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Professional paper

DIFFERENCES IN THE LEVEL OF ANXIETY AMONG MALE ATHLETES IN ADOLESCENCE

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Abstract

The study of anxiety, its antecedents, its relations with other psychological variables, and its consequences has a long history of theoretical and empirical attention within sport psychology. Anxiety is a psychological occurrence which affects the overall behavior of an individual, and the success in sport all along. The main objective of the study is oriented towards determining the distinctions in the level of anxiety among male athletes from different sports during adolescence. A total of 75 subjects, male athletes aged 11 – 24 years old, were included in this research. The overall sample has been divided into three groups with 25 subjects per each group, respectively 25 subject athletes at the age of 11-14 years (early adolescence), 25 subject at the age of 15-19 years (mid adolescence) and 25 subject at the age of 20-24 years (late adolescence/young adulthood). In order to assess the anxiety as a psychological feature, the following tests were utilized: TAI (the Talt Anxiety Inventary) and CSAI-2 (Competitive State Anxiety Inventory-2). Statistical processing was performed with the Statistical Program for Social Sciences, SPSS15. Based on the statistical analysis of the data it can be concluded that there is statistically significant differences in the level of anxiety in TAI variable among tested subjects between males of different group ages during adolescence. Middle

Keywords: anxiety, athletes, male, adolescence.

1. Introduction

The fact that little is known about the development of anxiety symptoms from late childhood to late adolescence as well as its impact on sports performance was the main motive of this paper. Adolescence is a transition period in life, marked by physical, social, as well as psychological changes (i.e., Cameron, 2004; Dahl, 2004). Together with these changes, symptoms of anxiety often appear. Anxiety symptoms are highly prevalent among adolescents, and interfere significantly with their daily lives (Verhulst, Van Der Ende, Ferdinand, & Kasius, 1997; Ollendick & Hirshfeld-Becker, 2002). Anxiety in children is characterized by subjective feelings of tension, apprehension, nervousness, and worry that may be expressed in various forms (Kain ZN, et al. 1996). According to Burghes (Nasvytienė & Balnonytė, 2006), the children who tend to worry and feel fear, have low responsiveness threshold – they are easily excitable and very sensitive to impressions.

Adolescence has been identified as a critical period for sport continuation, being the period where the greatest drop-out occurs. Many factors such as interpersonal constraints, lack of enjoyment, or perceptions of low competence have been associated with this phenomenon (Crane & Temple, 2014). Coping with these emotions is considered a relevant factor influencing adolescent experiences within their sport, both in a positive or in a negative way (Nicholls, Perry, Jones, Morley, & Carson, 2013). Emotions experienced during sport activities seem to have some importance in this regard (Mohiyeddini, Pauli, & Bauer, 2009).

Anxiety is *an emotion characterized by feelings of tension, worried thoughts, and physical changes like increased blood pressure.*

Studies shows that, in the general population, anxiety symptoms first decrease during early adolescence, and subsequently increase from middle to late adolescence. Knowledge about the course of development of anxiety symptoms during adolescence are very important for the sport itself and the athletes.

Anxiety is defined as an aversive emotional experience that can develop during potentially threatening, evaluative situations (e.g., Eysenck, Derakshan, Santos, & Calvo, 2007).
Martens (1977) defined competitive state anxiety as the "tendency to perceive competitive situations as threatening and to respond to them with feelings of A*nxiety, coping, and sport commitment in adolescence*
5 apprehension and tension". These feelings include somatic and cognitive symptoms of anxiety (Martens et al., 1990). According to Spielberger (1979), the term state anxiety expresses the emotional situations of the individuals which consist of feelings of tension, apprehension, nervousness and worry. Today, the most acceptable definition of anxiety is this: it is an emotional state characterized by distress and unpleasant anticipation, foreboding, worry and uncertainty (Shaqiri, 2016). Lufi, Okasha, and Cohen (2004) have divided anxiety into two categories: state anxiety and trait anxiety. The trait anxiety is described as the individual's capability to perceive different situations from the environment like danger and threat. On the other hand, state anxiety is described as the perception of individual's emotional situation.
Competitive anxiety is one of the factors that affects the results of athletes (Esfahani & Soflu., 2010). Hanton (Hanton et al., 2008) observed that athletes whose anxiety is at the desired level perform better and based on how the athletes interpret the situation, anxiety can enhance or weaken their performance. Competitive anxiety usually implies that an athlete appraises a situation as having personal significance, and perceives not having the resources to cope with the situation (Wolf, Evans, Laborde, & Kleinert, 2014).
Performing a successful free-throw in basketball, soccer penalty kick or hitting a specific target, can be viewed as tasks that are highly dependent on selective attention since the athlete needs to concentrate on the relevant information (i.e., the basket, goalkeeper, the dartboard) while ignoring other information (e.g., worries; Oudejans, van de Langenberg, & Hutter, 2002; Vickers, Rodrigues, & Edworthy, 2000).

