

STUDY ON ANXIETY IN ADOLESCENT TENNIS PLAYERS

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INTRODUCTION

The term "anxiety" originates from the Latin word "anxius," meaning shock. The concept of anxiety, both as a state and a personality trait, was first introduced by R.B. Cattell (1966) and later developed by Ch. Spielberger (1966). According to Cashmore (2002, as cited in G. Rogleva, 2009), anxiety refers to an unpleasant emotion characterized by vague, undefined, but persistent feelings of apprehension and fear.

Ch. Spielberger's work provides an in-depth understanding of anxiety. He suggests that the term "state anxiety" should denote the emotional state or specific set of reactions arising when an individual perceives a situation as threatening, regardless of its actual threat level. Further studies distinguish between anxiety as a transient state and as a personality trait (Spielberger, 1983). Trait anxiety is viewed as a stable, acquired behavioral dispositional personality trait that predisposes individuals to perceive a wide range of objectively safe stimuli as threatening, leading to situational anxiety in specific moments. Ts. Misheva and N. Panayotov (2004) found a high correlation between these two types of anxiety.

Anxiety affects individuals on multiple levels (A. Peden, 2010; M. Besharat & S. Pourbohlool, 2011), triggering simultaneous physiological, cognitive, behavioral, and emotional reactions. Physiologically, it manifests through somatic changes induced by elevated adrenaline levels, such as increased heart rate, sweating, nausea, muscle tension, dry mouth, and more. These changes are particularly significant in tennis, as heightened muscle tension can disrupt movement coordination, leading to technical errors. Behaviorally, anxiety may hinder one's ability to act or cope with specific situations. Emotionally, unmanaged anxiety can result in feelings of fear or terror, impaired concentration, tension or nervousness, irritability, restlessness, and hopelessness. Conversely, a positive emotional response includes full concentration, motivation, and confidence in success.

Notably, the manifestations of anxiety vary by sport type—they are more pronounced in individual sports, whereas in team sports, the presence of teammates and shared responsibility likely reduce pre-competition anxiety symptoms (L. Craft et al., 2003).

The competitive activities of adolescent tennis players involve not only significant physical exertion but also high psychological stress. Athletes often face opponents who are considerably stronger and older. A common belief in tennis is that losing is always a failure, which heavily burdens adolescents (G. Mamassis, 2002). Improper approaches by coaches and setting unattainable goals can develop trait anxiety, which easily manifests as situational anxiety during competitions. Overly demanding parents can have a similar effect. Naturally, one of the most negative factors influencing anxiety in tennis is loss and how the athlete perceives it.

A meta-analysis on the impact of anxiety on sports performance by T. Woodman and L. Hardy (2003) revealed that out of 43 studies, 26 (60%) found a negative effect of anxiety, 7 (16%) found no correlation, and 10 (23%) observed a slight positive correlation with sports results.

Similar findings were reported by G. Domuschieva-Rogleva, M. Georgiev, and A. Antonov (2004), with the distinction that representatives of team sports exhibited higher levels of cognitive anxiety.

METHODS

Objective of the Study

To identify differences in sports anxiety among adolescent tennis players.

Research Tasks:

To describe the degree of sports anxiety expression in adolescent tennis players.

To uncover differences in sports anxiety across groups based on gender and qualification.

The study involved 66 tennis players aged between 9 and 14. The participants were divided into three groups:

Group 1: Top-level competitors (6 individuals) occupying leading positions in national rankings.

Group 2: Second-level competitors (12 individuals) who compete but do not hold top positions.

Group 3: Children practicing tennis but not listed in national rankings (24 Bulgarian and 24 foreign tennis players).

