

DIFFERENCES IN PSYCHOLOGICAL DISPOSITIONS OF ELITE AND SUBELITE KICK-BOXERS

Milija Ljubisavljević¹, Valentina Baić², Đurica Amanović²,
Dag Kolarević² and Veselin Bunčić³

¹ Ministry of interior, Belgrade, Serbia

² Academy of criminalist and police studies, Belgrade, Serbia

³ High School of Vocational Studies for Education of teachers and trainers Subotica, Serbia

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Abstract

The paper presents a study aimed at testing the existence of differences in psychological dispositions kick-boxer with regard to their level of sports performance. The survey covered three basic dimensions of personality: Extraversion-introversion, neuroticism-emotional stability and psychoticism, as well as the following perceptive disposition: speed perception forms, speed rounding a whole, the flexibility of concluding the perceptual material and the ability of manipulation in the perceptual space. In a sample of 50 male patients, aged from 18 to 27 years of age, the effect of different sports (16 elite and 34 sub-elite kick-boxers), were applied Eysenck Personality Questionnaire (EPQ) and Bukvić- Štajnberger test for assessing the ability of the perceptive response ($F -1$). Results show a significant correlation dimension Neuroticism and Psychoticism with the level of success in elite sport kick-boxer. When it comes to the level of perception of competitors, results indicate that there are no significant deviations from the average values of other athletes whose perceptive abilities previously investigated.

Key words: kickboxing, elite – sub-elite competitors, psychological, perception, success

Introduction

Kick boxing belongs to a group of martial arts based on hitting or group polystructural acyclic sports that dominate acyclic unpredictable developments (Ćirković & Jovanović, 1992). The main goal of this sport is fighting to receive the least, a task that many strokes, arms and legs, as well as to overcome the opponent better technique, speed and power punches.

One of the few researchers of kick-boxing the Kapo who with various collaborators (Kapo, Rađo, Kajmović, 2005a; Kapo, Rađo, Kajmović, 2005b; Kapo, Kajmović, Ramadanović, 2006) analyzed the prevalence of specific technical and tactical elements of the several international tournaments, as well as the application of different technical and tactical elements with the most successful and unsuccessful competitors. The results of these studies suggest the dominance of handheld kicks, as well as the differences between successful and less successful athletes who have been most evident in the application of manual techniques, thus confirming the dominance of the box in relation to the techniques taken from other martial arts.

In a study (Kapo et. Al., 2006), a sample of 92 boxers, it was found that there is a dominant influence on the serial processor-specific motor skills in the basis of which is primarily SAR (frequency realization boxing technique). The results also indicated the dominant negative impact dis-regulation regulators of organic functions of conative set of variables in the event of specific motor abilities of boxer. Based on these results made alternative model: motor - cognitive –

conative processes in boxing. In the aforementioned study, the researchers attempted to define the latent structure of the area composed of technical and tactical elements and individual personality traits of competitors who win and lose matches. The results pointed to the importance of four factors affecting the discrimination winners and losers. These are: sports brash, offensive capacity, technical skills and superior tactical skills with balanced hypothetical dimensions.

When defining the primary objective of this study we have had in mind the modest scientific prediction of the issue concerned (Katić, Blazević, Zagorac, 2006; Blažević, 2009; Ljubisavljević, 2013), which we concluded and the results that have been implemented in other martial systems and sports (Zulić, 1987; Milošević, Gavrilović, Ivančević 1989, Milošević, Mudrić Milošević, Jovanović, 2004; Willmore & Costill, 1994; Amanović, 2013; Milošević & Milošević, 2014) as well as the top sport in general (Havelka & Lazarević, 1981; Hošek. Petrović, Momirović & Horga 1982; Horga, Bosnar & Momirović 1982; Willmore & Costill, 1994; Bačanac, 2000). For this reason, this paper kickboxing observed through the prism of the top sports achievements as a typical competitive activity.

The basic problem is that the research should be focused on is, whether between different levels of performance (and sub-elite) athletes in kickboxing, there are differences in the psychological dispositions, which included examination of the importance of certain personality traits, as well as the importance of certain perceptual disposition.

