The Effects of Lifestyle on The Incidence of Obesity Experienced by Many People

Fitrotul Ainiyyah Azzahroh[1], Aninda Tanggono[1]

[1]Faculty of Medicine Universitas Pembangunan Nasional Veteran Jawa Timur

Corresponding Author

Fitrotul Ainiyyah Azzahroh

Faculty of Medicine Universitas Pembangunan Nasional Veteran Jawa Timur

Rungkut Madya Street Number 191, Rungkut Kidul, Rungkut District, Surabaya, Jawa Timur 60293

Tel/Fax: +6285706574770

E-mail: fitrotrotulainiyyah@gmail.com

Abstract

Background. Obesity is a condition where a person's body exceeds normal weight due to the accumulation of excess body fat tissue. Obesity is caused by the amount of energy released by the body being less than the amount of food ingested. Someone who is obese can easily be measured using BMI. A person who has a BMI > 25.0 can be said to be overweight or obese. This literature aims to review the literature regarding the relationship between obesity and individual lifestyle patterns using a comparison of the best methods.

Method. The method used in this journal is by taking samples obtained from the BMI value index and using qualitative statistical methods.

Discussion. The resulting review of journal literature shows that obesity has a significant negative effect on exercise, physical activity and diet. Meanwhile, obesity has a significant positive effect on anxiety levels. It can be concluded that obesity is an abnormal condition in fat that can cause more serious health problems. Understanding the relationship between obesity and the factors that cause it really needs to be studied in more depth.

Conclusion. We may conclude obesity has a positive and significant effect on exercise, physical activity and healthy diet, which means that the higher the physical activity, exercise and healthy diet, the lower the level of obesity.

Keywords: Obesity, Healthy Diet, BMI, Physical Activity, Anxiety Level

Introduction

Obesity is a complex multifactor disease that accumulated excess body fat so that a person's weight is abnormal.[1] Obesity is an event when body tissue compared to total body weight is greater than the actual or normal condition.[2] Obesity can occur because there is an imbalance between the energy from food that comes in which is greater than the energy used by the body. Obesity can cause serious health consequences, because it is a risk factor for degenerative diseases. Excessive fat accumulation in adipose tissue can cause morbidity and death. Health problems associated with obesity include cardiovascular disorders such as hypertension, stroke, and coronary heart disease, as well as conditions related to insulin resistance such as type 2 diabetes mellitus, and several types of cancer. Many factors play a role in obesity, most of which are interactions between genetic factors and environmental factors, including physical activity, socio-economics and nutrition.[1,2]

In principle, obesity occurs because energy intake is greater than output, resulting in excess energy in the form of fat tissue. Body Mass Index (BMI) is a simple tool or way to monitor the nutritional status of adults, especially those related to underweight and overweight.[3]

This suggests that BMI as a measure of obesity may introduce important misclassification problems. Measuring total body fat is considered to be a better measurement, because this type of measurement yields estimates of lean mass or fat mass. Therefore, overweight and obesity as risk factors for morbidity and mortality should be monitored regularly, but are mostly monitored through BMI based on self-reported or measured height and weight.[4]

No	BMI	Clasification
1	< 18.5 kg	Body weight below normal
2	18.5 – 24.9 kg	Body weight normal
3	25.0 – 29.9 kg	Body weight above normal
4	30.0 – 34.9	Obese 1
5	35.0 – 39.9	Obese 2
6	>40.0	Obese 3

Obesity can be divided into 2 forms, namely: central (abdominal) obesity which is associated with a number of metabolic disorders and diseases with high mortality and morbidity, and obesity, especially the morbid type, which is associated with several types of

respiratory disorders includes: respiratory mechanics, airflow resistance, breathing patterns, gas exchange, and respiratory drive.[5] Obesity has a direct influence on the mechanics of the respiratory system. This is characterized by a decrease in the compliance ability (stretch) of the lungs, thorax walls, and the respiratory system as a whole. Excess body weight places an additional burden on the thorax and abdomen resulting in excessive stretching of the thoracic wall. This definitely makes a person tired easily and makes the respiratory muscles have to work harder to produce high pressure in the pleural cavity to allow air to flow in during inspiration.[5,6]

Methods

A systematic review of peee-reviewed articles, report, and case studies from 2019 to 2024 was conducted using databases such a Google Scholar, Wiley Online Library, and Science Direct. Search terms included “BMI diabetes,” “Impact of diabetes,” “Factor Affering Obesity in Urban and Rular”, and “Relationship lifestyle with obesity”.

