

“The Relationship Between Nutritional Status and Hydration Status with $VO_2\text{max}$ Among Cempaka Putih Pencak Silat Athletes in the Jember Branch.”

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ABSTRACT

*Berikut terjemahan abstrak ke dalam **bahasa Inggris akademik** yang sesuai untuk skripsi:*

$VO_2\text{max}$ is an indicator of cardiorespiratory fitness that plays an important role in supporting the performance of pencak silat athletes. Nutritional status and hydration status are considered factors that may influence athletes' aerobic capacity; however, previous studies have reported inconsistent findings. This study aimed to analyze the relationship between nutritional status, hydration status, and $VO_2\text{max}$ among athletes of the Cempaka Putih Pencak Silat Club, Jember Branch. This study employed an analytic observational design with a cross-sectional approach. The study involved 24 athletes selected using a simple random sampling technique. Nutritional status was assessed using Body Mass Index-for-Age (BMI-for-Age), hydration status was measured using the Self-Urine Examination (Pemeriksaan Urine Sendiri/PURI) method, and $VO_2\text{max}$ was evaluated using the Multistage Fitness Test (MFT). The relationship between variables was analyzed using Kendall's Tau test with a significance level of 95% ($\alpha = 0.05$). The results showed that most athletes had normal nutritional status, were well hydrated, and had $VO_2\text{max}$ levels predominantly in the very poor category. Statistical analysis revealed no significant relationship between nutritional status and $VO_2\text{max}$ ($p = 0.071$), whereas a significant relationship was found between hydration status and $VO_2\text{max}$ ($p = 0.042$).

Keywords: *nutritional status, hydration status, $VO_2\text{max}$, pencak silat, athletes.*