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CORRELATION STUDY BETWEEN SKINFOLD WITH MENSTRUAL CYCLE IN STUDENTS

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ABSTRAK
Setiap bulan secara teratur seorang wanita mengeluarkan darah dari alat kandungannya kejadian ini disebut menstruasi. lama siklus menstruasi antar wanita satu dengan wanita bisa berbeda. Tujuan penelitian ini adalah untuk mengetahui hubungan *skinfold* dengan siklus menstruasi pada mahasiswi fakultas psikologi dan kesehatan Universitas Widya Dharma Klaten. manfaat penelitian ini diharapkan dapat menjadi masukan bagi masyarakat tentang korelasi *skinfold* mahasiswi. Metode penelitian ini menggunakan studi korelasi dengan teknik analisis *kendall's tau-b* untuk mengetahui hubungan antara dua variable yang berskala ordinal. Tekhnik pengambilan sample *purposive sampling*. Hasil penelitian 10 (77%) responden mengalami siklus menstruasi normal, 2 (15%) responden mengalami siklus menstrusi memendek dan 1 (8%) responden mengalami siklus menstrusi memanjang. rata – rata nilai skinfold pada bisep 21,41 mm, trisep 23,91 mm, suprailiaka 26,66 mm, dan subskapula 24,20 mm. siklus menstrusi berbanding dengan skinfold (p>0,05). Simpulan tidak terdapat korelasi *skinfold* dengan siklus menstruasi pada mahasiswi Fakultas Psikologi Dan Kesehatan Universitas Widya Dharma Klaten

Kata kunci : siklus menstruasi, *skinfold caliper*

ABSTRACT
Every month on a regular basis a woman bleeds from her womb, this event is called menstruation. The length of the menstrual cycle between women can be different from one woman to another. The purpose of this study was to determine the relationship between skinfold and the menstrual cycle in female students of the Faculty of Psychology and Health, Widya Dharma University, Klaten. The benefits of this research are expected to be input for the community about female student skinfold correlation. This research method uses a correlation study with Kendall's tau-b analysis technique to determine the relationship between two ordinal scale variables. The sampling technique was purposive sampling. The results of the study 10 (77%) of respondents experienced normal menstrual cycles, 2 (15%) of respondents experienced shortened menstrual cycles and 1 (8%) of respondents experienced elongated menstrual cycles. the average skinfold value on the biceps is 21.41 mm, triceps is 23.91 mm, suprailiac is 26.66 mm, and subscapula is 24.20 mm. menstrual cycle compared to skinfold (p>0.05). The conclusion is that there is no skinfold correlation with the menstrual cycle in female students of the Faculty of Psychology and Health, Widya Dharma University, Klaten

Keywords ***:*** *menstrual cycle, skinfold caliper*

INTRODUCTION

Menstruation is when a woman bleeds from her uterus regularly every month. Menstruation is a drying of the uterus that occurs consistently and is accompanied by shedding of the endometrium (desquamation). The nerve center, pituitary, ovaries, and regenerative organs of the uterus work together to give birth to this feminine event (the hypothalamic pituitary ovarian axis). Menarche or first menstruation occurs for the first time between the ages of 12 and 13, indicating that these systems work together(Munjidah, 2016). Menstruation is the release of blood, mucus and debris (Setiawati, 2015). The menstrual cycle is a sign of the maturation process of the reproductive organs which is influenced by the body's hormones (Islamy and Farida, 2019). The menstrual cycle is the time from the first day of menstruation until the arrival of the next menstrual period (Sitiayu et all, 2017). This

happens regularly every so-called menstrual cycle (Tombokan et all, 2017). Several variables that influence menstruation include age, stress, medication consumed and diet status. Nutritional problems can also cause menstrual disorders. Obese women are more likely to experience problems with the function of their ovaries. Obese women show excessive supradrenal gland activity, which is characterized by an increase in the ratio of estrone to estradiol and increased production of the hormones testosterone and androstendione. These two hormones will later have an impact on the hormonal process which increases the menstrual cycle. Because granulosa cells and fat tissue can convert androgens to estrogen, the body's fat tissue can also affect estrogen levels. By measuring the biceps, triceps, supscapular and suprailiac parts, we can estimate the total amount of fat in a person's body. body by measuring the thickness of body fat (Munjidah,2016)

Skin folds or also known as body fat thickness describes body fat mass and body composition. The standard body fat percentage based on subcutaneous folds is then compared with the fat thickness in the four measurement areas to calculate fat mass as a percentage of body weight. Body fat levels are proportional to the thickness of the fat folds. A person whose fat content increases, the thickness of the fat folds also increases (Sasongko, 2017). A person who has excessive fat fold thickness will affect physical activity (Trisnowiyanto, 2016). Excessive thickness of weak folds also affects heart and lung endurance (Alamsyah, 2017). Increasing fat levels in the body also has an effect on decreasing muscle mass (Yunita et all, 2019). This thickness can be used to estimate total body fat (Dahriani et al, 2016).

