

# Anxiety, self-esteem and competition ranking of judokas

## Authors' Contribution:

- A** Study Design
- B** Data Collection
- C** Statistical Analysis
- D** Manuscript Preparation
- E** Funds Collection

Hakan Kolayis<sup>ABCD E</sup>, Ihsan Sari<sup>ADE</sup>

Sakarya University, School of Physical Education and Sport, Sakarya, Turkey

**Source of support:** Departmental sources

**Received:** 17 January 2011; **Accepted:** 23 January 2011; **Published online:** 31 January 2011

## Abstract

### Background and Study Aim:

The aim of this study was anxiety, self-esteem, self-confidence levels and competition ranking of Turkish judokas, the relationship of these variables with competition ranking.

### Material/Methods:

This study was conducted in Senior Men Turkish Judo Championship with 126 judokas. CSAI-2 (Competitive State Anxiety Inventory), STAI (State Trait Anxiety Inventory), Cooper Smith Self-esteem Inventory were used for data collection. The data was analysed in SPSS 13.0 package program.

### Results:

t-test results showed that there was not a significant difference between males and females according to their state anxiety, cognitive anxiety, somatic anxiety, self-confidence and self-esteem points. Moreover, there was a correlation between cognitive anxiety and state anxiety, somatic anxiety and state anxiety and somatic anxiety and cognitive anxiety. Results also showed that there was a negative significant correlation between the variables of self-confidence and state anxiety, self-confidence and cognitive anxiety, self-confidence and somatic anxiety. Competition ranking was not found to be correlation with any of the variables excluding education level.

### Conclusions:

Self-esteem and anxiety points did not significantly differ according to gender. It was found that educational level significantly correlated with competition ranking and state-anxiety.

### Key words:

anxiety • self-esteem • competition ranking • self-confidence • judokas

### Author's address:

Hakan Kolayis, Sakarya University, School of Physical Education and Sport; Esentepe Campus, 54187, Sakarya, Turkey; e-mail: hkolayis@sakarya.edu.tr

## BACKGROUND

**Anxiety** – it is a psychological and physiological state characterized by somatic, emotional, cognitive, and behavioral components.

**Self-esteem** – a person's overall evaluation or appraisal of his or her own worth.

Emotions affect athletes at many levels of personal and sport functioning. The impacts of emotions might be physiological, psychological and behavioural. Understanding how emotions affect athletes is essential to gain mastery over their emotions during competition sessions [1].

Self-esteem refers to how much value people place on themselves. Higher self-esteem stands for positive self-evaluation and low self-esteem refers to an unfavourable self-opinion [2]. Self-esteem is indispensable for high quality of life [3] and is related to life satisfaction [4]. Higher self-esteem is contributed to feeling of having life's control and to feeling of being an effective person

[5] and it is one of the key indicators of good mental health and a significant correlate of life adjustment [6].

Anxiety is a state of uneasiness, accompanied by dysphonia and somatic signs and symptoms of tension, concentrated focus on possible failure, misfortune or danger [7]. State anxiety refers to relatively temporary states of unpleasant feelings of tension and apprehension accompanied by arousal of the autonomic nervous system [8] and pre-competition anxiety is the feeling of anxiety symptoms due to competition and is a widely prevalent condition that exists among athletes of all levels and within every sport [9], Martens et al. [10] proposed the multidimensional theory of anxiety in order to explain precompetitive sport anxiety. The theory

**Competition ranking** – act of classifying of athletes in a sportive event.

**Self-Confidence** – the attitude which allows people to have a positive and realistic perception of themselves and their abilities.

**Judokas** – practitioners of judo.

states that anxiety is comprised of two parts which are somatic and cognitive anxiety, that impact performance.

Cognitive anxiety is the mental component of anxiety. It is caused by negative expectations about success or by negative self-evaluation. The definition of somatic anxiety refers to physiological and affective components of anxiety which develop directly due to autonomic arousal [11].

As anxiety is a negative state and is accompanied by some negative emotions such as anger and worry, the relationship between anxiety and sport performance has been always an attracted subject for sports scientists [12]. Many researchers tried to explain the relationship between performance and anxiety [13–19]. Murphy [20], states that in an anxious athlete who is preparing for competition, the biological preparedness function of anxiety results in some physiological changes which have a direct impact on sport performance. These changes are, for instance, increased muscle tension, heart rate and respiration rate. High anxiety might also negatively affect attention and cognitive flexibility. Anxiety occurs when the athlete perceives a threat to some value which is essential. The perceived threat might be injury, shame or loss of prestige [20]. It was also stated that athletes should be supported by coaches to manage anxiety [21].

