



The Relationship of Nutritional Status and Anxiety with Menstrual Syndrome in Midwifery Study Program Undergraduate Program University dr. Soebandi

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ABSTRAK

Latar Belakang : Menstruasi adalah proses luruhnya lapisan rahim yang diikuti dengan pendarahan yang terjadi secara terus menerus setiap bulannya, yang kemudian menciptakan siklus menstruasi. Gangguan menstruasi dapat disebabkan oleh beberapa hal, antara lain psikologis (stres, ketegangan dari kehidupan sehari-hari, kecemasan, dan kelelahan fisik maupun mental), hormonal, masalah gizi, dan organik (radang tumor, trauma, dan lain-lain). Metode Penelitian : Metode penelitian ini menggunakan metode cross sectional. Pengambilan sampel menggunakan total sampling. Jumlah sampel sebanyak 37 responden. Analisis statistik menggunakan uji chi-square. Hasil Penelitian : Analisis Hubungan Status Gizi dan Kecemasan dengan Sindrom Menstruasi pada Mahasiswi Program Studi Kebidanan Program S1 Universitas dr. Hasil uji statistik dengan menggunakan perhitungan Chi-Square dengan menggunakan SPSS 25 didapatkan hasil P-value 0,415 > a = 0,05 dan 0,139 > a = 0,05. Kesimpulan : Maka Ha diterima dan Ho ditolak, yang berarti tidak ada hubungan antara status gizi dan kecemasan dengan sindrom menstruasi. Saran : diharapkan untuk lebih memperhatikan manajemen stres agar kecemasan yang dialami tidak berlarut-larut.

Abstract

Background : Menstruation is the process of shedding the uterine lining which is followed by continuous bleeding that occurs every month, which in turn creates the menstrual cycle. Menstrual disorders can be caused by several things, including psychological (stress, tension from everyday life, anxiety, and physical and mental fatigue), hormonal, nutritional problems, and organic (inflammation of tumors, trauma, etc.). **Research Method** : This research method uses cross sectional method. Sampling using total sampling. The sample is 37 respondents. Statistical analysis using the Chi-square test. **Research Result** : Analysis of the Relationship of Nutritional Status and Anxiety with Menstrual Syndrome in Midwifery Study Program Undergraduate Program University dr. Soebandi. The results of statistical tests using the Chi-Square calculation using SPSS 25 obtained the results of P-value 0,415 > a = 0,05 dan 0,139 > a = 0,05. **Conclusion** : Then Ha is accepted and Ho is rejected, which means there is no relationship between nutritional status and anxiety with menstrual syndrome. **Suggestion**: it is expected to pay more attention to stress management so that the anxiety experienced does not drag on.

Introduction

Menstruation is a natural process that usually occurs in women every month. Menstruation is the process of shedding the uterine lining which is followed by continuous bleeding that occurs every month, which in turn creates the menstrual cycle (Meilan & Fillona, 2018). If a woman's menstrual intervals are basically constant each month, even if she misses a period, her menstrual cycles are considered regular. (Hidayatul & Supriyadi, 2020). One indication of menstrual problems is irregular menstrual periods. Changes in the length and irregularity of the menstrual cycle are the result of variations in the hormones that control reproduction. The average menstrual cycle lasts between 21 and 35 days. The usual volume of menstrual blood is between 30 and 40 ml. Expert estimates suggest that women will menstruate as much as 500 times in their lifetime. (Mamnu'ah, 2018). Actually, the length of the menstrual cycle of 28 days is not often found. Only about 10-15 percent of women have a 28 day cycle (Manurung, 2019).

The Indonesian Ministry of Health in its 2015 Basic Health Research revealed that as many as 11.7% of adolescents in

Indonesia experience irregular menstruation. The prevalence of academic stress among students worldwide is 38 – 71% and there are 39 – 61% of students in Asia experiencing academic stress. In Indonesia, the percentage of students experiencing academic stress is 36.7-71.6% (Mamahit and Christine 2020). Data in East Java shows a high level of student academic stress at 1.8%, moderate stress at 64.5%, low stress at 33.6%. The results showed that the prevalence of students with high stress levels was mostly experienced by health students, namely 57.4% consisting of nursing students at 63.3%, medical students at 57% and dentistry at 50%. Results research conducted regarding the level of anxiety in D3 level 3 students obtained data that as many as 10 respondents (24.4%) and female students who had a high level of anxiety mostly experienced irregular menstrual cycles as many as 6 respondents (14.46%). The results of research (Purwati & Muslikhah, 2020) found data that 30 semester 7 students (46.88%) experienced irregular menstrual cycles.

