
The Relationship Of Fast Food Consumption Habits And Stress With The Menstrual Cycle Of Adolescence Woman In Senior High School N. 1 Gunungsitoli

Jernihati Krisniat Harefa

Akademi Kebidanan Harapan Keluarga, Nias

*Corresponding Author

Email : jerniharefa@gmail.com

Abstract

Adolescence is the transition from childhood to adulthood. This transition is referred to as the maturation phase characterized by certain hormonally influenced changes. To find out the relationship of fast food consumption habits and stress with the menstrual cycle of young women in senior high School N.1 Gunungsitoli. This research uses an analytical type of research with a cross-sectional design. There are 79 girls in class X and XI. Using pss-10 questionnaire, food frequency questioner (FFQ) and menstrual cycle questionnaire. Using univariate analysis and bivariate analysis. The majority of young women in N.1 Gunungsitoli senior high school often eat fast food (53,2%). The majority of young women in N.1 Gunungsitoli senior high School experience moderate stress. The menstrual cycle of young women in N.1 Gunungsitoli senior high School experiencing abnormal cycles (65,8%). There is a significant relationship between the consumption habits of fast food and the menstrual cycle with a p-value of 0,000 ($p\text{-value} \leq 0,05$). There is a relationship between stress levels and the menstrual cycle with a p-value of 0,028 ($p\text{-value} \leq 0,05$). There is a relationship of fast food consumption habits and stress to the menstrual cycle.

Keyword: Fast Food Consumption Habits, Stress, and Menstrual Cycle

INTRODUCTION

Adolescence is a period of transition from childhood to adulthood. This transition is referred to as the maturation phase which is marked by certain changes that are influenced by hormones. Viewed from the side that adolescents have not been able to master their physical and psychological functions optimally, so that they can influence adolescent behavior in carrying out risky behavior. Therefore, adolescent health services according to the problem must be more intensive in the promotive and preventive aspects by caring for adolescents (Lili 2018).

According to the World Health Organization (WHO) youth (Adolescence) is the period between the ages of 10 and 19 years, while the United Nations (UN) defines youth as ages between 15 and 24 years. According to The Health Resources and Services Administrations Guidelines of the United States, the age category for adolescents is 11 to 21 years. Adolescence will begin with puberty. This will be seen by the emergence of secondary sex characteristics in which adolescents experience a physical, emotional, and social change. For women, this is marked by the arrival of menstruation (Sriamin, 2013).

According to the World Health Organization in 2015 said that the problems of adolescents in the world are around problems regarding menstrual disorders (38.45%), nutritional problems related to anemia (20.3%), learning disorders (19.7%), psychological disorders (0.7%), as well as the problem of obesity (0.5%). Menstrual disorders are common and can cause adolescents to see a doctor. Menstrual disorders that are not treated can affect the quality of life and daily activities. (Hapsari, 2014).

Along the way, not all teenagers who experience menstruation will run smoothly without complaints. The early years of menstruation are a period that is vulnerable to menstrual disorders

(Lubis et al., 2017). 75% of women in their late teens experience menstrual-related disorders. Many women experience menstrual disorders during their menstrual period. Menstrual disorders include menstrual cycle irregularities (duration or length), hyper or hypomenorrhea, poly or oligomenorrhea, dysmenorrhea, amenorrhea, and premenstrual syndrome (Karout et al., 2012).

One of the factors that affect menstrual cycle disorders is unhealthy eating patterns. The habit of frequently consuming fast food is one of the unhealthy eating patterns. Fast food is fast food which is classified as high fat, high sodium, high sugar food but low in fiber and vitamins. According to (Banowati et al., 2011) the nutritional content of fast food is unbalanced, if it is consumed continuously in excess it will cause nutritional problems and disease risk factors, such as obesity, skin disorders, degenerative diseases and menstrual cycle disorders. In line with this, Larasati & Alatas, (2016) food has an unbalanced nutritional content, namely high in calories, high in fat, high in sugar, and low in fiber. The content of fatty acids in fast food interferes with the metabolism of progesterone in the luteal phase of the menstrual cycle. Fast food that is usually consumed includes: burgers, french fries, fried chicken, hamburgers etc. Consumption of fast food has become part of the lifestyle in Indonesian society, especially in adolescents. This is reinforced by (Astuti & Maggiolo, 2014) which shows that it is teenagers who consume the most fast food. And research (Lili 2018) shows that there is a significant relationship between consumption of fast food and the menstrual cycle.

