

**THE RELATIONSHIP BETWEEN PROTEIN INTAKE AND BODY FAT
PERCENTAGE WITH CARDIORESPIRATORY FITNESS AMONG
TAEKWONDO ATHLETES IN JEMBER**

Yohan Yuanta S.ST., M.Gizi_{as} Supervising Lecturer

Maharani Balqis Maulida
Clinical Nutrition Study Program
Health Department

ABSTRACT

Cardiorespiratory fitness is an essential component in supporting the performance of taekwondo athletes. Good aerobic capacity is influenced by several factors, including protein intake and body composition, as reflected by body fat percentage. This study aimed to analyze the relationship between protein intake and body fat with cardiorespiratory fitness (VO_2max) among taekwondo athletes in Jember Regency. This study employed an analytical observational design with a cross-sectional approach. A total of 71 athletes were selected using a simple random sampling technique. Protein intake data were collected using the Semi-Quantitative Food Frequency Questionnaire (SQ-FFQ), body fat percentage was measured using Bioelectrical Impedance Analysis (BIA), and cardiorespiratory fitness was assessed using the Multistage Fitness Test (MFT). The relationships between variables were analyzed using the Pearson Chi-Square test. The results showed that the majority of athletes had inadequate protein intake (<80% of the recommended requirement), accounting for 48 athletes (67.6%), while 47 athletes (66.2%) had a normal body fat percentage. The analysis revealed a significant relationship between protein intake and cardiorespiratory fitness ($p<0.001$), as well as a significant relationship between body fat and cardiorespiratory fitness ($p=0.003$). In conclusion, protein intake and body fat were significantly associated with cardiorespiratory fitness (VO_2max) among taekwondo athletes in Jember Regency.

Keywords: *protein intake, body fat, VO_2Max , cardiorespiratory fitness, taekwondo athletes.*