Actually, anxiety might be harmless to some degree. Hardy et al. [22] stated that each athlete has an anxiety zone within which performance will be optimal, and if anxiety goes to outside of this zone performance will be impaired. This also suggests that each athlete has an anxiety zone which is individual and it changes according to various individual features (age, gender, sports year, emotional status etc.)

There are various individual factors that affect self-esteem and anxiety. For example, age, gender, socio-economic status, school type, occupation of father, education level of father is some of the factors that affect level of self-esteem and anxiety [5,6]. For example, physical body provides a substantial interface between the individuals and the world that it influences self-esteem. [6]. For athletes this could be interpreted as feeling competent or perceiving high performance might result in higher self-esteem. Moreover, there are also social and cultural factors that affect self-esteem. How we think other people perceive us or what is valued in the society is important for self-esteem. In addition, social comparison is also a factor affecting self-esteem. Social comparison involves observing other people and comparing ourselves to them. For example, an athlete perceives themselves as a good athlete when seeing his performance in 400 meters. But if they compare themselves with another athlete whose performance is much better, their self-esteem will get lower [6].

The aim of this research is to outline the general states of anxiety, self-esteem and **self-confidence** levels of Turkish **judokas** in terms of some demographic characteristics and the relationship of these variables with **competition ranking**.

## MATERIAL AND METHODS

### Participants

This study was conducted in Senior Men Turkish Judo Championship. 126 participants (82 male made of 65.1% of the participants and 44 female made of 34.9% of the participants) voluntarily participated in the study; the mean of their age was:  $x: 20.53 \pm 2.93$  years, the mean of training age was;  $x: 8.86 \pm 3.84$  years, education level of 65 of the participants (70%) was university and 28 of the participants (30%) reported their educational level as high school.

### Measures

**CSAI-2 (Competitive State Anxiety Inventory)** is used to measure cognitive anxiety, somatic anxiety and self-confidence. It was formed by Martens, Burton and Vealey in 1981 and there are 27 questions in this inventory. CSAI-2 was translated into Turkish and validity and reliability were reported by Koruç in 1998. Translation reliability was for cognitive anxiety;.925, somatic anxiety;.928, self-confidence;.950. Test retest reliability was found to be; cognitive anxiety;.961, somatic anxiety;.929, cognitive anxiety;.929, self-confidence;.949. In the result of the comparison, a significant difference was not found between STAI and CSAI-2, ANOVA ( $26.1 = .69; p(.05)$ ). This finding was received as criterion validity. Inventory loses decision near competition as construction validity. It was found for two weeks with row;.561,.672,.541, end of two days with row;.230,.223,.321 [23].

**STAI (State Trait Anxiety Inventory)** was developed by Spielberger et al. (1970) and in the present study. The inventory was adapted into Turkish in 1985 by Öner and Le Compte. The scale determines how an individual would feel, independently of a particular situation he was in. The inventory is made up of 20 items and provides a four-point Likert type assessment (1 is for almost never, 4 is for almost always) and was used for overlap validity in the present study. Cronbach's alpha of the scale was between .83 and .87 and test retest reliability was reported to be between .34 and .72 [24].

**Cooper Smith Self-esteem Inventory** was developed by Stanley Coopersmith (1975). It evaluates the attitudes of answerers towards themselves in different areas. Tufan and Turan (1987) made the language adaptations for Turkish participants. Reliability coefficient

**Table 1.** Descriptive statistics for participants.

	N	Minimum	Maximum	Mean	SD
Age	98	16	32	20.5306	2.92942
Training age	77	1	22	8.8571	3.83788
State anxiety	97	20	62	39.5979	9.51059
Cognitive anxiety	95	9	28	19.5263	4.36095
Somatic anxiety	95	9	29	16.2632	4.51525
Self-confidence	95	12	36	26.8842	5.55028
Self-esteem	71	20	92	65.8028	14.1145

