

## ANXIETY AND SELF-ESTEEM IN STUDENTS OF SPORT AND PHYSICAL EDUCATION

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(Research note)

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### Abstract

*The objective of this research is examining the correlation between the degree of state and trait anxiety, on one hand, and global and specific self-esteem, on the other hand. Furthermore, it aims at examining the difference in the level of anxiety and self-esteem prominence in relation to the gender of the examinee. State-Trait Anxiety Inventory - STAI (State-Trait Anxiety Inventory, Spielberger, 1983) was used to assess the degree of state and trait anxiety prominence. The Rosenberg Self-Esteem Scale - RSE (Rosenberg Self-Esteem Scale, Rosenberg, 1965) was used to assess global self-esteem. The State Self-Esteem Scale (SSES, Heatherton & Polivy, 1991) was used to assess specific self-esteem and it assessed the specific self-evaluation of: 1. Physical appearance 2. Social adequacy and 3. Intellectual abilities. The research was conducted on an appropriate sample comprising of 127 students (of both genders) of the Faculty of Sport and Physical Education in Nis. The results of the research show that there is a pronounced negative and statistically significant correlation between the Trait and State anxiety, on one hand, and Global and Specific self-esteem and all the subscales of Specific self-esteem on the other. Differences in degree of self-esteem in the sphere of the physical appearance of the examinees of different gender have been obtained, which shows that male students of sport and physical education have higher self-esteem than female students in the sphere of physical appearance.*

**Keywords:** *students in sports, anxiety testing, self-esteem testing, state-trait anxiety, global self-esteem, self-esteem topical, correlation coefficient, t-test*

### INTRODUCTION

Anxiety is one of the basic human emotions occurring in response to potentially stressful and threatening situations. Its basic role is to warn and prepare people on forthcoming dangers. This particular emotion stands for one of the central constructs of the personality theory and psychopathology. We could distinguish between two types of anxiety, the state and trait anxiety. Self-esteem is defined as an evaluative dimension of the self-concept which is of great importance for the individual. Both anxiety and self-esteem proved to be very important for the success of an individual in various spheres of life, especially when it comes to athletes and sports teachers.

The nature of human emotions has always attracted the attention of those who have been attempting to reach more comprehensive understanding of man and his behaviour. Anxiety

stands for one of the basic human emotions. Its presence in everyday life has led to its being considered as the central phenomenon in numerous theoretical discussions and researches. Anxiety is most often defined as an anticipation of a certain danger, although it is sometimes defined as a reaction to stimuli which do not represent real danger (Zdravkovic, 1980). The role of anxiety is to warn and prepare the individual for a potentially stressful or dangerous situation. It may be described as a diffuse, free-floating tension that is not always caused by an existing object or situation, but it may also be described as a specific reaction to inner danger (Marić, 2005). It is followed by a strain of psychological and physiological changes which prepare the individual to fight or run away.

The modern lifestyle, besides its advantages, becomes more and more demanding for a man and his abilities. His attempts to meet

the increasing demands that the surrounding is imposing can make him emotionally vulnerable and anxious.

Cattel & Scheir (Cattel & Scheir, 1963, according to Spielberger & Sydeman, 1994) used the factorial analysis to examine the anxiety upon they have identified two factors – trait and state anxiety. Different manifestations of anxiety can be placed into these two categories.

State anxiety is a transitory emotional state characterized by a subjective feeling of tension and worry. It is followed by an enhanced autonomous nervous system activity and it is also supposed that the intensity of state anxiety varies and fluctuates depending on the degree of the perceived threat (Spielberger et al., 1970, according to Spielberger & Sydeman, 1994).

Trait anxiety represents a tendency of an individual to perceive stressful situations as dangerous and to react to these with more frequent and intense enhancement of state anxiety (Spielberger et al., 1970, according to Spielberger & Sydeman, 1994). Thus, state anxiety is provoked by a certain situation in which an individual has found himself, while trait anxiety can be defined as a way of viewing the world used by an individual when confronting different circumstances in his surrounding (Spielberger, 1966, according to Humara, 1999).

Researches which have examined the influence of physical exercise on the degree of current anxiety reports of a decrease of anxiety after both a moderate intensity and energetic physical activity (U. S. Department of Health and Services, 1996, according to Cronin, 2005). The results of Steptoe's (Steptoe et al., 1989, according to Cronin, 2005) research have shown that physical exercises have anxiolytic effect on individuals with high trait anxiety.

