The Relationship between Carbohydrate Intake and Sedentary Lifestyle and Fasting Blood Sugar Levels in Students at Jember State Polytechnic

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ABSTRACT

Non-Communicable Diseases (NCDs) are a global health problem associated with metabolic disorders, one of which is increased fasting blood glucose (FBG) levels. Abnormal FBG levels may increase the risk of long-term metabolic problems and are likely to occur among university students due to lifestyle changes and high academic demands. The main factors suspected of affecting the stability of FBG levels among students are dietary patterns, such as carbohydrate intake, and high sedentary behavior (sedentary lifestyle). The purpose of this study was to determine the relationship between carbohydrate intake and sedentary lifestyle with FBG levels among students a Jember State Polytechnic. This study used an analytical observational method with a cross-sectional design. The subjects consisted of 103 participants selected using probability sampling techniques by combining proportionate stratified random sampling and simple random sampling. Data were collection using subject identity forms, a modified Sedentary Behavior Questionnaire (SBQ), and two 24-hour food recall forms. Data analysis included the Kolmogorov-Smirnov normality test and bivariate analysis using the Spearman correlation test because the data were not normally distributed. The results showed that 92.2% of the participants had inadequate carbohydrate intake, 94.2% had a high sedentary lifestyle, and 98.0% had normal FBG levels. The conclusion of this study was that there was no significant relationship between carbohydrate intake and FBG levels, and there was no significant relationship between sedentary lifestyle and FBG levels among students at Jember State Polytechnic.

Keywords: *Carbohydrate Intake, Fasting Blood Sugar Levels, Sedentary Lifestyle, Students.*