Methods

Participants

The study included 50 athletes in kickboxing, male, aged from 18 to 27 years old, divided in two subgroups - the elite and sub-elite, of which 16 athletes classified in the group of elite kick-boxer (medalists in official international competitions) and 34 sub-elite kick-boxer (competitors who are in the period of implementation of this research were ranked between the fourth and tenth place in the official state championships). As the sorting criteria to take the results achieved in the official national and international competitions, and their current ranking official at the time of the study. The survey covers kick-boxers from all competitive disciplines (semi contact, lite contact, full contact, low kick and K-1) and all weight categories.

Instrument

For this research, we used the following instruments: a) Eysenck questionnaire by personalities EPQ which contains 90 questions, while 69 issues related to testing three basic dimensions of personality: Introversiion-extraversion (E) (21 item), Neuroticism-emotional stability (N) (23 items), Psychoticism (P) (25 items). The task was to respond to each question by circling "yes" or "no." All items are therefore meant a binary response format; and b) Test F-1 (Bukvic and Štajnberger, 1971), designed to assess the ability of the perceptive response. The tasks consisted of two groups of points - set configurations of black, on the left, and the larger group of white, from the right. The test consists of an example, two tasks for exercise and 36 quests to solve. Time at the quiz is five minutes, and the results are expressed in terms correctly solved problems.

Procedures

The survey was conducted in the form of empirical studies transversal character. Respondents period of implementation of this research were members of the most successful clubs in the Republic of Serbia. The elite athletes (team of Serbia) were tested in preparation for the World Championships in Skopje (Macedonia), while sub-elite athletes tested during the preparation period of athletes for the upcoming competition season in Bor, Zaječar, Jagodina and Zemun.

Results

In terms of dimensions Introversiion-extroversion, descriptive parameters show somewhat lower value, indicating that the kick-boxers less extroverted compared to other athletes. In terms of dimensions Neuroticism, research results show that the respondents had lower levels of neuroticism. The results were at the upper limit of moderate homogeneity what is indicated high coefficient of variation. Results in terms of dimensions Psychoticism, indicating that respondents had a somewhat higher level of psychoticism.

The results were moderately homogeneous with values of kurtosis and skewness, who did not confirm statistically significant deviation from the normal schedule.

Table 1. Descriptive parameters (central and dispersive).

	Perception(Test F1)	Introversiion-Extroversion (EPQ)	Neuroticism (EPQ)	Psychoticism (EPQ)
Mean	19,02	13,98	10,64	6,04
Median	20,00	15,00	10,50	6,00
Variance	38,59	13,97	21,37	5,30
Std. Deviation	6,21	3,73	4,62	2,30
Std. Error (sX)	,87	,52	,65	,32
cV	,32	,26	,43	,38
Minimum	6	7	1	2
Maximum	31	20	18	12
Skewness	-,18	-,17	-,19	,28
Kurtosis	-,86	-1,02	-,89	-,18

In terms of perceptual abilities in a group of elite and sub-elite kick-boxer results of discriminative analysis show that there is no statistically significant difference (p = ,712) at the level of significance (p = 0.05). (Table 2). The significance of differences was tested by t-test for independent samples.

Table 2. Descriptive parameters for perceptive ability in elite and sub-elite kick-boxers

Competitors	N	Mean	Std. Dev.	Std. Error
Elite	16	19,50	7,465	1,866
Sub-elite	34	18,79	5,640	0,967

(t = ,371 p = ,712)

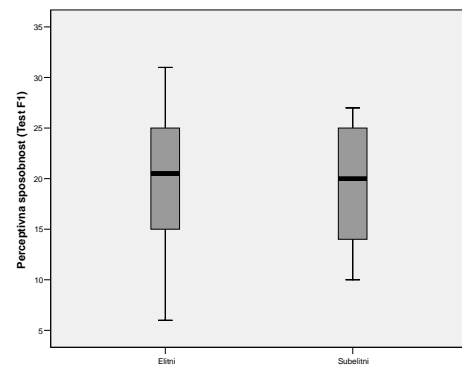


Figure 1. Perceptive ability: relation of average values and variation width of elite i sub-elite kick-boxers

In terms of dimensions Introversiion-extroversion in a group of elite and elite sub kick-boxer results of discriminative analysis show that there is no statistically significant difference (p = ,364) at the level of significance (p = 0.05) (Table 3). The significance of differences was also tested by t-test for independent samples.