Several factors that can interfere with the menstrual cycle are weight, anxiety, physical activity, diet, environmental exposure and working conditions and

disrupted hormone function. The dangers that can threaten women if their menstrual cycles are irregular include affecting fertility, causing uterine polyps, uterine cancer, polycystic ovary syndrome and ovarian cysts. Menstrual disorders can be caused by several things, including psychological (stress, tension from everyday life, anxiety, and physical and mental fatigue), hormonal, nutritional problems, and organic (inflammation of tumors, trauma, etc.) (Wirenviona & Riris, 2020). During menstruation, there are several disturbances, starting from a physical and psychological perspective. As a result of this disturbance, women who are menstruating experience disturbances in their daily routine, including worry and panic which can lead to monthly phobias. It is important to note that if this stress and worry is persistent and severe and is not treated promptly, it will eventually lead to phobias related to menstruation.

Disruption of the menstrual cycle can be avoided with certain steps, one of which is light exercise. Excessive exercise can interfere with the release of the hormone GnRH (Gonadotropin Releasing Hormone) from the hypothalamus. GnRH hormone suppression resulting from exercise-related hypothalamic dysfunction

disrupts menstrual cycle patterns by limiting the secretion of Luteinizing Hormone (LH) and Follicle Stimulating Hormone (FSH) (Wahyuni et al., 2018). Apart from physical activity, what students can do is strengthen their lifestyle with good nutrition. Nutritional status in women when in excess or deficiency can cause hypothalamic function to decrease so that it does not provide stimulation to the anterior pituitary to excrete FSH (Follicle Stimulating Hormone) and LH which results in decreased levels of the hormone estrogen resulting in a negative impact on the menstrual cycle, namely inhibiting the ovulation process. and causes lengthening of the menstrual cycle (Dya & Adiningsih, 2019). As with malnutrition or excess nutritional status, stressful conditions will also affect the hypothalamus so that the hormones the body needs, especially reproductive hormones cannot be produced properly, and the menstrual cycle becomes irregular. The level of anxiety allows the menstrual cycle process to not run normally, which can cause the hormones that play a role in the menstrual cycle to be disrupted, these hormones are FSH, LH, estrogen and progesterone. If there is a disturbance in the hormones FSH and LH it will not cause

the formation of egg cells, if so then the hormones estrogen and progesterone will also not be formed as they should, so that the menstrual cycle will also be disrupted. Progesterone levels have an influence on women's psychology and the menstrual cycle. Based on the background of the problems above, the researcher is interested in researching "The relationship between nutritional status and anxiety with menstrual cycle disorders in undergraduate female students of S1 Midwifery at the final level at the

University of dr. Soebandi"

Method

This research method uses cross sectional method. Sampling using total sampling. The sample is 37 respondents. Statistical analysis using the Chi-square test. The research variable consist of independent and dependent variables. The independent variable is is nutritional status and anxiety, while the dependent variable is the menstrual syndrome. The research instrument used measurements of body weight, height, and questionnaires.

Results

Table 1 respondent's nutritional status

IMT Category	Frequency	Percentage %
Normal	27	73,0
Thin	3	18,1
Fat	7	18,9
Total	37	100

Source : Primary data for 2023

Based on table 1, 27 students (73.0%) had normal nutritional status. Those with a thin nutritional status were 3 respondents (18.1%) and 7 respondents (18.9%) hadan obese nutritional status.

Table 2 Respondents Anxiety

Anxiety	Frequency	Percentage %
Normal	3	8,1
light	2	5,4
currently	13	35,1
Critical	9	24,3
Awfully	10	27,0
Total	37	100

Source : Primary data for 2023

Based on table 2 it is known that 3 respondents (8.1%) experienced normal anxiety, 5.4% respondents mild anxiety, 13 respondents (35.1%) moderate anxiety, 9 respondents (24) severe anxiety .3%), and 10 respondents (27.0%) experienced very severe anxiety.

