

## PERFECTIONISM, ANXIETY IN SPORT, AND SPORT ACHIEVEMENT IN ADOLESCENCE

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### Abstract

The goal of this study was to consider the distinctive differences in certain dimensions of perfectionism between athletic and non-athletic adolescents, and also to establish a correlation of perfectionism, variables of anxiety and sport achievement in junior athletes. Our sample encompassed high-school students from Valjevo, Serbia (N=120) and junior athletes (N=126), with a mean age of 17,2 years. They were subjected to a battery of tests, comprised by the Positive and Negative Perfectionism Scale (PANPS), Questionnaire regarding sport achievement (UUS), Competitive State Anxiety Inventory (CSAI-2) and the Sport Competition Anxiety Test (SCAT). Instruments that were used for measuring had a satisfying metric characteristic (reliability), which points to the fact that they can be used in our population as well. By using the Student t-test, it was shown that athletes manifested the construct of adaptive perfectionism in greater number compared to non-athletes ( $p \leq .01$ ). By conducting the test of Variance Analysis (ANOVA), it was established that maladaptive perfectionist athletes had more pronounced sport anxiety (as a state) from clusters of adaptive perfectionists and non-perfectionists. Calculated Pearson's correlation coefficients showed that the values of variables of maladaptive perfectionism have statistically significant positive correlation with sport anxiety (as a state, and as a dimension of personality), and also with adaptive perfectionism and self-confidence, whereas the variable of sport anxiety (as a dimension of personality) shows a substantially negative interaction with sport achievement ( $p \leq .01$ ). As a conclusion, the hypothetical model proposed in this article and its implications for further verification were analyzed in the context of existing empiric and theoretical grounds.

**Keywords:** perfectionism, sport anxiety, sport achievement, adolescents

### Introduction

According to available literature, research conducted so far shows that psychological factors such as: dimensions of personality (perfectionism, anxiety and self-confidence), sport anxiety and sport achievement - are subjects of intensive research by many authors in the science of psychology. By acknowledging that, identifying the mentioned phenomena is a both practical and theoretical issue. Modern psychology literature usually determines *perfectionism* as a multidimensional construct with two basic dimensions: adaptive and maladaptive perfectionism. In the last decade of the 21<sup>st</sup> century, many authors emphasized that perfectionism (tendency to pursue unrealistically high goals, which is followed by rigorous self-evaluation and fear of failure) is an important variable in explaining sport anxiety and sport achievement of adolescent age. In his study, Terry-Short et al. (1995) examined the hypothetical model of perfectionism by comparing healthy and clinical subjects on a questionnaire which determines this latent dimension as positive or negative, depending on whether their way out of certain situations were positive or negative. According to these authors, *negative perfectionism* is defined as a negative way of strengthening and fortification, unrealistic individual criteria, unpleasant response of the organism to failure, and an inner impulse towards avoiding failure.

In his research, Papadomarkaki & Portinou (2012) believe that maladaptive views are characterized by perfectionist feelings of uneasiness caused by mistakes, the fear of failure and negative feedback of the organism to mistakes. According to research conducted by Boone et al. (Boone, et al., 2013; Boone, et al., 2014), *positive perfectionism* is characterized by setting high standards, an individual desire for success and a self-directed tendency to the ideal, whereas failure does not lead to decreased motivation, in which the initial part of the task is relaxed. Empirical findings in certain studies by Braet and Goossens, followed by Stoeber (Braet, & Goossens, 2010; Stoeber, 2012) point to an intense distinction of both components of perfectionism in the sample consisting of athletes compared to clusters of persons with depressive symptoms and eating disorders, and also to a control group representing the general population, especially in the dimension of adaptive perfectionism. In his paper, Gucciardi (2012) emphasizes the fact that athletes with more intense perfectionism, particularly maladaptive perfectionism, possess a more intense disposition towards sport anxiety as a dominant state during competition. Determining the link between perfectionism and sport achievement is a subject of many current empirical research, like the one conducted by Andrews et al, then Aračić, Greblo in his two individual papers, and two

