Identification of Overweight and Obesity Causative Factors in Students

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Abstract

Introduction: Overweight and obesity are degenerative diseases that regularly engage in the entire society. At the student age, overweight and obesity often occur due to various unhealthy lifestyles.

Objective: The purpose of this study is to identify the various factors that trigger overweight and obesity in students. The research sample was last year students in Purwokerto, Banyumas Regency.

Method: The research method used a questionnaire to determine the profile of Body Mass Index (BMI) and students' lifestyle. The research sample was 40 final year students in Purwokerto, Banyumas Regency, with random sampling technique. The data was collected with Google Form application. The questionnaire results were analyzed descriptively qualitatively.

Results: The results showed that college students' causative obesity factors are eating patterns, sleep patterns, and physical activity. Average yield of eating patterns 18.95, sleep patterns 16.46, and physical activity 12.70.

Conclusion: The research recommendation is the importance of education concerning a healthy lifestyle in carrying out academic and non-academic activities to reduce overweight and obesity.

Keywords: Obesity; Overweight; Students

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INTRODUCTION

Students have high assignment requirements in fulfilling both academic and non-academic assignments. Academically, students have high-performance requirements to complete lecture assignments, exams, and meet the target of achieving lectures on time. Apart from academic activities, students are also actively involved in various non-academic activities, including Student activity units, competitions, community service, social services, and various supporting activities.
The high-performance demands that students indirectly have an impact on the lifestyle experienced by students. Most students choose to ignore a healthy lifestyle in order to meet academic and non-academic requirements on campus. The unhealthy lifestyle carried out by students is ignoring regular sleep patterns by staying up late to complete assignments. For practicality reasons, they choose to consume fast food and drinks that have high-calorie content but are low in nutrients and fiber. The high level of activity among students also causes reluctance to arrange regular sports activities. Many studies found a correlation between unhealthy lifestyles with levels of overweight and obesity.

Overweight and obesity occur due to excess fat accumulation in the body (1). Research on obesity based on gender shows that adult women are more likely to be overweight than men. Previous research shows that the percentage of fat in adolescent girls is greater than that of boys (2,3). An unhealthy lifestyle can interfere with health, which causes obesity. Further implications regarding the impact of obesity are disruption of health development and academic and non-academic achievement (4,5).

Consumption of unhealthy foods has a significant effect on overweight and obesity. In various studies, the result shows that fast food's growth became a trigger for low nutritional status. Poor eating patterns with inadequate nutrition and lack of physical activity are factors that determine high levels of fat in the body (6,7). This bad habit is carried out routinely almost every day by most students in the Purwokerto area. The development of cafe facilities and entertainment venues proliferates students' unhealthy lifestyles. They are interested in arranging various activities late into the night, consuming unhealthy foods, and prefer sitting activities over movement activities.

Irregular sleep patterns have also been considered one of the causative factors of overweight and obesity, besides eating patterns and sports activities. Irregular sleep patterns and inadequate rest periods affect the decline in body fitness. Based on observations on students' lifestyle phenomenon in Purwokerto, this study aims to prove the dominant causative factors of overweight and obesity in final year students in the Purwokerto area based on the correlation hypothesis of eating patterns, sleep patterns, and sports activities on cases of overweight and obesity.

**METHOD**

**Time and Place of Research**

The research was carried out at universities in the Purwokerto area, Banyumas Regency from August to early September 2019. The research sites were JenderalSoedirman University (Unsoed), PurwokertoMuhamadiyah University (UMP), Purwokerto State Islamic Religion Institute (IAIN) and WijayaKusuma University (UNWIKU) Purwokerto.

**Research methods**

The research method used aEx-postfacto with questionnaire to determine the profile of Body Mass Index (BMI) and lifestyle patterns of students. The research sample was 40 final year students in Purwokerto, Banyumas Regency, with random sampling technique. The data was collected with the Google Form application. The questionnaire results were analyzed descriptively to explain the causative factors of obesity in final year students in the Purwokerto area, Banyumas Regency.

**Instruments and Data Analysis**

Overweight and obesity indicators are measured using the Body Mass Index (BMI) for children aged 5-20 year based on the standards established by the Ministry of Health of the Republic of Indonesia. The instrument used to identify the factors causing obesity was a questionnaire regarding eating patterns, sleep patterns, and physical activity.
activity using a Likert scale 1-5. Methods of data analysis applying descriptive methods based on the measurement results of the questionnaire. Measurement of the Body Mass Index scale according to the Ministry of Health standards is presented in Table 1 below: (8)

<table>
<thead>
<tr>
<th>No.</th>
<th>Criteria</th>
<th>BMI (kg/m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Thin</td>
<td>BMI &lt; 18,5</td>
</tr>
<tr>
<td>2</td>
<td>Normal</td>
<td>BM 18,5 - 25,89</td>
</tr>
<tr>
<td>3</td>
<td>Overweight</td>
<td>BMI 25,90 - 26,99</td>
</tr>
<tr>
<td>4</td>
<td>Obesity</td>
<td>BMI 27-above</td>
</tr>
</tbody>
</table>

**RESULTS**

Measurement of body mass index in research respondents aims to measure overweight and obesity in final year students in Purwokerto. A lifestyle questionnaire that includes diet, sleep patterns, and physical activity aims to affirm the causes of obesity and obesity in research respondents. Table 2 below presents the questionnaire result data regarding the body mass index and lifestyle of the research respondents based on the questionnaire results.