In addition, there are other things that affect the menstrual cycle, namely stress levels. Stress is a universal phenomenon that everyone can experience that has an impact on the physical, social, emotional, intellectual and spiritual. Stress is a condition where the body is disturbed because of psychological pressure on adolescents, that the main cause of stress (tension) and problems that exist in adolescents comes from relationships with friends and family, pressure and expectations from themselves and others pressure at school by teachers and work house, economic pressures and tragedies in their lives, for example death, divorce and illness suffered by them or their family members (Wangsa, 2010).

The purpose of this study was to determine the relationship between fast food consumption and stress with the menstrual cycle of adolescents at SMA Negeri 1 Gunungsitoli.

RESEARCH METHODS

This study used analytic research with a cross-sectional design to determine the relationship between fast food consumption habits and stress with the menstrual cycle of SMA Negeri 1 Gunungsitoli students. The subjects of this study were young women who had experienced menarche. The sampling technique in this study was carried out by Simple Random Sampling with a total sample of 79 people. The instrument used to collect data was a food frequency questionnaire (FFQ) to determine fast food consumption habits, a perceived stress scale questionnaire (PSS-10) to determine stress in adolescents, and a menstrual cycle questionnaire. The questionnaire was prepared based on a literature review on problems that commonly occur in adolescents with a total of 25 questionnaire items. Univariate and bivariate statistical analysis. Univariate analysis is data analysis which aims to describe the characteristics of each research variable into a frequency distribution table. Bivariate analysis was used by researchers to determine the relationship between fast food consumption habits and stress with the menstrual cycle of young women at SMA Negeri 1 Gunungsitoli.

RESULTS AND DISCUSSION

Table 1 Frequency Distribution of Fast Food Consumption Habits

Fast food consumption habits	Frequency (f)	Percentage (%)
Often	42	53,2
Seldom	37	46,8
Total	79	100

Based on table 1, it can be seen that of the 79 female respondents at SMA Negeri 1 Gunungsitoli, the majority of the habit of consuming fast food is often 42 respondents (53.2).

Table 2 Frequency Distribution of Stress Levels

Stress level	Frequency (f)	Percentage (%)
Light	4	5,1
Currently	50	63,3
Heavy	25	31,6
Total	79	100

Based on Table 2, it is known that the stress level of young women at SMA Negeri 1 Gunungsitoli is that the majority experienced moderate stress levels, 50 respondents (63.3%), and a minority of 4 respondents (5.1%) experienced mild stress.

Table 3 Distribution of Menstrual Cycle Frequency

Menstruation	Frequency (f)	Percentage (%)
Normal	27	34,2
Abnormal	52	65,8
Total	79	100,0

Based on Table 3, it is known that the menstrual cycle of young women at SMA Negeri 1 Gunungsitoli is that the majority have abnormal menstrual cycles 52 respondents (65.8%) and the minority have normal menstrual cycles 27 respondents (34.2%).

Table 4. The Relationship between Fast Food Consumption Habits and the Menstrual Cycle of Young Girls at SMA Negeri 1 Gunungsitoli

Fast food consumption habits	Menstrual Cycle				Total	<i>P-Value</i>
	Normal		Abnormal			
	N	%	N	%		
Often	2	4,8	40	95,2	42	100
Seldom	25	67,6	12	32,4	37	100
Total	27	34,2	52	65,8	79	100

Based on Table 5.4 above, it is known that 42 respondents (100%) with frequent fast food consumption habits, the majority experienced abnormal menstrual cycles as many as 40 people (95.2%) and a minority of normal menstrual cycles as many as 2 respondents (4.8%). Of the 37 respondents (100%) with rare fast food consumption habits, there were 25 respondents (67.6%), the

majority had normal menstrual cycles and a minority of 12 respondents (32.4%) experienced abnormal menstrual cycles.

The results of the statistical test using the chi-square test of the 2x2 table obtained a continuity correction p-value of 0.000 ($p\text{-value} \leq 0.05$) meaning that there is a significant relationship between fast food consumption habits and the menstrual cycle of young women at SMA Negeri 1 Gunungsitoli.

Table 5 The Relationship between Stress and Adolescent Menstrual Cycles at SMA Negeri 1 Gunungsitoli

Stress Level	Menstrual Cycle				Total		P-Value
	Normal		Abnormal		N	%	
	N	%	N	%			
Light	3	75,0	1	25,0	4	100,0	0.028
Currently	20	40,0	30	60,0	50	100,0	
Heavy	4	16,0	21	84,0	25	100,0	
Total	27	34,2	52	65,8	79	100	

Based on table 5 above, it is known that the majority of 50 respondents (100%) with moderate stress experienced abnormal menstrual cycles as many as 30 respondents (60.0%) and a minority experienced normal menstrual cycles as many as 20 respondents (40.0%). Of the 4 respondents with mild stress, the majority were 3 respondents (75.0%) with normal menstrual cycles and 1 respondent (25.0%) with abnormal menstrual cycles.

