

Variation in Psychological Profiles of Young Tennis Players, Boys, and Girls Aged 11–14

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ABSTRACT

This study aimed to investigate the psychological profile of young tennis players aged 11–14 years old. A total of 40 U¹¹ to U¹⁴ category tennis players, 20 males and 20 females, participated in this study. The study used the ITF (International Tennis Federation) questionnaire to discover the psychological characteristics needed for a successful tournament play, and it was the following: motivation, commitment, fighting spirit, concentration, emotional control, control of behavior and thoughts, self-confidence, mental preparation for a match, psychological match momentum, and match analysis. The results for the answers of the boys showed a statistically significant interaction of the factors with ($F_{22, 22} = 0.001, p < 0.05$), with regard to the majority of responses, “Slightly good” was selected 39 times, accounting for 21.67% of the total, “Fairly good” was selected 75 times, accounting for 41.67%, and “Very good” was selected 43 times, accounting for 23.89%. The results for the answers of the girls showed a statistically significant interaction of the factors with ($F_{22, 22} = 0.001, p < 0.05$). With regard to the majority of responses, “Slightly good” was selected 40 times, accounting for 22.22% of the total, “Fairly good” was selected 70 times, accounting for 37.77%, and “Very good” was selected 53 times, accounting for 29.44%. Differences in responses were observed between boys and girls, and more specifically, the girls were more motivated to commit to the sport of tennis and to give their best effort when playing tennis. In terms of concentration, the boys showed that they could concentrate at a better level than the girls during the match, but the girls had higher grades to control their emotions while playing tennis. Also, the girls showed a higher ability to control their behavior than that of the boys. On the other hand, the boys showed with their answers more confidence and less anxiety than the girls. As well, the boys were more mentally prepared for the match than the girls and had the ability to control the momentum of a match with higher percentages. Finally, in the ability to analyze and learn from a match, boys and girls varied in the same percentages. Therefore, coaches and sports psychologists should take the results of our research seriously so they can help tennis athletes of these ages.

Keywords: Gender differences, mental training, psychological characteristics, young tennis players.

1. INTRODUCTION

Tennis players benefit from psychological abilities to constantly and successfully manage their thoughts. To achieve better, they must develop their mental abilities. Players can manage their behaviors, thoughts, and bodily sensations by using psychological skills, which helps them play better. According to research, tennis coaches are increasingly interested in learning about and implementing mental training approaches in their everyday work with players and are gradually becoming more conscious of the significance of mental abilities for tennis performance (Gould *et al.*, 2001; Moran, 2013).

Mental training is the practice of developing the internal abilities that aid athletes in achieving their goals by teaching them to control their psychological states in line with those aims. The primary goals

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TABLE I: AGE DISTRIBUTION OF PARTICIPANTS BY GENDER

| Age | Number of boys | Number of girls |
|-----|----------------|-----------------|
| 11 | 3 | 4 |
| 12 | 5 | 4 |
| 13 | 3 | 5 |
| 14 | 9 | 7 |

of mental training for athletes are to increase their performance and general well-being (Behncke, 2004; Morais & Rui Gomes, 2019). According to experts, young athletes who possess strong psychological traits and abilities are better equipped to handle these difficulties and pressures (Henriksen *et al.*, 2014) and may prevent burnout or early dropout (Gould & Carson, 2008).

A variety of diverse elements make up psychological skills, such as motivation, concentration, coping with stress, and anxiety. Kremer and Moran (2008) have proposed that psychological skills can help players achieve their goals of being the best athletes by helping them to apply learned behaviors that athletes use in their training and is a blend of techniques, each specifically created to address the demands of them (Gill, 2000). The process of developing daily regular activities and capabilities in connection to environments in sports and exercise is known as psychological skills training (Weinberg & Gould, 2007).

In addition to suggesting that athletes could master these skills and strategies through psychological skills training and consistent practice, Krane and Williams (2006) concluded that a number of behavioral and psychological skills and strategies (such as goal setting, imagery, anxiety control, and coping skills) are associated with peak performance. Psychological skills are created and preserved via training, and the advantages of this kind of instruction grow with time.

As shown above, tennis psychology has been extensively studied. However, specific studies with young tennis players aged 11–14 that focus on gender differences are few. This study aimed to analyze the psychological profile of tennis players' boys and girls aged 11–14 years old, and to focus on gender diversity at this critical yet important age.

2. METHOD

2.1. Sample

Forty junior tennis players, ages 11 to 14, compete in events run by the Hellenic Tennis Federation and are placed at the top of the national list. They participated in this study (20 males and 20 females). They took part in a 12-and-a-half hour weekly tennis-specific training program (technical, tactical, and physical condition) with training experience ranging from seven to eleven years. Their ages ranged from 11 to 14 years and are shown in Table I.

