Estimation of Maximal Aerobic Capacity (VO_2-max) and Study of its Associated Factors among Industrial Male Workers in Sanandaj city/Kurdistan Province2013

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Abstract

Background and Aim: Estimating the maximal aerobic capacity in humans can be used to establish the proportionality between the worker and work physiology. This study was conducted to determine VO2-max and its associated factors among male workers of industrial sector of Sanandaj city.

Method: To conduct this study, ٢٠٠ healthy and non-smoking male workers were randomly selected. Maximal aerobic capacity (VO2-max) was measured by Tuxworth & Shahnavaz method. T test and one way ANOVA test were used to examine the relationship between qualitative variables and VO2max mean and quantitative variables and VO2-max mean, respectively. The stepwise multiple linear regression analysis was used to build the best model.

Results: According to results, workers' maximal aerobic capacity mean was estimated to be 2.92±0/34 Lit/M. The results showed that there was association between VO2-max and weight and marital status while no association was found between VO2-max and height, BMI, age, education level, shift working, job satisfaction, exercise per week and fatigue.

Conclusion: Weight and marital status are the factors affecting the maximal aerobic capacity.

Keywords: Maximum aerobic capacity, physiologically fitting, Physical work capacity, Tuxworth & Shahnavaz protocol.