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The Effect of Anxiety Level to The Menstrual Cycle on DIII Midwifery Student at STIKes Nani Hasanuddin Makassar



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Abstract

Adolescence is psychologically a period of transition from childhood to adulthood. Menstruation is an important event in the life of a young woman. For this reason, young women need to recognize their bodies, what will happen, so that they are not surprised or frightened when their first menstruation arrives. The menstrual cycle is important as a reproductive function that carries out preparation for conception and pregnancy. The purpose of this study was to determine the effect of anxiety levels on the menstrual cycle in DIII Midwifery students of Stikes Nani Hasanuddin Makassar. This study used quantitative analytic method, with a cross sectional approach. The population in the study of all students of the 2019 batch was 3-7 respondents and the sample used was 37 respondents with a total sampling technique. Result: There was no effect of anxiety level and menstrual cycle in DIII Midwifery students of STIKes Nani Hasanuddin Makassar. The large Odds Ratio (OR) on the test results was 0.622, it is most likely that the risk of disruption of the menstrual cycle of DIII Midwifery students if experiencing severe anxiety was 0.622 times compared to DIII Midwifery students who only experience moderate anxiety.

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INTRODUCTION

Adolescence is the transition from puberty to adulthood. During this period, adolescents experience many changes, both physically, psychologically and socially. Individuals are said to have entered adolescence between the ages of 16 or 17 years and ended at the age of 21 years. Psychological problems experienced by adolescents, anxiety is one of the most psychological problems experienced by adolescents. In an electronic news report, it was revealed that today's teenagers are more prone to anxiety than teenagers in the previous generation because today's academic demands are more than that of their parents (Irianto, 2015).

In the world, it is estimated that the youth group is 1.2 billion or 18% of the world's population (WHO, 2014). According to the 2013 Indonesian health profile, the total population of Indonesia in 2013 aged 15-19 years was 10,729,820 people and those aged 20-14 years were 10,453,214. According to the Regulation of the Minister of Health of the Republic of Indonesia number 25 of 2014 adolescents are residents in the age range of 10-19 years in Indonesia according to the 2010 population census of 43.5 million or about 18% of the total population (Kementerian Kesehatan RI, 2014).

Adolescence is psychologically a period of transition from childhood to adulthood. In adolescence, cognitive maturity occurs, namely the interaction of a perfect brain structure and an increasingly wider social environment that allows adolescents to think abstractly. It is at this age that the characteristics, attitudes and behaviours that are always curious, feel and want to try new things develop. These attitudes and behaviours must be directed or facilitated so that they do not have a negative impact. According to the World Health Organization (2014), adolescents are residents in the age range 10-19, and adolescence is divided into early adolescence aged 10-13 years, middle adolescence aged 14-16 years and late adolescence aged 17-19 years. According to the Regulation of the Minister of Health of the Republic of Indonesia Number 25 of 2014, adolescents are residents in the age range of 10-18 years and according to the Population and Family Planning Agency (BKKBN) the age range of adolescents is 10-24 years and unmarried (Kementerian Kesehatan RI, 2014)

Menstruation is an important event in the life of a young woman. For this reason, young women

need to recognize their bodies, what will happen, so that they are not surprised or frightened when their first menstruation arrives. The information provided also needs to be considered in stages and depth, so that it is reassuring, makes them comfortable, and in accordance with their level of maturity (Sinaga, Ernawati; Saribanon, Nonon; Suprihatin; Sa'adah, Nailus; Salamah, Ummu; Murti, Yulia Andani; Trisnamiati, Agusniar; Lorita, 2017). Badan Litbang Kesehatan, (2010) the average menarche or first menstruation in women aged 10-15 years in Indonesia is (20.0%) with some occurrences earlier at the age of less than 9 years which is not explained how much.

Preliminary study conducted random interviews with DIII Midwifery students at STIKes Nani Hasanuddin Makassar, namely 5 people about the menstrual cycle with the result that 3 out of 5 students experienced menstrual cycle disorders. In addition, researchers made observations on students while participating in learning in class, it was found that students seemed to complain and were tired because each lecturer gave different assignments and had to collect them on time so that their stress level also increased. Based on the background above, the researcher is interested in researching the title of the effect of anxiety levels on the menstrual cycle in DIII students in the care of Stikes Nani Hasanuddin Makassar.

METHOD

This study was a quantitative study using cross sectional method to get the effect of anxiety level with menstrual cycle. The study was carried out at the STIKes Nani Hasanuddin Makassar Campus in September 2021 – January 2022. The population in this study were all D III Midwifery students at STIKes Nani Hasanuddin Makassar Class of 2019 with 37 respondents. The sampling technique used is a total sampling of 37 respondents.