Based on the results of statistical tests using the chi-square test with a 3x2 table, we get a likelihood ratio p-value of 0.028 ($p\text{-value} \leq 0.05$) meaning that there is a relationship between stress levels and the menstrual cycle of young girls at SMA Negeri 1 Gunungsitoli.

Discussion

The Relationship between Fast Food Consumption Habits and the Menstrual Cycle of Young Girls at SMA Negeri 1 Gunungsitoli.

Based on the results of the study of 79 respondents, the majority of respondents had the habit of consuming fast food frequently, as many as 42 respondents (100%) with abnormal menstrual cycles of 40 people (95.2%) and normal menstrual cycles of 2 respondents (4.8%). The minority of respondents have a habit of consuming fast food rarely as many as 37 respondents (100%) with normal menstrual cycles as many as 25 respondents (67.6%) and with abnormal menstrual cycles as many as 12 respondents (32.4%).

The results of the statistical test using the chi-square test of the 2x2 table obtained a continuity correction p-value of 0.000 ($p\text{-value} \leq 0.05$) meaning that there is a significant relationship between fast food consumption habits and the menstrual cycle of young women at SMA Negeri 1 Gunungsitoli.

In line with research conducted by Benefita Rahma (2021) with the title the relationship between fast food consumption habits and stress on the menstrual cycle in young women at SMAN 12 Bekasi City. The sample technique used was simple random sampling with a sample size of 66. The research method used was quantitative with a cross sectional design. The results of the research from the results of bivariate analysis using the Chi-square test showed that there was a significant

relationship between fast food consumers and the menstrual cycle in female students of SMAN 12 Bekasi City with a p-value of 0.003.

Based on the results of observations on the questionnaire, it was found that 39 respondents often consumed fast food and experienced abnormal menstrual cycles, 3 respondents often consumed fast food and experienced normal menstrual cycles, 11 respondents rarely consumed fast food but experienced abnormal menstrual cycles because the respondents experienced stress

This research is also in line with research entitled "The Relationship between Fast Food Consumption and Menstrual Cycles" which was conducted by Sri Wahyuni at AKBID Muhammadiyah Aceh in 2013. There are young women who often eat this fast food and experience irregular menstrual cycles, this is because The content of these foods will affect the function of several enzymes needed for growth hormone in the body. however, some teenagers often eat fast food, but their menstrual cycles are regular. This can happen because these young women may still be able to balance their consumption between fast food and healthy food, in addition to adding regular activities such as sports.

According to Lili (Lediana, 2016) explained that fast food is food that is available quickly and is ready to be served, such as fried chicken, hamburgers and pizza. Fast food is easy to get in culinary markets or special places that already provide it. Availability of food variations according to taste and purchasing power. In addition, processing and serving are easier and faster, suitable for those who are busy at work. It is easy to get ready-to-eat food on the market that provides a variety of food according to people's tastes and purchasing power, and the preparation is faster, and is very helpful when there is a busy schedule. This is what affects the increase in consumption of ready-to-eat food (fast food).

Fast food has an external effect on the menstrual cycle. Fast food is food that has low nutritional value, nutrients have a very important value, namely to maintain body processes in healthy growth and development, especially for adolescents who are still in healthy growth and development, especially for adolescents who are still growing. The nutritional state of young women can affect physical growth, including the menstrual cycle. Thus the difference in the menstrual cycle is determined based on the state of nutritional status. The better the nutritional status, the faster the age of menarche. The habit of teenagers to eat irregularly also has consequences such as skipping breakfast, consuming fast food, and having an uncontrolled diet. (Benefits 2021). Every woman experiences a different menstrual cycle. This can be influenced by various factors such as physical activity, nutritional status, and a person's mental or psychological state (Lili 2018)

According to the researcher's assumption that school and the environment are places and opportunities for adolescents to consume food freely. This is because teenagers are far from parental supervision for food selection. There are many types of cheap food in schools and the environment where teenagers live, this is what causes teenagers to like these foods more than the home menu provided by their parents.

This is also common because the parents' income is able to meet the needs of teenagers' pocket money every day and the condition of teenagers who are far from their parents or live in boarding houses. Pocket money is the dominant factor in fast food consumption, the higher the allowance, the higher the accessibility, so the higher the frequency of fast food consumption. A comfortable place provided by a fast food restaurant is widely used by students and students for a gathering place.

The Relationship between Stress and the Menstrual Cycle of Young Girls at SMA Negeri 1 Gunungsitoli.

Based on the results of the study of 79 respondents, it was found that the majority of 50 respondents (100%) with moderate stress experienced abnormal menstrual cycles by 30 respondents (60.0%) and experienced normal menstrual cycles by 20 respondents (40.0%). The minority of 4 respondents (100%) with mild stress 3 respondents (75.0%) with normal menstrual cycles and abnormal menstrual cycles of 1 respondent (25.0%).

