



**“ANXIETY ON DEALING FINAL EXAMINATION AS DETERMINANT CHANGES OF THE MENSTRUAL CYCLE TO FEMALE STUDENTS “**

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ABSTRACT	Keywords
<p>Women will experience menstrual cycle changes during her productive life. In its effect on the menstrual cycle, anxiety involves the neuroendocrinology system as a major system of its role in female reproduction. This research aimed to determine whether the anxiety as the determinant of menstrual cycle changes in students of Midwifery Department Bina Sehat PPNI Health science institute Mojokerto. This research used comparative analytic design with cross-sectional approach. Its population was all third grade students of Midwifery Department Bina Sehat PPNI Health science institute Mojokerto which is a final exam 128 people. The number of samples was 28 respondents using simultaneous sampling technique for 15 days. The data were analyzed by using chi-square test. The result showed that 6 respondents had moderate anxiety, most of them had normal menstrual cycle, 12 students (75%) and 7 respondents had severe anxiety, most of them had oligomenorrhea that was 5 students (71, 4%), chi-square test results obtained <math>p = 0.003</math>, means <math>p &lt; \alpha (0.05)</math> so that <math>H_0</math> is rejected means there is anxiety becomes the determinant of menstrual cycle. It is suggested to female students to be able to improve their knowledge about the menstrual cycle and excessive anxiety control with technical technique and hopefully can give motivation and good coping to students</p>	<p><b>Anxiety, Menstrual Cycle</b></p>

## INTRODUCTION

Basically, anxiety is a natural thing that has ever experienced by every human being. Anxiety is an emotional response to subjective judgments of individuals, influenced by the unconscious and not specifically known cause (Ini, 2009). Based on data from the National Institute of Mental Health (2005) in the United States there are 40 million people suffering from anxiety disorders at the age of 18 years until the elderly. In Indonesia the number of young girls who experienced emotional disturbance by 20% (Princess, 2007). Factors that can cause menstrual pattern disorders in Hestiantoro (2009) are Disturbed hormonal function, systemic abnormalities, anxiety, thyroid, excess prolactin hormone, physical abnormalities (reproductive organs) such as fertility disorders, recurrent abortion, and malignancy in organs reproduction. Based on previous research, that the menstrual cycle is strongly influenced by the level of anxiety experienced. This is in accordance with the results of research Luthfa (2014) that most students experience disruption at home at Pondok Pesantren Kuno Putri Gamping Sleman.

Based on preliminary study conducted on February 20, 2017, at Bina Sehat PPNI Health Science Institute of Mojokerto by using interview method to 10 female students of Midwifery department final level, got information that 3 people (30%) said irregular menstrual cycle, history of previous menstrual cycle is 28 day and is now  $\leq$  21 days, 2 people (20%) said the history of menstrual cycle is irregular, 1 person (10%) said no menstruation for 3 months and previous menstrual history is 28

days, this is due to anxiety because the activity of lecture which is packed, preparing for a series of tests, clinical practice, report targets to be met, as well as KTI preparation activities, and 4 people (40%) said regular menstrual cycles when students are busy. Based on the above background, researchers are interested to examine the anxiety of facing the final exam as a determinant factor of the menstrual cycle

## METHODS

The design of this study used a comparative analytic design using cross-sectional, the research design by measuring or observing at the same time (once) between the two variables (Hidayat, 2009). In this study analyzed the relationship between anxiety present the final exam with the menstrual cycle. The population is the object of research or object to be studied, (Notoatmodjo, 2005). Population in this research is all third grade students of Midwifery department Bina Sehat PPNI Health Science Institute number 128 student. The sample is partly taken from the entire research object that is considered to represent the population (Suyanto, 2008). The sample in this study is the third-grade obstetric DIII Bina Sehat PPNI Health Science Institute Mojokerto.

Variables are the size or characteristics possessed by members of a group different from those of other groups (Notoatmodjo, 2010). In this study, the variables used there are two, namely independent variables and dependent variables. the independent variable is the anxiety of the final exam, the dependent variable is the menstrual cycle.

