

Responses to the Competitive State Anxiety Inventory–2 by the Taekwondo Athletes Participated in the Turkey Taekwondo Championship Competitions

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Abstract: Background: The taekwondo (TKD) is a popular sport which people engaged in more than 180 countries at any age in the world. Besides its popularity, the studies on this field continue to increase gradually. The purpose of this study, therefore, is to measure pre-competition anxieties, and to evaluate data obtained of the pre-competition concerns of the taekwondo athletes who participated in the Turkey Taekwondo Championship Competitions. **Materials and Methods:** The questionnaires of the Competitive State Anxiety Inventory–2 (CSAI–2) were asked the taekwondo athletes who participated in the Turkey Championship Competitions prior to the 31 to 59 minutes for the age categories of 12 to 14 and 16 to 21. Aforementioned study was carried out on 348 (n= 140 female, n= 208 male) taekwondo athletes for the age categories of 12 to 14 and 16 to 21 who voluntarily participated in the study. **Results:** Significant differences, total scores of taekwondo athletes, were observed for the age categories of 12 to 14 (n=167) and 16 to 21 (n=181) and there were significant differences in the values of analysis results between males (62,91 ±11,25 – 7,54 ±18,92) and females (62,64 ±11,01 - 3,22 ±22,44) in terms of “the right of the statement to indicate how feel right now” and “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport.” **Conclusions:** Intensity and direction of cognitive anxiety, somatic anxiety and self-confidence are more effective in explaining and planning performance differences and anxiety management.

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Introduction

Anxieties at elevated levels are common reactions against the conditions caused by stressful competition sports, and such kind of moods are perceived as undesired emotional situation. The level of anxiety, therefore, may have the power in it to block the full capacity of an athlete. For these reasons, the sport psychologists have tried to understand the impact of anxiety in sport performances. The metabolic characteristics provide the basis for the functional situations for all kind of sport branches. The taekwondo, a complex sport field, carries many anthropological values in it, and these features have some important benefits for being successful in taekwondo. Some specific preparations in psychological, functional, and physical aspects are required so that an athlete can demonstrate good performance. The psychological ones among these factors include important elements in it for two reasons. First, the feelings affect objectively or subjectively the athletic performance. Second, it provides some basic information that arranges athlete's relationship with the environment. To understand the emotional state of an athlete represents some important factors in the studies for his/her

behaviour, development, planning, and implementation capabilities (Cerin, 2003).

This sport branch, then main purpose of it had been to improve war skills and techniques of soldiers, and to provide warrior training to individuals, had been applied first only in Korea, and then began to spread, especially after the Korean War, all over the world in later periods. The taekwondo sport in the world has experienced a process of transforming from its traditional structure to modern sports since 1950 (Shirley and Gabriel, 2011). According to the records of the sport of taekwondo dating to the end of 1988, the taekwondo has been commonly exercised by a total of 22 million people of 34 countries in Asia continent, 26 countries in Africa continent, and 24 countries in America continent (Yalcinkaya, 1987).

The taekwondo is a branch of sport which was developed, in the form of martial arts sport, in Korea 120 centuries ago (Lee and Kim, 2007). In more recent times, taekwondo has transformed from a Korean self-defense skill set during warfare to a recognized international sport (Kazemi et al, 2010). Then, taekwondo has quickly become a sport branch exercised worldwide. According to the figures of the year 2009, more than 80 million people in 180

countries worldwide have involved in taekwondo (Shirley and Gabriel, 2011). The Taekwondo World Championship was first held in 1973 (Yalcinkaya, 1987), and it was 1994 that this branch was decided to take part in competitions as a branch of the olympic sports (Shirley and Gabriel, 2011). Taekwondo has been accredited as an olympic event since the Olympic Games of Sydney in the year 2000 (Ramazanoglu, 2012). The words 'taekwondo' translate as "tae" to hit using the foot, "kwon" to hit using the fist, and "do" referring to the art. This term directly translates into the art of kicking and punching. Taekwondo is unique by the predominant use of powerful kicking techniques (Kazemi et al., 2010). The taekwondo is a combat (martial) sport that forms the art of foot and fist fight (Shirley and Gabriel, 2011). In fact, this sport is not meant to combat against others, but the struggles of human by himself/herself (Cular et al., 2011). The main purpose of the taekwondo training, on the other hand, is to provide any taekwondo athlete to acquire humility by means of social behaviours. The self-confidence in an individual increases by the nature of this sport. For this reason, the virtues of manhood and humility incurred are based principally on a sense of self-confidence (Gil, 1978). A taekwondo athlete can demonstrate his/her performance only defeating their opponents using quick and clear kicks (Cular et al., 2011).

"Two major taekwondo competition systems, the WTF and ITF, are recognized, and can be differentiated by the competition rules, techniques and equipment used. The WTF competition system regulates full contact and kicks and strikes to the body and head as assented techniques. The following protection equipment is prescribed: trunk protector, dobok (white trousers and jacket), forearm and shin guards, head protector, groin guard and belt" (Cular et al., 2011). Contrary to ITF competitors, "WTF, do not wear trunk protectors, but have hand and feet safety equipment, while strikes are performed through light contact. The same techniques are allowed as in the WTF with the addition of the head punch. Currently, the WTF sparring discipline is the only olympic category among them" (Cular et al., 2011).

Anxiety as a state was instead defined as subjective, consciously perceived feelings of apprehension and tension accompanied by or associated with activation arousal of the autonomic nervous system (Spielberg, 1966). The anxiety defined in sports field is a "tendency to perceive a threat to the competition conditions, and to respond with feelings of anxiety and stress against these situations. The indications of anxiety may also be associated with stress of participating in a sport competition. As a definition, stress is the process that involves the

perception of a substantial imbalance between environmental demand and response capabilities under conditions in which a failure to meet demands is perceived as having important consequences and is responded to with increased levels of cognitive and somatic state anxiety" (Lynette et al., 2003). Anxiety has been identified usually under cognitive anxiety and somatic anxiety. The cognitive anxiety covers the field in which some adverse situations and of competitors about his/her performance are investigated accordingly (Krane, 1994). The cognitive anxiety can be expressed as the negative image and self doubts about one's own self. The somatic anxiety, on the other hand, can be characterized by the physical symptoms available. For example, sweating palms, stomach cramps and shivering (Krane, 1994), and increased heart rate are defined as tension in the muscles (Lane et al., 1999). Anxiety in sports is among today's study topics as one of the important issues which occupy the researchers so much (Jones and Uphill, 2004). The anxiety in sport takes first place among the issues which are mostly researched in the field of sport psychology (Krane, 1994). The Competitive State Anxiety Inventory-2 (CSAI-2) has been used more than other systems as an instrument of research for the studies in this field (Jones and Uphill, 2004).