2.2. Instruments

The study used the ITF (International Tennis Federation) questionnaire to discover the psychological characteristics of the 11–14 age group. All study participants were informed about the purpose of the study and gave written consent to participate in it. For each statement, there were seven alternative answers, as follows: 1. Very bad, 2. Fairly bad, 3. Slightly bad, 4. I do not know, 5. Slightly good, 6. Fairly good, 7. Very good. The questionnaire had nine questions and included the psychological characteristics needed for a successful tournament play, and it was the following: motivation, commitment, fighting spirit, concentration, emotional control, control of behavior and thoughts, self-confidence, mental preparation for a match, psychological match momentum, and match analysis.

2.3. Statistical Analysis

The statistical analysis was performed using IBM SPSS v25. The significance level was set at $P < 0.05$. Mean and standard deviations were calculated for all variables. Multivariate analysis with repeated measures of seven factors (Very bad, Fairly bad, Slightly bad, I do not know, Slightly good, Fairly good, Very good) was used to identify statistically significant differences between the nine questions.

3. RESULTS

The results in Table II, with the analysis of variance, showed a statistically significant interaction of the factors with ($F_{22, 22} = 0.001$, $P < 0.05$). The results of our study for the answers of the boys aged

TABLE II: FREQUENCIES OF THE ANSWERS OF THE BOYS

| Question | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|---|---|---|---|---|----|---|
| 1. In your ability to motivate and commit yourself to tennis? | 0 | 0 | 0 | 2 | 3 | 6 | 9 |
| 2. In your ability to fight and give 100% effort while playing tennis? | 0 | 0 | 0 | 1 | 4 | 14 | 1 |
| 3. In your ability to concentrate yourself while playing tennis? | 0 | 0 | 1 | 1 | 4 | 9 | 5 |
| 4. In your ability to control your emotions and temper? | 0 | 0 | 1 | 3 | 9 | 7 | 0 |
| 5. In your ability to control your behavior while playing tennis? | 0 | 0 | 1 | 2 | 3 | 7 | 7 |
| 6. In your ability to have confidence in yourself? | 0 | 0 | 1 | 2 | 2 | 8 | 7 |
| 7. In your ability to mentally prepare for the match? | 0 | 1 | 1 | 0 | 6 | 6 | 6 |
| 8. In your ability to control the momentum or match flow during a match? | 0 | 0 | 1 | 2 | 6 | 10 | 1 |
| 9. In your ability to analyze and learn from a match? | 0 | 1 | 0 | 2 | 2 | 8 | 7 |

TABLE III: DESCRIPTIVE STATISTICS OF THE ANSWERS OF THE BOYS

| Factor | N | Mean | Std. deviation |
|---------------|---|-------|----------------|
| Very bad | 9 | 0.00 | 0.00 |
| Fairly bad | 9 | 1.11 | 2.20 |
| Slightly bad | 9 | 3.33 | 2.50 |
| I do not know | 9 | 8.33 | 4.33 |
| Slightly good | 9 | 21.67 | 11.45 |
| Fairly good | 9 | 41.67 | 12.50 |
| Very good | 9 | 23.89 | 16.35 |

TABLE IV: FREQUENCIES OF THE ANSWERS OF THE GIRLS

| Question | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|---|---|---|---|----|----|----|
| 1. In your ability to motivate and commit yourself to tennis? | 0 | 0 | 0 | 1 | 0 | 8 | 11 |
| 2. In your ability to fight and give 100% effort while playing tennis? | 0 | 0 | 0 | 0 | 4 | 10 | 6 |
| 3. In your ability to concentrate yourself while playing tennis? | 0 | 0 | 0 | 2 | 6 | 8 | 4 |
| 4. In your ability to control your emotions and temper? | 0 | 0 | 2 | 0 | 0 | 16 | 2 |
| 5. In your ability to control your behavior while playing tennis? | 0 | 0 | 0 | 0 | 4 | 2 | 14 |
| 6. In your ability to have confidence in yourself? | 0 | 0 | 6 | 2 | 6 | 2 | 4 |
| 7. In your ability to mentally prepare for the match? | 0 | 0 | 2 | 2 | 6 | 10 | 0 |
| 8. In your ability to control the momentum or match flow during a match? | 0 | 0 | 0 | 0 | 12 | 4 | 4 |
| 9. In your ability to analyze and learn from a match? | 0 | 0 | 0 | 2 | 2 | 8 | 8 |

11–14 in Table III showed that for the first version, “Very bad,” no one of the boys answered any of the nine questions. For the second version, “Fairly bad,” the boys answered two questions, in the seventh and ninth ones, with a percentage of 1.11%. For the third version, “Slightly bad,” the boys answered 6 times with a percentage of 3.33%. For the fourth version, “I do not know,” the boys answered 15 times with a percentage of 8.33%. The fifth version, “Slightly good,” answered 39 times with a percentage of 21.67%. The sixth version, “Fairly good,” answered 75 times with a percentage of 41.67%. Finally, the seventh version, “Very good,” answered 43 times with a percentage of 23.89%.