papers with his associates; In addition, works of Sindik, Cruce et al, and Ulu and Tezer. (Andrevvs et al., 2014; Aračić, 2013; Greblo, 2011; Greblo, 2013; Greblo and Keresteš, 2012; Greblo et al., 2013; Sindik, 2012; Cruce, et al., 2012; Ulu & Tezer, 2010). Research that was conducted by Owens and Slade, Stoeber and Stoeber, then Stoeber only, and Hanchon (Owens & Slade, 2008; Stoeber & Stoeber, 2012; Stoeber, 2014; Hanchon, 2010) emphasize the fact that the thrive of athletes towards perfection is statistically significantly expressed, since achievement in sport is correlated with perfectionism. Anxiety has always been a fundamental human emotion. In recent times, this phenomenon attracts the attention of many researchers, since it has a major impact on achieving results in sport. According to a recent study conducted by Nilgin et al. (Nilgiin et al., 2013), sport anxiety assumes the existence of three basic dimensions: somatic anxiety (negative thrill and withstanding of emotions during competition), cognitive anxiety (negative thoughts and expectations of own success or performance), and self-confidence (perception of personal capabilities and belief in the possibility of flawless performance of motor activity). When it comes to sport anxiety, it is necessary to distinguish two components: sport anxiety as a state of being, and sport anxiety as a dimension of personality. In his research, Behzadi et al. (2011) think that sport anxiety represents the tendency of considering the circumstances of the competition threatening, which, as a reaction to this situation, leads to an anxious state.

Research findings by Vujanović and Tišma (2011) turn the attention to the fact that the state of sport anxiety mandates an emotional state of fear and tension in relation to a certain situation in sports, whereas a high level of sport anxiety prevents the athletes achievement. Such conclusion was made by Pineda-Espejel et al. (2011). According to research conducted by Hamam (2013) but also Hardy & Grace (2009), there is a significant interaction between sport anxiety as a state, and sport achievement, self-confidence and mood in athletes. Similar results were obtained in an empirical study by Vosloo, Ostrow and Watson, (Vosloo, Ostrow & Watson, 2011), in which a sample of swimmers with increased somatic anxiety had less self-confidence compared to swimmers with lower somatic anxiety. Based on the brief review of international literature in psychology, it is observed that even though the both theoretical and practical significance of identifying perfectionism, sport anxiety, and sports achievement was considered long ago, there are still limited research contributions to understanding their specific nature. Specifically, relevant studies that would identify these phenomena in the Serbian population more completely are simply missing. Examining such issues could be very important, in both theory and practice, which is why this research is significant, since it is one of the first of its kind in our country, and first in being

conducted on the population of athletes. The basic goals of this empiric research are: 1) To see whether there are statistically significant differences between adolescent athletes and non-athletes in dimensions of perfectionism, sport anxiety and sport achievement; 2) To examine the relation between the variable of perfectionism (as a significant dimension of personality), sport anxiety (as a state, and as a personality trait) and sport achievement in examinees in adolescent age. Taking into consideration the findings of previous relevant studies, and the goals that are set, two starting hypotheses were formulated in this empiric research under which are assumed significant differences in levels of construct of perfectionism, sport anxiety, and sport achievement between athletes and non-athletes ( $X_1$ ), as well as the interaction of dimensions of perfectionism, sport anxiety, and sport achievement between athletes and non-athletes ( $X_2$ ).

## Methods

### Sample

In this research, there was a total of 246 examinees divided into two groups: non-athletes (120), and athletes (126). After discarding invalid questionnaires, where not all answers to the questions asked were fulfilled, the final sample comprised 234 subjects. The sample of non-athletes comprised male students of third and fourth grade of Technical School in Valjevo (64) and Economics school (56) in Valjevo, respectively. The sample of athletes comprised males in junior category from three soccer clubs from Valjevo - „Budućnost“, „Krušik“ and „Radnički“, and two karate clubs - „Zansin“ and „Zvezda“. Mean age of examinees was 17,2 years (SD = .88). The criteria for placing subjects in the group of non-athletes was not practicing any sport. The criteria for placing subjects in the group of athletes had to be fulfilled, and it comprised having organized practices totaling at least five hours per week, and that they participate at competitions on a regular basis. *Research procedure:* Transverse research was conducted in September 2014. Firstly, the subjects were handed a document with basic information about the project in which a formal parental consent was requested, to enable the subjects participation. After the consent was given, questionnaires were handed to the subjects, with instructions how to fulfill them. During this process, it was briefly explained that participation in this research is anonymous and voluntary, and that the obtained results will be used solely for the purpose of scientific research. The tests were conducted in groups, at the beginning, during, or at the end of classes, or regular practices, with the presence of researchers, in a time span of app. 30 minutes.