The imbalance of perception of an athlete's to respond and cover some environmental demands leads to stress thereby. Anxiety can be expressed, therefore, as anxious anticipation or fear for some dangerous consequences that may arise in the future. Anxiety is accompanied usually by some undesired emotions, stress and tension, and physiological symptoms and signs. Anxiety symptoms relating to sports may also occur as an anxiety disorder. Anxiety disorders refer to the permanent sadness and fears which appear as a result of distress and disorder during age-related functional impairment distress and anxiety disorders, age-appropriate functional circumstances as defined by the Diagnostic and Statistical Manual of Mental Disorders, 4th edition, Text revision (DSM-IV-TR). We can mention studies at school, play, profession, and interpersonal relationships etc. as examples. These situations may take a few months as it may take a few days, and yet take often 6 months or more (Patel et al., 2010).

Many academic studies made versatile investigations on the effects of anxiety in sport performances. Anxiety is due, in general, to the athlete who does not know either how to beat stress. In addition, anxiety also expresses the interpretation of psychological arousal. Some different theoretical models, on the other hand, have been developed to describe the anxiety for sport competitions. Yerkes and Dodson's research on the sport anxiety/

performance relationship was initially based on the inverted-U hypothesis. This hypothesis posited a curvilinear relationship between physiological arousal and performance. Moderate levels of arousal were generally associated with better performance, whereas arousal levels that were too high or too low led to poorer performance (Craft et al., 2003).

The Competitive State Anxiety Inventory-2 has focused, for the last 20 years, on the researches carried out in the field of sport psychology as the preferred method to measure anxiety (Mellalieu et al., 2003). The scale of Competitive State Anxiety Inventory (CSAI) occupies the largest place for the researches in the field of sport psychology (Raudsepp and Kais, 2008). Anxiety is one of the most studied fields of sport psychology, and 22 published scales at least have been used in these studies (Raudsepp and Kais, 2008). The Competitive State Anxiety Inventory-2 (CSAI-2), therefore, is the most widely used measure of competitive status anxiety among them. The CSAI-2, which has been more benefited from in more than 35 articles published in the field of sport psychology, takes its place among the measurement techniques, and it is the most well-known one (Martens et al., 1980). The studies on anxiety can be measured by physiological, behavioral, and cognitive procedures. For that reason, the Competitive State Anxiety Inventory-2 (CSAI-2) is today's most often used scale for measuring anxiety in the field of sport psychology, and it is the one which measures also the situational anxiety. The Competitive State Anxiety Inventory-2 (CSAI-2) has a construction for measuring cognitive anxiety, somatic anxiety, and self-confidence (Gant and Cox, 2004).

The researchers developed the Competitive State Anxiety Inventory-2 (CSAI-2), which was originally designed to measure the cognitive and somatic components of competitive state anxiety. However, during the development of the questionnaire, the authors encountered a third factor, which they subsequently labeled 'self-confidence'. Since the late-1980s, the CSAI-2 has been the most frequently used tool in this field of research (Cerin et al., 2000). The scale of anxiety status takes part on at least two fundamental elements. Martens, Burton, Vealey, Bump, and Smith (1990) developed the scale of multi-directional anxiety status about sports. This tool is known as the Competitive State Anxiety Inventory-2 (CSAI-2) which can make interpretations about the cognitive and somatic situations differently, and it is also used for evaluating the state of self-confidence (Maynard, 1995). Its capability of measuring the self-confidence besides the cognitive and somatic anxiety proves that the measuring tool is a reliable one (alpha reliability

coefficients of .76 - .91), and for this reason, it is accepted as an eligible and effective instrument (Burton, 1988). With this scale, this situation has led to abundance for examining the competition anxiety of athletes in recent years. Other fields, positive or negative (facilitative and debilitative), of the competition anxiety, and the structure of anxiety were investigated by means of various versions of the CSAI-2 (Mellalieu et al., 2003).

Martens, Burton, Rivkin, and Simon (1980) modified the original State-Trait Anxiety Inventory in creating the original CSAI. A major limitation of the CSAI was, though it represented the state anxiety for particular sport fields, that its structure was conceptualized as uni-dimensional one in nature. So, the CSAI-2 was developed as a specific measurement tool in the area of cognitive and somatic anxiety in sport branches. This scale was supported for measuring also the physical harm and common anxiety in addition to cognitive and somatic anxiety. Aforespecified third feature emerged during the validation studies. As a result, three subscales which were the final version of the CSAI-2 took shape thereby; cognitive anxiety, somatic anxiety and self-confidence. Each of these scales has subscales comprised of 9 questionnaires (Craft et al., 2003).

The anxiety and physiological arousal are associated with athletic performance, and they affect performances. This effect is manifested by physiological symptoms. In other words, the cognitive anxiety puts positive effect on the performance if the physiological arousal is low while it puts negative effect on the performance if the physiological arousal is at high levels (Patel et al., 2010). There is a correlation between anxiety and athletic performance. Researchers in the field of sport psychology desired to draw attention to this issue from this point. It was intended, meanwhile, to identify the negative and damaging aspects of anxiety for evaluating academic researches accomplished and for the efforts put for the effective comments, and to eliminate the negative elements those affecting the performances of competitors. In addition to above, it was aimed to improve and correct the unfavorable and negative harmful (anxiety) experiences occurring for competitors. The sport psychologists looked the study on the field of anxiety as an independent structure at first, but they accepted the study, in recent years, as interdependent structures (Craft et al., 2003).

An inherent aspect of competitive athletics is the need for athletes to meet the demands of competition and to perform well under pressure. Depending on how the athlete perceives the demands of competition, he or she may interpret pressure situations in a variety of ways. For example, they may be perceived as a natural part of athletic competition,

or they may invoke heightened levels of stress (Craft et al., 2003). The studies of anxiety can be measured and evaluated using the physiological, behavioural and cognitive procedures, but the most reliable results can be achieved by the self-report questionnaires (Spielberger and Hackfort, 1989). The most commonly utilized evaluation instrument/ tool for measuring the anxiety is the Competitive State Anxiety Inventory-2 (CSAI-2: Martens, Burton, Vealey, Bump, & Smith, 1990), the second version of CSAI-2. The CSAI-2 measures, in addition to cognitive and somatic anxiety, the self-confidence too (Vadocz et al., 1997). Consequently, the CSAI-2 is recognized as a widely used measuring means all over the world to measure the competition anxiety (Woodman and Hardy 2003).

Materials and Methods

Participants

The aim of this study was to measure and evaluate the competitive state anxiety of the taekwondo athletes participating in the competitions for Turkey championships in 2013 for the age categories of 12 to 14 and 16 to 21. Aforementioned study was carried out on 348 taekwondo athletes (n= 140 females, n= 208 males) for the age categories of 12 to 14 and 16 to 21 who voluntarily participated in the study.