Discussion

Obesity Factors

This research emphasizes that obesity is caused by disturbed energy balance mechanisms, which are influenced by intrinsic factors (such as genetic predispositions that influence physiology and behavior) as well as extrinsic factors (such as the availability of high-calorie foods and low levels of physical activity). Therefore, effective management and prevention of obesity must focus on understanding and treating the underlying physiological causes, not just on controlling food intake and exercise.[7] Another factor in obesity is the consumption of fast food which contains lots of protein, fat, simple carbohydrates, salt and little fiber. This habit causes obesity and overweight problems due to lack of fiber.[8]

Risk of obesity on quality of work life

Night shift work and blue-collar jobs have a significant positive association with increased BMI and risk of obesity. Research finds mixed results regarding the impact of workplace psychosocial stress on BMI and obesity. Some associations were significant, while others showed no clear relationship. There is also a significant association between racial discrimination in the workplace and the risk of obesity, especially among black workers. The method used is statistical analysis using multiple logistic regression for each of the 20 occupational exposures separately.[9] It can be proven in other studies that the workplace and

time spent working have a big influence on obesity. And obesity also affects the quality of work.[10]

Relationship Between Lifestyle and Obesity

Diet or food intake is the amount of food consumed by a person. Excessive energy intake with high fat and carbohydrate content continuously can cause obesity. Diet plays an important role in the process of obesity. Poor diet is a trigger for obesity. Obesity is related to diet, especially when eating foods that are high in calories and low in fiber. Research shows that there is a significant relationship between diet and physical activity and the incidence of obesity in students at SMPN 1 Bulukumba. Of the 47 respondents, analysis using the chi-square test produced a value of $p = 0.0\ 47 < 0.05$ for diet, which shows that diet is closely related to obesity.[11] Among the obese group, males who consumed fruits, French fries, cakes, sweets, and doughnuts more than three times a week were more likely to be obese, unlike females, for whom this trend was not observed.[12] A diet low in fruits, vegetables, and whole grains reduces fiber intake, which is important for appetite control. The habit of eating large portions without considering daily calorie needs. This further increases the presentation of obesity.[8]

Factor Affecting Obesity in Urban and Rular Adolescents : Demographic, Socioeconomic Characteristics, Health Behavior and Health Education

The study showed significant differences in demographic characteristics, socioeconomics, and health behaviors between adolescents in urban and rural areas in Korea, especially with regard to obesity. The analysis showed that teenagers who exercised regularly had a lower risk of obesity, while those who had poor sleep satisfaction had a higher risk. This research uses a stratified clustering extraction method.[13] After adjusting for sociodemographic factors, children and adolescents in rural areas were more likely than children and adolescents in urban areas to be overweight or obese. So it is necessary to reduce disparities in obesity prevention among children and adolescents in urban and rular.[14]

Application of Receiver Operating Characteristics (ROC) on the Prediction of Obesity

Individuals with a Body Mass Index (BMI) of 25 or more have the highest predictive accuracy regarding chronic disease risk. The SVM model showed good ability in classifying BMI categories, including obesity. Receiver Operating Characteristic (ROC) analysis and Area Under the Curve (AUC) values show that the SVM model has high accuracy in predicting health risks associated with obesity. Different BMI categories show varying AUC values, but generally show encouraging results.[15]

Conclusion

Obesity has many factors, both intrinsic and extrinsic factors. Consuming fast food that is not properly measured and does not contain enough fiber greatly influences the risk of obesity. Moreover, not being accompanied by exercise and frequently sleeping or being too lazy to move increases the risk of obesity. Obesity can be measured using ROC analysis with good accuracy for classification of BMI and associated health risks.

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