The instrument used a questionnaire in the form of a google form. The dependent variable in this study was the menstrual cycle, where in the questionnaire there were 9 closed questions in describing the menstrual cycle experienced by the respondents. The independent variable studied was the level of anxiety, where the researcher used a manifest anxiety scale questionnaire with a total of 38 questions. Furthermore, the study results were analyzed using the Fisher exact test and OR (Odds Ratio).

RESULT

In table 1 we can conclude that none of the responses experienced mild anxiety or no anxiety. There are 24 respondents (64.9%) experiencing moderate anxiety and as many as 13 respondents (35.1%) experiencing severe anxiety. In regular menstrual cycles there are 23 respondents (62.2%) while 14 respondents (37.8%) have irregular menstrual cycles.

Table 1: Frequency Distribution n

Variable	Frequency	Percent (%)
Anxiety Level		
No Worry	0	0
Mild Anxiety	0	0
Moderate Anxiety	24	64.9
Heavy Anxiety	13	33.1
Menstrual Cycle		
Regular	23	62.2
Irregular	14	37.8

Source: Primary Data

Table 2: Frequency Distribution n

Anxiety Level	Menstrual Cycle				Total		ρ	OR
	Regular		Irregular		N	%		
	n	%	n	%				
Moderate Anxiety	14	58.3	10	41.7	24	100	0.766	0.622
Heavy Anxiety	9	69.2	4	30.8	13	100		
Total	23	62.2	14	37.8	37	100		

Source: Primary Data

Table above shows that from 37 respondents there were 24 respondents who experienced moderate anxiety including 14 respondents (58.3%) who had regular menstrual cycles and 10 respondents (41.7%) of whom experienced irregular menstrual cycles. The other 13 respondents experienced severe anxiety including 9 respondents (69.2%) had regular menstrual cycles while 4 respondents (30.8%) had irregular menstrual cycles.

From the results of SPSS using the chi-square test, the value of $\rho = 0.766$, so it can be concluded that there is no relationship between anxiety levels and menstrual cycles in DIII Midwifery students at STIKes Nani Hasanuddin Makassar. The large Odds Ratio (OR) on the test results is 0.622, it is most likely that the risk of disruption of the menstrual cycle of DIII Midwifery students if experiencing severe anxiety is 0.622 times compared to DIII Midwifery students who only experience moderate anxiety.

DISCUSSION

From the results of the study obtained data as in table 1 about the anxiety level of DIII Midwifery students of STIKes Nani Hasanuddin Makassar who experienced moderate anxiety as many as 24 respondents (64.9%) experienced moderate anxiety and as many as 13 respondents (35.1%) experienced severe anxiety. The condition of the respondents mostly experienced moderate anxiety disorders and severe anxiety, influenced by the late adolescent age factor as a factor in seeking identity resulting in unstable emotional changes, learning assignments on campus and work activities at home, as well as social life activities both with friends and partners, feel unable to face the

problems in the life they face, resulting in psychological disorders in adolescents, namely anxiety (Yudita et al., 2017).

This is in accordance with the theory of anxiety management, characterized by worry, fear, sadness, anxiety in itself as a stressor which can lead to increased anxiety if he cannot control his consciousness and is maladaptive (Hawari, 2006). Action is needed to overcome this, by means of psychosocial therapy to restore the adaptability so that the person concerned can return to normal functioning in everyday life, both at home, school/campus, at work and in his social environment.

Adolescents as a period that is vulnerable to anxiety, emotionally unstable, then through a religious approach will provide a sense of comfort to the mind and closeness to God, dhikr and prayers delivered will give positive hope. The importance of the role of the family in adolescents who experience all problems with their duties both at home and at school to provide support, therefore the role of the family is quite effective in reducing anxiety, in addition to providing counseling so that the lives of teenagers are more focused and motivated to be more active. better yet, counseling can be done effectively when there is motivation from both parties, between the client (the person receiving the consultation) and the counselor (the person providing the consultation)(Imasari, 2017; Manurung, 2016; Setiyowati & Suryaningsih, 2017).

Therefore, knowledge about anxiety and its treatment needs to be known, in the hope that anxiety disorders can be overcome with the right actions, to overcome anxiety in particular in adolescents by getting support or motivation both from themselves and from others, as well as getting wider knowledge from school education, especially for counseling teachers must pay attention to their students so that anxiety disorders in adolescents can be overcome.

In this study, the results showed that there was no relationship between anxiety levels and menstrual cycles in DIII Midwifery students at STIKes Nani Hasanuddin Makassar. Table 4.2 shows that from 37 respondents there were 24 respondents who experienced moderate anxiety including 14 respondents (58.3%) who had regular menstrual cycles and 10 respondents (41.7%) of whom experienced irregular menstrual cycles. The other 13 respondents experienced severe anxiety including 9 respondents (69.2%) had regular menstrual cycles while 4 respondents (30.8%) had irregular menstrual cycles.

