

# The Relationship Of Stress Level And Menstrual Cycle In Adolescent Girls At Manbatul Akhlaq Mojo Kediri Islamic Boarding School

Tety Ripursari<sup>1</sup>, Nita Dwi  
Astikasari<sup>2</sup>, Candra  
Wahyuni<sup>3</sup>

Faculty Of Nursing And  
Midwifery STRADA Indonesia  
Institute Health Sciences

\*Email:  
tetty30578ripursari@gmail.com

## ABSTRACT

Adolescent girls especially female students, as academic individuals cannot be separated from stress in daily activities. As result of perceiveid stress, it can cause the putiaitary to release ACTH wich then increases cortisol levels, causing disruption of the menstrual cycle. The aim of this research was to determine the relationship between stress levels and the menstrual cycle in adolescent girls at the Manbatul Akhlaq Mojo Kediri Islamic Boarding School. This research uses an observational analytical research design with a cross sectional approach. Purposive sampling technique. The sample was 32 respondents, statistical tests used spearman-Rho. The results of the reserch from 32 respondents showed that the majority of respondents who experienced moderate levels of stress had irregular menstrual cycles (<21 or >35 days) with a precentage of 16 people (50%) and respondents who experienced moderate levels of stress had regular menstrual cycles (21-35 days) There were 2 people with a percentage (6.25%), respondents with mild levels of stress had irregular menstrual cycles totaling 5 people (15.6%), and respondents with low levels of stress had regular menstrual cycles as many as 9 people(28,1%). There is sigifict reltioship etwee stress d the menstrual cycle in adolescent girls the Mamtul Akhlaq Mojo Kediri Islamic Boarding School.  $P=0.001<0.05$ . You need to get enough rest, joke and tell stories to friends, do fun things, do physical activity/exercise, so that the stress felt by respondents can be minimized and their menstruation becomes regular.

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## INTRODUCTION

The menstrual cycle or menstruation is the release of necrotic endometrium which is produced by a decrease in estrogen and progesterone levels due to the absence of fertilization in the endometrium. (Nurfadilah et al., 2022). Healthy and unproblematic reproductive organs are indicated by a normal menstrual cycle, a good hormonal system can be indicated by continuous egg production and a regular cycle, with a normal menstrual cycle, a woman can know her fertile period, and it is even easy to get pregnant. After the age of 18 years, women's menstruation generally becomes regular (Kartikawati et all, 2017). Meanwhile, the menstrual cycle is the time span between the start of the next menstrual period. In normal women, the menstrual cycle lasts around 21 days to 35 days (Yuniyanti et.al., 2022).

When Adolescent girls are 17 to 18 years old, menstruation will start normally, namely 28 days to 35 days. Menstrual cycle anomalies in adolescent who have reached adulthood can of course be a sign of a problem. Menstrual problems in women occur quite often, with a prevalence rate of 30 to 70%. Menstruation usually lasts 3-5 days, but can also last 7 to 8 days, or even 1 to 2 days, and is accompanied

by a little blood. Short menstrual periods are known as polymenorrhea, prolonged menstrual cycles or oligomenorrhea, and amenorrhea which occurs when there is no menstruation for three months, are three types of menstrual cycle disorders (Sari et.al 2020).

Based on the health profile in 2021, the prevalence of emotional mental disorders in Indonesia aged  $\geq 15$  years is 9.8%, this figure has increased compared to 2013 which was 6%, and in East Java in 2019 it was 6%. Meanwhile, according to WHO, of 18 million women aged 18-55 years, the most common menstrual cycle disorder is irregular menstrual frequency at 80.7%. According to results from BPS (2021), it is reported that 13.7% of women in Indonesia aged 10-59 years' experience have irregular menstruation.

Santri, especially female students, as academic individuals cannot be separated from stress in their daily activities. Academic activities and also the demands of their own expectations can make female students stressed. External expectations which include reading the newspaper, memorization, deposits, madrasa school rules, parental pressure to be successful at the boarding school, graduating from the boarding school must be able to become a child who is more useful in society, and the ability to adapt socially at the boarding school is one example of external demands. The increasingly complex material at the boarding school is increasingly challenging for the students' abilities, and the lack of free time or recreation is also one of the demands (Willibrordus & Nainggolan, 2021).

