

Comparison of emotional intelligence in athletes with doping history in comparison with general population

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ABSTRACT

Background: Regarding increasing and concerning worldwide trends of doping and lack of definite information about contributing factors in this era, this study was performed to determine the emotional intelligence in athletes with doping history in comparison with general population.

Methods and materials: In this case-control study 30 subjects were enrolled including two groups of professional athletes with doping history and general population. In each group 15 subjects were present. The emotional intelligence was assessed by Bar-On Emotional Questionnaire.

Results: The highest and lowest total scores in athletes group were 401 and 197 and in normal population group 410 and 243 were highest and lowest obtained scores and there was significant difference between total scores of two groups ($P=0.001$), and also in some subscale items including stress tolerance, optimism, self-regard, impulse control, and assertiveness ($P < 0.05$).

Conclusions: Totally, according to the obtained results in this study, it may be concluded that there is significantly lower emotional intelligence in athletes with doping history in comparison with general population.

Keywords: Athletes, Doping, Emotional intelligence

INTRODUCTION

Doping, defined as illegal use of energizing agents for better athletic performance and body figures. However, in legal setting the scientists are working for attaining this objective and it is required the athletes attain these abilities by special exercise and use of modern instruments and also respecting the nutritional considerations[1]. It is not recognized that why an athlete uses doping agents regarding loss of somatic health and decreased prominence[2].

Regarding to higher stress levels among athletes they may be predisposed to some other psychological problems such as lower emotional intelligence [3] and performing some interventions may result in lower pre-competitive anxiety and better performance among athletes[4]. Emotional intelligence is correlated with pleasant emotions in optimal and dysfunctional performances with lower scores on the self-report emotional intelligence scale appearing to experience intense unpleasant emotions before dysfunctional performance[5]. There is a positive linear relationship between emotional factors and body performance[6]. Emotional states are crucial and decisive factors in cognitive and perceptual functions[7]. So in subjects who use doping agents to increase body performance, some deficits may be present in their emotional intelligence[8].

Understanding the factors that predispose the athletes to use doping drugs may help us to do better programming for reduction of this problem among athletes[9]. Accordingly, regarding increasing and concerning worldwide trends of doping and lack of definite information about contributing factors in this era, this study was performed to determine the score of emotional intelligence in athletes with doping history in comparison with general population.

MATERIALS AND METHODS

In this case-control study 30 subjects were enrolled. The inclusion criteria were having professional athletic activity and doping history in case group and lack of such histories in control group. Lack of interest for incorporation in study was the only exclusion criterion.

For selection of doping subjects, the secret list of athlete's names that had doping history was received from Sport Medicine Federation and the students were selected from three universities in a random manner. All the subjects were ranged from 20 to 45 years. In each group 15 subjects were present that four and five individuals were female in athletes group and normal population, respectively. However one of the females in athlete's group had successful suicide and the required data were collected from her mother.

The emotional intelligence was assessed by Bar-On Emotional Questionnaire consisting 90 questions and 15 items with total score of 450 points. The questions had a likert pattern with five subscales that had points ranging from complete agreement to complete disagreement. Different dimensions of questionnaire included Emotional Self – Awareness, Assertiveness, Self- Regard, Self-Actualization, Independence, Empathy, Social Responsibility, Interpersonal Relationship, Reality Testing, Flexibility, Problem Solving, Stress Tolerance, Impulse Control, Optimism, and Happiness. The test-retest reliability coefficient with two-week interval was 0.88 that was significant and total Cronbach's alpha coefficient was 0.93.

Data analysis was performed by SPSS (version 13.0) software [Statistical Procedures for Social Sciences; Chicago, Illinois, USA]. Independent-Sample-T test was used for comparison between two groups and the results were considered statistically significant at P values less than 0.05.

RESULTS & DISCUSSION

The highest and lowest total scores in athletes group were 401 and 197 and in normal population group 410 and 243 were highest and lowest obtained scores and there was significant difference between total scores (Figure 1) of two groups ($P=0.001$), and also in some subscale items (Table 1).