<table>
<thead>
<tr>
<th>No.</th>
<th>Criteria</th>
<th>Average</th>
<th>Standard Deviation(SD)</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BMI</td>
<td>25.78</td>
<td>24.98</td>
<td>Close to Overweight</td>
</tr>
<tr>
<td>2</td>
<td>Eating Patterns</td>
<td>18.95</td>
<td>19.07</td>
<td>Irregular</td>
</tr>
<tr>
<td>3</td>
<td>Sleep Patterns</td>
<td>16.46</td>
<td>16.56</td>
<td>Fairly Regular</td>
</tr>
<tr>
<td>4</td>
<td>Physical Activity</td>
<td>12.70</td>
<td>12.82</td>
<td>Irregular</td>
</tr>
</tbody>
</table>

The results showed that the respondents had an average body mass index (BMI) of 23.07 with a standard deviation of 24.98. This value shows that the final year students in Purwokerto, Banyumas Regency on average have a normal body mass index close to overweight. Nevertheless, the distribution of body mass index individually found that respondents were overweight and obese.

In the eating patterns criteria, the average value is 18.95 with a standard deviation of 19.07. This value indicates that final year students in the Purwokerto area have an irregular eating pattern. The results of the study on the criteria for sleep patterns showed the number 16.46 with a standard deviation of 16.56. This value shows that the respondent has a fairly regular sleep pattern. Whereas in physical activity, the results showed that the respondents had an average value of 12.70 with a standard deviation of 12.82. This figure shows that final year students in Purwokerto, Banyumas Regency have irregular physical activity.

**DISCUSSION**
The leading cause of being overweight is an imbalance between energy consumption and energy expended in the body (9). Irregular eating patterns and lack of physical activity are triggers of excess body weight. The results of previous research indicate that excessive food consumption, coupled with a lack of physical activity, is one of the causes of obesity in young women (10). Low physical activity has a three times greater chance of causing excess weight than strenuous activity (11).

The results of other studies show that adolescents who have excessive consumption of macro nutrients, frequent consumption of fast food, lack of physical activity, obesity genetic factors from parents, and skip breakfast are at more risk of obesity (12). Based on previous research, students must maintain their eating patterns and physical activity to avoid overweight and obesity.

In addition to eating patterns and sports activities, causative factors of overweight and obesity are poor sleep patterns. Harmful sleep patterns will be decreased body condition, decreased health, and not an optimal performance for students. Sleeping too late will trigger excessive amounts of food; the impact will be overweight and obesity. Similar research shows a correlation between staying up late and the incidence of obesity in adolescents and adults (13).

Other studies regarding obesity with sleep patterns show that short sleep duration is associated with overweight and obesity in the campus environment (14). Various supporting research results prove that irregular sleep patterns are among the factors causing overweight and obesity in adolescents and adults. The habit of working overtime until late at night can interfere with the reproduction of hormones in the body so that various diseases and health problems are more likely to occur.

Based on the results and discussion, it shows that overweight and obesity occur in adolescence and adulthood. In this case, students in the Purwokerto area are rare in various health factors, including eating patterns, sleep patterns, and sports activities carried out by students. The unhealthier the student's lifestyle is, the higher the risk of overweight and obesity endured. Overweight and obesity will additionally have an impact on the physical fitness of students. Physical fitness is an essential component in supporting sports performance and achievement (15–19). A healthy lifestyle is a crucial point for obtaining good physical fitness.

Recommendations from this study's results and discussion are to apply a healthy lifestyle by paying attention to healthy eating patterns, adequate and regular sleep patterns, and doing physical activities as needed to maintain body condition to stay healthy and fit. The more fit the body condition, the performance and performance will increase. For students, especially final year students, ideal and fit body conditions will correlate with completing academic and non-academic assignments.

CONCLUSION

Based on the results of the research and discussion, it can be concluded that final year students in Purwokerto, Banyumas Regency have an average body mass index close to obesity. The factor that causes overweight and obesity in college students is an unhealthy lifestyle. Unhealthy lifestyles include overtime habits in completing college assignments, eating patterns at night with fast food and high-sugar drinks, and most students do not do sports regularly causing overweight and obesity in final year students in the Purwokerto area. The recommendation of this study is the importance of providing education about a healthy lifestyle in carrying out various academic and non-academic activities. Thus, the level of obesity and obesity in students can be controlled.
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REFERENCES