Measurement

Competitive State Anxiety Inventory-2 (CSAI-2) Martens et al. (1990) develops the CSAI-2 to be a sport-specific measure of the competitive state anxiety subcomponents of somatic and cognitive anxiety. The validation process for the CSAI-2 also produced a state self-confidence component. Thus CSAI-2 measures the separate components of state somatic anxiety and cognitive anxiety and self confidence (Gant and Cox, 2004).

Then, the participants were asked to self-report a score for this component by choosing a number on a scale from 0 to 27 approximately 31 to 59 minutes prior to competition (Craft et al., 2003). Athletes are asked to indicate "how you feel right now" for each item on a 4-point Likert scale ranging from "not at all" to "very much so. Examples of the cognitive anxiety items include "I am concerned about this competition," and "I am concerned about choking under pressure." These items differ from the somatic anxiety statements such as "I feel nervous" or "I feel tense in my stomach." the self-confidence subscale includes items such as "I feel at ease," and "I'm confident I can meet the challenge." Each of the three subscales has 9 items, which are summed to get a score representing the level of intensity the athlete is feeling for each component of anxiety, and for the self-confidence about performing. Based on the multidimensional anxiety theory Martens et al. (1990)

developed the Competitive State Anxiety Inventory-2 (CSAI-2). This 27-item scale measures the cognitive anxiety, the somatic anxiety and the self-confidence (Krane, 1994). The direction scale for each item required participants to rate whether they perceived the intensity of their feeling to be facilitative or debilitating for performances on a 7-point scale ranging from -3 (too much debilitating) to +3 (too much facilitative). Thus, possible direction scores ranged from -27 to +27 for each of the cognitive anxiety, the somatic anxiety, and the self-confidence.

Procedure

The current multidimensional approach to competitive state anxiety emerged through the work of Martens et al. (1990) and their development of the CSAI-2, which measures cognitive anxiety, somatic anxiety, and self-confidence (Edwards and Hardy, 1996). The time when the CSAI-2 was administered relative to the competition, from 24 hours prior to just 15 minutes, may also affect how well it predicts performance. An assessment of anxiety 24 hours before a competition may not yield the same information about one's anxiety state as when administered just 15 minutes prior to competition. With different studies using different times of assessment, different correlations with performance might well emerge (Craft et al., 2003). The participants in this study were asked to complete the questionnaires of CSAI-2 related to cognitive anxiety, somatic anxiety and self-confidence before a competition (31 to 59 minutes ago).

Data analysis

Some descriptive analyzes were carried out with the aim to provide information about general characteristics of the study groups. The Kolmogorov-Smirnov testing was used for the normality evaluation of the distribution of continuous variables. The independent sample t test was used, therefore, according to the assessment of normality (t-test for independent samples) accomplished.

The matched sample t-test was used, on the other hand, for the repeated comparison of the values according to the assessment of the normality (t-test for dependent samples). The data relating to the continuous variables were presented as average \pm standard deviation. The p-values, when calculated less than 0.05, were considered statistically significant. The calculations were made with available statistical software. (IBM SPSS Statistics 20, SPSS inc., an IBM Co., Somers, NY)

Result

This procedure used each participant's CSAI-2 subscale scores (i.e., intensity and direction of the cognitive anxiety, the somatic anxiety, and self-confidence), physiological arousal, and self-assessment for each of the taekwondo athletes.

Table 1. CSAI-2 subscales before match for the somatic anxiety by age

Somatic Anxiety	Age		p
	12-14 (n=167)	16-21 (n=181)	
Right of the statement to indicate how feel right now	18,83 ±4,93	19,87 ±5,59	0.069*
Thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport	2,11 ±7,35	-1,00 ±8,43	<0.001*
p	<0.001**	<0.001**	
The data were given as Mean ±SD			
* t-test for independent samples		** t-test for dependent samples	

When the statements of the somatic anxiety of the taekwondo athletes were evaluated in terms of the age groups of 12 to 14 (n=167), and 16 to 21 (n=181), some significant differences were determined for the data relating to “the right of the statement to indicate how feel right now” (18,83 ±4,93) - (2,11 ±7,35) with the statements about “thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport” (19,87 ±5,59) - (1,00 ±8,43) (p< 0,05). The differences between 18,83 ±4,93 and 19,87 ±5,59

for the somatic anxiety in terms of the values for “the right of the statement to indicate how feel right now” were observed statistically insignificant for the age groups of 12 to 14, and 16 to 21. The differences, on the other hand, between the values of 2,11 ±7,35 - 1,00 ±8,43 for the age groups of 12 to 14, and 16 to 21 in terms of “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport” were statistically significant (Table 1).

Table 2. CSAI-2 subscales before match for the somatic anxiety by gender

Somatic Anxiety	Gender		p
	Male (n=208)	Female n=140)	
Right of the statement to indicate how feel right now	19,11 ±5,00	19,77 ±5,72	0.255*
Thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport	1,12 ±7,59	-0,44 ±8,67	0.076*
p	<0.001**	<0.001**	
The data were given as Mean ±SD			
* t-test for independent samples		** t-test for dependent samples	

*p < 0.05

The somatic anxiety statements of taekwondo athletes between ages of 12 to 14 (n=167), and 16 to 21 (n=181) were evaluated by gender, and the figures (19,11 ±5,00 - 1,12 ±7,59) obtained in terms of “the right of statement to indicate how feel right now” were found significant for male ones. Some significant differences, similarly, were obtained (19,77 ±5,72- (-0,44 ±8,67) from the analysis results of “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport” for female ones (p< 0,05).

No significant difference, on the other hand, were determined for the somatic anxiety in terms of “the right of the statement to indicate how feel right now” (19,11 ±5,00 - 1,12 ±7,5) for both male and female ones. Likewise, when the figures 1,12 ±7,59 (-0,44 ±8,67) for “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport” were compared that there was no significant difference for male and female taekwondo athletes (Table 2).

Table 3. CSAI-2 Subscales before match for the cognitive anxiety by age

Cognitive Anxiety	Age		p
	12-14 (n=167)	16-21 (n=181)	
Right of the statement to indicate how feel right now	19,36 ±5,57	19,87 ±5,55	0.396*
Thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport	2,73 ±7,14	-1,45 ±8,71	<0.001
p	<0.001**	<0.001**	
The data were given as Mean ±SD			
* t-test for independent samples		** t-test for dependent samples	

*p < 0.05

The cognitive anxiety statements of taekwondo athletes between ages of 12 to 14 (n=167), and 16 to 21 (n=181) were evaluated by age, and some significant differences were obtained as a result of the analyses of the findings (19,36 ±5,57) - (2,73 ±7,14) and (19,87 ±5,55) - (-1,45 ±8,71) for “the right of the statement to indicate how feel right now” and “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport”. The differences between

the values (19,36 ±5,57) - (19,87 ±5,55) for the responses to “the right of the statement to indicate how feel right now” for the cognitive anxiety of taekwondo athletes between ages of 12 to 14, and 16 to 21 were found meaningless statistically. On the other hand, the differences between statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport” (2,73 ±7,14) - (-1,45 ±8,71) for 12 to 14, and 16 to 21 were found statistically meaningful (Table 3).

