

RELATIONSHIP BODY IMAGE PERCEPTION, NUTRITIONAL KNOWLEDGE, EATING DISORDER AND PHYSICAL ACTIVITY ON NUTRITION STATUS OF OQ MODELING SCHOOL MEMBERS.

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Abstract

Background: Having a proportional body shape is a means for teenagers. Dissatisfaction with body shape will lead to feeling insecure, have a poor self-concept, and low self-esteem that cause problems that bulimia nervosa eating disorders and binge eating. Diet to reduce weight will increase growth and will affect nutritional status. A low nutritional status in adolescents will affect the performance and performance of a teen in the long term that will affect later adulthood. **Objective:** To observe differences in bulimia and binge eating disorders on nutritional status and relationship with nutritional status of OQ Modeling School members. **Methods:** The study used a descriptive method of observational asphalt and cross sectional type with the sample of adolescents as many as 12 respondents. The bivariate analysis in this study using Chi-Square test, Pearson measurement, Spearman Rank, and T-test. **Result:** Respondent has bulimia eating disorder (66,7%), eating disorder binge eating (33,3%), physical activity (1,44 PAL), BMI (19,68Kg / m²), body fat (22,32%). **Conclusion:** There is a difference between eating disorders against BMI and body fat, there is a significant relationship between the physical activity of BMI and body fat member OQ Modeling School ($p \leq 0,05$).

Keywords: Body Image, Body Fat IMT, Model

Background

The problem that often arises in adolescents is the nutritional status of thin, which according to (Riskesdas, 2010) there is a prevalence of lethargy in adolescents 13-15 years 11% and 16-18 8.9% consisting of 1.8% very thin and 7.1% thin. Adolescence is the time of rapid changes in terms of physical, cognitive, and psychosocial growth or behavior such as emotions, interests, and attitudes (Hurlock, 1999). Experiencing puberty and drastic physical changes experienced by early adolescents, who are preparing themselves for adulthood. In the late teenager has a personality that becomes a grip on his maturity, which develops the personal, social and moral underlying himself to see himself and the environment (E. L. Kelly in Vishnu Perdana 2012).

Having a proportional body shape is something everyone desires. For teens having a proportional body shape is a must. According to Honigman & Castle (in Sari, 2014) in his book *Living with Your Looks* defines the body image as a person's mental image of body shape and size, and how that person will judge what he thinks and feels about his size and shape, as well as how roughly others judge him or her.

Diet to reduce excessive weight or strict diet will inhibit growth. Dietary behavior like this will affect the nutritional status. Low nutritional status in adolescents will affect the productivity and performance of a teen in the long term that will impact on adulthood later. This is supported by many studies in adolescents on dietary behavior that results will affect the physical growth disorders of malnutrition, and the development of psychology in adolescence. A strict diet in adolescents will also increase the risk of malnutrition and eating disorders such as eating disorders such as anorexia nervosa and bulimia nervosa (Mahan & Escott-Stump, 2008). Meanwhile, in

adolescence nutritional needs are very important to note. Therefore, adolescents need to eat a diverse diet for nutritional deficiencies in the type of food that one can be supplemented with nutrients from other foods (MOH, 1997). Diet is done by a person because of dissatisfaction with the image of himself and assess the actual body shape is not in accordance with the nutritional status so it has a negative body image perception, while the perception of positive body image on the contrary where a person assess the actual body shape in accordance with the nutritional status (Lingga M, 2011).

Beauty is used as the most commonly used benchmark for assessing women. But beauty in society is judged differently in a culture and time. One measure of beauty that is often a concern is the image of body shape. In the study (Russell and Cox, 2003) that there is an understanding of African American racial women who have a beautiful view based on race. They argue that beautiful for their race (blacks) can not be equated with beautiful white women.

Method

Research conducted on OQ Modeling School members as many as 12 people. Sample selection was done with a saturated sample with age criterion of woman 13-18 years and active member of OQ Modeling School.

The data studied in this study are eating disorders (bulimia, binge eating), physical activity and nutritional status (IMT, Body Fat). Measurement of eating disorders using a questionnaire consisting of 18 questions with a Linkert scale, physical activity measurement using a 2 x 24-hour physical activity, measurement of nutritional status using microtome and Body Impedance Analysis (BIA). Nutrition knowledge

questionnaire, already validated & reliable. Nutritional status based on BMI is measured using Scales & Microtoise. All data were then analyzed bivariate using chi square test, Pearson correlation, rank-spearman correlation, and T-test ($p < 0,05$).

The study was conducted in August 2017 with a sample of 12 members of OQ Modeling School.

Results

Univariate Analysis

Tabel 1. Univariate Analysis Results

Variable	n	%	Mean±SD	Min	Max
Body Fat (%)	12		22,32±3,73	18,00	27,60
Physical Activity	12		1,44±0,18	1,18	1,71
BMI (Kg/m²)	12		19,68±2,05	17	23
Eating Disorder					
Bulimia	8	66,7			
Binge Eating	4	33,3			

Based on the result of research, it is found that body fat average on respondents is 22.32% with standard deviation 3,73, minimum value 18,00% and maximum value 27,60%. Physical activity of respondents has an average of 1.44 PAL with a standard deviation of 0.18, a minimum value of 1.18 PAL and a maximum value of 1.71 PAL. The body mass index of respondents has an average of 19.68 Kg / m² with a standard

deviation of 2.05 minimum value of 17 Kg / m² and a maximum value of 23 Kg / m². Based on the results of the study found that as many as 8 respondents tendency bulimias with percentage 66.7% and 4 respondents binge eating disorder with the percentage 33.3%.