**Table 2.** The Difference between Genders according to anxiety and self-esteem levels.

Variable	Gender	N	Mean	SD	P
State anxiety	Male	61	36.8852	9.23959	0.538
	Female	36	44.1944	8.19693	
Cognitive anxiety	Male	60	18.7	4.28755	0.998
	Female	35	20.9429	4.17234	
Somatic anxiety	Male	60	15.3167	4.38214	0.868
	Female	35	17.8857	4.33027	
Self-confidence	Male	60	28.0333	5.46163	0.997
	Female	35	24.9143	5.20391	
Self-esteem	Male	44	65.2727	12.90459	0.404
	Female	27	66.6667	16.11497	

A significant difference between males and females was not observed for the values of state anxiety, cognitive anxiety, somatic anxiety, self-confidence and self-esteem ( $p > 0.5$ ).

was found to be 0.76 ( $p < 0.05$ ). For the validity of the scale the relationship between Cooper Smith Self-esteem Inventory and Rosenberg Self-esteem Inventory and the correlation was reported to be 0.61 ( $p < 0.05$ ). The grown-up version of the scale was used. The scale which is made up for 25 items was scored between 0-1 [25].

#### Data collection

The questionnaires were collected from the participants in the competition day of Senior Men Turkish Judo Championship for the purpose of comparing anxiety and self-esteem points according to different demographic characteristics and competition rankings. Participants voluntarily participated in the study and the data was collected from the judokas by the researchers in face to face interactions.

#### Analysing of the data

The data was analysed in SPSS 13.0 package program by descriptive statistic techniques, independent variables t-test and Pearson's correlation test. Level of significance was determined to be 0.05.

## RESULTS

In this research, the aim was to examine anxiety, self-esteem and self-confidence levels of Turkish judokas in terms of some demographic characteristics and the relationship of these variables with competition ranking. The results of the data analysis were given below (Tables 1–3).

Pearson's correlation test revealed that there was a significant positive correlation between the values of age and training age ( $r: 0.685, p < 0.05$ ), age and self-confidence ( $r: 0.256, p < 0.05$ ), training age and self-confidence ( $r: 0.289, p < 0.05$ ), state anxiety and cognitive anxiety ( $r: 0.435, p < 0.05$ ), state anxiety and education level ( $r: 0.216, p < 0.05$ ), state anxiety and somatic anxiety ( $r: 0.597, p < 0.05$ ), cognitive anxiety and somatic anxiety ( $r: 0.578, p < 0.05$ ), education level and competition ranking ( $r: 0.244, p < 0.05$ ). A negative correlation was observed between the values of age and cognitive anxiety ( $r: -0.278, p < 0.05$ ), age and education level ( $r: -0.376, p < 0.05$ ), training age and state anxiety ( $r: -0.330, p < 0.05$ ), training age and education level ( $r: -0.434, p < 0.05$ ), training

**Table 3.** The correlation among age, anxiety, self-esteem, competition ranking, educational level and training age.

		Age	Training age	State anxiety	Cognitive anxiety	Education level	Somatic anxiety	Self-confidence	Self-esteem
Age	r	1							
	p								
Training age	r	0.685*	1						
	p	0.000							
State anxiety	r	-0.162	-0.33*	1					
	p	0.116	0.003						
Cognitive anxiety	r	-0.278*	-0.219	0.435*	1				
	p	0.007	0.061	0.000					
Education level	r	-0.376*	-0.434*	0.216*	0.061	1			
	p	0.000	0.000	0.038	0.573				
Somatic anxiety	r	-0.174	-0.28*	0.597*	0.578*	0.13	1		
	p	0.095	0.016	0.000	0.000	0.227			
Self-confidence	r	0.256*	0.289*	-0.652*	-0.367*	-0.22*	-0.47*	1	
	p	0.013	0.013	0.000	0.000	0.04	0.000		
Self-esteem	r	-0.045	-0.18	-0.227	-0.014	0.132	-0.109	0.151	1
	p	0.774	0.3	0.148	0.929	0.409	0.499	0.347	
Competition ranking	r	-0.083	-0.107	-0.044	-0.223	0.244*	-0.024	-0.022	-0.021
	p	0.471	0.424	0.707	0.056	0.036	0.842	0.855	0.886

\* p&lt;0.05.

age and somatic anxiety ( $r: -0.280, p<0.05$ ), state anxiety and self-confidence ( $r: -0.652, p<0.05$ ), cognitive anxiety and self-confidence ( $r: -0.367, p<0.05$ ), education level and self-confidence ( $r: -0.220, p<0.05$ ), somatic anxiety and self-confidence ( $r: -0.470, p<0.05$ ).