Table 4. CSAI-2 subscales before match for the cognitive anxiety by gender

Cognitive Anxiety	Gender		p
	Male (n=208)	Female n=140)	
Right of the statement to indicate how feel right now	19,72 ±5,41	19,48 ±5,79	0.693*
Thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport	1,26 ±7,80	-0,50 ±8,81	0.051*
p	<0.001**	<0.001**	
The data were given as Mean ±SD			
* t-test for independent samples		** t-test for dependent samples	

*p < 0.05

When the cognitive anxiety statements of male taekwondo athletes (19,72 ±5,41) - (1,26 ±7,80) and of female subjects (19,48 ±5,79) - (-0,50 ±8,81) between ages of 12 to 14 (n=167), and 16 to 21 (n=181) were evaluated accordingly, meaningful (significant) differences were obtained in terms of the values, “the right of the statement to indicate how feel right now” and “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport”.

There was no significant difference, on the other hand, between 19,72 ±5,41 - 19,48 ±5,79 in terms of “the right of the statement to indicate how feel right now” for male and female ones. The same situation was valid for also figures 1,26 ±7,80 - 0,50 ±8,81 figures in terms of “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport” (Table 4).

Table 5. CSAI-2 subscales before match for the self-confidence by age

Self-confidence	Age		p
	12-14 (n=167)	16-21 (n=181)	
Right of the statement to indicate how feel right now	24,70 ±5,38	22,96 ±5,44	0.003*
Thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport	6,23 ±8,28	3,39 ±8,60	0.002*
p	<0.001**	<0.001**	
The data were given as Mean ±SD			
* t-test for independent samples		** t-test for dependent samples	

*p < 0.05

Significant differences were found between the figures in terms of “the right of the statement to indicate how feel right now” (24,70 ±5,38 and 22,96 ±5,44) and “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport (6,23 ±8,28 and 3,39 ±8,60) for the age groups of 12 to 14 (n=167), and 16 to 21 (n=181) when the self-confidence statements of taekwondo athletes were evaluated by age. Statistically significant differences were

observed, therefore, between the figures of 24,70 ±5,38 for the age categories of 12 to 14 (n=167) and 22,96 ±5,44 for the age categories of 16 to 21 (n=181) in terms of “the right of the statement to indicate how feel right now”, and between the figures of 6,23 ±8,28 for age groups of 16 to 21 (n=181) and 3,39 ±8,60 for 16 to 21 in terms of “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport” (Table 5).

Table 6. CSAI-2 subscales before match for the self-confidence by gender

Self-confidence	Gender		p
	Male (n=208)	Female n=140)	
Right of the statement to indicate how feel right now	24,08 ±5,36	23,38 ±5,64	0.246*
Thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport	5,15 ±8,22	4,16 ±9,04	0.289*
p	<0.001**	<0.001**	
The data were given as Mean ±SD			
* t-test for independent samples		** t-test for dependent samples	

*p < 0.05

When the self-confidence statements of the age groups 12 to 14 (n=167) and 16 to 21 (n=181) were evaluated, some significant differences were found between the male taekwondo athletes (24,08 ±5,36 - 5,15 ±8,22) and female ones (23,38 ±5,64 - 4,16 ±9,04) in terms of “the right of the statement to indicate how feel right now” and “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in

your sport” respectively. On the other hand, there were significant differences between male and female athletes for the figures of “the right of the statement to indicate how feel right now (24,08 ±5,36) - (23,38 ±5,64). The same situation was also applicable, therefore, to the figures of “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport (5,15 ±8,22) - (4,16 ±9,04) (Table 6).

Table 7. CSAI - 2 Subscales of taekwondo athletes total scores in terms of cognitive anxiety, somatic anxiety, and self-confidence by age

Total	Age		p
	12-14 (n=167)	16-21 (n=181)	
Right of the statement to indicate how feel right now	62,91 ±10,79	62,71 ±11,48	0.869*
Thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport	11,08 ±18,57	0,93 ±21,01	<0.001*
p	<0.001**	<0.001**	
The data were given as Mean ±SD			
* t-test for independent samples		** t-test for dependent samples	

*p < 0.05

Significant differences were observed, for the age categories of 12 to 14 (n=167) and 16 to 21 (n=181), between the figures of “the right of the statement to indicate how feel right now” and “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport” as 62,91 ±10,79 - 11,08 ±18,57 and 62,71 ±11,48 - 0,93 ±21,01 when total sum total scores of the taekwondo athletes were taken into account. No significant difference, however, was

observed statistically between the figures 62,91 ±10,79 for the age groups of 12 to 14 (n=167) and 62,71 ±11,48 for 16 to 21 (n=181) in terms of only “the right of the statement to indicate how feel right now”. There were significant differences, on the contrary, between the figures 11,08 ±18,57 for the age groups of 12 to 14 (n=167) and 0,93 ±21,01 for 16 to 21 (n=181) in terms of “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport” (Table 7).

Table 8. CSAI - 2 subscales of taekwondo athletes total scores in terms of cognitive anxiety, somatic anxiety, and self-confidence by gender

Total	Gender		p
	Male (n=208)	Female n=140)	
Right of the statement to indicate how feel right now	62,91 ±11,25	62,64 ±11,01	0.822*
Thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport	7,54 ±18,92	3,22 ±22,44	0.053*
p	<0.001**	<0.001**	
The data were given as Mean ±SD			
* t-test for independent samples		** t-test for dependent samples	

*p < 0.05

When we evaluated the total scores of taekwondo athletes by gender categories, there were significant differences in the values of analysis results between males ($62,91 \pm 11,25 - 7,54 \pm 18,92$) and females ($62,64 \pm 11,01 - 3,22 \pm 22,44$) in terms of “the right of the statement to indicate how feel right now” and “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport”. There were no

significant difference, on the contrary, between the figures of $62,91 \pm 11,25$ and $62,64 \pm 11,01$ in terms of “the right of the statement to indicate how feel right now”, and between the figures of $7,54 \pm 18,92 - 3,22 \pm 22,44$ in terms of “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport” for both males and females respectively (Table 8).