### Statistical data analysis

In data analysis, firstly, the valid metric characteristics of the used instruments were determined (Cronbach's alpha reliability test).

Then, methods of descriptive statistics were applied (arithmetic mean and standard deviation), Kolmogorov-Smirnov test (K-S), Variance Analysis (ANOVA), Student t-test, Scheff-s post hoc method, and Pearson's coefficient of correlation (Ps). Data was inserted and processed in the software module IBM SPSS (20 for Windows) and IBM SPSS (Amos version 20). The significance was tested at  $p \leq .01$ .

#### Measuring instruments

For collecting data, four measuring instruments were used: *Positive and Negative Perfectionism Scale* – (PANPS, Terry-Short et al., 1995) is used for measuring multidimensional perfectionism, which consists of 40 items, 20 of which relates to positive (for ex. "I feel good when I move boundaries"), and 20 items relates to negative (for ex. "I set unrealistically high goals for myself"). Subjects had a task to determine the degree of accordance, or discordance with every item on the 5-degree Likert-type scale, (from 1 "completely disagree" to 5 – "completely agree"). By summing individual answers to all items, two results are obtained: positive perfectionism and negative perfectionism. The theoretical range of results for each subscale is 20-100. Both Subscales on the mentioned sample have a satisfying reliability of internal consistency, measured by Cronbach coefficient. For negative perfectionism, value (Cronbach alpha)  $\alpha = .89$ , and for positive  $\alpha = .78$ . These results point to a high internal consistency, hence, the items on the scale are positively correlated with each other. Questionnaire of sports achievement (UUS) consisted of a single item which requested from the athlete to mark his place in the previous competitive season in his category. Subjects were offered four answers: 1<sup>st</sup>, 2<sup>nd</sup>, or 3<sup>rd</sup> place, as well as the place on the ranking list according to the result achieved, which they entered on their own. *Competitive State Anxiety Inventory* (CSAI-2: Martens et al., 1990) serves for evaluating anxiety during competitions, and it contains three dimensions : cognitive competitive anxiety which referred to the expectation of a negative outcome (for ex. "I was concerned with my performance."), somatic competitive anxiety – refers to the somatic reactions preceding competition ("My body was tense.") and temporary sport self-confidence during competition – refers to believing in self and own capabilities ("I felt confident."). The measuring instrument encompassed 27 items, in which the subjects formulated their responses accordingly ("completely disagree", "partly agree", "partly disagree", "completely agree"). The results were summed for each of the three subscales. Higher results on the dimensions indicated a greater competitive anxiety (as a state), whereas a higher result on the dimension of self-confidence signalized a lower competitive anxiety (as a state). Reliability of internal consistency, which was measured by the Cronbach-alpha coefficient for cognitive competitive anxiety was acceptable ( $\alpha = .81$ ), for somatic anxiety ( $\alpha = .85$ ), and for self-confidence ( $\alpha = .87$ ).

*Sport competition Anxiety Test* (SCAT) by Martens (Martens, 1977) measures individual differences in tendencies that the competitive situation is understood as a threatening one, and that a state of anxiety, with its different intensities, is the response in these situations. It encompasses 17 items with which subjects estimated how often do they behave in the described way (for ex. "Before competition, I am worried that I will not fight good enough.") by choosing one of the three answers (rarely, sometimes, often). The theoretical range of the results is 12-36. Calculated coefficient of reliability type Cronbach alpha, the used measuring instrument, was  $\alpha = .79$ .

## Results

#### Descriptive statistics

The results of the descriptive measures of individual variables of adaptive and maladaptive perfectionism on the sample of athletes (soccer players and karate fighters) and non-athletes of high school age are shown in Table 1.