## DISCUSSION

Supporting our results, t-test results revealed that there was not a significant difference between males and females according to state anxiety, cognitive anxiety, somatic anxiety, self-confidence and self-esteem points. Similarly, in a study, conducted with high school student, it was found that self-esteem and anxiety scores did not differ according to gender [5,26–28]. In contrast, Bucaria (1989) conducted a study with 424 participants and reported a difference between males and females according to their scores of self-esteem. Moreover, Serin & Öztür [5] and Taşğın et al. [30] found a significant difference for anxiety points according to gender.

The results also revealed that there was a correlation between cognitive anxiety and state anxiety, somatic anxiety and state anxiety and somatic anxiety and cognitive

anxiety. This finding can be interpreted as anxiety types may increase or decrease together. The effect of an increase in a type of anxiety might make changes in other types of anxiety.

It was also found that there was a negative significant correlation between the variables of self-confidence and state anxiety, self-confidence and cognitive anxiety, self-confidence and somatic anxiety. This shows that self-confidence of the athletes increased when anxiety scores dropped. Previous study reported that anxiety and self-confidence points negatively and significantly correlating [31]. Athletes whose self-confidence is higher are likely to have lower anxiety; this might eventually affect their performance.

Apart from the results above, we initially hypothesized that there was a positive significant correlation between competition-ranking, self confidence and self-esteem, we also hypothesized that a negative correlation between anxiety and competition-ranking. However, competition ranking was not found to be correlation with any of the variables excluding education level. This implies that more successful athletes were not the ones who have higher levels of self-confidence and self-esteem or

lower anxiety. Considering the relevant literature, these results were surprising [32,33].

Competition-ranking was found to be significantly and positively correlating with educational level. Higher educational level might be positively affecting cognitive process of athletes. Maybe that is why it was found in this study that educational level was correlated with competition-ranking. Higher educational level or better cognitive abilities might result in better outcomes related to, for instance, decision making, risk-taking, evaluating situating and acting properly, evaluating the game etc.

## CONCLUSIONS

To conclude, when we consider the results of this study, self-esteem and anxiety points did not significantly differ according to gender, but it was found that educational level significantly correlated with competition ranking and state-anxiety. According to this result it can be said that if we increase the number of athletes who have high educational level, it might eventually increases athletes' competition ranking. Finally, we advise to researchers for future studies that they can study in the same area with more athletes from different sports.

