

Effect of Circuit Resistance Exercise with Different Intensity on Psychological and Mood States of Athlete Students

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Mental health means feeling of comfort toward your-self and others, and its measures are success, social balance, state of being realistic, social agreement and feeling of value ability [1]. A sport provides not only physical health but, is effective for mental health promotion. Very few studies measured effects of acute exercise on mood states and short-term mood states in athletes. Resistance training, particularly circuit resistance training is special model of training in the preparation of athletes and their mood states will be affected by the intensity of exercise and will strongly influence their success. The purpose of this study was to investigate effect of circuit resistance exercise with different intensity on psychological and mood states of male and female athlete students. Standard POMS questionnaire (Bill Morgan 1979) was translated and modified in some of the questions, and validity and correlation by the test - this test of reliability obtained (Cronbach Alpha 87%). POMS questionnaire, includes six mental states: Tension, depression, vitality, anger, fatigue, and confusion [2]. The target population of this study was all male and female athletes' student's university of Guilan. For this purpose respectively, 45 men (3 groups of 15 individuals) and 45 women (3 groups of 15 individuals), with mean age of 21 ± 1.85 and 21 ± 2.24 years, height 161 ± 4.93 and 176.02 ± 5.99 cm, weight 55 ± 6.89 and 68.36 ± 9.29 kg and body mass index 21.20 ± 1.9 and 21.91 ± 2.9 randomly assigned to groups. In separate sessions, circuit resistance exercises with different intensity (50%, 65% and 80% of one repetition maximum) were performed. For data analysis Kolmogorov-Smirnov test, correlated *t*-test, ANOVA and Tukey test were used. Results of this study showed that low-intensity exercises (50% 1RM), compared with moderate and high resistance training (65% or 80%

1RM), improved mood and mental states in males and females. However; mental states and creating temper between males and females were not shown any significant difference. Effects of physical activity on mental health can be justified based on two physiological hypotheses.

The first hypothesis; one reason cause to increase the neurotransmitter is (monoamine) existing in Synapses play the role of anti- depression. Based on second hypothesis, physical activity lead to release endorphins and especially beta endorphins and play the role of inhibition, its effects on the central neurotic system cause to calmness feelings and improving mood states after exercise [3]. In general, from results of this study can be concluded that: mental states and create profile male and female athletes according to user's icy mountains and Morgan is not affected in different circuit training intensity. However, to ensure clear information in this regard, further investigation is necessary.

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