Table 1 Descriptive indicators, values of t-test and Kolmogorov-Sminov test (K-S) for the examined variables

Variables	Category	AS	SD	t	K-S	p
Adaptive perfectionism	Athletes	80.12	7.95	4.10	.08	.001
	Non-athletes	77.46	8.02		.12	
Maladaptive perfectionism	Athletes	61.24	9.47	.88	.05	29.35
	Non-athletes	49.83	10.51		.10	

All analyzed variables, after testing of normality of distribution by Kolmogorov-Smirnov test (K-S), showed that the probability distribution of the results are around the arithmetic mean, in accordance to the Gaussian distribution, which pointed out that the empiric values of frequencies are not statistically significant from theoretical. To determine the statistical significance of differences between the means of variables of the two subject samples, t-test was applied. Bivariate analysis showed that the subsample of active junior athletes had a significantly more dominant result on the *subscale adaptive perfectionism* compared to non athletes of the same category ( $t = 4.10$ ;  $p \leq .01$ ), whereas in the variable *maladaptive perfectionism*, the statistical differences were insignificant ( $p \geq .05$ ). In addition, it was observed that both subsamples of subjects had a relatively high mean values on the dimension *adaptive perfectionism*, whereas they are significantly lower in both groups of subjects on the subscale *maladaptive perfectionism*. According to research conducted by Erceg (2007), such results are standard among adolescents who are more commonly adaptive perfectionists and usually positively oriented towards success with a reduced negative response of the organism to failure. Apart from this, statistically significant differences in athletes and non-athletes were noted in the variable *adaptive perfectionism* ( $p \leq .01$ ). In contrast, the obtained result of the t-test in the variable *maladaptive perfectionism* is greater than the borderline value.

That, with the probability ( $p \geq .05$ ) points to the fact that there aren't statistically significant differences of mean values between the tested subsamples of subjects.

**Variance Analysis**

By the method of Variance Analysis (ANOVA), the mean square of deviation of values of variables in the group was examined: somatic anxiety, cognitive anxiety, self-confidence, sport anxiety – as a state and as a dimension of personality, and sport achievement from the arithmetic middle of subsample of athletes in junior category: adaptive, maladaptive perfectionists, imperfectionists (Table 2).

Table 2 Significance of values in the examined variables in athletes

Variables	Category	AS	SD	F	p
Somatic Anxiety	Adaptive	17.03	7.14	7.46	.001
	Maladaptive	22.25	6.08		
	Imperfectionists	17.34	5.21		
Cognitive Anxiety	Adaptive	12.96	4.06	13.67	.001
	Maladaptive	17.88	5.14		
	Imperfectionists	14.35	3.92		
Self-Confidence	Adaptive	26.07	4.96	5.89	.001
	Maladaptive	20.94	4.85		
	Imperfectionists	22.25	4.77		
Anxiety as a dimension of personality	Adaptive	18.86	4.82	3.43	.005
	Maladaptive	19.75	3.77		
	Imperfectionists	16.94	5.04		
Sport achievement	Adaptive	3.40	4.83	1.05	.513
	Maladaptive	2.90	3.97		
	Imperfectionists	2.20	1.48		

Based on the insight in the calculated F-values in the cells of the matrix, it was established that the examined clusters in the population of athletes (soccer players and karate fighters) are statistically significantly different in variables of sport anxiety as a state ( $p \leq .01$ ) and sport anxiety as a dimension of personality, on the level of  $p \leq .05$ . On the other hand, the measures of dispersion showed that, with the probability level of less than 95%, groups of athletes in junior category are not statistically significantly different in terms of value in the variable sport achievement. In order to determine a more precise statistical significance of the different

arithmetic means between clusters of subjects in the variable somatic anxiety, the *Scheffe post hoc* test of comparison was applied. The results showed that in the variable *somatic anxiety*, maladaptive perfectionist athletes achieved statistically significantly higher results than maladaptive perfectionists ( $p \leq .01$ ), as well as imperfectionists, on the level of  $p \leq .05$ . In contrast, the obtained empiric findings of imperfectionists and adaptive perfectionists did not achieve a level of statistically significant difference ( $p \geq .05$ ). At the variable *cognitive anxiety*, there are statistically high and marked differences between maladaptive perfectionists achieving better results, than adaptive and imperfectionists ( $p \leq .01$ ). Adaptive perfectionists had maximal results, then perfectionists, and lastly, maladaptive perfectionists, thereby imperfectionists are not statistically significantly different from adaptive and maladaptive perfectionists ( $p \geq .05$ ).

