

CORRELATION BETWEEN NUTRITIONAL STATUS AND MENSTRUAL REGULARITY AMONG STUDENTS OF PAJANGAN 1 BANTUL SENIOR HIGH SCHOOL

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Abstract

WHO states that obesity has become a global epidemic with cases of over 300 million people worldwide. The results came from Riskesdas of Yogyakarta province in 2013 that is 12.9% obese and 6% obesity. At Bantul district, the prevalence of fat is 7.9% and obesity is 1%. Nutritional status has potentially cause disruption in reproductive health of adolescent girls. Obesity that continues in adulthood will result in earlier sexual maturity and irregularity of the menstrual cycle. Then the lack of nutrition in a student will result in decreased reproductive function. There is correlation between nutritional status and menstrual regularity on grade XI student of Pajangan 1 Bantul Senior High School. School is expected to make teamwork with the public health center to give information about nutrition and reproductive health as an effort for maintaining nutritional status so they will get regular menstruation.

Keywords: nutritional status, menstrual regularity, student, obesity

1. INTRODUCTION

According to WHO 2010 data in previous study, there were 75% of young women experiencing menstrual disorders and is the reason most young women visit a gynecologist. The cause of menstrual disorders can be due to biological disorders (organic or dysfunctional) or can also be psychological. Menstrual cycles in adolescents are often irregular, especially in the first year after menarche, around 80% of young women experience menstrual delays 1 to 2 weeks and around 7% of girls who have menstruation come faster, due to ovulation that has not happened (Anovulatory cycles) [1]. Irregular menstrual cycles are one of the symptoms of a disruption in the reproductive system [2]. In addition, the menstrual cycle related to reproductive health can also be a reference for students in their preparation to become a woman who will later become a mother related to her fertile period [3]. Nutrition affects sexual maturity in girls who get their first menstruation earlier, tend to be heavier and taller during menstruation compared to before menstruation at the same age. A lack of nutrition in a person will have an impact on decreasing reproductive function [4]. Nutritional status in adolescents according to the Indonesian Health Profile in adolescents aged less than 18 years is known through nutritional prevalence based on the Indicator Body Mass Index (BMI) of nutritional status in this group dominated by obesity problems, although underweight problems are also still quite high [4]. In Indonesia, the prevalence of obesity in adolescents is around 5.7% and 1.6% is obese. The results of the Yogyakarta Province Riskesdas in 2013 were 12.9% fat and 6% obese. Whereas Bantul Regency itself has a fat prevalence of 7.9% and 1% obesity [5]. In the real reality the application of a diet that is less will affect the work ability of organs directly where the body does not have normal abilities because

energy which is mostly sourced from food is not sufficient so that it will affect the maximization of the work of the reproductive organs [6]

On the contrary, excessive eating patterns will certainly improve the work of the organs of the body as a form of hemodialysis in order to expend these excesses. This of course will have an impact on the functioning of the hormonal system in the body. This will affect the work of the organs to the maximum including the female sexual organs in the form of both progesterone, estrogen, FSH, and LH itself which will have an impact on the menstrual cycle disorders that are too fast and the menstrual cycle is short [6].

2. METHODS

This type of research is analytic survey is a survey or research that tries to explore how and why health phenomena occur by using a cross sectional approach is a method of data collection carried out at the same time and one time data collection, namely a study that tries to find out why health problems this can happen. Then analyze the dynamics of correlation between good phenomena between risk factors and effect factors [7].

The design of this study is correlation which aims to find the presence or absence of relationships. If there is a relationship, the relationship will be known and the relationship is meaningful or not [8]. When viewed from the data source, data collection can use primary data. Primary data are sources of data that directly provide data to data collectors [9]. Data obtained directly from respondents with the way researchers conducted direct measurement techniques on body weight and height of respondents and simple interviews to determine the regularity of menstrual respondents. Research Instruments include : a). step scale (the scales used to measure the calibrated weight with a precision capacity of 0.1 kg; b). height measuring instrument (a measuring instrument used to measure the calibrated height with a precision capacity of 0.1 cm); and c). observation sheet (observation is a data retrieval technique where researchers get information directly from someone (research target)). Observation Sheet Grilles are : 1). When is your menstrual day / date in March?; 2). When is your menstrual day / date in April?; and 3). When is your menstrual day / date in May?