Competitive Anxiety

Competitive anxiety is defined as a sentiment of worry when an upcoming situation is perceived as threatening by the individual. A type of anxiety which is perceived due to a state of competition or disagreement is characterized as competitive anxiety (Mellalieu, Hanton, & Fletcher, 2009). When an athlete with low self-esteem feels endangered of being faced by challenges and then he recalls his ability to perform, this scenario is called competitive anxiety (Smith, Smoll, & Schutz, 1990).
Competitive Anxiety carries four quantifiable characteristics (Smith et al., 1990):

- Cognitive aspect is characterized by the signs and symptoms of anxiety associated with thought process e.g. inability to concentrate, thinking about irrelevant stuff, problematic and interruptive thoughts.
- Affective aspect is comprised of symptoms of anxiety displayed in the form of feelings e.g. feeling of hopelessness, carelessness and self-loathing.
- Somatic component is related to physiological symptoms of anxiety e.g. heart palpitation, excessive urination, cold or hot flashes or insomnia in extreme cases.
- Motor problem is related to the signs of anxiety resulted in muscular tension, it could include shuddering, frowns, burden on feet, scrambling head or stretched muscles.

Components of Anxiety

It has been diagnosed for many years that psychological factors play a crucial function in competition. In this manner, the relationship among anxiety and athletic performance is broadly studied. The multidimensional theory shows that aggressive anxiety consists of two

subcomponents, cognitive and somatic, enduring an effect on overall performance (Liebert & Morris, 1967). The first one is cognitive anxiety, described as the mental component of anxiety and in game usually manifested by using negative expectations and negative self-evaluation. There may be a bad linear relation among cognitive anxiety and overall performance. The cognitive elements of anxiety ascend due to worry of bad opinions, fear of failure and lacking self-esteem (Martens et al., 1990). It is the intellectual element, which is described via poor anticipations about fulfillment or self-evaluation, poor conversation with oneself problems about whole performance, metaphors of failing, incapacity to ponder and disturbed attention (Jarvis, 2006; Martens et al., 1990). Cognitive anxiety is further divided into two types, state and trait anxiety:

- Individual's feelings about some specific moments are referred to as state anxiety. This is a subjective type of anxiety (Alexander & Krane, 1996; Conroy & Metzler, 2004).
- Trait anxiety is an unsightly feeling and is the persona of the athlete and it is felt because athletes are categorized as anxious.

The second one is somatic anxiety which carries the physical components of anxiety e.g. profligate heart rate, sweaty palms, and shortness of breath, stretched muscles and nervousness. It is recommended that the relationship among somatic anxiety and overall performance is inverted u shaped, decreased or increased somatic anxiety is the determinant of high or low performance (Jarvis, 2006; Martens et al., 1990). Another research also suggested that the somatic anxiety is comprised of physiological reactions of the human body, which contains palpitation, respiration and muscular tension. These bodily signs are the result of psychological stress, which create anxiety in the athlete before appearing in the game and results in unsatisfactory performance (Kremer, Lavallee, Williams, & Moran, 2004).

2. Research methodology

The purpose of the study was to compare anxiety between male athletes from different sports during adolescence. A total of 75 subjects, male athletes aged 11 – 24 years old were included in this research. The overall sample has been divided into three groups with 25 subjects per each groups, respectively 25 subject athletes at the age of 11-14 years (early adolescence), 25 subject at the age of 15-19 years (mid adolescence) and 25 subject at the age of 20-24 years (late adolescence/young adulthood).

Test Anxiety Variables

A total of 4 (four) variables were applied in this research, of which: 1 (one) variable for assessing anxiety as a personality trait, 3 (three) variables for assessing competitive anxiety.

- Variable 1 – TAI – anxiety which is treated as a dispozition, as a relative permanent trait of personality.
- Variable 2 – CA – cognitive anxiety.
- Variable 3 – SA – somatic anxiety.
- Variabla 4 – SC – self-confidence.

Measuring Instruments

In order to assess the anxiety as a psychological feature, the following tests were utilized:

- TAI (the Talt Anxiety Inventary), constructed by Spilberger et al (1970). The test has two scales: one for measuring anxiety as a current state and the other for measuring anxiety as a disposition, as a relatively permanent personality trait. In this research, the second form was used in order to obtain data on how much the individual is inclined to

react to different situations with anxious reactions. In this paper, the scale TAI (the Talt Anxiety Inventory) was used, which contains 20 items.

- CSAI-2 (Competitive State Anxiety Inventory-2), (according to Martens, Vealey and Burton 1990). - is a competitive anxiety test. The test has three scales: cognitive anxiety, somatic anxiety and self-esteem.