The results in Table IV, with the analysis of variance, showed a statistically significant interaction of the factors with ($F_{22, 22} = 0.001$, $P < 0.05$). The results of our study for the answers of the girls aged 11–14 in Table V showed that for the first version, “Very bad,” and for the second version, “Fairly bad,” no one of the girls answered any of the nine questions. For the third version, “Slightly bad,” the girls answered 10 times with a percentage of 5.55%. For the fourth version, “I do not know,” the girls answered 9 times with a percentage of 6.11%. The fifth version, “Slightly good,” was answered 40 times with a percentage of 22.22%. The sixth version, “Fairly good,” answered 70 times with a percentage of 37.77%. Finally, the seventh version, “Very good,” was answered 53 times with a percentage of 29.44%.

4. DISCUSSION

The first question was: In your ability to motivate and commit yourself to tennis? The boys answered “very good” with 45%, “fairly good” with 30%, “slightly good” with 15%, and “I do not know” with 10%. The girls in the same question answered “very good” with 55%, “fairly good” with 40%, and “I do not know” with 5%. In this question, the girls seem more determined to commit to tennis. The difference between them may be small, but it contradicts the findings of other scientists (e.g., [Balaguer & Atienza, 1994](#); [González et al., 2000](#)) that the boys demonstrate a greater desire to motivate and commit themselves to tennis. Motivation has been identified as an essential factor in long-term performance and continued participation in tennis ([Crespo & Reid, 2007](#)).

The second question was: In your ability to fight and give 100% effort while playing tennis? The boys answered “very good” with 5%, “fairly good” with 70%, “slightly good” with 20%, and “I do not know” with 5%. The girls in the same question answered “very good” with 30%, “fairly good” with 50%, and “slightly good” with 20%. By their answers, the girls showed, compared to the boys, that they were willing to try to a higher degree during the match. In addition, our research showed something new, which agrees with the data of [Butcher et al. \(2002\)](#), in a ten-year study, that women felt more strongly than men that they were not good enough and experienced more pressure to perform well.

The third question was: In your ability to concentrate yourself while playing tennis? The boys answered “very good” at 25%, “fairly good” at 45%, “slightly good” at 20%, “I do not know” at 5%, and “slightly bad” at 5%. The girls in the same question answered “very good” with 20%, “fairly good” with 40%, “slightly good” with 30%, and “I do not know” with 10%. The boys answered this question more positively than the girls, as a result of which they have a slight advantage in the ability to concentrate during the match. On the other hand, of course, both boys and girls maintain with their answers a fairly high percentage in the ability to concentrate when playing tennis. The ability to concentrate is widely considered to be one of the key determinants of successful sports performance ([Jackson, 2003](#)).

The fourth question was: In your ability to control your emotions and temper while playing tennis? The boys answered “very good” with 0%, “fairly good” with 35%, “slightly good” with 45%, “I do not know” with 15%, and “slightly” with bad 5%. The girls in the same question answered “very good” with 10%, “fairly good” 80%, “slightly good” with 0%, “I do not know” with 0%, and slightly bad with 10%. For the first time, the percentage saw 0% in the ability to control the boys’ emotions, but also the 20% percent of the girls was low. Most girls 80% answered, “fairly good.” On the other hand, the boys answered “fairly good” with 35% and “slightly good” with 45%. That showed us that the girls can control their emotions more than the boys when they play tennis. In addition, because the players are young, it seems from their answers that they have not worked in this area to be able to control their emotions, which is very important for success in tennis.

The fifth question was: In your ability to control your behavior while playing tennis? The boys answered “very good” with 35%, “fairly good” 35%, “slightly good” 15%, “I do not know” 10%, and “slightly bad” 5%. The girls in the same question answered “very good” with 70%, “fairly good” 10%, and “slightly good” 20%. Again, in the ability to behave on the tennis court, the girls had the highest percentage, 70%, compared to the boys. This finding contradicts the study of [Yoon et al. \(2022\)](#), who support that girls are more likely to experience mental health issues between the ages of 11 and 14. Girls reported a greater degree of overall difficulty than males did for a variety of mental health issues and subjective well-being. In practice and specifically during tennis tournaments, our findings are verified, according to which girls’ behavior is better than that of boys.