A research instrument is a tool for researchers in using data collection

methods (Arikunto, 2010). The instrument used in this study is a questionnaire.

Method of data processing done through the process with stages as follows:

Editing, done by distributing observation sheet to the respondent. Then the researcher corrected back the completeness of the data so that if there is lack of data can be completed immediately. Coding, classifying answers from respondents into categories. Scoring, the scores are summed up then the collected data are analyzed by giving a score of the two variables studied. Tabulating, Preparation of data in the form of frequency distribution table. The data obtained is then inserted in the master sheet then the data is processed by using the frequency distribution table and cross table (Hidayat, 2009). Data Analysis conducted data analysis by using chi-square test. In terms of the data, kai square test can be used to determine the relationship between categorical variables with categorical variables. The results are presented in the form of frequency distribution and percentage.

## RESULT AND DISCUSSION

Results of research conducted on 128 respondents obtained results as in the following table:

Table 4.1 Frequency Distribution of Respondents Based on Student Age, Midwifery and Past Cycle Menstrual Experience on third grade Students of Diploma III Midwifery department at Bina Sehat PPNI Health Science Institute Mojokerto

NO	Research Data	Categories	f	%
1	Age	20 Years old	2	7,1
		21 Years old	20	71,4
		22 Years old	5	17,9
		23 Years old	1	3,6
TOTAL			28	100
2	Experience previous menstrual cycles	Regular	22	78,6
			6	21,4
		Irregular		
TOTAL			28	100

*Source: Primary data, 2017*

Based on table 4.1 it is known that some 21-year-old students are 20 students (71,4%). It shows that almost all of the respondents have a history of the regular menstrual cycle that is as much as 22 students (78.6%).

Table 4.2 Frequency Distribution of Respondents Based on Anxiety Level and Menstrual Cycle on third grade Students of Diploma III Midwifery department at Bina Sehat PPNI Health Science Institute Mojokerto

No		Categories	f	%
1	Anxiety Level	No worries	0	0
		Mild anxiety	5	17,9
		Medium anxiety	16	57,1
		Serious anxiety	7	25
		Panic anxiety	0	0
2	TOTAL		2	10
			8	0
	Menstrual Cycle	Amenore	0	0
				14,3
		Polimenore	4	3
			18	64,3
	Oligomenorrhea	6	21,4	
TOTAL		2	10	
		8	0	

The menstrual cycle of students is mostly (64.3%) normal, that is 18 students. Students sometimes experience menstrual cycle changes caused by changes in hormone levels due to stress/anxiety or emotional state. Besides, that drastic changes in sports portion and drastic weight changes can affect the menstrual cycle because the system metabolism in the body does not work well (Hestiantoro, 2009).

Respondents who experienced polimenore as many as 4 students (14.3%), this is because the hormonal function is disrupted. Respondents who experienced normal menstrual cycles of 18 students (64.3%) were due to previous menstrual history is normal and regular, and respondents who experienced oligomenorrhea as many as 6 students (21.4%), this is due to excess production of prolactin hormone thus suppressing the fertility rate of respondents and causing the respondent not to visit menstruation.

### **Anxiety in Facing Final Examination As Determinant of Menstrual Cycle**

Anxiety Facing Final Examination As Determinant of Menstrual Cycle Based on Table 4.2 indicates that respondents who experienced moderate anxiety, almost all experienced a normal menstrual cycle, and from respondents who experienced severe anxiety, almost entirely oligomenore.

From the result of Chi-Square test get  $p = 0,003$  then  $p < \alpha (0,05)$ . Means  $H_0$  rejected, meaning that the anxiety facing the final exam as a determinant of menstrual cycle in DIII student's midwifery level III Bina Sehat PPNI Health Science Institute Mojokerto.

Severe emotional stress can also cause irregular bleeding because when this happens, the body will produce stress hormones that will affect menstrual hormone release. The stress conditions experienced will greatly affect the hypothalamus because the hypothalamus is part of the brain that places various hormones that regulate the menstrual period, resulting in irregular menstruation (Elhert and Gaab, 2001).