Table 3. Descriptive parameters for introversiion-extroversion in elite and sub-elite kick-boxers

Competitors	N	Mean	Std. Dev.	Std. Error
Elite	16	14,69	7,646	0,812
Subelite	34	13,65	3,789	0,650

(t = ,916 p = ,364)

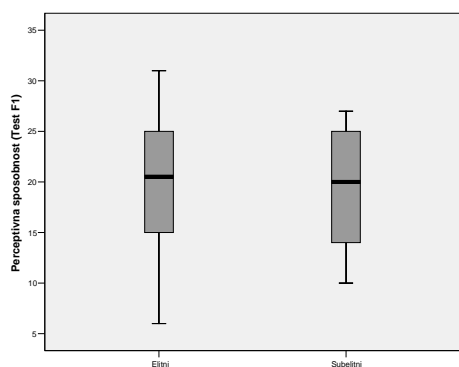


Figure 2. Introversion-extroversion: relation of average values and variation width of elite i sub-elite kick-boxers

The results of discriminative analysis show that there is a statistically significant difference ($p = .028$) with respect to the dimensions of Neuroticism in a group of elite and sub-elite kick-boxers on the level of significance ($p = 0.05$) (Table 4). What are the terms of neuroticism concluded significant differences between elite and sub-elite kick-boxer, it was necessary to supplement the interpretation presented in the analysis of this dimension at the level of the entire sample. It was determined that the kick-boxers have lower levels of neuroticism, which is only valid for a group of elite kick-boxer, while the group sub-elite kick-boxer said to have significantly higher levels of neuroticism.

Table 4. Descriptive parameters for neuroticism in elite and sub-elite kick-boxers

Competitors	N	Mean	Std. Dev.	Std. Error
Elite	16	8,56	4,412	1,103
Subelite	34	11,62	4,452	0,763

($t = -2,270^*$ $p = .028$)

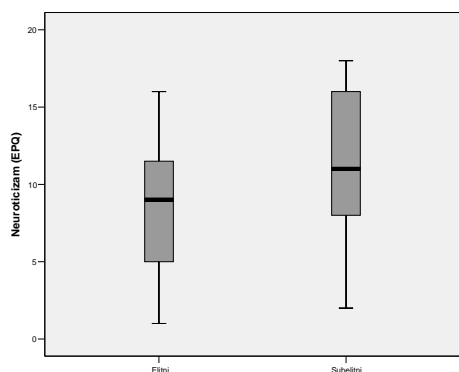


Figure 3. Neuroticism: relation of average values and variation width of elite i sub-elite kick-boxers

The results of discriminative analysis show that there is a statistically significant difference ($p = .030$) in terms of dimensions Psychoticism in a group of elite and sub-elite kick-boxers on the level of significance ($p = 0.05$) (Table 5). How are in terms of psycho- concluded significant differences between elite and sub-elite kick-boxer, it was necessary to supplement the earlier allegations made in the analysis of results at the level of the

entire sample. It was determined that the kick-boxers had higher levels of psycho- which applies only to the elite group kick-boxer, while the group sub-elite kick-boxers can be said to have a lower level of psychoticism.

Table 4. Descriptive parameters for psychoticism in elite and sub-elite kick-boxers

Competitors	N	Mean	Std. Dev.	Std. Error
Elite	16	7,06	2,462	0,616
Subelite	34	5,56	2,092	0,359

($t = 2,240^*$ $p = .030$)

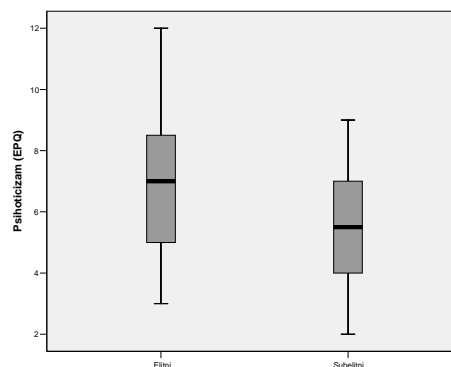


Figure 3. Psychoticism: relation of average values and variation width of elite i sub-elite kick-boxers

Results point-biserial correlation analysis showed the expected association between competitive success and psychoticism and neuroticism only at the level of significance ($p = 0.05$) (Table 6). Interpretation of the coefficients of a point-biserial correlation, it was found that in both variables (Neuroticism and Psychoticism) that are discriminative analysis detected a hypothetical significant predictors for discrimination elite and subelite kick-boxers, there is a statistically significant correlation with the level of sports performance. The significance of this connection is only valid at the level of significance $p = 0.05$. When applied stricter criteria conclusion ($p = 0.01$), neither of these variables were not significantly associated with the athlete's success.