A majority of authors in contemporary psychological literature relates self-esteem to the evaluative dimension of the self-concept (Opacic, 1995). This concept has proven itself to be of great importance for the subjective experience of satisfaction in people. It can be treated as a primary indicator of the positive adjustment of an individual, which makes it interesting for researches in various fields of psychology (Todorovic, Zlatanovic, Stojiljkovic & Todorovic, 2009). Rosenberg (Rosenberg, 1965, according to Karademir, Açak & Çoban, 2011) defines self-esteem as a positive or negative orientation toward oneself. The level of self-esteem

in people with a positive orientation toward themselves will be high during self-evaluation, as opposed to those ones whose orientation is negative.

Most studies on self-esteem have found the correlation between low self-esteem and the anxiety (Mruk, 1999, according to Wray & Stone, 2005). Although there is a negative correlation between the self-esteem and anxiety, the causal relation between these two variables remains obscure. One group of authors finds that anxiety warns an individual of the vulnerability of the personality system and on the necessity to maintain self-esteem (Epstein, 1973; Leary & Downs, 1995, according to Wray & Stone, 2005). Another group supports the idea of reciprocal relation between self-esteem and anxiety (Coopersmith, 1967; Horney, 1950, according to Wray & Stone, 2005), which means that individuals with increased anxiety will eventually start to evaluate themselves and think of themselves in a less positive way, while individuals with low self-esteem become oversensitive to threats, which causes them to be anxious more often. A third group of authors shares the belief that self-esteem in some way diminishes the anxiety (Greenberg, Pyszczynski, & Solomon, 1995; Mruk, 1999, according to Wray & Stone, 2005). The proofs for this could be found in the results of researches which revealed that individuals with higher self-esteem show better results when under stress, as opposed to individuals with low self-esteem (Solomon, Greenberg, & Pyszczynski, 1991, according to Wray & Stone, 2005).

#### *Research Problem*

The problem of this research is examining the correlations between the degree of trait and state anxiety prominence, on one hand, and global and specific self-esteem, on the other hand; i.e, examining the difference in the degree of anxiety and self-esteem prominence in relation to the gender of the examinees.

#### *Research Objectives*

Examining the possibility of the existence of correlations between the degree of trait anxiety prominence and global self-esteem;

Examining the possibility of the existence of correlations between the degree of trait anxiety prominence and specific self-esteem;

Examining the possibility of the existence

of correlations between the degree of state anxiety prominence and global self-esteem;

Examining the possibility of the existence of correlations between the degree of state anxiety prominence and specific self-esteem;

Examining the possibility of the existence of differences in trait anxiety prominence in relation to the gender of the examinee;

Examining the possibility of the existence of differences in state anxiety prominence in relation to the gender of the examinee;

Examining the possibility of the existence of differences in global self-esteem prominence in relation to the gender of the examinee;

Examining the possibility of the existence of differences in specific self-esteem prominence in relation to the gender of the examinee;

## METHODS

State-Trait Anxiety Inventory-STAI (*State-Trait Anxiety Inventory, Spielberger, 1983*) was used to assess the degree of state and trait anxiety prominence. It consists of 40 items: 20 were designed to assess trait anxiety and the other 20 aimed at evaluating the state anxiety. The Rosenberg Self-Esteem Scale - RSE (*Rosenberg Self-Esteem Scale, Rosenberg, 1965*) was used to assess the global self-esteem. The State Self-Esteem Scale (SSES, *Heatherton & Polivy,*

*1991*) was used to assess the specific self-esteem and also to assess the specific self-evaluation of the: 1. Physical appearance 2. Social adequacy and 3. Intellectual abilities.

## Research sample

The research was conducted on an appropriate sample comprising of 127 students (of both genders) of the Faculty of Sport and Physical Education in Nis.