By the statistical methods, the basic statistical parameters have been provided:

- Arithmetic Mean (Mean), Standard Deviation (Std. Dev.), lower and upper distance limits (range), minimum (min) and maximum (max) scores.
- To determine the differences in the multivariate and univariate manifesto space, the multivariate and univariate analysis of the variant have been utilized.
- To determine the differences between separate variables and the level of their significance between separate samples, the post-hoc comparative LSD test will be applied.
- Statistical software such as *SPSS* and *Exel* have been used for data processing.

3. Results

For all applied variables in the research, the basic descriptive statistical parameters were calculated for all respondents: arithmetic mean (X), standard deviation (SD), lower and upper limit of the range in which the results move (Min-Max), skewness-symmetry (Skew), kurtosis-length or flattening of the distribution (Kurt), as well as Kolmogorov Smyrna's test (KS) which tests the normality of the distribution. The results of these analyzes are shown in Tables 1 through 3.

Table 1. Basic descriptive data on anxiety assessment variables in 11 - 14 years old male athletes

	N	Minimum	Maximum	Mean	SD	Skewness	Kurtosis
TAI	25	27,00	51,00	39,96	5,56	-0,31	0,10
CA	25	12,00	29,00	18,48	4,17	0,65	0,06
SA	25	10,00	25,00	16,40	4,01	0,65	0,04
SC	25	18,00	35,00	29,64	4,75	-0,82	0,51

Table 2. Basic descriptive data on anxiety assessment variables in 15 - 19 years old male athletes

	N	Minimum	Maximum	Mean	SD	Skewness	Kurtosis
TAI	25	24,00	49,00	40,36	6,15	-0,80	0,94
CA	25	11,00	27,00	16,92	4,75	0,71	-0,05
SA	25	11,00	24,00	16,64	3,67	0,63	-0,76
SC	25	24,00	36,00	31,20	3,50	-0,59	-0,66

Based on the obtained results from table 1 and 2, it can be seen that the skewness values of all applied variables for assessing anxiety in male athletes aged 11 to 14 and 15-19 years are within the limits of the recommended values from -1 to +1, which indicates that the distribution of the results is approximately symmetrical. From the kurtosis values, it can be seen that all variables show platokurtic distribution.

Table 3. Basic descriptive data on anxiety assessment variables in 20 - 24 years old male athletes

	N	Minimum	Maximum	Mean	SD	Skewness	Kurtosis
TAI	25	30,00	43,00	36,76	3,68	-0,11	-1,19
CA	25	9,00	31,00	17,88	5,71	0,41	-0,58
SA	25	9,00	25,00	15,28	3,95	0,66	0,05
SC	25	19,00	36,00	31,04	3,78	-1,56	3,23

From the review of (table 3.), it can be seen that the skewness values of most variables for assessing anxiety in male athletes aged 20 to 24 years are within the recommended values of -1 to +1, which indicates that the distribution of results is approximately symmetrical. Negative asymmetry is observed only in SC variables.

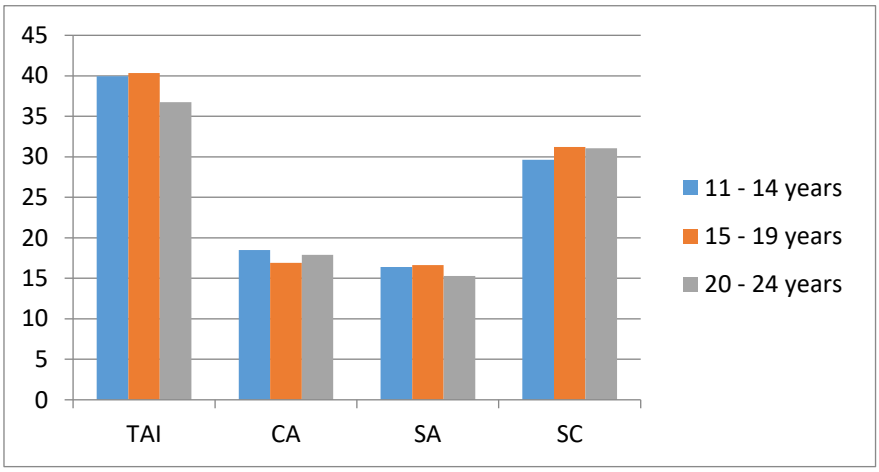

Figure 1. Arithmetic means of the variables for the groups included in the research

Table 4. Intergroup differences between male athletes of different age categories

	11-14 years		15-19 years		20-24 years		F	Sig.
	Mean	SD	Mean	SD	Mean	SD		
TAI	39,96	5,56	40,36	6,15	36,76	3,68	3,55	**,034**
CA	18,48	4,17	16,92	4,75	17,88	5,71	0,64	,530
SA	16,40	4,01	16,64	3,67	15,28	3,95	0,87	,422
SC	29,64	4,75	31,20	3,50	31,04	3,78	1,13	,330

From the review of table 4, it can be seen that intergroup differences between athletes of different age categories among male respondents were determined only in the TAI variable ($p < 0.05$). No statistically significant differences were determined in the other variables.

