

## ***The Relationship Between Nutritional Status and Sleep Quality with Fasting Blood Glucose Levels among Students of Politeknik Negeri Jember***

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### **ABSTRACT**

*Fasting blood glucose (FBG) is an important indicator in assessing the body's glucose metabolism. Nutritional status and sleep quality are factors that may affect fasting blood glucose levels. Vocational college students tend to have dense academic activities, which may increase the risk of poor sleep quality and nutritional problems. This study aimed to determine the relationship of nutritional status and sleep quality with fasting blood glucose levels among students of Politeknik Negeri Jember. This study used a quantitative method with a cross-sectional design. A total of 103 respondents were included in this study using proportionate stratified random sampling and simple random sampling techniques. Nutritional status data were obtained through Body Mass Index (BMI) measurements, sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI) questionnaire, and fasting blood glucose levels were measured using a glucometer after a minimum of 8 hours of fasting. Bivariate analysis was performed using the Spearman Rank test. The results showed that most respondents had normal nutritional status, accounting for 55 respondents (53.4%), poor sleep quality accounting for 93 respondents (90.3%) and normal fasting blood glucose levels 101 respondents (98.1%). The analysis showed a significant relationship between nutritional status and fasting blood glucose levels ( $p = 0.032$ ), whereas sleep quality was not significantly associated with fasting blood glucose levels ( $p = 0.643$ ). In conclusion, nutritional status was significantly associated with fasting blood glucose levels and sleep quality showed no significant association among students of Politeknik Negeri Jember.*

**Keyword :** *Fasting blood glucose levels, Sleep quality, Students, Nutritional status*