## RESULTS

### *The correlation between Anxiety and Self - Esteem*

It was also examined whether there are any correlations between anxiety and global and specific self-esteem. It has been determined (Table 1.) that there is a pronounced negative correlation between State anxiety and the degree of Global self-esteem ( $r = -0.486$ ;  $Sig = 0.000$ ), also with Specific self-esteem ( $r = -0.712$ ;  $Sig = 0.000$ ) and all the subscales of Specific self-esteem: Intellectual abilities subscale ( $r = -0.591$ ;  $Sig = 0.000$ ), Social adequacy subscale ( $r = -0.587$ ;  $Sig = 0.000$ ) and Physical appearance subscale ( $r = -0.648$ ;  $Sig = 0.000$ ).

It has been revealed (Table 2.) that there is a negative correlation between State anxiety prominence and Global self-esteem ( $r = -0.393$ ;  $Sig = 0.000$ ). Furthermore, there is a negative

*Table 1. The correlation between Trait anxiety and Global and Specific Self-esteem*

		The Rosenberg Global Self-Esteem Scale	Specific Self-Esteem Scale	Intellectual Abilities Subscale	Social Adequacy Subscale	Physical Appearance Subscale
Trait Anxiety	R	-.486**	-.712**	-.591**	-.587**	-.648**
	Sig.	.000	.000	.000	.000	.000
	N	127	126	127	127	125

*Table 2. The correlation between State anxiety and Global and Specific Self-Esteem.*

		The Rosenberg Global Self-Esteem Scale	Specific Self-Esteem Scale	Intellectual Abilities Subscale	Social Adequacy Subscale	Physical Appearance Subscale
State Anxiety	R	-.393**	-.634**	-.594**	-.466**	-.579**
	Sig.	.000	.000	.000	.000	.000
	N	126	126	127	127	125

correlation between State anxiety prominence and Specific self-esteem ( $r = -0.634$ ;  $Sig = 0.000$ ). A negative correlation has also been obtained between State anxiety and all the subscales of Specific self-esteem: Intellectual abilities subscale ( $r = -0.594$ ;  $Sig = 0.000$ ), Social adequacy subscale ( $r = -0.466$ ;  $Sig = 0.000$ ) and Physical appearance subscale ( $r = -0.579$ ;  $Sig = 0.000$ ).

*Global and Specific Self-Esteem Prominence and Differences in Relation to the Gender of Examinees*

Table 3. shows data concerning the theoretical and empirical range of scores in the subscales. It can be seen that there are no major deviations of the empirically obtained maximum in relation to the theoretical maximum scores on

*Table 3. Theoretical and empirical range of scores and Global, Specific and Anxiety prominence of the total sample of students*

	The Rosenberg Global Self-Esteem Scale	Specific Self-Esteem Scale	Intellectual Abilities Subscale	Social Adequacy Subscale	Physical Appearance Subscale	Trait anxiety	State anxiety
N	127	126	127	127	125	126	125
Mean	34.7817	72.1620	26.0559	24.5245	21.6197	22.8182	18.7832
Std. Deviation	6.22181	9.45736	3.56781	3.87631	3.60207	8.44838	8.21296
Empir. Minimum	26.00	56.00	19.00	16.00	15.00	3.00	1.00
Empir. Maximum	50.00	95.00	35.00	35.00	30.00	37.00	34.00
Theor. Minimum	10	20	7	7	6	0	0
Theor. Maximum	50	100	35	35	30	60	60

the self-esteem scales. Still, it is noticeable that there are deviations in the empirically obtained minimums in relation to the maximums, which may point to the fact that the sample of examinees did not comprise of any individuals with extremely low self-esteem.

When dealing with the anxiety scales, there are no major deviations of the empirical from the theoretical minimums, while there are

deviations of the empirical from the theoretical maximums, which points to the fact that there were no examinees with extremely pronounced anxiety.

The data shown in Table 4. points out the existence of differences in the degree of self-esteem prominence in the sphere of physical appearance between examinees of the opposite gender, which shows that male students of sport

*Table 4. T-test – differences in the degree of self-esteem prominence in relation to the gender of examinees*

	Gender	AS	t	Sig.
The Rosenberg Global Self-Esteem Scale	Male	34.1563	.280	.103
	Female	36.0000		
Specific Self-Esteem	Male	72.2165	.338	.653
	Female	71.4419		
Intellectual Abilities Subscale	Male	25.8041	-1.077	.283
	Female	26.5000		
Social Adequacy Subscale	Male	24.4124	-.061	.952
	Female	24.4545		
Physical Appearance Subscale	Male	22.0000	2.160	.033
	Female	20.6047		

Table 5: T-test – differences in the degree of Trait anxiety in relation to the gender of examinees

	Gender	AS	t	Sig.
Trait Anxiety	Male	22.5052	-1.141	.256
	Female	24.2558		

Table 6: T-test – differences in the degree of State anxiety in relation to the gender of examinees

	Gender	AS	t	Sig.
State anxiety	Male	18.8125	-.371	.711
	Female	19.3721		

and physical education (AS= 22.00) have higher self-esteem than female students (AS= 20.60) in the sphere of physical appearance. The obtained difference is statistically significant at the level of Sig. < 0.05.

