenced by the social environment, especially peer support. This research aims to determine the relationship between the influence of peer support and the status of overweight in adolescents. This research uses an observational design with a cross-sectional approach. The sample consisted of 20 students from the Sunan Pandanaran Sleman Madrasah Tsanawiyah who were taken using stratified random sampling. Data collection was carried out through the self-reported method to measure nutritional status and the peer support questionnaire to assess the influence of the social environment. The research was carried out in September 2024. The results of the analysis showed that 75% of the respondents were influenced by peer support in their nutritional status, while 25% were not. There is a significant relationship between peer support and overweight status in adolescents ($p = 0.028$). This research concludes that peer support plays a significant role in determining the nutritional status of adolescents. It is hoped that these findings will form the basis for the development of obesity intervention and prevention programs that consider aspects of the social environment, especially the role of peers.

Keywords: Adolescents, Nutrition Status, Peer Support.

INTRODUCTION

Overnutrition in adolescents is a global concern, especially in developing countries. According to the World Health Organization (WHO), the prevalence of obesity among adolescents has increased dramatically in recent decades. Adolescents with overnutrition status are at high risk of various health problems that can continue into adulthood (Tarigan et al., 2024); (Widjaja et al., 2013). Research suggests that an unbalanced diet, lack of physical activity, and socioeconomic status contribute to unhealthy weight gain (Abrari et al., n.d.).

The importance of appropriate and sustainable nutrition interventions is also emphasized in various studies. Implementing malnutrition prevention programs in puskesmas shows that a comprehensive and community-oriented approach can help reduce malnutrition rates (Susanti et al., 2017). Strengthening the health system and increasing public awareness about the importance of balanced nutrition is necessary to prevent more serious nutrition problems in the future

Improving nutritional status must involve various sectors, including education, health, and social policy, to ensure that every child gets adequate nutrition to support

optimal growth and development (Hananti et al., 2023). One of them is developing a peer support program; peer support is a form of mutual assistance in which individuals with similar experiences, such as mental health challenges or other life difficulties, provide each other with emotional, social, and practical support to promote recovery, well-being, and empowerment. It is characterized by mutual understanding, reciprocity, and understanding (Mead & MacNeil, 2006).

Overweight is a global epidemiologic problem that seriously threatens global public health. As many as 1.4 billion adults over the age of 20 are overweight. Overweight tends to occur more in women than men (Sudargo et al., 2018). Overweight is found not only in the adult age group but also in children and adolescents. Overnutrition in children and adolescents will increase the risk of overnutrition in adulthood. This, of course, not only impacts physical health but can also impact mental health (Siyoto & Peristyowati, 2014).

The prevalence of overweight in the adolescent age group in the Special Region of Yogyakarta (DIY, *Daerah Istimewa Yogyakarta*) shows a significant increase. According to the 2018 Riskesdas data, the prevalence of obesity in adolescents aged 16-18 years based on Body Mass Index per Age (IMT/U, *Indeks Massa Tubuh menurut Umur*) reached 14.43%, with details of 8.24% being overweight and 6.19% obese (RI, 2018). In addition, the prevalence of obesity in adolescents aged 13-15 years in DIY was reported at 8% (Shinta et al., 2021).

The increase in overnutrition is a serious concern, given the health risks it poses, including non-communicable diseases such as diabetes mellitus and hypertension. Therefore, comprehensive prevention and treatment efforts are needed to reduce the rate of increase in the prevalence of overnutrition in adolescents in DIY (RI, 2018); (Shinta et al., 2021).

Research conducted by Kocak (2017) showed a relationship between peer influence on food choices and similar habits that can increase adolescents' body mass index (BMI). This is because, during puberty, adolescents tend to be more influenced by peer groups and seek acceptance in their social environment.

Other studies also support these findings. For example, research by Salvy et al. (2012) found that peers play an important role in determining adolescents' eating behaviors, which may contribute to an increased risk of obesity. In addition, research by De la Haye et al. (2010) showed that friendship networks can influence eating patterns and physical activity, which impacts adolescents' weight status.

Research conducted by (Karim, 2017) shows that physical activity has a positive and significant relationship to nutritional status with a correlation coefficient of 0.26, which has a low correlation value interpretation with a significance level of $0.045 < 0.05$ in class VII students of SMP Negeri 5 Sleman.

Based on this background, the purpose of this research is to analyze the effect of peer support on the status of overweight in adolescents, especially in the Yogyakarta Special Region, by assessing how social interaction affects diet and physical activity that contribute to overnutrition. Thus, the benefits of this research include adding to the academic treasure trove, providing a basis for effective interventions for health

practitioners and educators, and providing input for the development of public policy to create an environment that supports a healthy lifestyle among adolescents.