By applying the *Scheffe post hoc* test of comparison under the variable *sports anxiety (as a dimension of personality)*, not a single statistically significant difference was established between intergroups in relation to the inner-group variance in three subsamples of active athletes in junior category. The obtained results denounce the existence of statistically significant difference between adolescent athletes and non-athletes in the dimensions of perfectionism, sports anxiety and sports achievements in accordance to the findings made by Černeško in his research (2012). Based on the obtained results by the Student t-test and Variance Analysis (ANOVA), it can be stated on the level of  $p \leq .01$  that the first tested hypothesis is accepted ( $X_1$ ).

*Linear correlation between the examined dimensions*

In order to inspect and examine the degree of quantitative correspondence of variation of variables of perfectionism and sport anxiety (as a state and as a dimension of personality) and sport achievement in athletes in junior categories, Pearson's coefficient of correlation was implemented (Table 3).

Table 3 Correlations of perfectionism, anxiety and sports achievement variables on the sample of athletes

Dimensions	1	2	3	4	5	6	7
1. Adaptive perfectionism		.14	-.13	-.12	.41**	-.01	.18
2. Maladaptive perfectionism			.63**	.59**	-.23**	.30**	-.04
3. Cognitive anxiety				.70**	-.50**	.55**	-.01
4. Somatic anxiety					-.63**	.59**	-.08
5. Self-confidence						-.45**	.17
6. Anxiety as a dimension of personality							-.14
7. Sport achievement							

Linear correlations between the tested variables of maladaptive perfectionism and all dimensions of sport anxiety – as a state, are statistically significant and range from low to moderate values. In particular, the moderate statistically significant positive correlations between *cognitive anxiety and maladaptive perfectionism* ( $r = .633$ )

are evident, negative interaction of *somatic anxiety and self-confidence* ( $r = .626$ ), as well as a positive link of *maladaptive perfectionism and somatic anxiety* ( $r = .591$ ). Moreover, in the correlation matrix, it is visible that junior athletes (soccer players and karate fighters) in whom the dominant dimension is *maladaptive perfectionism*

exhibit *sport anxiety* as a state in all three variables: cognitive dimension, somatic dimension, and self-confidence. In addition to that, a statistically significant link has been observed between *sport anxiety* (as a state) and *sport anxiety* (as a dimension of personality), and a moderate positive correlation between *adaptive perfectionism and self-confidence* with the dimension of sport anxiety as a state. Finally, based on this data, a moderate positive statistically significant connection of variables (maladaptive perfectionism and sports anxiety as a dimension of personality) is observed. All analyzed variables of sport anxiety (as a state) significantly correlate with sport anxiety (as a personality trait). In contrast, calculated Pearson's coefficients of correlation point to the fact that a statistically significant interrelation between variables of perfectionism and sport achievement has not been determined. The empiric results obtained concerning the coherence of these variables are in accordance to the assumptions and conclusions of the research by Greblo and Keresteš (Greblo i Keresteš, 2012). The statistical significance of the obtained findings of correlation at the level of  $p \leq .01$  confirms that the second tested hypothesis in this empiric research has been accepted ( $X_2$ ).

## Discussion

The results of the analysis applied on the construct of perfectionism in this cross-sectional research study show that adaptive perfectionism in active athletes (soccer players and karate fighters) is more obvious compared to non-athletes of the same age, whereas the difference in expressing maladaptive perfectionism between clusters of athletes and non-athletes was shown to be statistically insignificant. This points to the fact that junior athlete are, in a higher degree, characterized with a tendency towards perfecting movement execution, endurance when performing tasks and rigorously set criteria, which is similar to the findings of research carried out so far in other cultures, according to Stoeber, then Hill et al., Cumming and Duda (Stoeber, 2012; Hill et al., 2011; Cumming & Duda, 2012). Our findings proved that there are statistically significant differences between adaptive and maladaptive perfectionist athletes and non-athletes in the examined variables of anxiety (as a state) and variables of sport anxiety (as a dimension of personality).