Reproductive health, especially adolescent girls, is closely related to menstruation. Where not every teenager has a regular menstrual cycle, this irregular menstrual cycle is influenced by several factors, some of which are age, nutritional intake, hormones and psychological disorders of the respondents. In its influence on the menstrual cycle, anxiety involves the neuroendocrinological system as a system that has a large role in female reproduction. Disorders of the menstrual cycle involve integrative regulatory mechanisms that

affect biochemical and cellular processes throughout the body, including the brain and psychology. The influence of the brain in hormonal reactions occurs through the hypothalamic-pituitary-ovarian pathway which includes multiple effects and feedback control mechanisms(Girianto et al., 2021; Saputri, 2016).

In an anxious state, there is activation of the amygdala in the limbic system. This system will stimulate the release of a hormone from the hypothalamus, namely *corticotropic releasing hormone* (CRH). This hormone will directly inhibit the secretion of hypothalamic GnRH from its production site in the arcuate nucleus. This process probably occurs through increased secretion of endogenous opioids. Increased CRH will stimulate the release of endorphins and *adrenocorticotropic hormone* (ACTH) into the blood. An increase in ACTH levels will cause an increase in blood cortisol levels. In women with symptoms of hypothalamic amenorrhea, it shows a state of hypercortisolism caused by an increase in CRH and ACTH. These hormones directly and indirectly causes a decrease in GnRH levels, which in this way causes anxiety to cause menstrual cycle disorders. From the normal menstrual cycle to *oligomenorrhea or polymenorrhea*. These clinical signs depend on the degree of suppression of GnRH. These symptoms are generally temporary and will usually return to normal if the existing anxiety can be overcome, the length of the menstrual cycle is influenced by age, weight, physical activity, anxiety level, genetics and nutrition(Samsulhadi, 2011; Silalahi, 2021; Wiknjosastro, 2007).

The average age of the respondents was around 20 ± 22 years with an average level of anxiety at the level of severe anxiety. The types of activities carried out by respondents include taking part in regular lecture learning activities, internal problems with themselves, doing college assignments, participating in campus organizations and outside campuses, and respondents at this time are final year students who are preparing to face Field Work Practice (PKL) and final project. Therefore, knowledge about anxiety and its handling needs to be known, in the hope that anxiety disorders can be overcome with the right actions, to overcome anxiety, especially in adolescents by getting support or motivation from both themselves and from others, and getting wider knowledge from education. Schools, especially for

guidance and counseling teachers, must pay attention to their students so that anxiety can be overcome in order to maintain reproductive health in adolescents.

In this study, the level of anxiety did not fully influence the menstrual cycle in the respondents, this was because some respondents said they had experienced menstrual disorders since the beginning of their menstruation or since the first time they had their period (*menarche*), namely hormonal disorders in the body that resulted in menstrual disorders . As is known, the menstrual cycle is regulated by hormones. There are four hormones responsible for the menstrual cycle, namely estrogen, progesterone, follicle stimulating hormone (FSH), and luteinizing hormone (LH). Luteinizing Hormone (LH) and Follicle Stimulating Hormone (FSH), which are produced by the pituitary gland, trigger ovulation and stimulate the ovaries to produce estrogen and progesterone. Estrogen and progesterone will stimulate the uterus and breast glands to be competent to allow fertilization to occur. If fertilization does not occur, the egg will pass through the uterus, dry out, and leave the body about 2 weeks later through the vagina. Since the uterine wall is not needed to support the pregnancy, the lining breaks down and sheds. Blood and tissue from the uterine wall (endometrium) combine to form the menstrual flow (Heffner, Linda J; Schust, 2010; Manuaba, I.B.G; *et al*, 2007; Sinaga, Ernawati; *et al*, 2017).

CONCLUSION

There is no relationship between the level of anxiety and the menstrual cycle in DIII Midwifery students of STIKes Nani Hasanuddin Makassar. The large Odds Ratio (OR) on the test results is 0.622, it is most likely that the risk of disruption of the menstrual cycle of DIII Midwifery students if experiencing severe anxiety is 0.622 times compared to DIII Midwifery students who only experience moderate anxiety.

SUGGESTION

The result of this study is that there is no relationship between the level of anxiety and the menstrual cycle in adolescents, due to filtering of bias (exclusion) variables in respondents against the dependent variable is not optimally carried out, so it is hoped that further research should be carried out filtering bias (exclusion) variables,

especially on menstrual history. It is hoped that further research can use research methods to analyze more deeply with a wider number of respondents.

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CONFLICTS OF INTEREST

The author declares that there are no conflicts of interest with the topic or any associated objects upon the publication of this study.

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