



EMOTIONAL INTELLIGENCE AND PSYCHOLOGICAL CHARACTERISTICS OF ATHLETES OF DIFFERENT SPORTS

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ABSTRACT

A number of studies in psychology and the field of sports focus on the topic of the relationship between emotional intelligence and personality characteristics as well as their influence on sports performance. **PURPOSE:** The aim of this study was to examine the connections and interrelations among personality traits: extraversion, conscientiousness, agreeableness, emotional stability and openness to experience, and emotional intelligence in relation to successful performance in sport.

METHODS: The research was done among 88 athletes practicing different sports (46 women and 42 men, aged between 12 and 59 years old), divided into groups according to their age, gender, qualification, sports experience, and level of education. **RESULTS:** There were statistically significant differences in the appraisal of others' emotions ($U=602$; $p=.017$) along the factor 'education' (Secondary or High). Athletes with high education are more adept at determining the emotions of others than those with secondary education. We revealed statistically significant differences according to gender in agreeableness ($U=706$; $p=.029$) and appraisal of others' emotions ($U=714$; $p=.034$). **CONCLUSIONS:** The female athletes showed higher results than the male ones on the agreeableness scale and were better at appraising others' emotions.

Key words: personality traits, emotional intelligence, sport performance

INTRODUCTION

A number of studies in psychology and the field of sports focus on the topic of the relationship between emotional intelligence and personality characteristics as well as their influence on sports performance (1-7 and many others). This scientific matter is of great interest to us too.

The aim of this study was to examine the connections and interrelations among personality traits: extraversion, conscientiousness, agreeableness, emotional stability and openness to experience, and emotional intelligence in relation to successful performance in sport.

In order to fulfill the aim of the research, we set the following tasks: to determine the levels of the researched psychological characteristics of athletes from different kinds of sports (individual, combat, and team); to establish whether there is a difference between the research variables of the examined factors: gender, age, practice experience, and level of qualification; to establish the existence of different relations and interdependencies between the studied variables.

The research was done among 88 athletes practicing different sports (individual, team, single combat) - 46 women, 42 men aged between 12 and 59 years, with sports experience from 1 to 30 years. Medal-holders from European and World Championships, including participants in the Olympic Games, were among the studied athletes. The athletes were divided into groups by gender, age, sports experience (practice), sports qualification (ranking from Bulgarian Championships), and education (secondary, higher). The demographic information is shown in **Table 1**.

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Table 1. *Researched individuals differentiated into groups*

		N
Gender	Women	46
	Men	42
Age	up to 19 years old	40
	20 – 41	38
	over 42 years old	10
Practice Experience	up to 5 years	17
	6 – 10 years	38
	11 – 15 years	21
Level of qualification (*Rank of Bulgarian Championships)	over 16 years	12
	Medalists	61
Education	Non-medalists	27
	Secondary	58
	High	30

METHODS

The data were collected with anonymous, self-reported electronic questionnaires in Google Forms. The following methods were used to accomplish the tasks, achieve the goal and verify the reliability of the hypothesis: theoretical analysis; mathematical-statistical methods: SPSS 25 - variation, comparative (U-criterion of Mann-Whitney, H - Criterion of Kruskal-Wallis), correlation (Spearman criterion) and regression analysis.

All participants and parents of children under 18 years of age were informed about the purpose of the study and gave informed consent.

For the aim of the study, the following psychological questionnaires were used:

The Big Five personality test (50 items) (Goldberg, 1992), Bulgarian adaptation by Alexandrova-Karamanova (8). The dimensions of the big five model include extroversion, agreeableness, conscientiousness, neuroticism, and openness to experience (intellect/imagery). Participants were required to indicate, on a 5-point Likert scale (strongly disagree, disagree, neutral, agree, strongly agree), whether the statement was true for them.

The other instrument was *The Bulgarian Short Version of Emotional Intelligence (EIS-S) (9)*. This version of the self-report emotional intelligence test consists of 14 items. It has a four-

factor structure: 1) regulation of own and others' emotions (regulation of own emotions and regulation of others' emotions describe how individuals control their feelings and influence the feelings of others); 2) utilization of emotion (utilization of emotions refers to how emotions are used in problem-solving contexts); 3) appraisal of own emotions; 4) appraisal of others' emotions. Responses are indicated on a 5-point Likert-type scale with 1 = strongly disagree; 2 = disagree; 3 = neither disagree nor agree; 4 = agree; 5 = strongly agree.