Contrary to that, the individual difference between clusters of subjects in the variable sport achievements is not statistically significant. These results are compatible with the research carried out by Dehghani et al (Dehghani et al., 2013). Namely, it was shown that junior athletes with visible maladaptive perfectionism mentally experience the consequences of somatic anxiety in many situations, compared to imperfectionists or adaptive perfectionists. With that, it seems that the way perfectionism forms in an athlete is very important, whether as a tendency or as

persistence in his strive for perfection, as orientation towards success or disallowing it, since it dictates the visibility of the somatic response of his organism. Statistical dispersion data obtained in our transverse study on the variable *self-confidence* – measures sports anxiety (as a state), allude to the statistically significant difference between subsamples of adaptive and maladaptive perfectionists. Within this domain, maladaptive perfectionists achieve lower results than adaptive perfectionists, which is in accordance with international findings by Öner et al., and Qetin et al. (Öner, et al., 2013; Qetin et al., 2014), who established that athletes with a visible tendency for ideal execution without negative reactions to the absence of perfection, have far more self-confidence than athletes who are maladaptive perfectionists, who suffer from fear during execution of motor movements.

This directs to the possibility that their adaptive perfectionism serves as a protective factor of self-confidence in circumstances of an unwanted outcome when executing movement. According to research by Hamilton, but also Spaaij et al (Hamilton, 2003; Spaaij et al., 2014), junior athletes are oriented towards achieving a result in many situations, which can have an effect on their execution. However, if flawless execution of movement is not carried out in such situations, there is a possibility that adolescent athletes with visible adaptive perfectionism will not lose self-confidence. In addition, under the same circumstances, in athletes who do not give up from ideal execution, but manage to connect their self-confidence with their performance in this setting, a decrease in self-confidence occurs. An interesting finding is that adaptive perfectionists do not experience cognitive and somatic anxiety in comparison to maladaptive athletes who exhibit cognitive and somatic flaws is observed, which naturally causes self-confidence to be reduced. By examining the differences between adaptive and maladaptive perfectionists and imperfectionists in the variable sports achievement, not a single statistically significant difference was found. The interpretation of this result lies in the assumption that junior athletes during competition do not compete with contestants that are superior to them, for which the difference in sport achievements would surely be more relevant between clusters of adaptive and maladaptive athletes. The results of the conducted research suggest that in anxiety as a dimension of personality (in adaptive perfectionists, maladaptive perfectionists and imperfectionists), a statistically significant difference between clusters of subjects was not found.

This assessment of subjects is not in accordance to the findings in the study conducted by Dias et al (Dias et al., 2012), in which maladaptive perfectionists manifested a higher dose of anxiety as a dimension of personality than adaptive perfectionist athletes. In this research, statistically significant interactions between adaptive and

maladaptive perfectionism and sports anxiety (both as a state and as a dimension of personality), and sports achievement of subjects, were determined. Anxiety as a dimension of personality correlates with other variables of anxiety (as a state), and a moderately positive correlation with cognitive and somatic anxiety was established, and a negative relation with the self-confidence of athletes. Moreover, adolescent sports anxiety as a dimension of personality is in a moderately positive degree of quantitative concordance of variations with maladaptive perfectionism. Similar correlations among variables were obtained in an earlier research by Ribeiro et al (Ribeiro *et al.*, 2014).

However, a statistically significant link between dimensions of perfectionism and sport achievement has not been established. This empiric finding is not in accordance to research by Cruz and Fonseca (Cruz & Fonseca, 2010). Reasons for such findings probably lie in the fact that athletes do not experience the intensive consequences of their perfectionism to such an extent that this dimension could reduce sport achievement, unless they exhibit sports anxiety at the same time. In addition, it is assumed that perfectionism does not have an effect momentarily on sport achievement in adolescent athletes, which can later on obtain a completely different look if they become professionals. Active junior athletes who are used to experiencing sport anxiety are prone to an anxious way of behavior. Similarly, they will behave similarly in a competitive setting, during which this dimension will display itself both in cognitive and somatic domains, but under the assumption that anxiety will reflect on self-confidence of the contestant as well. Athletes with significant sport anxiety (as a dimension of personality) often experience a decline in attention in such circumstances, as well as arrest of commanding their behavior, psychic blocks and somatic symptoms of anxiety. In addition, they are expected to have less self-confidence and motivation. Contrary to that, athletes with lower sport anxiety will not feel the mentioned somatic and cognitive signs as often. Having that in mind, their self-confidence and driving force will be on a higher level compared to anxious athletes. An interesting fact is that such model of anxiety is more commonly manifested in athletes who are maladaptive perfectionists. They especially take into account their mistakes, orient