3. RESULTS AND DISCUSSION

3.1 Univariate Analysis

Based on the **Table 1**, it can be seen that from 70 high school students in Panjangan 1 Bantul, most of them had normal nutritional status, namely as many as 53 female students (75.7%) having underweight as many as 8 female students (11.4%), overweight students of 4 (5.7%) while there were 5 female students who were obese (7.1%). Based on the **Table 2**, it can be seen that most of respondent had regular menstruation, as many as 42 students (60%), while 28 irregular female students (40%) had irregular menstruation.

Table 1. Frequency Distribution of Nutritional Status among Students of Panjangan 1 Bantul Senior High School

Nutritional Status	Frequency (f)	Percentage (%)
Underweight	8	11.4
Normal	53	75.7
Overweight	4	5.7
Obesity	5	7.1

Total	70	100
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Table 2. Frequency Distribution of Menstrual Regularity among Students of Pajangan 1 Bantul Senior High School

Menstruation	Frequency (f)	Percentage (%)
Regular	42	60
Irregular	28	40
Total	70	100

3.2. Bivariate Analysis

Table 3. Nutritional Status and Menstrual Regularity among Students of Pajangan 1 Bantul Senior High School

Nutritional Status	Menstrual Regularity				Total	
	Regular		Irregular			
	n	%	n	%	n	%
Underweight	2	2.9	6	8.6	8	11.5
Normal	37	52.9	16	22.9	53	75.8
Overweight	2	2.9	2	2.9	4	5.8
Obesity	1	1.4	4	5.7	5	7.1
Total	42		28		70	100

Based on **Table 3**, it can be seen that there were 8 female students who experienced underweight nutritional status, meanwhile there were 6 female students (8.6%) who had irregular menstruation. For 52 female students whose normal nutritional status was 37 female students (52.9%) had regular menstruation. For 5 female students who are obese, only 1 has regular menstruation.

Table 4. Correlation between Nutritional Status and Menstrual Regularity among Students of Pajangan 1 Bantul Senior High School

χ^2 Count	Sig.	χ^2 Table	Contingency coefficient	Conclusion
9.709	0.000	7.82	0.021	Ho rejected

Based on the **Table 4**, it is known that the value of the contingency coefficient is $0.021 < 0.05$. This shows that Ho is rejected, so that in this study the hypothesis states "there is a relationship between nutritional status and menstrual regularity" among student of Pajangan 1 Bantul Senior High School. This statement indicates that Ha is accepted.

4. CONCLUSION

Young women experience a lot of menstrual cycle irregularities due to stress, irregular eating patterns, consuming too much junk food, and often experiencing volatile emotional changes.

Female students on average say they rarely eat breakfast, and eat only 2 times a day and rarely eat in their house. They often snack in the school canteen at recess and the trend that occurs at this time is to have dinner with friends in hangouts or places where young people often provide junk food that is not good for health. At night they often chew snacks while working on assignments. According to researchers this is what causes the menstrual cycle of girls to become irregular, namely because of nutritional factors. The most influential factor in the regularity of the menstrual cycle is hormonal imbalance [10]. Other sources also said genetic factors, age, disease, stress factors, changes in routine, lifestyle and nutritional status (seen from the body mass index can also affect menstrual cycle irregularities) [11]. Impacts that can occur when menstrual irregularities occur include worry or fear can reduce the level of activity and thought power so that it can reduce academic achievement, in addition it also affects fertility and can even cause infertility [12].

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