RESULTS AND ANALYSIS

The variation analysis showed that researched individuals were characterized by high conscientiousness, openness to experience (**Table 2**). This characterizes them as organized, reliable, diligent, self-disciplined, ambitious and persistent in daily activities, 'curious,' with broad interests, creative personalities, and innovators with a rich imagination. They have average emotional stability (**Table 2**), which defines them as dynamic and balanced. They were characterized by mean 'extraversion' levels (**Table 2**). Since this scale shows the breadth and intensity of interpersonal interaction, the level of activity, and the need for external stimulation, we can assume that the studied athletes have a balanced intensity regarding interpersonal interaction and communication with many people. The final scale, 'agreeableness,' measures the quality of relationships with others, from sympathy to

hostility in thoughts, feelings, and actions. The studied athletes showed indicators close to the upper limit (**Table 2**), which defined them as agreeable, trusting, helpful, generous, and direct in their behavior and interaction with others, compared to the norms of the Big Five factor markers' adaptation, where the minimum possible score is 10 points, the maximum - 50 points, and the middle of the scales corresponds to 30 points.

The variation analysis of the subscales for emotional intelligence was within the norms of The Bulgarian Short Version of Emotional Intelligence (9) (**Table 2**). This means that the studied athletes do not differ in their emotional intelligence from other people who are not actively involved in sports activities and do not participate in competitions.

Table 2. Mean variables for the whole group

	N	Min	Max	Mean	SD
Extraversion	88	15.00	49.00	35.09	7.73
Agreeableness	88	27.00	50.00	40.35	5.68
Conscientiousness	88	25.00	50.00	39.18	6.43
Emotional stability	88	16.00	45.00	32.15	6.97
Openness to experience	88	27.00	50.00	39.72	5.44
Regulation of own and others' emotions	88	2.20	5.00	4.10	0.64
Utilization of emotions	88	1.67	5.00	4.07	0.71
Appraisal of own emotions	88	2.33	5.00	4.19	0.81
Appraisal of others' emotions	88	1.67	5.00	3.78	0.83

The results from the *comparative analysis by gender* (Mann-Whitney) showed differences

between all researched variables of emotional intelligence (**Figure 1**).

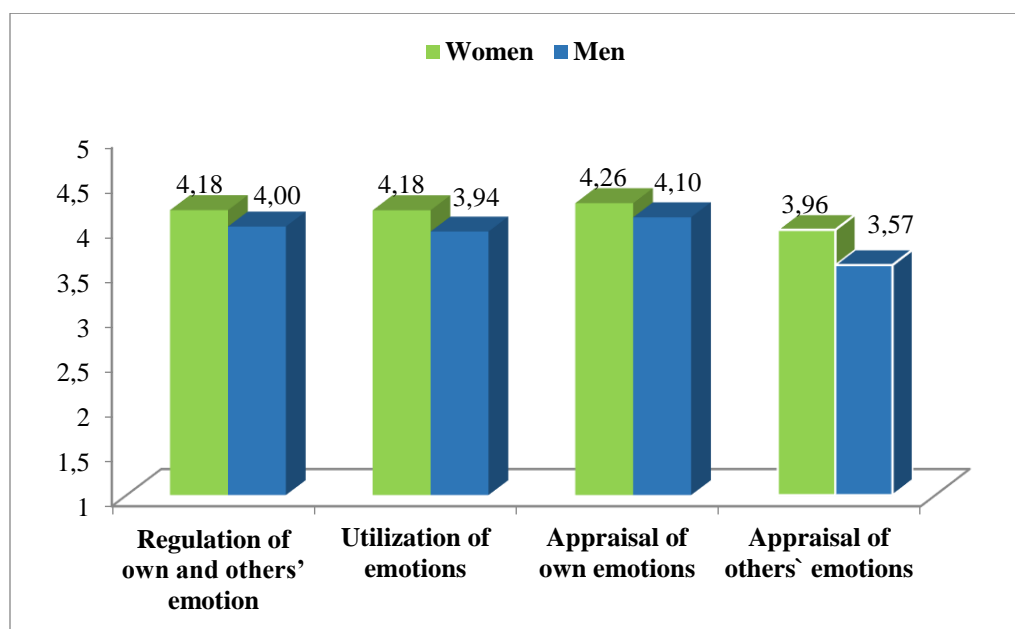


Figure 1. Mean variables of emotional intelligence subscales by gender

We revealed statistically significant differences according to gender in agreeableness ($U=706$; $p=.029$) and appraisal of others' emotions ($U=714$; $p=.034$). The female athletes showed

higher results than the male ones on the agreeableness scale, and they were also better at the appraisal of others' emotions (**Table 3**).

Table 3. Mean variables by gender

Variables	N	Women		N	Men	
		Mean	SD		Mean	SD
Appraisal of others` emotions	46	3.96	0.77	42	3.57	0.84
Agreeableness	46	4.15	0.58	42	3.91	0.54

There were statistically significant differences in the appraisal of others' emotions (U=602; p=.017) along the factor 'education' (Secondary

or High). Athletes with high education were more adept at determining the emotions of others than those with secondary education (**Table 4**).