## REFERENCES:

- Taylor J, Wilson G: Applying sport psychology. Four perspectives. Champaign, IL: Human Kinetics, 2005
- Baumeister RF, Campbell JD, Krueger JL, Vohs KD: Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest*, 2003; 4: 1–44
- Branden N: What is self-esteem? Paper presented at the International Conference on Self-esteem, Asker/Oslo, Norway. (Report No. CG 022 939). (ERIC Document Reproduction Service No. ED 325 783, 1990
- Biddle SJ, Fox KR, Boutcher SH: (eds.) *Physical Activity and Psychological Well-Being*. Routledge: London, 2000; 63–87
- Serin NB, Öztürk S: The relationship between the self esteem and the anxiety levels of children between the age 9–13 whose parents had divorced and the same range of whom are not divorced. *Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi*, 2007; 8: 117–12 [in Turkish]
- Buckworth J, Dishman RD: *Exercise psychology*. Champaign, IL, Human Kinetics, 2002
- Corman AM: *Dictionary of psychology*. Oxford, UK: Oxford University Press, 2003
- Vingerhoets G: Perioperative anxiety and depression in openheart surgery. *Psychosomatics*, 1998; 39: 30–37.
- Alexander D: Psychophysiological effects of pre-competition anxiety on basketball performance. Unpublished master dissertation submitted to California State University, 2009
- Martens R, Burton D, Vealey RS et al: Development and validation of the Competitive State Anxiety Inventory-2. In *Competitive Anxiety in Sport*. Martens R, Vealey RS, Burton D (eds.), Champaign, IL, Human Kinetics, 1990
- Martens R, Vealey RS, Burton D: *Competitive anxiety in sport*. Champaign, IL, Human Kinetics, 1990
- Tiryaki S: *Spor Psikolojisi, Kavramlar, Kurallar ve Uygulama, Eylül Kitap ve Ya-yinevi*. Ankara, 2000 [in Turkish]
- Kleine D: Anxiety and sport performance: A meta-analysis. *Anxiety Research. An International Journal*, 1990; 2: 113–31
- Burton D: Do anxious swimmers swim slower? Reexamining the elusive anxiety performance. *Journal of Sport Psychology*, 1988; 10: 45–61
- Pijpers JR, Oudejans RRD, Holsheimer F, Bakker FC: Anxiety-performance relationships in climbing: a process-oriented approach. *Psychology of Sport and Exercise*, 2003; 4: 283–304
- Pijpers JR, Oudejans RRD, Bakker FC: Anxiety-induced changes in movement behaviour during the execution of a complex whole-body task. *Quarterly Journal of Experimental Psychology*, 2005; 58: 421–45
- Oudejans RRD, Pijpers JR: Training with anxiety has a positive effect on expert perceptual-motor performance under pressure. *Quarterly Journal of Experimental Psychology*, 2009; 62: 1631–47
- Bakker FC, Withing HTA, y Van der Brug H: *Sports Psychology: Concepts and Applications*. New York: John Wiley and Sons, 1990
- Smith D, Bar-Eli M: *Essential Readings in Sport and Exercise Psychology*. Champaign, IL, Human Kinetics, 2007
- Murphy S: *The sport psych handbook* (ed.), Human Kinetics Publisher, Inc. Champaign, 2005
- Weinberg RS, Gould D: *Foundations of sport and exercise psychology* (3<sup>rd</sup> ed.). Champaign, IL, Human Kinetics, 1998
- Hardy L, Jones G, Gould D: *Understanding psychological preparation for sport: Theory and practice in elite athletes*, Chichester, UK, Wiley, 1996
- Koruç Z: "CSAI-2" nin Türkiye uyarlaması, ön çalışma I. *Spor Bilimleri V. Kongresi*. Ankara: Hacettepe University, 1998 [in Turkish]
- Civan A, Ari R, Görücü A, Özdemir M: Bireysel ve takım sporcularının müsabaka öncesi ve sonrası durumluluk ve sürekli kaygı düzeylerinin karşılaştırılması. *Uluslararası İnsan Bilimleri Dergisi*, 2010; 7: 193–206 [in Turkish]
- Tufan B, Turan N: Coopersmith Benlik Saygısı Ölçeği üzerinde geçerlik, güvenilirlik çalışması. 23. Ulusal Psikiyatri Kongresi Bildirileri, İstanbul, 1987 [in Turkish]
- Karakaya I, Coşkun A, Ağaoglu B: Yüzücülerin depresyon, benlik saygısı ve kaygı düzeylerinin değerlendirilmesi. *Anadolu Psikiyatri Dergisi*, 2006; 16: 40–45 [in Turkish]
- Çebe F: Sosyal hizmetler ve çocuk esirgeme kurumu yetiştirme yurtlarında barınan çocukların "benlik saygısı", "depresyon", "kaygı" skorlarının ailesi yanında kalan çocuklarla karşılaştırılması. Master dissertation submitted to Istanbul University, 2005 [in Turkish]
- Ibrahim H, Morrison N: Self-actualization and self-concept among athletes. *Res Q*, 1976; 47: 68–79
- Bucaria LJ: The relation of sports status to body image, self-esteem and fearfulness in high school adolescents. *Dissertation Abstracts International*, 1989; 50: 3086-A
- Taşgın Ö, Tekin M, Altınok E: The study about physical education teachers' levels of anxiety from the aspect of a number of modifiers (sample Batman). *Ataturk Journal of Physical Education and Sports Sciences*, 2007; 9: 12–20 [in Turkish]
- Pastore DR, Fisher M, Friedman SB: Abnormalities in weight status, eating attitudes, and eating behaviors among urban high school students: Correlations with self-esteem and anxiety. *J Adolesc Health*, 1996; 18: 312–19
- Chapman C, Lane AM, Brierley JH, Terry PC: Anxiety, self-confidence and performance in taekwon do. *Perceptual and Motor Skills*, 1997; 85: 1275–78
- Chamberlain ST, Hale BD: Competitive state anxiety and self-confidence: intensity and direction as relative predictors of performance on a golf putting task. *Anxiety, Stress, and Coping*, 2007; 20: 197–208