

ABSTRACT

Background : VO2 max is the maximum volume of oxygen that is processed by the body during intensive activities and is an indicator of the basic concepts of physical fitness. VO2 max has milliliters per minute per kilogram of body weight. Factors that determine VO2 max include heart lung function, age, aerobic muscle metabolism, body fatness, state of exercise, genetics, gender, multivitamin. Purpose: To determine the difference in VO2 max between prospective pilgrims based on age (adult and elderly), gender, hemoglobin level, and the number of leukocytes. Methods: The total sample consisted of 60, each of 30 for gender and age variables. Sampling uses a purposive sampling method with inclusion criteria, namely age 36-55 years, has a normal BMI (18.5-24.9 kg / m²), physically fit, cooperative, does not consume stamina enhancing multivitamins, mild physical activity to moderate. VO2 Max is measured by the Rockport method. Result: Obtained the number of samples with VO2 max fit in the adult group of 20 people (66.7%) and VO2 max not fit 10 people (33.3%). In the elderly group sample with VO2 max fit 11 people (36.7%) and less fit 19 people (63.3%). In the male group there were 20 people (66.7%) with VO2 max fit and 10 people (33.3%) less fit. Whereas in the group of women found 11 people (36.7%) fit and 19 people (63.3%) less fit. The differences in each variable were analyzed using the Chi Square test, $p = 0.02$ was obtained so that it can be concluded that there were significant differences in VO2 max in the age and gender variables. The average hemoglobin level in the fit group was 14, g / dl, and the unfit group was 13.8 g / dl. Data were analyzed by t-test unpaired test, the results obtained $p = 0,008$, which means there are significant differences in blood hemoglobin levels in groups with VO2 max fitter and less fit. The average number of leukocytes in the group with VO2 max fit was 7.83 thousand / μ l and 7.27 thousand/ μ l in the less group. Data were analyzed by unpaired t test obtained p value = 0.69, which means there is no significant difference in the number of leukocytes in the fit and less fit groups. Conclusion :.There is a significant difference in VO2 max between prospective pilgrims who are adults and elderly, between men and women, blood hemoglobin levels in the group with VO2 max fitter and less fit, and there is no significant difference in the number of leukocytes in the fitter and less fit groups. Keywords : VO2 max, Age, Gender, Hemoglobin Levels, and Number of Leukocytes for Hajj Prospective Pilgrims.