

Influence of music therapy on anxiety and salivary cortisol, in stress induced by short term intense physical exercise

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Abstract

Background. Music therapy (MT) has been shown to have a beneficial effect on anxiety and cortisol levels.

Aims. The objective of the study is to highlight the modulation by MT of anxiety and salivary cortisol in stress induced by short term intense physical exercise, in sedentary subjects.

Methods. The subjects (n=22) were selected according to the inclusion criteria of the study. Stress was represented by short term intense physical exercise, performed with a Monark Ergonomic 839E cycle ergometer. The analyzed indicators were anxiety and salivary cortisol. Selected music was Concert No. 21 by W. A. Mozart. Statistical analysis was made on the basis of the Student test.

Results. Following administration of MT, anxiety and salivary cortisol were reduced immediately pre- and post-stress compared with subjects who did not follow any treatment.

Conclusions. 1). Under the influence of MT, compared with the untreated subjects, anxiety and salivary cortisol were significantly reduced immediately pre- and post-exercise, in stress caused by short term intense physical exercise, in sedentary persons. 2). It was proven that the influence is significantly more intense on anxiety than on salivary cortisol in the moments immediately pre- and post-stress, in the case of MT. 3). There are differences between the experimental group of MT and the untreated control group regarding the dynamic evolution of anxiety, as well as salivary cortisol. 4). We suggest the use of MT in the modulation of stress caused by short term intense physical exercise in persons with a sedentary life-style.

Keywords: stress, anxiety, short term intense physical exercise, salivary cortisol, music therapy.