Table 3 respondent's menstrual cycle

Siklus Menstruasi	Frekuensi	Presentase %
Normal	9	24,3
Tidak Normal	28	75,7
Total	37	100

Source : Primary data for 2023

Based on table 3, it was found that 9 respondents (24.3%) experienced normal menstrual cycles and 28 respondents (75.7%) experienced abnormal menstrual cycles.

Tabel 4 Cross Tabulation of the Relationship between Nutritional Status and Menstrual Syndrome

		Menstrual Syndrome				<i>P value</i>
		Normal		Abnormal		
Nutritional	Normal	F	%	F	%	0,415
		Thin	0	0,0	3	
	Fat	1	2,7	6	16,2	
Total		9	24,3	28	75,7	

Source : Primary data for 2023

The results of the analysis of the relationship between nutritional status and menstrual cycle disorders were 8 respondents who had normal nutritional status with normal menstrual cycles (21.6%), respondents who had normal nutritional status with abnormal menstrual cycles (51.4%). Respondents who had a thin nutritional status with abnormal menstrual cycles were 3 respondents (8.1%). And respondents who had nutritional status were obese with normal menstrual cycles were 1 respondent (2.7%), respondents who had nutritional status were obese with abnormal menstrual cycles were 6 respondents (16.2%). The statistical test results obtained a p-value of $0.415 > \alpha = 0.05$, meaning that it can be concluded that there is no relationship between nutritional status and menstrual cycle disorders.

Tabel 5 Cross tabulation analysis of the relationship between anxiety and menstrual cycle disorders

		Gangguan Siklus menstruasi				<i>p-value</i>
		Normal		Abnormal		
Anxiety		F	%	F	%	
		Normal	2	5,4	1	2,7
	Light	0	0,0	2	5,4	
	Currently	5	13,5	8	21,6	
	Critical	1	2,7	8	21,6	
	Awfully	1	2,7	9	24,3	
	Total	9	24,3	28	75,7	

Source : Primary data for 2023

Based on table 5.7, it was found that 2 respondents experienced normal anxiety with anormal menstrual cycle (5.4%), and 1 respondent experienced normal anxiety with an abnormal menstrual cycle (2.7%). Respondents who experienced mild anxiety with an abnormal menstrual cycle were 2 respondents (5.4%). Respondents who experienced moderate anxiety with a normal menstrual cycle were 5 respondents (13.5%), and respondents who experienced moderate anxiety with an abnormal menstrual cycle were 8 respondents (21.6%). Respondents who experienced severe anxiety with a normal menstrual cycle were 1 respondent (2.7%), and respondents who experienced severe anxiety with an abnormal menstrual cycle were 8 respondents (21.6%). Respondents who experienced very severe anxiety with a normal menstrual cycle were 1 respondent (2.7%), and respondents who experienced very severe anxiety with an abnormal

menstrual cycle were 9 respondents (24.3%). The statistical test results obtained a p-value of $0.139 > \alpha = 0.05$ which can be concluded that there is no relationship between anxiety and menstrual syndrome.

Discussion

Based on the data obtained by the researchers, it was found that most of the results of nutritional status were in the category of normal BMI (73.0%), thin BMI (18.1%) and fat BMI (18.9%). Nutritional status is a picture of the condition of the body as a result of the utilization of nutrients from the food consumed (Rahmat, 2022). Nutritional problems are a reflection of the consumption of nutrients that are not sufficient for the body's needs. A person has a good nutritional status if the nutritional intake is in accordance with the body's need. that need to be addressed because they can occur in all life cycles, starting early in life in the womb, toddlers, teenagers to the elderly. Nutritional status is influenced by the availability of good food in the family, and

the physical condition of adolescents who are not sick, and is influenced by the intake of nutrients such as: carbohydrates, fats and proteins.