Table 9. Total correlation evaluation for male taekwondo athletes in terms of “the right of the statement to indicate how feel right now” among the statements of cognitive anxiety, somatic anxiety, and self-confidence

		C_Total1	S_Total1	SC_Total1
C_Total1	Pearson Correlation	1	,087	-,045
	Sig. (2-tailed)		,211	,517
	N	208	208	208
S_Total1	Pearson Correlation	,087	1	,154*
	Sig. (2-tailed)	,211		,026
	N	208	208	208
SC_Total1	Pearson Correlation	-,045	,154*	1
	Sig. (2-tailed)	,517	,026	
	N	208	208	208

There is a correlation towards to weak (0,087) and in positive direction between the total scale scores for the cognitive anxiety and the somatic anxiety; and a correlation of weak (-0,045) and in negative direction between the total scale scores for

the cognitive anxiety and the self-confidence. The correlation between the total scale scores for the somatic anxiety and the self-confidence is, on the other hand, weak (0,154) and in positive direction (Table 9).

Table 10. Total correlation evaluation in terms of the responses to “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport” for the male taekwondo athletes in all age categories

		C_Total1	S_Total1	SC_Total1
C_Total2	Pearson Correlation	1	-,026	,472**
	Sig. (2-tailed)		,705	,000
	N	208	208	208
S_Total2	Pearson Correlation	-,026	1	-,052,
	Sig. (2-tailed)	,705		460
	N	208	208	208
SC_Total2	Pearson Correlation	,472**	-,052	1
	Sig. (2-tailed)	,000	,460	
	N	208	208	208

There is a correlation of weak (-0,026) and in negative direction between the total scale scores for the cognitive anxiety and the somatic anxiety, and a correlation of middle level (0,472) and in positive direction between the total scale scores for the

cognitive anxiety and the self-confidence. The correlation between the total scale scores for somatic total scale score and the self-confidence total scale score is, therefore, weak (-0,052) and in negative direction (Table 10).

Table 11. An evaluation of total correlation for cognitive anxiety, somatic anxiety and self-confidence in terms of “the right of the statement to indicate how feel right now” for the female taekwondo athletes in all age categories

		C_Total1	S_Total1	SC_Total1
C_Total1	Pearson Correlation	1	,055	-,137
	Sig. (2-tailed)		,518	,106
	N	140	140	140
S_Total1	Pearson Correlation	,055	1	,106
	Sig. (2-tailed)	,518		,212
	N	140	140	140
SC_Total1	Pearson Correlation	-,137	,106	1
	Sig. (2-tailed)	,106	,212	
	N	140	140	140

There is a correlation of weak (0,055) and in positive direction between the total scale scores for the cognitive anxiety and the somatic anxiety, and a correlation of, again, weak (-0,137) and in negative direction between the total scale scores for the

cognitive anxiety and the self-confidence. The correlation between the somatic total scale score and the self-confidence total scale score is, meanwhile, weak (0,106) and in positive direction (Table 11).

Table 12. An evaluation of total correlation in terms of responses to “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport” for the female taekwondo athletes in all age categories

		C_Total1	S_Total1	SC_Total1
C_Total2	Pearson Correlation	1	-,109	,324**
	Sig. (2-tailed)		,198	,000
	N	140	140	140
S_Total2	Pearson Correlation	-,109	1	-,018
	Sig. (2-tailed)	,198		,835
	N	140	140	140
SC_Total2	Pearson Correlation	,324**	-,018	1
	Sig. (2-tailed)	,000	,835	
	N	140	140	140

There is a correlation of weak (-0,109) and in negative direction between the total scale scores for the cognitive anxiety and the somatic anxiety, and a correlation of, again, middle (0,324) and in positive direction between the total

scale scores for the cognitive anxiety and the self-confidence. The correlation between the somatic total scale score and the self-confidence total scale score is, on the other hand, weak (-0,018) and in negative direction (Table 12).

Table 13. A correlation evaluation of taekwondo athletes in the age categories of 12 - 14 for the statements of cognitive anxiety, somatic anxiety and self-confidence in terms of “the right of the statement to indicate how feel right now”

		C_Total1	S_Total1	SC_Total1
C_Total1	Pearson Correlation	1	,077	-,100
	Sig. (2-tailed)		,322	,200
	N	167	167	167
S_Total1	Pearson Correlation	,077	1	,021
	Sig. (2-tailed)	,322		,792
	N	167	167	167
SC_Total1	Pearson Correlation	-,100	,021	1
	Sig. (2-tailed)	,200	,792	
	N	167	167	167

There is a correlation, as it shown on the table, of weak (0,077) and in positive direction between the total scale scores for the cognitive anxiety and the somatic anxiety, and a correlation of,

again, weak (-0,100) and in negative direction between the total scale scores for the cognitive anxiety and the self-confidence. The correlation between the somatic total scale score and the self-

confidence total scale score is, on the other hand, weak (0,021) and in positive direction (Table 13).

Table 14. A correlation evaluation of taekwondo athletes in the age categories of 12 -14 in terms of the responses to “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport”

		C_Total1	S_Total1	SC_Total1
C_Total2	Pearson Correlation	1	,023	,450**
	Sig. (2-tailed)		,770	,000
	N	167	167	167
S_Total2	Pearson Correlation	,023	1	-,048
	Sig. (2-tailed)	,770		,534
	N	167	167	167
SC_Total2	Pearson Correlation	,450**	-,048,	1
	Sig. (2-tailed)	,000	534	
	N	167	167	167

** Correlation is significant at the 0.01 level (2-tailed).

There is a correlation towards to weak (0,023) and in positive direction between the total scale scores for the cognitive anxiety and the somatic anxiety, and a correlation of, again, middle (0,450) and in positive direction between the total scale scores

for the cognitive anxiety and the self-confidence. The correlation between the total scale scores for the somatic anxiety and the self-confidence is, on the other hand, weak (-0,048) and in negative direction (Table 14).

Table 15. A correlation evaluation of taekwondo athletes in the age categories of 16 - 21 for the statements of cognitive anxiety, somatic anxiety and self-confidence in terms of “the right of the statement to indicate how feel right now”

		C_Total1	S_Total1	SC_Total1
C_Total1	Pearson Correlation	1	,084	-,061
	Sig. (2-tailed)		,261	,413
	N	181	181	181
S_Total1	Pearson Correlation	,084	1	,204**
	Sig. (2-tailed)	,261		,006
	N	181	181	181
SC_Total1	Pearson Correlation	-,061	,204**	1
	Sig. (2-tailed)	,413	,006	
	N	181	181	181

The correlation between the total scale scores for the cognitive anxiety and the somatic anxiety is weak (0,084) and in positive direction, and the correlation between the total scale scores for the cognitive anxiety and the self-confidence is, again,

weak (-0,061) and in negative direction. There is a correlation of weak (0,204) and in positive direction between the somatic total scale score and the self-confidence total scale score (Table 15).