Based on the data, the researcher wants to carry out research entitled a study of the correlation between skinfold and the menstrual cycle in female students. The aim of this research was to determine the relationship between skinfold and the menstrual cycle in female students.

METHOD

This research used an observational analytical design with a correlative study approach between skinfold and the menstrual cycle The research was conducted at the UNWIDHA physiotherapy laboratory from November 2022 to August 2023.. The measurement to determine the skinfold value is to use a skinfold caliper, while the menstrual cycle can be calculated into normal, lengthened and shortened categories. The research sample used purposive sampling, namely 20 students from the Faculty of Psychology and Health UNWIDHA. Skinfold value data was measured on the bicep, tricep, supscapular and suprailiac using a skinfold caliper. The menstrual cycle is a normal, lengthening and shortening cycle experienced by respondents for 6 months. Skinfold and menstrual cycle data from respondents were collected and analyzed using Kendall's tau-b analysis technique.

RESULT

Table 1. Results Of Skin Fold Measurements With A Skinfold Caliper

Menstrual Cycle	Number of respondents	Presentation Value
Normal	10	77%
Shortening	2	15%
Elongated	1	8%
Total	**13**	**100%**

The menstrual cycle of UNWIDHA Faculty of Psychology and Health students in the normal category is 10 (77%), the shortened category is 2 (15%) respondents and the elongated category is 1 (8%) respondent.

Table 2. Skinfold Average Value

Skinfold location	Average value (mm)
Biceps	21,41
Triceps	23,91
Suprailiaca	26,66
Subscapula	**24,20**

The average skinfold value for the biceps area is 21.41 mm, the triceps area is 23.91 mm, the suprailiac area is 26.66 mm and the subscapula is 24.20. Data on skinfold values and average menstruation were carried out statistical tests using SPSS tools with the Kendall's tau-b analysis technique and obtained a p value of> 0.05, which means that the skinfold value is inversely proportional to the menstrual cycle, which means there is no correlation between skinfold and the menstrual cycle in psychology faculty students. and health at Widya Dharma University Klaten.

DISCUSSION

Data on skinfold values and average menstruation were carried out statistical tests using SPSS tools with Kendall's tau-b analysis technique to determine the relationship between two variables on an ordinal scale and obtained a p value> 0.05, which means that the skinfold value is inversely proportional to the menstrual cycle, which means there is no Correlation of skinfold with menstrual cycle in psychology and health faculty students at Widya Dharma University, Klaten.

The above is in line with Tamara and Leonardo's research in 2014 entitled The Relationship Between Skin Fold Thickness and Menstrual Patterns in Female Students Aged 14-18 Years at Taruna Nusantara High School, Magelang. This research showed that the duration of the normal menstrual phase was 190 (88%), lengthened 11 (5.1%), and shortened 15 (6.9%). The average skinfold thickness of the biceps was 19.39 mm, triceps 21.81 mm, suprailiac 24.59 mm, and subscapular 22.15 mm; % body fat is very low 158 (73.1%), low 39 (18.1%), average 16 (7.4%), and high 3 (1.4%). In the regression correlation analysis, the duration of the menstrual phase was inversely proportional to the percentage of body fat (R2=0.015; p>0.05).

Menstruation is the discharge of blood, mucus, and debris from the uterine mucosa accompanied by periodic and cyclic shedding of the endometrium (desquamation), which begins approximately 14 days after ovulation. The time between the first day of menstruation and the start of the next menstrual period is called the menstrual cycle. Menstrual cycle length is the time between the first day of menstruation and the start of the next menstrual period. The menstrual cycle is greatly influenced by the hormones and fitness level of each individual. Skinfold measurements do not yet indicate a person's fitness level. A person's fitness level can be known and is dominated by the heart and lung endurance of each individual (Rizqi and Putra, 2020; Rizqi AM, 2021).

This is in accordance with research conducted by Prahita et al in 2017. This research stated that there was no significant relationship between body fat percentage and menstrual cycle regularity. Alvinatul in 2020 in his research also stated that a person's body fat has nothing to do with the menstrual cycle experienced by a person.

CONCLUSION

Based on the results that have been carried out, it can be concluded that there is no correlation between skinfold and the menstrual cycle in female students from the psychology and health faculty at Widya Dharma University, Klaten.

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