Bivariate Analysis

Tabel 4. T-Test Eating Disorder with Nutrition Status

		Eating Disorder		
		Bulimia	Binge Eating	
Nutriton Status	IMT	N	8	4
		Mean	17,750	20,000
		St. Deviasi	0,707	1,414
		<i>p value</i>	0,004	
<i>Body Fat</i>		N	8	4
		Mean	21,625	26,000
		St. Deviasi	2,924	2,160
		<i>p value</i>	0,025	

Based on the analysis results obtained p value = 0.004, this indicates that at 95% confidence degree there is a significant difference between eating disorders with

body mass index and p value = 0.025, this indicates that at 95% confidence degree there is the significant difference between eating disorder with body fat.

Tabel 4.6. Corellation Pearson Physical Activity with Nutrition Stus

		Physical Activity	
Nutrition Status	IMT	R	-0,609
		Sig. (2-tailed)	0,036
		n	12
	Body Fat	R	-0,730
		Sig. (2-tailed)	0,007
		N	12

Based on the results of the analysis obtained physical activity with body mass index and body fat has a significant relationship. The relationship of physical activity with body mass index has strong relation with positive coefficient value $r = -0,609$ and p value = 0,036. The relationship of physical activity with body fat has strong relation with negative coefficient value $r = -0,730$ and p value = 0,007.

Discussion

Eating disorders with body mass index have a significant relationship ie high eating disorders have low body mass index. Variables of eating disorders with bulimia and binge eating criteria have differences and there is a relationship with value $p = 0.034$. The difference shows that eating disorders with bulimia criteria have lower body fat compared with eating disorders binge eating.

This is because the binge eating behavior that delayed eating when hungry and responded by eating a lot in one meal will increase body mass index. This is supported by the study (Gormally, et al, 1982). The same results were obtained in Tanofsky-Kraff (2004) and Stewart et al. (2002) study that there was a significant association between eating disorders and BMI despite the unhealthy decrease in BMI. Even in the study (Cole, TJ, Flegal, KM, Nicholls, D., & Jackson A. A, 2007) found adolescents who were diagnosed as having an eating disorder anorexia nervosa had the lowest BMI value $<16 \text{ Kg} / \text{m}^2$ in adolescents over 10 years.

Eating disorders with body fat have a significant relationship that is eating disorders high body fat is low. All respondents had eating disorders with criteria of eating disorders

bulimia 8 people (66.7%) and binge eating disorder 4 people (33.3%). Variable of eating disorders with body fat have difference and relation with value $p = 0,025$. The difference shows that eating disorders with bulimia criteria have lower body fat compared with eating disorders binge eating.

This is because eating disorders with bulimia criteria there is no intake into the body due to vomit back incoming food. This illustrates when the higher eating disorders experienced by someone to eat the lower body fat that is owned by someone. This does not mean to lose body fat way by doing a very strict diet and even the tendency to have eating disorders. That's what is often misunderstood by many people to choose shortcuts to eliminate the fats they find disturbing. The dif- ferences in this study are consistent with the study (Russell, G, 1979) in which bulimia patients regurgitate consumed foods to keep the weight small so that fat is also lower in bulimic patients than in binge eating patients.

Body fat itself has a criterion or classification which according to (Williams, 2002) for female sex has a percentage of body fat $\geq 30\%$ is very high, 26-29% high, 20-25% normal and $<19\%$ low. Respondents not only want to lose weight and the amount of fat in their body with the aim of having the ideal body according to him without knowing the limits or classification of the body fat itself. Based on the results obtained, this study is supported by (Tanofsky-Kraff., M 2004) that there is a significant relationship between eating disorders with body fat.

Physical activity with body mass index has a significant relationship that is a high physical activity carried out has a low body mass index. Some respondents have enough

physical activity with a normal body mass index, this is because with physical activity can help in increasing the body's metabolism that causes energy reserves accumulated in the body of fatty substances can burn as calories. Physical activity variable with body mass index has a strong relation with negative coefficient value $r = -0,609$ and p value = 0,036.

This happens because some respondents have routine activities such as skull dance, piano lessons, gymnastics and jogging where the activities include moderate to severe activities FAO / WHO / UNU (2001). From the data obtained through interviews, there are some respondents who have a special gari where the day is the toughest activity. Because in the 1st day there are special lessons that are not only 1 in a day. The results of this study are in line with the research conducted (Merinta S, 2012) and (Dieny F. F, 2007) that there is a significant relationship between physical activity with body mass index.

Physical activity with body fat has a significant relationship that is a high physical activity done has low. Some respondents have enough physical activity with a normal body fat, this is because with physical activity can help in increasing the body's metabolism that causes energy reserves accumulated in the body of fatty substances can burn as calories. Physical activity variable with body fat has a strong relationship with negative coefficient value $r = -0,730$ and value $p = 0,007$. This shows that the higher the physical activity of a person to eat the lower body fat. The study was also supported by (Lingga, M, 2011) that there was a significant relationship between physical activity and body fat.

Conclusions and recommendations

Based on t-test result there is difference between eating disorder with IMT ($p = 0,004$) and body fat ($p = 0,025$). There is also an association with physical activity with BMI (0.609) and body fat (0.007).

The need to balance between food intake and physical activity so as to obtain normal nutritional status. Should model schools also be added gym or gymnastics classes and seminars or workshops on nutrition to expand

knowledge and want to do what is known about the nutrition.

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