Table 16. A correlation evaluation of taekwondo athletes in the age categories of 16 -21 in terms of the responses to “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport”

		C_Total1	S_Total1	SC_Total1
C_Total2	Pearson Correlation	1	-,133	,349**
	Sig. (2-tailed)		,075	,000
	N	181	181	181
S_Total2	Pearson Correlation	-,133	1	-,032
	Sig. (2-tailed)	,075		,667
	N	181	181	181
SC_Total2	Pearson Correlation	,349**	-,032	1
	Sig. (2-tailed)	,000	,667	
	N	181	181	181

There is a correlation towards to weak (-0,133) and in negative direction between the total scale scores for the cognitive anxiety and the somatic anxiety, and a correlation of, therefore, middle (0,349) and in positive direction between the total scale scores for the cognitive anxiety and the self-confidence. The correlation between the total scale scores for the somatic anxiety and the self-confidence is, on the other hand, weak negative (-0,032) and in negative direction (Table 16).

Discussion

The studies relating to pre-competition emotional states are important and valuable because the information obtained from these studies will help in establishing the relationship between taekwondo athletes and competition and in making evaluations for statements during competitions. This study was accomplished on CSAI-2 statements prior to the competition of the taekwondo athletes, both male and female, in 12-14 and 16-21 age categories. The purpose of the present study was to extend the research based knowledge concerning competitive anxiety, somatic anxiety and self-confidence of taekwondo sportsmen/sportswomen. The present study sought to investigate the influence of achievement goals and perceived ability on the temporal patterning of anxiety in taekwondo athletes prior to the Turkey championship competitions.

Taekwondo athletes competing in individual contact sports, in which anxiety might be relatively consistently high across situations (as it was) always present risk of physical injuries (Cerin, 2003). The research has indicated that individual-based sports tend to produce more competitive anxiety than team sports, as do subjectively scored and non-contact sports (Martens et al., 1990).

Hanin and his colleagues claim that those who show positive and negative emotions can have both an optimal and dysfunctional impact upon performance (Mellalieu et al., 2003). Performers who interpreted anxiety symptoms as facilitative labeled significantly more positive emotional states than did individuals who interpreted their thoughts and perceived feelings as debilitating. Moreover it appears that a multitude of emotional states, including anxiety, influence athletic performance (Mellalieu et al., 2003). It would appear that the anxiety-performance relationship may vary as a function of culture, in addition to gender differences previously found (Edwards and Hardy, 1996).

No noticeable difference has been observed, in terms of “the right of the statement to indicate how you feel right now”, between age categories of 12 to 14 and 16 to 21. Significant differences were observed, on the contrary, in terms of

“thoughts/feelings as negative to performance in your sport” for aforespecified age categories. Moreover, “the right of the statement to indicate how you feel right now” ended up with similar results for both age groups. Different results were obtained, on the other hand, in terms of “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport”. (Table 7-8).

For most young athletes (generally 13 to 24 years old, i.e., high-school and college age group) sport participation is reported to be no more stressful than many other activities of daily student or work life in general where competition is involved and performance is measured (Patel et al., 2010). It is stated in a study that emotional state is not stable under the age of 18, and this situation will impact performance negatively. Relevant study indicated that such a negative situation might be observed particularly in cases of actual competition. Another study pointed out that a significant and negative relationship was found between age and cognitive anxiety, and this may have been the result of the older athletes having had more experience than their younger counterparts. It was observed, at the same time, that female athletes had higher cognitive anxiety levels and lower self-confidence levels than their male counterparts. Russell, Robb, and Cox (1998) found higher cognitive and somatic anxiety prior to competition for females as opposed to males (Modroño and Guillen, 2011).

When the statements of the somatic anxiety of the taekwondo athletes were evaluated in terms of the age groups of 12 to 14 (n=167), and 16 to 21 (n=181), some significant differences were determined for the data relating to “the right of the statement to indicate how you feel right now” ($18,83 \pm 4,93$) - ($2,11 \pm 7,35$) with the statements about “thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport” ($19,87 \pm 5,59$) - ($1,00 \pm 8,43$) ($p < 0,05$). Significant differences were observed for others. The somatic anxiety statements of taekwondo athletes between ages of 12 to 14 (n=167), and 16 to 21 (n=181) were evaluated by gender, and the figures ($19,11 \pm 5,00$ - $1,12 \pm 7,59$) obtained in terms of “the right of statement to indicate how you feel right now” were found significant for male ones. In another study, therefore, the results are in agreement with the multidimensional anxiety theory, since cognitive and somatic anxiety scores were not related to performance while self-confidence exhibited a statistically significant positive relation to performance (Tsopani et al., 2011). No difference was found, meanwhile, between males and females in their own in terms of somatic anxiety factor of

gender. Thanks to the absence of gender differences, coaches shall be capable of identifying the anxious statements in routing somatic factors of competitors to the competitions (Table 1-2).

The cognitive anxiety statements of taekwondo athletes between ages of 12 to 14 ($n=167$), and 16 to 21 ($n=181$) were evaluated by age, and significant differences were obtained as a result of the analyses accomplished on the findings ($19,36 \pm 5,57$) - ($2,73 \pm 7,14$) and ($19,87 \pm 5,55$) - ($-1,45 \pm 8,71$) for "the right of the statement to indicate how you feel right now" and "the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport"; no significant difference was observed for others. It shows, meanwhile, that the gender differences give same results and there is no difference in relation to each other, and the difference is only in itself (Table 3-4).

Significant differences were found between the figures in terms of "the right of the statement to indicate how you feel right now" ($24,70 \pm 5,38$ and $22,96 \pm 5,44$) and "the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport" ($6,23 \pm 8,28$ and $3,39 \pm 8,60$) for the age groups of 12 to 14 ($n=167$), and 16 to 21 ($n=181$) when the self-confidence statements of taekwondo athletes were evaluated by age. No significant relationship was observed in this study for gender differences in terms of self-confidence. There are significant differences, on the other hand, for male and female ones in their own separately between "right of the statement to indicate how you feel right now" and "thoughts/feelings as the negative (debilitative) or positive (facilitative) in relation to the performance in your sport". However, there is no difference between both genders (Table 5-6). That being the scores of the self-confidence higher in younger ages for both males and females show that the self-confidence decreases gradually with age.

