

The Relationship Between Diet Quality and Overweight Status with Diabetes Mellitus Among Adults in Summersari Village, Jember, East Java

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ABSTRACT

Diabetes mellitus (DM) is a metabolic disease characterized by elevated blood glucose levels due to impaired insulin secretion, insulin action, or both. Poor diet quality and overweight status are factors that contribute to an increased risk of DM. Studies on diet quality using the Alternate Healthy Eating Index (AHEI) among adults in Summersari Village remain limited, despite the relatively high prevalence of DM and overweight. This study aimed to analyze the relationship between diet quality and overweight status with diabetes mellitus among adults in Summersari Village. This was a quantitative study with a cross-sectional design. The study sample consisted of 104 adults aged 18–59 years in Summersari Village, selected using simple random sampling. Diet quality was measured using the AHEI-2010 based on 2×24-hour dietary recall, nutritional status was determined using Body Mass Index (BMI), and diabetes mellitus was identified through random blood glucose (RBG) examination. Data were analyzed using the Fisher's Exact test with a 95% confidence level. The results showed that 64.4% of respondents had poor diet quality, 63.5% were overweight, and 8.7% had diabetes mellitus. Bivariate analysis showed a significant relationship between diet quality and diabetes mellitus ($p=0.025$). Another result showed no significant relationship between overweight status and diabetes mellitus ($p=0.481$). These findings indicate that improving diet quality is necessary as an effort to prevent diabetes mellitus in the community.

Keywords: diet quality, AHEI, overweight status, diabetes mellitus, adults