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THE EFFECT OF DRAM BELL AND RELIGIOUS AND EPIC LYRICS ON MOTOR PERFORMANCE IN ZORKHANEH-PAHLAVANI ATHLETES

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ABSTRACT

The purpose of this study was to investigate the effect of dram bell and religious-epic lyrics on motor performance in zorkhaneh-pahlavani athletes. The subjects of the study included 30 zorkhaneh-pahlavani athletes with an average of 31.10 ± 4.24 year's old age, 176.33 ± 3.45 height, and 26.69 ± 2.70 BMI who voluntarily participated in this study. This was a retrospective study and the subjects had experienced at least three years of professional activity. Subjects' performance were calculated in some parameters including meel (n), sang (n), Kabbadeh (n), spinning (s) and push-up (number) in two consecutive sessions with a one week interval before the test (without dram bell and) and posttest (with the dram bell and religious-epic lyrics). The dependent t-test was used to analyze the data. The results showed that the rhythm and religious-epic lyrics significantly affected athletes' motor function and increased sang ($p < 0.0001$), push-up ($p < 0.0001$), meel ($p < 0.0001$), spinning ($p < 0.0001$) and kabbadeh ($p < 0.0001$). According to the results, probably dram bell and religious-epic lyrics had significant effects in cortical stimulation and increasing the stimulation of the brain motor. And also by increasing sympathetic nervous system activity it increases the motor function of bastanikar athletes.

Keywords: Dram bell, Religious-epic lyrics, Motor performance, Zorkhaneh -pahlavani athletes

INTRODUCTION

Music has always been considered as a treatment to the brain-related motor abilities [1, 2]. This function has always been at the focus of specialist's attention. The fatigue is a factor in reducing the optimal exercise performance in the central (brain) and peripheral (skeletal muscle) areas [3]. Research has shown that playing music during sports activities will be accompanied by increased pressure endurance,

endorphins and blood pressure leading to decreased pain [4, 5].

On the other hand music can improve mental state, reduce fatigue and increase selective attention by increasing the level of arousal during the physical activity [6, 7]. Hence it can be said that music can affect the body's hormonal factors. So it has been shown that listening to music during exercise leads to further increases in serum cortisol levels resulting in increased arousal [8].

From the physiological point of view the increased amount of serotonin in relation to dopamine in the brain is one of the most important factors of fatigue. so the music can reduce this ratio during exercise [9]. In the other hand music can reduce the muscle tension and increase oxygen and blood flow by controlling the individual emotions and then increase the efficiency of aerobic metabolism [10].

Lane *et al* (2011) showed that running record was improved while listening to music [11]. Bharani *et al* (2004) observed a significant effect on exercise performance exhaustion [12]. Also Karageoghis *et al* (1990) evaluated the effects of music on physical and psychological factors positively [13]. Meis (1985) and Crust (2004) on the other hand could not show a significant effect for listening to music on athletic performance [14, 15].

Dram bell and music can reduce the stress and pressure caused by intense exercises by influencing physiological factors and since athletes are always looking for ways to improve their motor function to succeed in competitive sports, this study aims to answer the question whether dram bell and religious-epic lyrics will have a significant effect on motor performance in zorkhaneh-pahlavani athletes?

MATERIALS AND METHODS

This is a quasi-experimental study from the collection method point of view and of applied type from the purpose point of view. Subjects were 30 male with a mean age of 31.10 ± 4.24 years old, 176.33 ± 3.45 cm height, 83.16 ± 1.04 kg weight and 26.69 ± 2.7 kg/m BMI, respectively.

Measurement of variables

Height and weight of the subjects were measured using a standard Japanese stadiometer scales and scorpion in barefoot state with minimal clothing (weight in kilograms with 1.0 kg precision; height in cm with 1.0 mm precision) and were recorded in special data work sheets. Body mass index were calculated based on the ratio of weight in kilograms to the square of height (m).

Measurements (meel by number, sang by number, Kbbadeh by number, spinning by seconds and push-up by number) were done in two successive weeks. The first week

without rhythm and religious and epic poetry, the second with beat and religious and epic lyrics.

Statistical methods

At first the subjects' characteristics and the study data were analyzed using descriptive statistics with tables and graphs. After confirming normal distribution of the data in both groups (Klmygraf Smirnov test), the data mean difference was analyzed using the

dependant t-test in 0.05 significance level. All statistical analyzes were performed using spss software version 18.

RESULTS

The results showed that the rhythm and religious-epic poems had significant effects on athletes' motor function and increased the sang ($p < 0.0001$), push-up ($p < 0.0001$), meel ($p < 0.0001$) spinning ($p < 0.0001$) and Kbbadeh ($p < 0.0001$) (Table 1).

Table 1: Comparison of Mean Outcome Measurements between two groups

Variable	Standard Deviation	t	p-value
Sang	1.107	-27.12	0.0001
Push-up	1.59	-49.19	0.0001
Meel	1.156	-72.76	0.0001
Spining	2.215	-9.146	0.0001
Kbbadeh	0.67	-53.21	0.0001

DISCUSSION

Results showed that dram bell and religious-epic lyrics had a significant effect on performing sang, push-up, meel, spinning, kabadah.

Some researchers believe that music has mental effects and can increase the cognitive motivation and stimulation by deviating the mind from fatigue. Also it can increase physical activity and efficiency by improving the brain information processing and decreasing parasympathetic activity [16,17].

From the Physiological point of view this is in a direct relationship with serum cortisol levels since cortisol levels released during exercise is one of the most important physiological factors responding to mental and physical stress [18, 19]. Lactate

concentration, hypoxia and loss of blood PH during physical activity are factors that can lead to increased cortisol. thus since the music can reduce stress, it can lead to decreased serum cortisol levels and increased efficiency [20].

In this regard, the results of the present study were consistent with Ayvanaga Makoto *et al* (2005), Nethery (2002), Szmedar (1998) and Lorna (1995) [20-24]. Also, Lane *et al* (2001) and Hutchinson *et al* (2011) noted the stimulating effect of music on physical performance [11, 25]. Mariagrace (2010), Bharani *et al* (2004) and Crust (2006) confirmed improved physical performance as a result of listening to music [12, 26, 27] but the results of the present study did not show a meaningful consistence with Gester (2001), who

examined the effects of different musical rhythms on basketball players' motor function [28].

CONCLUSION

The results of this study showed that listening to music during exercise can significantly improve athletic performance by reducing fatigue and enhancing the level of physiological arousal through physiological changes. Since music is affordable, available and functional it is recommended to coaches, athletes and sports delegations to benefit from this efficient and effective method in order to improve motor performance and reduce the fatigue caused by heavy exercises.

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