Efforts that can be made to prevent menstrual cycle disorders are reducing stress by using management such as providing time to relax and getting enough rest. Quite a lot of women experience menstrual disorders but secretly without realizing that there are ways to relieve them. Women can understand what is actually happening to their bodies and then look for efforts to protect themselves or alleviate the disorders they are experiencing. If you experience menstrual irregularities quite often, you should immediately see a gynecologist or general practitioner. The doctor will diagnose what is causing the irregularity (Sari, 2020).

Based on the initial survey obtained at the Manbatul Akhlaq Islamic boarding school on July 11 2023, there were 35 female students aged 12-25 years. From the results of interviews with 10 female students, it was found that 6 female students had abnormal menstrual cycles due to stress, and 4 other female students had normal menstrual cycles.

## METHODS

This research is a quantitative research in analytical form and uses a cross sectional design to determine the relationship between stress and the menstrual cycle in adolescents girls at the Manbatul Akhlaq Mojo Kediri boarding school. The research was carried out on December 6, 2023. The independent variable in this study is stress level, while the dependent variable is the menstrual cycle. The population in this study were all female students at the Manbatul Akhlaq Islamic Boarding School, Mojo Kediri, totaling 38 students. The sample in this study was some of the female students of the Manbatul Akhlaq Mojo Kediri boarding school who met the inclusion criteria, totaling 32 respondents. The sampling technique used is purposive sampling, which is a sampling technique that aims to obtain research samples that have certain characteristics, so that the data obtained can be analyzed properly. The research instrument used a questionnaire. Data analysys used the Spearman Rho test.

## RESULTS

### General data

Age	F	%
16 - 18 Years	7	21,8
19 – 21 Years	16	50
22 – 24 Years	9	28,2
Total	32	100

The research results showed that half of the respondents were aged 19-21 years, namely 16 respondents (50%).

## Special Data

### 1. Stress Level

No	Stress Level	F	%
1	Mild Stress	14	43,75
2	Moderate Stress	18	56,25
3	Severe Stress	0	
Total		32	100

The research results showed that most of the respondents experienced mild stress, namely 18 respondents (56.2%).

### 2. Menstrual Cycle

No	Menstrual Cycle	F	%
1	Normal (21-35 days)	12	37,5
2	Abnormal (< 21 days - > 35 days)	20	62,5
Total		32	100

The research results showed that the majority of respondents experienced an abnormal menstrual cycle (<21 or>35 days), namely 20 respondents (62.5%)

## Cross Tabulation of General Data With Variables

### 1. Age And Stress Level

Age	Stress Level						Total	
	Mild Stress		Moderate Stress		Severe Stress			
	F	%	F	%	F	%	F	%
16-18 Years	1	3,1	6	18,8	0	0	7	21,9
19-21 Years	5	15,6	11	34,4	0	0	50	50
22-24 Years	8	25	1	3,1	0	0	9	28,1
Total	14	52.4	18	56.3	0	0	32	100

The research results showed that almost half of respondents aged 19-21 years had a moderate level of stress, 11 people (34.4%).

### 2. Age And Menstrual Cycle

Age	Menstrual Cycle				Total	
	Normal		Abnormal			
	F	%	F	%	F	%
16-18 Years	0	0	7	21,7	7	21,9
19-21 Years	3	9,3	14	43,8	16	50
22-24 Years	9	28,1	0	0	9	28,1
Total	12	52,4	20	65,6	32	100

The research results showed that almost half of respondents aged 19-21 years had abnormal menstrual cycles, as many as 14 people (43.8%).

## Cross Tabulation Between Stress Level And Menstrual Cycle

No	Stress Level	Menstrual Cycle			
		Normal		Abnormal	
		F	%	F	%
1.	Mild Stress	9	28,1	5	15,65
2.	Moderate Stress	2	6,25	16	50
3.	Severe Stress	0	0	0	0
Total		11	34,35	21	65,65

The research results showed that half of the respondents whose stress levels were moderate had an abnormal menstrual cycle (<21 or >35 days), 16 people with a percentage of (50%).