RESEARCH METHOD

Madrasah Tsanawiyah in Sleman Regency. The subjects obtained were 20 students. The subjects in this research were between 12-15 years old, so they were categorized as early adolescents. The gender of the subjects who participated in this research consisted of 10 male students and 10 female students. The criteria in this research were seventh- and eighth-grade students who could communicate well and were physically and mentally healthy. Subjects were also willing to measure body weight and height independently, report it, and follow the research process until the end. Subject selection was carried out using a stratified random sampling method. This research collected data on peer influence and the characteristics of respondents, including age, gender, weight, and height.

Peer influence data were collected using the peer group support questionnaire. The questions asked in the questionnaire were about peers' influence in choosing food, how to make decisions regarding food consumption when gathering with peers, and so on. In this research, peer influence consists of two categories: there is peer support if the subject answers 60% of the total questions, and there is no peer support if the subject answers less than 60% of the total questions (Nomate et al., 2017).

Nutritional status was assessed according to IMT/U based on body weight and height in square meters. Data on the weight and height of the subject was obtained through self-reporting, which was carried out independently by the subject. The subject's nutritional status was assessed based on IMT/U concerning WHO 2005. The status category comprises overnutrition > 1 SD; normal nutritional status is $-2 - 1$ SD.

Univariate and bivariate analyses were conducted on the data that had been collected. Univariate analysis was conducted to determine the description of variables. Furthermore, bivariate analysis was conducted to determine the relationship between peer influence and overweight status in adolescents using the chi-square test.

RESULT AND DISCUSSION

Univariate analysis was carried out on the variable characteristics of respondents. Table 1 below describes the characteristics of respondents.

**Table 1. Univariate Analysis Data Frequency Distribution
of Respondents' Characteristics**

Variables	n	%
Gender		
Male	10	50
Female	10	50
Peer Influence		
No Effect	5	25
There is an Influence	15	75
Nutrition Status		
Normal ($-2 - 1$ SD)	18	80
More (< 1 SD)	2	20

Source: Primary data from interviews with respondents

The subjects in this research amounted to 20 students of Madrasah Tsanawiyah. In detail, the gender of the subjects consisted of 24 people (40%) male and 36 (60%) female. While in the peer variable, it can be seen that as many as 40 people (66.6%) have peer influence. For nutritional status, as many as 30 subjects each (50%) have normal and more nutritional status. Bivariate analysis was carried out on the peer influence and nutritional status variables. The results of the bivariate analysis can be seen in Table 2 below.

Table 2. Results of Bivariate Analysis of the Relationship between Peer Influence and Overweight Status in Junior High School Adolescents

Variable	Normal Nutritional Status		Over Nutrition Status		P-Value	OP	95% CI	
	N	%	N	%			Lower	Upper
Influence of Peer Support					0.028	3.5	1.112	11.017
No effect	3	15	1	5				
There is influence	15	75	1	5				

There is a relationship between peer support influence and overweight status in students of the Tsanawiyah Madrasah, indicated by a p-value of 0.028. The influence of peer support contributes to the occurrence of overweight status in adolescents.

Significant results were shown in this research, and there was a significant relationship between peer influence and overweight status in adolescents. Several studies have shown this relationship. Previous research conducted by Nomate in 2017 explained a relationship between peers and nutritional status (Nomate et al., 2017). Likewise, in a research conducted by Gwozdz in 2015, peers have a significant relationship with overweight adolescents in Europe (Gwozdz et al., 2015).

In adolescence, there is a transition towards independence, so the interests, behavior, and routines of teenage children will experience changes. One change is that adolescents spend more time outside the home with their peers (Saifah, 2011). One of the activities done with peers is consuming food together. Eating together is usually done at school or other places with their friends (Keller, 2008). Eating together with peers can impact the habit of choosing unhealthy foods that will affect weight gain. Peers strongly influence adolescents because they can also change behavior and good habits related to diet (Keller, 2008).

Research conducted by Wouters in 2010 states that peers can influence snack consumption and consumption of high-fat foods (Wouters et al., 2010). Valente, in 2009, found that adolescents' weight is related to the weight of their friends (Valente et al., 2009). Meanwhile, another research also mentioned that the effect of being overweight on adolescents is a social influence (Fowler & Christakis, 2008). This is also similar to research conducted by Arisdanni in 2018, which states that peers have a relationship with nutritional status in school children with a p-value = 0.00 (Arisdanni & Buanasita, 2018).

CONCLUSION

This study shows a significant relationship between peer support and an increase in overweight status in adolescents, answering the objective of revealing how social interactions affect eating habits and physical activity that have an impact on nutritional

status. The results indicate that the longer adolescents spend time with friends, the greater the effect on food consumption patterns that have the potential to increase the risk of overnutrition. The contribution of this research in the future includes the development of a peer support-based intervention program that can be applied more widely for the prevention of obesity among adolescents. These findings are expected to form the basis for further research that explores additional variables and tests the effectiveness of interventions in various contexts, so as to provide input for the formulation of more comprehensive health and education policies.

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