To assess sports anxiety, we used the Sport Competition Anxiety Inventory proposed by Mackenzie (2005) and Fernandez (2010), which evaluates anxiety as a personality trait. The questionnaire comprises 15 statements assessing how the respondent feels before a competition—how often they exhibit signs of anxiety—rated on a scale from 1 (rarely) to 3 (often). This test had not been translated and adapted for the Bulgarian population. We selected this test due to its concise number of items that accurately assess significant manifestations of competitive anxiety. Therefore, specialists translated the test, and we carefully examined its statistical characteristics. According to the author's methodology, 10 items contribute to the anxiety assessment, demonstrating high internal consistency reliability (Cronbach's $\alpha = 0.844$). The content of the items excluded by the author largely describes the absence of competitive anxiety

or the athlete's ability to manage its symptoms. The reliability of these items was also of a good level (Cronbach's $\alpha = 0.737$). Consequently, we included this measure in our research. Due to the different number of questions assessing the degree of anxiety and coping with it, and our desire to compare these two constructs, we used averaged values for each subscale in the analysis.

For statistical processing, we employed variation and dispersion analysis. Data was processed using the statistical software SPSS 19.

RESULTS

The instrument used to assess the anxiety levels of the participants is detailed in the methods section concerning sports anxiety. Preliminary data processing indicated that, in addition to the items measuring anxiety levels, the remaining items also hold cognitive value, as they describe potential mechanisms for coping with anxiety. The scale demonstrated sufficiently high internal consistency, justifying its use in the current analysis. Given the varying number of items across constructs, we averaged the results. Variation analysis revealed a normal distribution of values; therefore, dispersion analysis was employed in subsequent processing. The variation was relatively low. The mean values, variability of results, and statistical significance of differences among the various age and qualification groups are presented in Table 1. Age exhibited a negative correlation with the positive scale of the questionnaire ($r = -0.357^*$), possibly due to socially desirable responses among younger participants and a more accurate self-assessment and sense of responsibility among older children.

Table 1.
Mean Values and Variability of Anxiety Assessment Results

Психическ състояние	Общо		Аге	Пол				F	a	Et a	Квалификация								
	X-X-	S		момчет а		момиче та					Група 1		Група 2		Група 3		F	a	Eta
			X-	S	X-	S	X-	S	X-	S	X-	S							
Тревожност	2,08	0,52	0,141	2,29	0,42	1,94	0,54	4,98	0,031	0,333	2,07	0,46	1,78	0,59	2,23	0,446	3,21	0,051	0,376
Справяне с тревожността	2,32	0,58	-0,357*	2,33	0,63	2,32	0,55	0,00	0,954	0,009	2,83	0,20	2,46	0,45	2,13	0,608	4,86	0,013	0,446

Overall, the average anxiety score for all participants was $M = 2.08 \pm 0.52$ points, while the coping with anxiety score was slightly higher at $M = 2.32 \pm 0.58$ points. Boys reported significantly higher anxiety levels ($F = 4.98$, $p = 0.031$) with a mean of $M = 2.29 \pm 0.42$ points, compared to girls, who had a mean of $M = 1.94 \pm 0.54$ points. This finding is surprising, as leading authors in the field of youth tennis consider girls in this age group to be significantly more anxious. Logically, Group 3

exhibited the highest anxiety levels ($M = 2.23 \pm 0.45$ points), followed by Group 1 ($M = 2.07 \pm 0.46$ points), with Group 2 (Fig.1) showing the lowest levels ($M = 1.78 \pm 0.59$ points).

It is noteworthy that active competitors (Group 1) exhibit a significant predominance in coping with anxiety. Similarly, the girls in Group 2 share this characteristic. In contrast, representatives of the third qualification group display higher anxiety levels ($M = 2.23 \pm 0.45$ points) and a lower ability to manage it ($M = 2.13 \pm 0.61$ points).

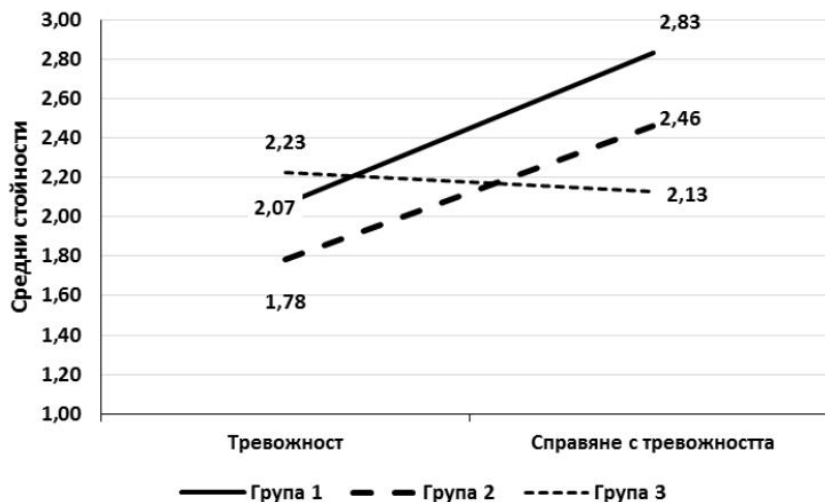


Figure 1. Comparative Analysis of Anxiety Components Among Different Study Groups