Jones, Swain, and Cale (1991) found, in a similar study, gender differences in the temporal patterning and antecedents of anxiety and self-confidence. Furthermore, although the Jones et al. (1993) gymnast study involved all females, the age range was considerably lower (age range of 14 to 16) than those in the netball study (age range of 18 to 31) (Edwards and Hardy, 1996). The gender has been identified, in another study, as a moderator variable of the temporal patterning of anxiety in several studies that males showed no changes on the cognitive and self-confidence sub-scales of the CSAI-2 during the pre-competition period. However, females reported a gradual elevation in scores with a simultaneous increase in the intensity of the somatic symptoms and

a decline in self-confidence (Cerin, 2003). Athletes' perceived ability and goal orientations would be significant predictors of precompetitive anxiety. It was predicted that a task orientation would be negatively related to cognitive anxiety, positively related to confidence and unrelated to somatic anxiety (Howard and Alistair, 1997). As an example, adult national ice hockey athletes in Hungary appear to be in a more beneficial state with regard to anxiety, pressure and worry than the U-18 athletes. It seems that adult athletes can better manage stress than the younger athletes (Gábor et al., 2008). In another study, all of the female participants were professional windsurfers and there existed no significant differences on anxiety or self-confidence characteristics between them and their male counterparts (Modroño and Guillen, 2011). Another study claims that athletes who have a higher self-confidence entering competition are more likely to be successful. One possible explanation is that confident athletes believe in their ability to perform well and win (Covassin and Pero, 2004).

There is no intercorrelation totally, for male taekwondo athletes, among the statements of cognitive anxiety, somatic anxiety, and self-confidence in terms of "right of the statement to indicate how you feel right now". It was determined that the cognitive anxiety of a participant was ineffective on the status of somatic anxiety and self-confidence, and the conditions of self-confidence and somatic anxiety have no influence, similarly, over the status of other anxieties ($p>0,05$) (Table 9). When the results of total intercorrelation evaluation in terms of the responses to "the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport" for the male taekwondo athletes in all age categories were taken into consideration as total value, it was observed that the total scale score for the cognitive anxiety has no relationship with the somatic anxiety ($r = -0,026$) ($p> 0,05$), and there was an intercorrelation with the total scale score for the self-confidence at the middle level ($r=0,472$) ($p<0,05$) and in positive direction. The intercorrelation between the somatic total scale score and the self-confidence total scale score was, therefore, weak negative ($-0,052$) and in negative direction ($p>0,05$) (Table 10).

There is no intercorrelation for cognitive anxiety, somatic anxiety and self-confidence in terms of "the right of the statement to indicate how you feel right now" for the female taekwondo athletes wholly ($p>0,05$). It was observed that any participant's cognitive anxiety was ineffective on the status of the somatic anxiety and self-confidence, and, likewise, both self-confidence and somatic anxiety conditions have no concern over the status of the others (Table

11). Female taekwondo athletes feature similar characteristics to the male taekwondo athletes. When the results of total intercorrelation in terms of responses to “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport” for the female taekwondo athletes in all age categories were taken into consideration as total value, it was determined that the total scale score for the cognitive anxiety has no relationship with the statements of somatic anxiety ($r = (-0,109)$ ($p > 0,05$), and there was a correlation with the total scale score for the self-confidence at the middle level ($r = 0,324$) and in positive direction ($p < 0,05$). It was clearly observed, meanwhile, that the cognitive anxiety total scale score influenced the self-confidence total scale scores at the middle level ($r = 0,324$) and in positive way. The correlation between the total scale scores of the somatic anxiety and self-confidence was weak ($-0,018$) and in negative direction ($p > 0,05$) (Table 12). The levels of female athletes are in line with the levels of male ones.

There was no intercorrelation for anxiety scores of cognitive, somatic, and self-confidence according to the results of correlation evaluation of taekwondo players in the age categories of 12 to 14 for the statements of cognitive anxiety, somatic anxiety and self-confidence in terms of “the right of the statement to indicate how you feel right now” ($p > 0,05$) (Table 13). When the results of total intercorrelation evaluation in terms of the responses to “the statements about thoughts/ feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport” for the taekwondo athletes in age categories of 12 to 16 were compared to each other, there was a correlation at the middle level ($r = 0,450$) and in positive direction between the total scale scores for the cognitive anxiety and the self-confidence ($p < 0,05$). So, those who have higher levels of cognitive anxiety accounts also for 45% of the idea that a high level of self-confidence. There is a correlation, meanwhile, of weak ($0,023$) between the total scale scores for the cognitive anxiety and the somatic anxiety, and a correlation of, again, weak ($-0,048$) between the total scale scores for the somatic anxiety and the self-confidence ($p > 0,05$) (Table 14).

No intercorrelation was observed for the statements of cognitive anxiety, somatic anxiety, and self-confidence per the responses to the correlation evaluation of taekwondo athletes in the age categories of 16 to 21 for the statements of cognitive anxiety, somatic anxiety and self-confidence in terms of “the right of the statement to indicate how you feel right now”. It was determined that the cognitive anxiety of the participants at this age group have put no effect on

the status of somatic anxiety and self-confidence, and the conditions of self-confidence and somatic anxiety have no effect, likewise, over the statements of other anxieties ($p < 0,05$) (Table 15). When the results of total intercorrelation evaluation in terms of the responses to “the statements about thoughts/feelings as negative (debilitative) or positive (facilitative) in relation to performance in your sport” for the taekwondo athletes in age categories of 16 to 21 were compared to each other, there was a correlation at the middle level ($r = 0,349$) and in positive direction between the total scale scores for the cognitive anxiety and the self-confidence. So, those who have higher levels of cognitive anxiety accounts also for 45% of the idea that a high level of self-confidence. There is a correlation, on the other hand, of weak ($-0,133$) between the total scale scores for the cognitive anxiety and the somatic anxiety, and a correlation of, again, weak ($-0,032$) between the total scale scores for the somatic anxiety and the self-confidence ($p < 0,05$) (Table 16).

Another study performed claims therefore that consideration of the regression analyses for the successful passes and assists indicates a negative linear relationship for cognitive anxiety and somatic anxiety. The relationship between self-confidence and these two performance measures was positive, with higher confidence being associated with more successful passes and assists. This result is not unusual and may be related to Carver and Scheier's (1986, 1988) control-process model of anxiety and performance, in which they propose that anxiety is facilitative as long as the individual's expectancies of being able to cope and of goal attainment are favourable. It also sits comfortably with Martens and co-workers' (1990) predictions for self-confidence and performance in their multidimensional anxiety theory, and with recent work by Hardy (1996) in which self-confidence was shown to improve the structure of the butterfly catastrophe models. Furthermore, it provides additional evidence that self-confidence is independent (Parfitt and Pates, 1999).

As it is analyzed, bivariate relationships show that only self-confidence predicts performance well, and even its relationship with performance is not strong. Also, the bivariate relations among cognitive anxiety, somatic anxiety, and self-confidence show that these three scales are quite intercorrelated on average. None of the subscales is an independent or separate measure of that component of anxiety. All mean intercorrelations among these subscales are stronger than the mean correlation of any subscale with performance. This underscores the importance of controlling for each subscale via the regression modelling approach. This finding supports those of other researchers who have argued that cognitive and

somatic anxiety may not be independent of one another (Craft et al., 2003).