Respondents who experienced moderate anxiety mostly experienced normal menstrual cycles and a small percentage of menstrual cycle changes, this is due to factors such as disturbed hormonal function, systemic abnormalities, anxiety, thyroid, excess prolactin hormone, and physical abnormalities in the respondents so that the body's hormones do not work well or may be anxious about things other than facing a final exam such as not reaching the target specified as a graduation requirement, so that the anxiety it experiences is stacking and disturbing the hormone stability that causes the change of menstrual cycle. However, this is not felt by some other respondents, so there is a normal menstrual cycle.

Of the respondents who experienced severe anxiety most of the menstrual cycle changes due to the greater the level of anxiety the more likely to occur menstrual cycle disruption.

## **CONCLUSIONS AND SUGGESTIONS**

### **Conclusion**

Based on the research that has been done, the researchers can conclude that the anxiety facing the final exam is a determinant factor of menstrual cycle changes in students Midwifery

department Level III Bina Sehat PPNI Health Science Institute Mojokerto. The results of this study support the theory of Prawirohardjo (2008) that severe emotional stress, such as facing the final exam can cause irregular bleeding because when this happens, the body will produce stress hormones that will affect menstrual hormone release.

### **Suggestion**

#### **For Respondents**

It is expected that students can think positively, do not assume that the final task is a burden but a responsibility that must be lived well with how to conduct regular guidance and follow the direction of lecturers.

#### **For Further Researchers**

Conducting research development about anxiety and menstrual cycle and hopefully, this research can be continued by taking into account other factors related to menstrual cycle.

#### **For Educational Institutions**

Increase literature review of anxiety and a menstrual cycle that can be used as a reference by students.

## **REFERENCES**

Ehlert, Ulrike; Gaab, Jens; Heinrichs, Markus .2001. Sychoneuroendocrinological contributions to the etiology of depression, posttraumatic stress disorder, and stress-related bodily disorders: the role of the hypothalamus–pituitary–adrenal axis. *Biological Psychology Journal* vol 57 (1-3). Page 141-152

Dalami E, Suliswati, Farida F, Rochima, Banon E. 2009. *Asuhan Keperawatan Jiwa dengan*

*Masalah Psikososial*. Jakarta: Trans Info Media.

Hestiantoro, Andon. 2009. *Metode Penelitian Kebidanan Teknik Analisa Data*. Jakarta: Salemba Medika

Notoatmodjo, Soekidjo. 2012. *Metodologi Penelitian Kesehatan*. Jakarta: Rineka Cipta

Feist, Jess dan Feist, Gregory. 2009. *Teori Kepribadian*. Jakarta: Salemba Humanika

Prawirohardjo, Sarwono. 2008. *Ilmu Kandungan Edisi Kedua, Cetakan IV*. Jakarta: Yayasan Bina Pustaka

\_\_\_\_\_. 2011. *Ilmu Kandungan*. Jakarta: Yayasan Bina Pustaka

Ehlert, Ulrike; Gaab, Jens; Heinrichs, Markus .2001. Sychoneuroendocrinological contribution to the etiology of depression, posttraumatic stress disorder, and stress-related bodily disorders: the role of the hypothalamus-pituitary-adrenal axis. *Biological Psychology Journal* vol 57 (1-3). Page 141-152

E, Suliswati, Farida F, Rochima, Banon E. 2009. *Nursing care of the Soul with Psychosocial Problems*. Jakarta: Trans Media Info.

Hestiantoro, Andon. 2009. *Method of Research Obstetrics Data Analysis Technique*. Jakarta: Salemba Medika

Notoatmodjo, Soekidjo. 2012. *Health Research Methodology*. Jakarta: Rineka Cipta

Feist, Jess and Feist, Gregory. 2009. *Personality Theory*. Jakarta: Salemba Humanika

Prawirohardjo, Sarwono. 2008. *Secondary Gynecology, Printed IV*. Jakarta: Yayasan Bina Pustaka

\_\_\_\_\_. 2011. *Gynecology*. Jakarta: Yayasan Bina Pustaka