Table 4. Mean variables by the level of education

Variables	N	Secondary		N	High	
		Mean	SD		Mean	SD
Appraisal of others` emotion	58	3.94	0.80	30	4.03	0.82

The comparative analysis *by age, practice experience, and level of qualification* (medalists/non-medalists in Bulgarian Championships) did not show statistically significant differences.

have better skills or a higher level of emotional experience.

The *correlation analysis* showed statistically significant positive correlations between personal factors of the Big Five and emotional intelligence subscales (**Table 5**).

This means that athletes with different qualifications or greater experience in sport do not

Table 5. Correlations between researched variables

Variables	Regulation of own and others' emotions	Utilization of emotions	Appraisal of own emotions	Appraisal of others' emotions
Extraversion	.488**	.211*		
Conscientiousness	.376**		.438**	.226**
Agreeableness	.556**	.375**	.268*	.365**
Emotional stability	.352**		.314**	
Openness to experience	.574**	.556**	.249*	.402**

** p<0.01; * p<0.05

In the athletes studied, the higher levels of openness to experience and agreeableness were positively correlated with all emotional intelligence subscales. Emotional stability showed a positive correlation with the regulation of one's own and others' feelings and emotions and the appraisal of others' emotions.

The higher values on the extraversion scale were related to better regulation of one's feelings and emotions and better utilization of emotions.

Conscientiousness was also positively correlated with the regulation of one's own and others' feelings and emotions and the appraisal of own and others' emotions.

Since emotional intelligence is a vital personality factor in the utilization of emotions in sport, and this skill is key to successful performance in the sports-competition environment, we analyzed the influence of personality characteristics from the Big Five factors on the components of emotional intelligence.

In conformity with the aim of the research, a step regression analysis was used. In all four models, the independent variables were the levels of researched variables: extraversion, conscientiousness, agreeableness, emotional stability, and openness to experience.

In the first model, the dependent variables were the levels of *regulation of own and others' emotions*. We found that regulation of own and others' emotions increased when the openness to experience, emotional stability, and agreeableness increased (**Table 6**).

The results showed that high levels of openness to experience, emotional stability, and agreeableness led to enhanced regulation of own and others' emotions, i.e., a higher level of openness to experience, emotional stability, and

agreeableness would also positively affect the ability to control emotions in general (**Table 6**).

In the second model, the dependent variables were the levels of *utilization of emotions*. They were positively influenced by openness to experience (**Table 6**) - the higher the openness to experience, the higher the level of utilization of emotions.

In the next model, the dependent variables were the levels of *appraisal of one's own emotions*. Appraisal of own emotions was positively influenced by agreeableness and conscientiousness personality traits (**Table 6**).

And in the last model, the dependent variables were the levels of *appraisal of others' emotions*. It was positively influenced by openness to experience and agreeableness (**Table 6**).

Table 6. Results from the regression analysis

Independent variable	Regulation of own and others' emotions			
	β	<i>t</i>	<i>Sig.</i>	ΔR^2
Openness to experience	.372	4.470	.000	.305
Emotional stability	.353	4.718	.000	.423
Agreeableness	.365	4.389	.000	.531
Utilization of emotions				
	β	<i>t</i>	<i>Sig.</i>	ΔR^2
Openness to experience	.510	5.497	.000	.260
Appraisal of own emotions				
	β	<i>t</i>	<i>Sig.</i>	ΔR^2
Conscientiousness	.420	3.404	.001	.136
Agreeableness	.348	2.488	.015	.194
Appraisal of others' emotions				
	β	<i>t</i>	<i>Sig.</i>	ΔR^2
Openness to experience	.265	2.441	.017	.140
Agreeableness	.249	2.298	.024	.190

In all four models, the influence of personality characteristics had a positive sign, indicating that better emotional intelligence was also due to higher levels of the Big Five personality traits.

CONCLUSION

The results of the conducted research provide additional information about the studied psychological parameters in the context of the sports-competitive environment.

High levels of conscientiousness, openness to experience, agreeableness, and medium to high levels of extraversion and emotional stability characterized the studied athletes. According to the results obtained, they do not differ in their emotional intelligence from other people who are not actively involved in sports activities and do not participate in competitions.

The statistical differences revealed according to gender showed that female athletes had higher levels on the *agreeableness scale* than male ones and were better at *appraising others' emotions* than male athletes. It also turned out that athletes with a higher education were better at appraising others' emotions compared to those with only a secondary education, and no differences were revealed according to age, sports experience, and ranking (medalists and non-medalists) in the Bulgarian Championships.

The influence of personality characteristics had a positive correlation, indicating that better emotional intelligence was also due to higher levels of the Big Five personality traits.

The findings of this study are limited, as they represent one small group of Bulgarian athletes. More athletes need to be studied to establish possible differences between particular groups of sport, as well as according to age and sports qualification.

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