Statistical Test Results			Stress Level	Menstrual Cycle
Spearman's rho	Stress Level	Correlation Coefficient	1.000	-.555**
		Sig. (2-tailed)	.	.001
		N	32	32
	Menstrual Cycle	Correlation Coefficient	-.555**	1.000
		Sig. (2-tailed)	.001	.
		N	32	32

The results of the research analysis regarding the relationship between stress levels and the menstrual cycle in newspaper based on statistical tests using the Spearman-Rho test showed that  $p = 0.001 < 0.05$ , so  $H_0$  was rejected and  $H_1$  was accepted, which means there is a relationship between stress levels and the menstrual cycle.

## DISCUSSION

**Stress Level,** Based on the results of the research conducted, it was found that from 32 respondents, the majority of respondents experienced mild stress, namely 18 respondents (56.2%). Stress is a person's psychological, physiological and behavioral response to pressure, whether pressure from within (internal) or from outside (external). Stress can impact every aspect of a person's life, creating mental tension, changes in behavior, interpersonal difficulties, and physical complaints (Nufadilah, 2022). In accordance with theory, an individual's perception and experience of major changes can cause stress. The stimulus that initiates, triggers change is called a stressor. In general they can be classified as internal and external. Internal stressors originate from within a person (for example a threat or an emotional state such as guilt). External stressors come from outside a person (for example changes in the environment, changes in family roles, or pressure from a partner).

This level of stress occurs in female students at the Manbatul Akhlaq Mojo Kediri Islamic Boarding School because their unstable emotional state is influenced by several internal and external stressors. Internal stressors experienced by female students include academic activities and also the demands of their own expectations. External stressors include reading the Koran, memorizing books, making deposits, madrasa school lessons, pressure from parents to be successful at the boarding school, graduating from the boarding school must be able to become a child who is more useful in society, as well as the ability to adapt socially at the boarding school. The increasing complexity of the material at the boarding school which increasingly challenges the students' abilities, and the lack of free time or recreation is also one of the demands (Willibrordus & Nainggolan, 2021).

The stress scale is categorized as mild if the respondent's answer to the PSS-10 question item is within a score of 0-13, categorized as moderate if the score is 14-26, and categorized as severe if the score is 27-40. In the research results, 11 people aged 19-21 years had moderate levels of stress (34.4%) while 5 people (15.6%) had mild levels of stress, respondents aged 16-18 years had moderate levels of stress. as many as 6 people (18.8%) while 1 person (3.1%) had mild stress, then 1 (3.1%) respondents aged 22-24 years had moderate stress levels and 8 people had mild stress levels. (25%). So the researchers concluded that in this study the 19-21 year age group contributed the most stress in the moderate stress category, namely 11 people (34.4%).

This is in accordance with Fields' (2021) theory: Older age has greater resilience in dealing with prolonged stressors and stressful life experiences, which is one of the reasons for the better mental health outcomes observed at older age. Researchers concluded that because of this internal stressor, the students' concentration was not focused, causing the students to experience stress. Apart from being influenced by internal stressors, stress can also be influenced by external stressors. Stress is an adaptive reaction that is individual, so each person's response is not necessarily the same (it will definitely be

different), so that the stress level of one female student is different from the stress level of another female student.

**Menstrual Cycle.** Based on the results of the research conducted, it was found that from 32 respondents, there were several people who experienced abnormal menstrual cycles, totaling 21 people (65.6%). The menstrual cycle is said to be normal if it occurs within 21-35 days and is said to be abnormal if it occurs < 21 days (polymenorrhea) and > 35 days (oligomenorrhea).

Based on the research results, it is known that of the 32 respondents, 11 respondents (34.3%) experienced a normal menstrual cycle, namely 21-35 days, 21 respondents (65.6%) experienced an abnormal menstrual cycle. Based on the results of research from 32 respondents, it was found that 14 people (43.8%) of respondents aged 19-21 years had abnormal menstrual cycles, while 3 people (9.3%) had normal cycles, respondents aged 16-18 years had 7 people (21.9%) had abnormal menstrual cycles and 0 people (0%) had normal cycles, 0 people (0%) had abnormal menstrual cycles and 9 people had normal cycles (28.1%).

