The Relation between Body Mass Index and Menstrual Cycle Disorders in Medical Students of University Pelita Harapan, Indonesia

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Abstract : Introduction: There are several things affecting menstrual cycle, namely, nutritional status, diet, financial status of one's household and exercises. The most commonly used parameter to calculate the fat in a human body is body mass index. Therefore, it is necessary to do research to prevent complications caused by menstrual disorder in the future. Design Study: This research is an observational analytical study with the cross-sectional-case control approach. Participants (n = 124; median age = 19.5 years $\pm$ SD 3.5) were classified into 2 groups: normal, NM (n = 62; BMI = 18-23 kg/m^2) and obese, OB (n = 62; BMI = $>$ 25 kg/m^2). BMI was calculated from the equation; BMI = weight, kg/height, m^2. Results: There were 79.10% from obese group who experienced menstrual cycle disorders (n=53, 79.10%; p value 0.00; OR 5.25) and 20.90% from normal BMI group with menstrual cycle disorders. There were several factors in this research that also influence the menstrual cycle disorders such as stress (44.78%; p value 0.00; OR 1.85), sleep disorders (25.37%; p value 0.00; OR 1.01), physical activities (25.37%; p value 0.00; OR 1.24) and diet (10.45%; p value 0.00; OR 1.07). Conclusion: There is a significant relation between body mass index (obese) and menstrual cycle disorders. However, BMI is not the only factor that affects the menstrual cycle disorders. There are several factors that also can affect menstrual cycle disorders, in this study we use stress, sleep disorders, physical activities and diet, in which none of them are dominant.

Keywords : menstrual disorders, menstrual cycle, obesity, body mass index, stress, sleep disorders, physical activities, diet
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