Differences in prominence among the other aspects of Specific self-esteem (Intellectual Abilities and Social Adequacy Subscale), as well as Global self-esteem, are not statistically significant at the level of Sig. < 0.05.

By examining the data shown in Table 5. and Table 6. it can be noticed that the found differences in the Trait and State anxiety prominence in relation to the gender of the examinees are not statistically significant at the level of Sig. < 0.05.

## CONCLUSION

The results obtained in this research prove the existence of a high negative and statistically significant correlation between the trait and state anxiety, on one hand, and the global and specific self-esteem, on the other. This confirms findings of the past researches (Mruk, 1999, according to Wray & Stone, 2005, Greenberg, Pyszczynski, & Solomon, 1995; according to Wray & Stone, 2005). The objectives of future researches should be determining the nature of this causal relationship.

The most encouraging results are the comparisons between the theoretical scores (minimum and maximum) and the empirically obtained results among future teachers of sport and physical education. The comparisons reveal that there were no students with extremely low self-esteem or high anxiety among the ex-

aminees. This finding is encouraging because it reveals a high degree of psychological health and it justifies our hope that the students would make a good teachers as well. Future researches should examine whether this state results from the fact that physical exercise has anxiolytic effect on individuals with a pronounced anxiety trait (Steptoe et al., 1989, according to Cronin, 2005), so that students who are highly physically active have lower anxiety, or that is their inherent state.

There is no significant difference between male and female students of sport and physical education when it comes to anxiety and self-esteem prominence, except when it comes to physical appearance. The results reveal that male students of sport and physical education have more pronounced self-esteem in the sphere of physical appearance in relation to female students. The obtained results could be explained by the female students' perfectionism, i.e, the cultural facts.

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## АНКСИОЗНОСТА И САМОПОЧИТУВАЊЕТО КАЈ СТУДЕНТИТЕ ПО СПОРТ И ФИЗИЧКО ВОСПИТУВАЊЕ

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(Испиражувачка белешка)

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### Апстракт

Цел на истражувањето претставува утврдување на поврзаноста меѓу изразеноста на анксиозноста како црта и како состојба, од една страна и глобалното и актуелното самопочитување, од друга страна, односно, утврдување на разликата во изразеноста на анксиозноста и самопочитувањето со оглед на полот на испитаниците. За мерење на степенот на изразеноста како состојба и анксиозноста како црта, користен е Инвентарот на анксиозност како црта и како состојба - STAI (*State-Trait Anxiety Inventory*, Spielberger, 1983). За мерење на изразеноста на глобалното самопочитување, користена е Розенберговата скала на глобално самопочитување - RSE (*Rosenberg Self-Esteem Scale*, Rosenberg, 1965). За мерење на актуелното самопочитување, користена е скалата на актуелното самопочитување (SSES, *Heatherton & Polivy*, 1991) која го мери актуелното самопроценување на: 1. Физичкиот изглед, 2. Социјалната адекватност и 3. Интелектуалните способности. Истражувањето е спроведено на пригоден примерок од 127 студенти од двата пола, на Факултетот за спорт и физичко воспитување во Ниш. Резултатите од истражувањето покажаа дека постои изразена негативна корелација на анксиозноста како состојба и анксиозноста како црта со степенот на глобалното самопочитување и со актуелното самопочитување кај сите субскали на актуелното самопочитување. Добиели се разлики во степенот на изразеноста на самопочитувањето во сферата на изгледот меѓу испитаниците од различен пол, така што студентите имаа поизразено самопочитување, отколку студентките.

**Клучни зборови:** студентите по спорт, истражување за анксиозност,  
истражување за самопочитување, анксиозност како црта, глобално самопочитување,  
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