themselves to the result and direct their attention solely on the outcome. After competition, maladaptive perfectionists experience much more unpleasant feelings than adaptive perfectionists and feel uneasy about opinions of others. By realizing this, it is expected that athletes (soccer players and karate fighters) who are persistent in their demands to achieve exemplarity, to form anxiety issues. Hence, junior athletes who persistently insist on an ideal performance of motor movements, are constantly unsatisfied with the achieved, are classified in the group of maladaptive perfectionists, and in many situations, experience sports anxiety and lowering of the dimension of self-confidence. This can most likely be reflected on their internal desire and driving force for later athletic careers, but on their future profession as well. From a theoretical aspect, this cross-sectional study enables an initial view into the complex interrelations of perfectionism, sport anxiety and sport achievement. Apart from the scientific review of theoretical models, this paper creates conditions for a valid comparison with the results obtained in other European states, since a unique methodology was used which gives ground for future quantitative analysis of the examined phenomena both in athletic and nonathletic population.

By summarizing the obtained empiric results, it is concluded that our research had a few methodological limits: A relatively small and modest sample, collection of data in a very short time span, demographic demarcation of the analyzed sample and the specificity of the sample consisting of male adolescents. Because of this, the possibility of interpretation and generalization of obtained results is partly limited, which reduces its integrity. An additional limit refers to applying questionnaires of exclusively self-evaluative kind on male subjects, for which, in future research, it would be essential to include other measuring instruments, with different types of stimulation, as well as techniques, for ex. evaluation from fellows mates, and peers (coaches and teachers). Despite the relevant methodological limits of this transverse research and the inability to interpret and generalize the results on the entire adolescent population, the obtained results are indicative and point to a need of a more intensive research in this area, in order to provide a unique view of the initial research conceptualizations.

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## PERFEKCIONIZAM, TJESKOBA U SPORTU I SPORTSKA POSTIGNUĆA U ADOLESCENCIJI

### Sažetak

Cilj ovog istraživanja je bio razmotriti karakteristične razlike u određenim dimenzijama perfekcionizma između atletskih i neatletskih adolescenata, te također uspostaviti korelaciju perfekcionizma, varijabli tjeskobe i sportskih postignuća kod mlađih sportaša. Naš uzorak je obuhvatio srednjoškolske učenike iz Valjeva, Srbija (N=120) i mlađe sportaše (N=126), sa srednjom dobi od 17,2 godine. Bili su podvrgnuti bateriji testova sastavljenoj od pozitivne i negativne ljestvice perfekcionizma (PANPS), upitniku u vezi sa sportskim postignućima (UUS), natjecateljskom inventaru stanja tjeskobe (CSAI-2) i sportsko natjecateljskom testu tjeskobe (SCAT). Instrumenti koji su bili korišteni za mjerenje su imali zadovoljavajuće metrijske karakteristike (pouzdnost), što pokazuje činjenicu da mogu biti korišteni i u analiziranoj populaciji. Koristeći studentov t-test, pokazano je da su sportaši manifestirali konstrukt prilagodljivog perfekcionizma u većem broju u usporedbi s nesportašima ( $p \leq .01$ ). Provođenjem testa analize varijance (ANOVA), utvrđeno je da su maladaptivni perfekcionistački sportaši imali izraženiju sportsku tjeskobu (kao stanje) od grupe prilagodljivih perfekcionista i neperfekcionista. Izračunati koeficijenti Pearsonova korelacije su pokazali da vrijednosti varijabli maladaptivnog perfekcionizma imaju statistički značajnu pozitivnu korelaciju sa sportskom tjeskobom (kao stanje i dimenzija osobnosti), te s prilagodljivim perfekcionizmom i samopouzdanjem, dok varijabla sportske tjeskobe (kao dimenzije osobnosti) pokazuje bitno negativnu interakciju sa sportskim postignućem ( $p \leq .01$ ). Kao zaključak, hipotetski model predložen u ovom članku i njegove implikacije za daljnju potvrdu su bili analizirani u kontekstu postojanja empirijskih i teorijskih temelja.

**Ključne riječi:** perfekcionizam, sportska tjeskoba, sportsko postignuće, adolescenti

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