Based on the data obtained by the researcher, it is known that the highest number of respondents experienced moderate anxiety (35.1%). Meanwhile, respondents who experienced normal anxiety were (8.1%), mild anxiety (5.4%), severe anxiety (24.3%), and those who experienced very severe anxiety (27.0%). According to Salsabila (2020) an unpleasant feeling that a person feels when he is in an uncertain and unclear condition or situation, so it is called anxiety. Basically anxiety is a psychological condition of a person who is full of fear and worry, where feelings of fear and worry about something that is not certain will happen. Anxiety comes from Latin (*anxius*) and from German (*anst*), which is a word used to describe negative effects and physiological arousal. According to the American Psychological Association (APA), anxiety is an emotional state that arises when individuals are stressed, and is characterized by feelings of tension, thoughts that make individuals feel worried and accompanied by physical responses (heart beating fast, increased pressure blood, etc.). Anxiety can be said to

be a physiological state of the body that is experienced and will have an impact on excessive heart rate. Signs and symptoms of social anxiety have characteristics such as fear when they want to get other people's approval, fear of expressing opinions, feeling foreign and uncomfortable when in unfamiliar places (Badriyah S, et al. 2020).

Based on the data obtained by the researcher, it is known that the most results are respondents who experience abnormal menstrual cycles (75.7%) while respondents who experience normal menstrual cycles (24.3%). Menstruation is bleeding due to the shedding of the endometrial layer which occurs periodically. The distance between one menstrual period and the next is called the menstrual cycle, which ideally is said to be regular if each month has a range of 21-35 days, with an average cycle of 28 days. The menstrual cycle is classified as irregular if the length of menstruation changes every month and the blood volume changes (Prayuni, Imandiri and Adianti, 2019). The menstrual cycle disorders can be polimenorrhea, oligomenorrhea, and amonorrhea. Several factors that can disrupt the menstrual cycle are body weight, anxiety, physical activity, diet, environmental exposure and

working conditions and disrupted hormonal function.

In this study, nutritional status was measured using BMI with 3 results, namely thin, normal, fat. BMI can be used as a simple measure of nutritional status. The BMI threshold value for Indonesia in the thin category is < 17 , Normal 18.5-25 and Fat > 25 . (Yuni H. & Ririn H., 2023). The results of this study were that the majority of respondents had normal nutritional status and experienced abnormal menstrual cycles, namely (51.4%). The regularity of the menstrual cycle can be influenced by nutritional intake. If nutritional intake is insufficient, there will be a decrease in reproductive function which will likely result in menstrual cycle disorders (Noviyanti & Dardjito, 2018). Foods that contain folic acid, iron, vitamin C, vitamin E, vitamin B6, zinc, aluminum and calcium are examples of types of food that can change reproductive function. Nuts, fruit, green vegetables, meat, sea fish and vegetables are abundant sources of nutrition (Novita, 2018). The results of the chi-square statistical test showed a p-value of $0.415 > \alpha = 0.05$ so H_a was rejected and H_o was accepted, which means it can be concluded that there is no relationship between

nutritional status and menstrual syndrome. In this study, anxiety was measured using the DASS 42 questionnaire with the most results being that respondents experienced very severe anxiety and experienced abnormal menstrual cycles (24.3%). Anxiety causes systemic changes in the body, especially in the nervous system. Anxiety triggers the release of the hormone cortisol where the hormone cortisol suppresses the hypothalamus and interferes with the work and function of the hypothalamus, one of which is to secrete the menstrual hormones follicle stimulating hormone (FSH) and luetinizing hormone (LH). Changes in prolactin or endogeneous opiates occur which affect the basal cortisol elevation thereby reducing the LH hormone. If there is a disturbance in the hormones LH and FSH, it will affect the production of estrogen and progesterone so that it will cause menstrual cycle irregularities. Research on the relationship between anxiety and menstrual cycle disorders was analyzed using the chi-square statistical test. The results of the chi-square statistical test obtained a p-value of $0.139 > \alpha = 0.05$ which can be concluded that there is no relationship of anxiety and menstrual

Conclusion

1. Nutritional status of final year undergraduate midwifery students at Dr. University. Soebandi's nutritional status is in the normal category
2. Anxiety experienced by female midwifery students at the final level of the undergraduate program at the University of dr. Soebandi is anxiety in the moderate category
3. final year undergraduate midwifery student at Dr. University. Soebandi experiences an irregular menstrual syndrome
4. The results showed that there was no relationship between nutritional status and menstrual cycle disorders in midwifery female students at the final level of the undergraduate program at Dr. Soebandi University, with a p-value $> \alpha$
5. The results of the study showed that there was no relationship between anxiety and menstrual cycle disorders in final year undergraduate midwifery
6. students at Dr Soebandi University, with a p-value $> \alpha$.

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