The sixth question was: In your ability to have confidence in yourself? The boys answered “very good” with 35%, “fairly good” with 40%, “slightly good” with 10%, “I do not know” with 10%, and “slightly bad” with 5%. The girls in the same question answered “very good” with 20%, “fairly good” with 10%, “slightly good” with 30%, “I do not know” with 10%, and “slightly bad” with 30%. The results of this question showed that the boys ages 11–14 have more confidence and less anxiety than the girls. Our findings agreed with the results of the research by [Martínez-Gallego et al. \(2022\)](#) who stated

TABLE V: DESCRIPTIVE STATISTICS FOR THE ANSWERS OF THE GIRLS

| Factor | N | Mean | Std. deviation |
|---------------|---|-------|----------------|
| Very bad | 9 | 0.00 | 0.00 |
| Fairly bad | 9 | 0.00 | 0.00 |
| Slightly bad | 9 | 5.55 | 10.14 |
| I do not know | 9 | 6.11 | 6.00 |
| Slightly good | 9 | 22.22 | 18.56 |
| Fairly good | 9 | 37.77 | 22.23 |
| Very good | 9 | 29.44 | 22.14 |

that in terms of gender, pre-competitive physical anxiety and pre-competitive state anxiety were higher in females than in boys. Similarly, [Correia and Rosado \(2019\)](#) found that female athletes reported higher levels of anxiety than their male counterparts due to an increase in somatic symptoms and a decline in self-confidence before competition.

The seventh question was: In your ability to mentally prepare for the match? The boys answered “very good” with 30%, “fairly good” with 30%, “slightly good” with 30%, “slightly bad” with 5%, and “fairly bad” with 5%. The girls in the same question answered “very good” with 0%, “fairly good” 50%, “slightly good” 30%, “I do not know” 10%, and “slightly bad” 10%. The results of this question showed that the boys were more mentally prepared for the match than the girls. The results of matches are determined by the mental states of players before they begin, as [Covassin and Pero \(2004\)](#) have shown. Because of this, routines play a crucial part in helping athletes get ready for competition. In agreement, [Taylor \(1996\)](#) emphasizes the critical significance that pre-game routines have in developing players’ mental and behavioral consistency as well as their sense of control and self-assurance.

The eighth question was: In your ability to control the momentum or match flow during a match? The boys answered “very good” with 5%, “fairly good” 50%, “slightly good” 30%, “I do not know” 10% and “slightly bad” 5%. The girls in the same question answered “very good” with 20%, “fairly good” 20%, and “slightly good” 60%. The results of this question showed that the boys had the ability to control the momentum of a match with higher percentages. Furthermore, [Weinberg and Jackson \(1989\)](#) have demonstrated that male tennis players are more likely than female tennis players to come from behind. There is proof, therefore, that an athlete’s gender influences psychological momentum.

The ninth question was: In your ability to analyze and learn from a match? The boys answered “very good” with 35%, “fairly good” with 40%, “slightly good” with 10%, “I do not know” with 10% and “fairly bad” with 5%. The girls in the same question answered “very good” with 40%, “fairly good” with 40%, “slightly good” with 10%, and “I do not know” with 10%. The results of this question showed that there is a very small lead for girls, but in general, the percentages were the same.

Boys and girls at the age of 11–14 showed a high level of their psychological profile with their answers, presenting, of course, significant differences in some areas. More specifically, the girls were more motivated to commit to the sport of tennis and to give their best effort when playing tennis. In terms of concentration, the boys showed that they could concentrate at a better level than the girls during the match, but the girls had higher grades to control their emotions while playing tennis. Also, the girls showed a higher ability to control their behavior than that of the boys. On the other hand, the boys showed with their answers more confidence and less anxiety than the girls. As well, the boys were more mentally prepared for the match than the girls and had the ability to control the momentum of a match with higher percentages. Finally, in the ability to analyze and learn from a match, boys and girls varied in the same percentages.

5. CONCLUSION

The results of our research showed the psychological profile of players aged 11–14, but also the differences between boys and girls in the factors that are important to junior tennis success and player development. Coaches should understand the importance of psychological factors and the differences between boys and girls at this important age of their development to help young athletes develop their mental game so that they learn to manage difficult situations in high-pressure competitive tennis. Our ultimate goal was for this research to encourage the creation of mental training programs for tennis players and help those involved (athletes, coaches, parents, and sports psychologists) put psychological training into everyday life.

CONFLICT OF INTEREST

The authors declare that they have no known conflicts of interest concerning this research.

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