Table 6. Point-biserial correlation analysis

Variable	Dif. Means	Std.Dev.	r_{pb}
Perceptivna sposobnost	1,040	3,739	,0530
Extroversion (EPQ)	-3,055	4,624	,1297
Neuroticism (EPQ)	1,504	2,303	-,3082*
Psychoticism (EPQ)	1,684	4,612	,3046*

$$\sqrt{pq} = ,466476 \quad r_{,05} = ,273^* \quad r_{,01} = ,354^{**}$$

Discussion and conclusion

Starting from the idea that there are certain psychological dispositions of top athletes with respect to their level of success in this study included 50 current best kick-boxers in the Republic of Serbia, who belong to the group of elite and sub-elite kick-boxer.

The survey covered three basic dimensions of personality: Extraversion-introversion, neuroticism-emotional stability and Psychoticism, as well as four perceptive disposition: speed perception forms, speed rounding a whole, the flexibility of concluding the perceptual material and the ability of manipulation in the perceptual space. Of the three aforementioned dimensions of personality, with neuroticism and psychoticism, statistically significant difference, which is more typical of elite athletes, who had significantly lower levels of neuroticism, a higher level of psychoticism.

On this basis it was concluded that an elite kickboxer better control the emotional reactions that are less sensitive and anxiety, as well as to have a higher threshold of tolerance, yet they can be attributed to the more pronounced lack of sensitivity and empathy, rudeness, inhumanity, and less adaptability.

The level of perception kick-boxer was not significantly different from the average values of members of other sports that are included in research of Havelka and Lazarević (1981), Bačanac (2000) and research of Katić, Blažević and Zagorac (2006). Bearing in mind that the research would not have been significant associations dimension neuroticism and psychoticism with the level of success in elite sport kick-boxer when he applied stricter criteria conclusion ($p = 0.01$), we conclude that none of the personality dimensions could with a higher likelihood to be accepted as completely reliable factor of discrimination in elite athletes and sub-elite. What is still a lot of indications that suggest a potentially important predictive role of psychological disposition not only in kick-boxing, but also other sports, this question should be re-examined in one of the future research should include a larger number of elite athletes and sub-elite, both domestic and foreign.

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RAZLIKE U PSIHOLOŠKIM DISPOZICIJAMA ELITNIH I SUBELITNIH KICK-BOKSAČA

Sažetak

U radu je prikazano istraživanje usmjereno na ispitivanje postojanja razlika u psihološkim dispozicijama kick-boksača obzirom na njihovu razinu sportske uspješnosti. Istraživanjem su obuhvaćene tri temeljne dimenzije ličnosti: Ekstraverzija-introverzija, Neuroticizam-emocionalna stabilnost i Psihoticizam, kao i sljedeće perceptivne dispozicije: brzina opažanja oblika, brzina zaokruživanja cjelina, fleksibilnost zaključivanja na perceptivnom materijalu i sposobnost manipuliranja u perceptivnom prostoru. Na uzorku od 50 ispitanika muškog spola, starosti od 18 do 27 godina života, različitog sportskog učinka (16 elitnih i 34 subelitnih kick-boksača), primjenjeni su Eysenckov upitnik ličnosti (EPQ) i Bukvić-Štajnberger test za procjenu sposobnosti perceptivnog reagiranja (F-1). Rezultati ukazuju na značajnu povezanost dimenzija neuroticizam i psihoticizam sa razinom sportske uspješnosti kod elitnih kick-boksača. Kad je u pitanju razina percepcije natjecatelja rezultati ukazuju da nema značajnijih odstupanja od prosječnih vrijednosti drugih sportaša čije su perceptivne sposobnosti prethodno istraživane.

Ključne riječi: kik-boks, elitni – subelitni natjecatelji, psihologija, percepcija, uspješnost

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Correspondence to:

Milija Ljubisavljević

Ministry of Interior Belgrade, Serbia

Phone: 00381-641139349

E-mail: milija.ljubisavljevic@gmail.com