CONCLUSION

Sports Anxiety is a Significant Factor Among Adolescent Tennis Players

Anxiety manifests at varying degrees in young athletes and can influence their performance in competitions.

Primary signs of sports anxiety include physiological (elevated heart rate, tension), cognitive (impaired concentration), and emotional reactions (fear, nervousness).

Qualification is a Key Factor for Sports Confidence

Tennis players with higher qualifications (participants in national and international competitions) exhibit lower anxiety levels and a greater ability to cope with pressure.

Players with the lowest qualifications demonstrate the highest anxiety levels, suggesting that accumulating competitive experience may help reduce anxiety.

The Ability to Cope with Anxiety is Better Developed in Active Competitors

The lowest anxiety levels are observed in players who regularly participate in tournaments (Group 1).

The highest anxiety levels and the weakest coping abilities are noted in players with less competitive experience (Group 3).

REFERENCES

1. Atanasov, L. (2003). Dimensions of General Anxiety and Fear Levels, Self-Esteem, and Reflexivity in Adolescent Tennis Players. *Personality, Motivation, Sport*, 9.
2. Domuschieva-Rogleva, G. (2006). Influence of Competitive Anxiety and Preferred Coping Strategies on Sports Performance in Female Basketball Players. *Personality, Motivation, Sport*, 11.
3. Domuschieva-Rogleva, G. (2007). Standardization of the CSAI-2 Anxiety Test in Bulgarian Conditions. *Personality, Motivation, Sport*, 12.
4. Zhelyazkova-Koynova, Zh., & Savcheva, E. (2004). Interaction Model Between Personality Traits, Competitive Environment Factors, and Competitive Realization in Fencers (14-19 Years). III Congress Sport, Stress, Adaptation, November 19-21, 2004.
5. Fotios, M., Argiriadou, I., Mihailidou, S., & Veliyu, V. (1999). Influence of Trait Anxiety and Gender on Situational Anxiety in Track and Field Athletes. *Sport & Science*, 6.
6. Bacanac, Lj., & Juhas, I. (2004). Level of Sport Competitive Anxiety Trait as Function of Sex, Age, and Sport Experience. III Congress Sport, Stress, Adaptation, November 19-21, 2007.
7. Besharat, M., & Pourbohloul, S. (2011). Moderating Effects of Self-Confidence and Sport Self-Efficacy on the Relationship Between Competitive Anxiety and Sport Performance. *Psychology*, 2(7).
8. Covassin, T., & Pero, S. (2004). The Relationship Between Self-Confidence, Mood State, and Anxiety Among Collegiate Tennis Players. *Journal of Sport Behavior*, 27(3).
9. Craft, L. M., Becker, B., & Feltz, D. (2003). The Relationship Between Competitive State Anxiety Inventory-2 and Sport Performance: A Meta-Analysis. *Journal of Sport & Exercise Psychology*, 25.
10. Khan, Z., Haider, Z., Ahmad, N., & Khan, S. (2011). Sports Achievement Motivation and Sports Competition Anxiety: A Relationship Study. *Journal of Education and Practice*, 2(4).
11. Martin, J., & Gill, D. (1991). The Relationships Among Competitive Orientation, Sport-Confidence, Self-Efficacy, Anxiety, and Performance. *Journal of Sport and Exercise Psychology*, 13(2), 149-159.
12. Woodman, T., & Hardy, L. (2003). The Relative Impact of Cognitive Anxiety and Self-Confidence Upon Sport Performance: A Meta-Analysis. *Journal of Sports Sciences*, 21, 443-457.



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