Martens and his colleagues claimed in a study that the regressions were run also with simultaneous entry, with no change in results. Further, self-confidence, in the multidimensional anxiety theory of Martens, et al. (1990), is hypothesized to have a positive linear relation with athletic performance (Tsopani et al., 2011).

To extend the research based knowledge concerning the relationship between competitive state anxiety, self-confidence, and gymnastics performance of female rhythmic gymnasts. According to the findings, there were no differences between high and low scoring groups on mean cognitive and somatic anxiety scores, which agrees with previous results of Bejek and Hagtvet (1996) for female gymnasts. Further, the two groups differed on mean self-confidence as the high performance group (finalists) displayed higher self-confidence than the nonfinalists (Tsopani et al., 2011). Significant relationship was found, in another study, between performance ranking and pre-competition somatic anxiety. In this case, athletes who received better performance rankings in their events had lower pre-competitive somatic anxiety than those with poorer rankings (Modroño and Guillen, 2011).

Athletes report a greater amount of cognitive and somatic anxiety and less self-confidence in critical situations where they perceive a strong possibility of negative evaluation and threat; they also report this anxiety and lack of confidence as debilitating stress. In contrast, they report less cognitive and somatic anxiety and more confidence in challenging situations, and this anxiety is labeled as facilitative (Hale and Whitehouse, 1998).

Although the facilitative influence of anxiety upon performance did not emerge directly through the interpretation scale of the modified CSAI-2, indirect evidence of facilitative effects was provided by the anxiety intensity correlations with performance. The findings from the two-factor ANOVA revealed an interaction between the anxiety intensity subcomponents, which suggested that cognitive anxiety may sometimes enhance performance and sometimes impair it (Edwards and Hardy, 1996). Anxiety has the potential to exert either a positive or negative effect upon performance, depending upon the attentional (working memory) demands of the task and the perceived probability of success. This explanation would fit quite well with results from the present investigation. That is, under high cognitive anxiety and low physiological arousal, performance was maintained, which, according to processing efficiency theory, could be due to the compensatory mechanism of effort. However, as physiological

arousal increased and the probability of success decreased the demands of the task (increasing cognitive anxiety) possibly began to outweigh the effort, and performance therefore deteriorated (Edwards and Hardy, 1996).

Athletes who experience sport related anxiety should be managed in consultation with clinical psychologist or other similarly qualified clinicians, depending on the local community resources and available expertise (Patel et al., 2010). The ability to cope with intense anxiety is integral to success in competitive sport, particularly at the highest levels. With this knowledge, the coach can make informed decisions about which performance strategies and game plans may be the most appropriate in a particular game and what to focus on in training (Parfitt and Pates, 1999). Coaches are expert in identifying and managing young and talented athletes about whom anybody can assume that most of them might not have the necessary skills and/or abilities to use psychological skills in their practices and games. Therefore, it seems important to teach psychological self-regulating methods at an early age, which can later become one of the basic pillars of individual optimal performance (Gábor et al., 2008). Given the interactions among the anxiety subcomponents, it would seem apparent that multimodal stress management strategies might be more beneficial than the one-dimensional strategies (Edwards and Hardy, 1996).

Several suggestions for future research can be discussed. From an applied perspective, it is important to recognize that high levels of anxiety are not necessarily debilitating to performance. For those who are experiencing debilitating anxiety, a cognitive restructuring technique involving the relabeling of anxiety symptoms from negative to positive may be more effective than attempting to reduce the intensity of the symptoms through various relaxation strategies (Edwards and Hardy, 1996).

The sports psychologists and practitioners shall be able to intervene in and identify the statements of anxious structure using the information obtained from this study. The success of overcoming such kind of anxious situations will increase accordingly. Also, they shall be successful in recognition, understanding the reactions to the competition conditions, and elimination of the negative elements resulting from those might be occurred relating to the taekwondo athletes. They shall be able to develop, also, appropriate techniques of anxiety management for all of these situations, and be successful in this regard. Furthermore, they shall provide perception control and better manage the phenomenon of threat-perception by means of the anxiety management techniques.

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Appendix**Competitive State Anxiety-2 (CSAI-2)**

Directions: A number of statements that athletes have used to describe their feelings before competition are given below. The questionnaire is divided into two sections. In section 1 please read each statement and then circle the appropriate number to the right of the statement to indicate how you feel right now. There are no right or wrong answers. Do not spend too much time on any one statement, but choose the answer which describes your feelings right now.

In addition in section 2 please indicate whether you regard this thought/feeling as negative (debilitative) or positive (facilitative) in relation to performance in your sport. N.B. if you have scored '1' (Not at all) on the fourth item then you respond on this scale as if you had no self-doubts. If you respond '4' (very much so) to item 4 then you respond on this scale as if you had a great deal of self-doubt.

	Section 1: Please read each statement and then circle the appropriate number to the right of the statement to indicate how feel right now.				Section 2: Please indicate whether you regard this thought/feeling as negative (debilitative) or positive (facilitative) in relation to performance in your sport							
	Not at all	Somewhat	Moderately so	Very Much so	Very debilitative			Neutral			Very Facilitative	
1) I am concerned about this competition	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
2) I feel nervous	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
3) I feel at ease	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
4) I have self-doubts	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
5) I feel jittery	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
6) I feel comfortable	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
7) I am concerned that I may not do as well in this competition as I could	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
8) My body feels tense	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
9) I feel self-confident	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
10) I am concerned about losing	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
11) I feel tense in my stomach	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
12) I feel secure	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
13) I am concerned about choking under pressure	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
14) My body feels relaxed	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
15) I'm confident I can meet the challenge	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
16) I'm concerned about performing poorly	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
17) My heart is racing	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
18) I'm confident about performing well	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
19) I'm concerned about reaching my goal	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
20) I feel my stomach sinking	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
21) I feel mentally relaxed	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
22) I'm concerned that others will be disappointed with my performance	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
23) My hands are clammy	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
24) I'm confident because I mentally picture myself reaching my goal	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
25) I'm concerned I won't be able to concentrate	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
26) My body feels tight	1	2	3	4	-3	-2	-1	0	+1	+2	+3	
27) I'm confident of coming through under pressure	1	2	3	4	-3	-2	-1	0	+1	+2	+3	

Somatic Anxiety: 5,8,11,17,20,23,26,2,14

Cognitive Anxiety: 7,10,13,16, 22,1,4,19,25

Self-Confidence: 9,15,18,24,27,3,6,12,21