When Adolescent girls are 17 to 18 years old, menstruation will start normally, namely 28 days to 35 days. Menstrual cycle anomalies in adolescent who have reached adulthood can of course be a sign of a problem. Menstrual problems in women occur quite often, with a prevalence rate of 30 to 70%. Menstruation usually lasts 3-5 days, but can also last 7 to 8 days, or even 1 to 2 days, and is accompanied by a little blood. Short menstrual periods are known as polymenorrhea, prolonged menstrual cycles or oligomenorrhea, and amenorrhea which occurs when there is no menstruation for three months, are three types of menstrual cycle disorders (Sari et.al 2020). According to researchers, respondents who experience abnormal menstrual cycles are influenced by too many thoughts, especially in the learning process and the demands of rote memorization at the boarding school which must be in line with targets set by the boarding school so that it can affect the menstrual cycle where excessive stress affects the hormones that regulate the menstrual cycle.

**Analysis Of The Relationship Between Stress Levels And The Menstrual Cycle In Adolescent Girls At The Mnbatul Akhlaq Mojo Kediri Islamic Boarding School.** The results of research analysis regarding the relationship between stress levels and the menstrual cycle in adolescent girls at the Mnbatul Aakhlaq Mojo Kediri Islamic Boarding School, based on statistical tests using the Spearmen-Rho test, showed  $p = 0.001 < 0.05$ , so  $H_0$  was rejected and  $H_1$  was accepted, which means there is a relationship between stress levels and menstrual cycle. With a correlation coefficient value of 0.579, which means the level of relationship is in the medium relationship category, where the correlation value range is between 0.40-0.599, which is included in the medium relationship category (Sugiyono, 2020). The results of this study showed that half of the respondents with moderate levels of stress had an abnormal menstrual cycle (<21 or >35 days) with a percentage of 16 people (50%) and respondents with moderate levels of stress had normal menstrual cycles (21-35 days). there were 2 people with a percentage (6.25%), respondents with mild levels of stress had abnormal menstrual cycles of 5 people (15.6%), and respondents with low levels of stress had normal menstrual cycles of 9 people (28.1%).

According to researchers, the stress that occurs and is felt by respondents can be caused by several factors, for example respondents who experience background stressors such as piling up tasks (starting from reciting the newspaper, memorizing books, deposits, madrasah school assignments, excessive parental pressure (demanding and hoping that their children will become the best graduates, and have good grades), as well as the occurrence of personal stressors such as lack of space for refreshing and changes in mood), as well as problems with social relations with friends (for example, such as feeling embarrassed to socialize because of appearance problems, or because you are still a new student, there are several gangs or groups in the class which causes a lack of socialization between female students in the class, as well as bullying) or even financial problems experienced by respondents (for example, parents who have lost their jobs or a decrease in parents' income which makes female students feel uneasy. or even burdened, especially when the SPP payment is approaching).

The majority of female students themselves feel or experience moderate stress, the result of this stress is what triggers menstrual irregularities. The stress experienced by respondents can be overcome or minimized by providing time for adequate rest, joking and telling stories to friends, doing fun things, doing physical activities such as exercising, so that the stress felt by respondents can be minimized and their menstruation becomes regular.

Based on the table it shows that most of the respondents (52%) have sufficient knowledge, and after the intervention it is found that almost all of the respondents (85.71%) have good knowledge.



Based on statistical tests using Wilcoxon, it is known that there are differences in the value of students' knowledge before counseling and after counseling with a p value  $<0.001$  and a large increase in the mean pre: 4.62, and post: 6.57. Thus it can be seen that there is an increase in student knowledge after counseling is carried out. This activity has quite significant potential if we use it with strong will and will. In implementing this program, it is expected that high school and vocational students can apply the management of prevention and handling of gadget addiction to mental health emergencies independently. This counseling activity was able to increase students' knowledge about the definition of gadget addiction, the causes of gadget addiction, the determining indicators of someone addicted to gadgets, the impact of gadget addiction, the prevention and management of mental health emergencies for gadget addiction in adolescents. Based on the results of the evaluation the percentage of most respondents (52%) had sufficient knowledge, and after the intervention it was found that almost all of the respondents (85.71%) had good knowledge.

## CONCLUSION

Most of the respondents experienced mild stress, namely 18 respondents (56.2%). Most respondents experienced irregular menstrual cycles (21 or  $>35$  days), namely 21 respondents (65.6%). Based on statistical tests using the Spearman-Rho test, the result was  $p = 0.001 < 0.05$ , so  $H_0$  was rejected and  $H_1$  was accepted, which means there is a relationship between stress levels and the menstrual cycle.

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