Based on the results of statistical tests using the chi-square test with a 3x2 table, we get a likelihood ratio p-value of 0.028 ($p\text{-value} \leq 0.05$), meaning that there is a relationship between stress levels and the menstrual cycle of young women at SMA Negeri 1 Gunungsitoli.

In line with Rizka Angrainy's research, et al (2019) with the title "Relationship between Stress Levels and Menstrual Cycles in Young Girls at SMAN 5 Pekanbaru in 2019". The sample technique used was stratified random sampling technique, with a sample size of 80 respondents. The type of research used is quantitative with a cross-sectional design. The results showed that the majority of respondents had a moderate level of stress, as many as 31 people (38.8%) and for the menstrual cycle variable, it was found that the majority of respondents had short menstrual cycles, as many as 33 people (41.2%). The results of the chi square test obtained $p\text{-value} = 0.012 < 0.05$, which means there is a relationship between stress levels and the menstrual cycle in young women at SMAN 5 Pekanbaru in 2019.

Based On The Results Of Observations On The Questionnaire, It Was Found That 20 respondents with severe stress experienced abnormal menstrual cycles, in line with Kusmiran's research (2014) stress will trigger the release of the hormone cortisol where the hormone cortisol is used as a benchmark to see a person's degree of stress. And 5 respondents with severe stress but experienced normal menstrual cycles, according to Eni W. (2018) Age is related to a person's tolerance for stress. Adolescents are often prone to stress and their emotions are very strong, but from the early adolescent stage to late adolescence there is an improvement in emotional behavior and is able to control stress so that it can prevent ongoing stress. Symptoms of stress include mood swings, lack of self-confidence, anxiety, difficulty concentrating, irritability, forgetfulness, irritability and other symptoms.

Reporting from [kompas.com](https://www.kompas.com) (Verywell Health), within two years of women getting their first menstruation, irregular menstrual cycles in adolescents are generally normal. This is influenced by hormonal changes in the early days of a woman's first menstruation. The hormones released by the body greatly affect the length of menstruation and the amount of menstrual blood. As they get older, teenage menstrual cycles will generally form a more established and regular pattern.

Stress is a universal phenomenon that everyone can experience that has an impact on the physical, social, emotional, intellectual and spiritual. Stress is a condition where the body is disturbed because of psychological pressure on adolescents, that the main cause of stress (tension) and problems that exist in adolescents comes from relationships with friends and family, pressure and expectations from themselves and others pressure at school by teachers and work house, economic pressures and tragedies in their lives, for example death, divorce and illness suffered by them or their family members (Wangsa, 2010).

Kusmiran (2014) stress will trigger the release of the hormone cortisol where this hormone is used as a benchmark to see a person's degree of stress. The hormone cortisol is regulated by the hypothalamus of the brain and the pituitary gland, with the start of the activity of the hypothalamus, the pituitary secretes the hormone FSH (Follicle Stimulating Hormone), and the ovarian stimulus process will produce estrogen. If there is a disturbance in the hormones FSH (Follicle Stimulating Hormone) and LH (Lutenizing Hormone), it will affect the production of estrogen and progesterone causing menstrual cycle irregularities.

According to Eni W. (2018) Mild stress levels have no effect on the menstrual cycle because a person does not think too much about things that can trigger stress and is able to control stress. In the psychological response, it is found that they are able to complete work more than usual. Age is related to a person's tolerance for stress. Adolescents are often prone to stress and their emotions are very strong, but from early adolescence to late adolescence there is an improvement in emotional behavior and being able to control stress so that it can prevent ongoing stress.

This is in line with Nia F.F & Bunga A.'s research (2017) with the title "adolescent emotional maturity in problem solving. Says that an individual's emotions are said to be mature if he can control himself well, is able to express emotions according to the right situations and circumstances so that it is easier to adapt. However, most adolescents are still at an immature emotional stage, because they have not been able to control their physical and psychological functions optimally, therefore these adolescents must learn to get an idea of situations that can cause a reaction to what is felt.

According to the researchers' assumption that there is a relationship between stress and the menstrual cycle in young girls at SMA Negeri 1 Gunungsitoli, this is because many young women experience stress because many teenagers admit that they often worry about many things such as schoolwork, value demands, rankings, and relationships with the opposite sex because Teenagers begin to be interested in the opposite sex so that some teenagers experience heartbreak.

CONCLUSION

There is a Relationship between Fast Food Consumption Habits and Stress with the Menstrual Cycle of Young Girls at SMA Negeri 1 Gunungsitoli.

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