Figure 1- Comparison of total score of emotional intelligence in two groups

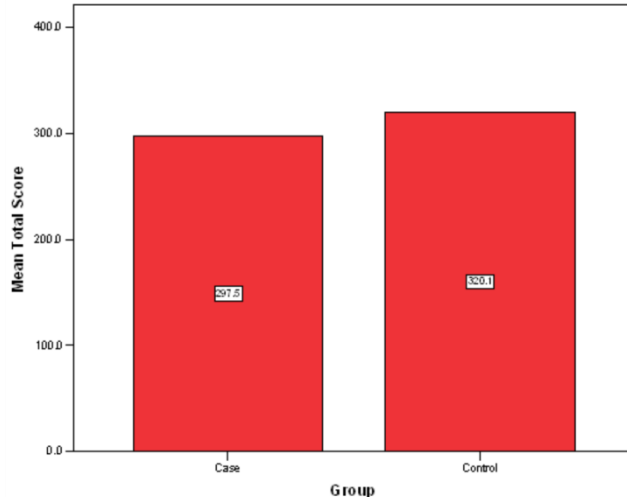


Table 1- Comparison of different items of emotional intelligence in two groups

Item	Group	Mean (range)	P value
Problem Solving	Case	20.9 (12-26)	> 0.05
	Control	22.1 (15-28)	
Happiness	Case	21.3 (11-30)	> 0.05
	Control	20 (8-30)	
Independence	Case	24.1 (15-27)	> 0.05
	Control	22.4 (11-28)	
Stress Tolerance*	Case	14.1 (6-24)	0.0001
	Control	21.3 (18-28)	
Self Actualization	Case	21.4 (12-30)	> 0.05
	Control	20.9 (11-30)	
Emotional Self-Awareness	Case	15.1 (7-26)	> 0.05
	Control	16.8 (8-30)	
Reality Testing	Case	20.3 (12-27)	> 0.05
	Control	19.6 (9-26)	
Interpersonal Relationship	Case	22.2 (10-30)	> 0.05
	Control	24.2 (11-30)	
Optimism*	Case	14.3 (4-25)	0.0001
	Control	20.8 (14-30)	
Self Regard*	Case	17.4 (9-28)	0.001
	Control	21.1 (11-30)	
Impulse Control*	Case	12.1 (3-25)	0.0001
	Control	17.2 (8-29)	
Flexibility	Case	25.6 (15-30)	> 0.05
	Control	23.2 (14-28)	
Social Responsibility	Case	24.7 (12-30)	> 0.05
	Control	25.2 (14-30)	
Empathy	Case	24.7 (8-30)	> 0.05
	Control	23.2 (11-28)	
Assertiveness*	Case	19.3 (7-26)	0.035
	Control	22.1 (9-30)	

*There was significant difference between two groups.

The lower scores in athletes were related to optimism and impulse control and in the control group it was related to emotional self-awareness and happiness. Stress tolerance, optimism, self-regard, impulse control, and

assertiveness were five items that demonstrated significant difference between two groups and higher mean scores were seen in control groups. Attaining lower stress tolerance score in athletes is an important finding in this study that shows the use of doping agents may be due to lack of tolerance to special sport stresses in professional function. This matter is also true about self-regard and assertiveness. However lower optimism would result in more readiness for being defeat in sport events. The lower score in impulse control may also be a response to some initiatives that may lead to use of doping agents and would predispose the athletes to using doping drugs.

An study demonstrated that emotional intelligence is a predictor of professional success [10]. If true, performing some interventional studies to increase the emotional intelligence would result in better athletic professional performance among athletes leading to lower use of doping agents. This matter may be an interesting topic for further investigations in future. Our study showed significant association between doping and emotional intelligence. As reported by Barkoukis et al [11] professional athletes are often the role models of adolescent and young adult populations, who often mimic their behaviors, including the abuse of drugs and if these younger population be experiencing some emotional intelligence deficits they may predispose to athletic professional activity with use of doping agents in their upcoming life years. As demonstrated by Donati [12] the fatigue is a Brain-Derived Emotion that regulates the athletic behavior to ensure the protection of whole body homeostasis. So dysfunctional emotional intelligence may increase the risk of doping to lower the body fatigue and increase the body performance.

Gatterer et al [13] revealed that the social emotion is an important preventive factor in anti-doping efforts that cultivate a shared sense of responsibility to remain clean of abuse of doping agents and emphasize the social analogy in this era. Accordingly, the challenge of developing a good global anti-doping agenda requires acceptance of doping as a problem by all related associations such as sport organizations, athletes, and public authorities[14].

Totally, according to the obtained results in this study, it may be concluded that there is significantly lower emotional intelligence in athletes with doping history in comparison with general population. Lower total score and also lower scores in some subscales such as stress tolerance and impulse control may be predisposing factors for doping in athletes. However further studies with larger sample size are needed to be carried out to obtain more accurate results especially if confounding variables be respected.

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Conflicts of Interest: The authors declare that they have no conflicts of interest.

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