In order to determine between which age categories there are statistically significant differences, the LSD test was also applied. The test results are shown in table 5.

From the values of the arithmetic means and the level of statistical significance of the Post hoc (LSD)-tests, it can be seen that the male respondents aged 20 to 24 years are statistically significantly different in the TAI variable compared to the male respondents aged from 11 to 14 and 15 to 19 years. Among male respondents aged 11 to 14 and 15 to 19 years, no significant statistical differences were determined in the TAI variable.

Table 5. LSD-tests among athletes of different age categories among male subjects

Dependent Variable	(I) Voz_1	(J) Voz_1	Mean Difference (I-J)	Std. Error	Sig.
TAI	11-14 years	15-19 years	-,40000)	1,48	,788
		20-24 years	3,20000*	1,48	,034
	15-19 years	11-14 years	,400000	1,48	,788
		20-24 years	3,60000*	1,48	,018
	20-24 years.	11-14 years	-3,20000)*	1,48	**,034**
		15-19 years	-3,60000)*	1,48	**,018**
CA	11-14 years	15-19 years	1,560000	1,39	,266
		20-24 years	,600000	1,39	,668
	15-19 years	11-14 years	-1,56000)	1,39	,266
		20-24 years	-,96000)	1,39	,492
	20-24 years	11-14 years	-,60000)	1,39	,668
		15-19 years	,960000	1,39	,492
SA	11-14 years.	15-19 years	-,24000)	1,10	,828
		20-24 years	1,120000	1,10	,311
	15-19 years	11-14 years	,240000	1,10	,828
		20-24 years	1,360000	1,10	,219
	20-24 years	11-14 years	-1,12000)	1,10	,311
		15-19 years	-1,36000)	1,10	,219
SC	11-14 years	15-19 years	-1,56000)	1,14	,177
		20-24 years	-1,40000)	1,14	,225
	15-19 years	11-14 years	1,560000	1,14	,177
		20-24 years	,160000	1,14	,889
	20-24 years	11-14 years	1,400000	1,14	,225
		15-19 years	-,16000)	1,14	,889

4. Conclusion

Adolescence is a time of substantial change both physiologically and psychologically. It also is a period of time when individuals are particularly vulnerable to developing symptoms of anxiety disorders (Costello & Angold, 1995).

This period often sets the stage for future beliefs about the self and others, developmental concerns, and interpersonal relationships, which all are factors that are important to the development of anxiety.

Sport may protect against symptoms of mental disorders that are increasingly prevalent among adolescents (Panza, et al. 2020).

Anxiety is determined by a dynamic interdependence of one's own biological, psychological and psychosocial provisions. Biological (constitutional), psychological (personality structure) and social (specific circumstances) frameworks give this feeling distinct subjective and individual features, both in terms of genesis and in terms of its structuring, its expression and its final outcome. Therefore, the generalization of this problem should be approached very carefully, because it is almost impossible and wrong, a different approach is needed for each individual to overcome the problem.

Many studies have concluded that there is a significant negative relationship between sports anxiety and sports performance in players. Sports anxiety is significant predictor of sports performance among sports players (Bukhari et al. 2021).

According to the findings it was concluded that there is a significant difference in the level of the psychological trait anxiety, between the male athletes aged 20 to 24 years in the TAI variable compared to the male respondents aged from 11 to 14 and 15 to 19 years. Among male respondents aged 11 to 14 and 15 to 19 years, no significant statistical differences were determined in the TAI variable. Based on the results male athletes aged 20 to 24 years have shown a lower level of anxiety compared to other age groups treated in this research.

In general, it can be concluded that all the results obtained from all the variables that define anxiety should be brought to an optimal level through adequate psychological methods and techniques. Therefore, to gain the maximum performance, athletes should overcome their anxiety.

The adolescent is more satisfied, kinder to the people from the immediate environment. Later his emotional reactions mature even more. There are large individual differences in emotional stability. Genetic factors, as well as education and experience, have an important influence. Factors that especially affect expressed emotionality are negative family relationships. All of them can cause emotional instability, feelings of inferiority, and so on. Emotional problems are caused by social incompatibility with the opposite sex, various conflicts in the school or with peers, problems with the choice of professional orientation, etc. Adolescents want to be emotionally independent from their parents and other authorities.

On the basis of findings and conclusion the researcher recommended for future implication that:

- Different awareness program may be conducted about anxiety and its effects on performance
- Athlete may be kept aware about different psychological factors affecting their performance
- Athlete may be kept aware about different physiological factors affecting their performance
- Athlete may be kept aware about different behavioral factors affecting their performance.

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