

The Relationship between Dietary Antioxidant Intake Quality, Nutritional Status, and Hypertension among Adults in Summersari Village

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ABSTRACT

Hypertension and abnormal nutritional status are health problems with increasing prevalence and are risk factors for various non-communicable diseases. One of the factors that plays a role in maintaining health is the quality of antioxidant intake, which functions to neutralize free radicals and reduce oxidative stress. This study aimed to analyze the relationship between dietary antioxidant intake quality, nutritional status, and hypertension among adults in Summersari Village. This study employed an analytical observational design with a cross-sectional approach involving 108 adults aged 18–59 years in Summersari Village. The quality of antioxidant intake was assessed using the Semi Quantitative Food Frequency Questionnaire (SQ-FFQ) and calculated using the Dietary Antioxidant Quality Score (DAQS). Nutritional status was determined based on Body Mass Index (BMI), while hypertension was measured using a digital sphygmomanometer. Data were analyzed using the Chi-Square test with a 95% confidence level ($\alpha = 0.05$). The results showed that 63.0% of respondents had abnormal nutritional status, 60.19% had hypertension, and 57.4% had adequate antioxidant intake quality. There was no significant relationship between dietary antioxidant intake quality and nutritional status ($p = 0.429$). However, there was a significant relationship between dietary antioxidant intake quality and hypertension ($p = 0.012$). Respondents with inadequate antioxidant intake quality had a 1.574 times higher risk of developing hypertension compared to those with adequate antioxidant intake quality ($PR = 1.574$; 95% $CI = 1.142–2.168$). In conclusion, dietary antioxidant intake quality was not associated with nutritional status but was significantly associated with hypertension among adults in Summersari Village. Increasing the consumption of antioxidant-rich foods is recommended as an effort to prevent hypertension.

Keywords: *dietary antioxidant intake quality, Dietary Antioxidant Quality Score (DAQS), nutritional status, hypertension, adults.*