International Journal of Instructional Cases
ISSN: 2399-830x

Gender Differences and the Junior Tennis Tournament System: The Relationship Between Tournament Opportunities and Development Opportunities

Yahong Chen *
Professor, International College, Krirk University, 10220, Thailand.
ORCID: https://orcid.org/0009-0000-4980-9212
Email: 15886401675@163.com

*Corresponding Author Email: 15886401675@163.com

Received Date: 22-06-2024; Accepted Date: 10-11-2024; Publication Date: 27-12-2024

Abstract
Tournaments play a crucial role in fostering the development of young tennis players. Participation in such events enables players to refine their skills, enhance their physical capabilities, and engage with other talented athletes. However, research highlights notable gender disparities within junior tennis tournaments. These differences manifest in greater attention, higher participation rates, and larger prize pools for boys' tournaments, thereby offering more developmental opportunities to male players. Conversely, the limited resources and exposure available to women's tennis hinder the professional growth of female players. To address these inequities, it is essential to ensure equal opportunities for development through equitable access to training resources, professional coaching, and sponsorship support. Integrating tennis education into school curricula could encourage broader participation in tennis events, standardise participation criteria, and create a level playing field for all players. Such measures are fundamental to promoting gender equality and fostering the balanced development of youth tennis.

Keywords: Gender Differences; Junior Tennis Tournament System; Tournament Opportunities; Developmental Opportunities; Level of Competition.

Introduction

To promote gender equality in junior tennis events, a range of effective strategies can be implemented(Anbarci et al., 2014; Anbarci et al., 2016; Fernández-García et al., 2019). These include establishing equal competition quotas and prize money for male

How to cite (APA):
Chen, Y. (2024). Gender Differences and the Junior Tennis Tournament System: The Relationship Between Tournament Opportunities and Development Opportunities. *International Journal of Instructional Cases*, *8*(2), 123-138.
International Journal of Instructional Cases

International Journal of Instructional Cases
ISSN: 2399-830x

and female players, ensuring access to high-quality training resources, and providing professional coaching teams. Additionally, efforts should focus on enhancing female athletes' partnerships with sponsors, conducting in-depth studies on the specific impacts of gender differences, advocating for policy changes to promote equality, and raising awareness among stakeholders regarding the significance of gender equity. Strengthening physical education programmes with a focus on gender equality is also critical. With these measures in place, the junior tennis system can create a level playing field, offering equal opportunities to all players, regardless of gender. Although significant progress has been made in recent decades, gender inequality remains pervasive and continues to influence the junior tennis tournament system—one of the most vital platforms for player development.

This study aims to investigate the impact of gender differences on the relationship between tournament opportunities and developmental prospects within the junior tennis tournament system. Through the analysis of existing data and research findings, this work seeks to understand how gender disparities influence junior tennis tournaments and to propose actionable solutions for promoting gender equality and ensuring a level playing field for development. By addressing this issue, the study aspires to provide meaningful insights and recommendations to mitigate gender disparities in the junior tennis tournament system.

In addition, there is limited research on the phenomenon of self-hindrance among adolescent athletes. Adolescence represents a critical period of rapid self-consciousness development, wherein athletes are often placed in high-pressure environments that evaluate their competencies. The interplay of these factors increases the likelihood of self-hindering behaviours (Gneezy et al., 2003; Gneezy & Rustichini, 2004; Palacios-Huerta & Volij, 2008). Compared to adults, adolescent athletes are in a transitional phase of psychological development, characterised by contradictions in their cognitive, emotional, and personality traits, making them more susceptible to negative phenomena (Paserman, 2023; Powell, 1986; Sagar & Lavallee, 2010; Schubert et al., 1999).

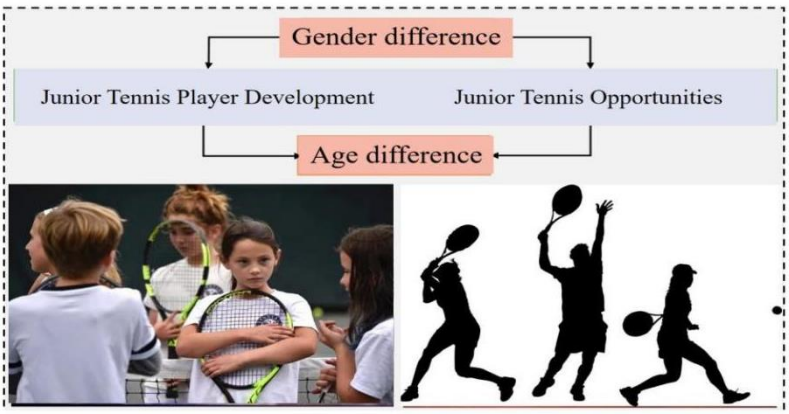

Figure 1: Gender, Age Differences and the Junior Tennis Tournament System

International Journal of Instructional Cases
ISSN: 2399-830x

Therefore, it is imperative to undertake a systematic and in-depth examination of the characteristics of adolescent athletes' self-hindering behaviours, the influence of achievement goal orientation on these behaviours, and their relationship with athletic performance. Such research would offer novel perspectives on the self-development of junior tennis players and provide insights for enhancing athletic performance (Figure 1).

Basic Information on the Achievement Goal Orientation of Junior Tennis Players

General Characteristics

This study focuses on athletes who participated in a National Junior Tennis Ranking Tournament in a specified year. A total of 138 questionnaires were distributed, of which 135 were returned, resulting in a recovery rate of 97.83%. Of these, 128 questionnaires were deemed valid, yielding an effective rate of 94.81%. The sample comprised 73 male athletes and 55 female athletes. By age, 25 participants were 13 years old or younger, while 103 were 14 years old or older, with an average age of 14.31 years. In terms of athletic levels, the sample included 20 first-level athletes, 82 second-level athletes, and 26 third-level athletes, with an average training duration of 5.57 years. The detailed composition of the sample is presented in Table 1.

Table 1: Basic Statistics of the Study Subjects

Demographic Variables	Hallmark	Frequency	Percentage (%)
Distinguishing Between the Sexes	Male	73	57.03
	Women	55	42.97
(A Person's) Age	Group 13 and Under	67	52.34
	14 and Over Group	61	47.66
Sports Level	First-Class	48	37.50
	Category B	39	30.47
	Three-Tier	41	32.03
Training Period	1-3 Years	34	26.56
	4-6 Years	52	40.63
	7-9 Years	42	32.81

The analysis of the four dimensions of achievement goal orientation among the junior tennis athletes in this study reveals distinct trends (Table 2). The scores for achievement-approaching (31.8984) and mastery-approaching (32.7500) dimensions are relatively high, while the scores for achievement-avoiding (11.3984) and mastery-avoiding (17.5703) dimensions are comparatively low. This pattern may be attributed to the competitive environment in which these athletes operate. Factors such as the nature of athletic competitions, along with the expectations of parents and coaches,

International Journal of Instructional Cases
ISSN: 2399-830x

influence their orientation towards achievement. As a result, in addition to striving to enhance their competitive abilities, the athletes also prioritise the understanding and mastery of sports techniques (Bańkosz & Winiarski, 2020; Cigercioglu & Guney-Deniz, 2021; Ghosh & Adhikari, 2020; Fernandez-Fernandez & Loturco, 2021; Kowalik & Lewandowski, 2021). They are motivated to demonstrate their capabilities through their performance outcomes and aim to avoid failure or perceptions of low ability. Consequently, the athletes exhibit high scores in achievement-approaching and mastery-approaching dimensions, while scores in the achievement-avoiding and mastery-avoiding dimensions remain lower.

Table 2: Descriptive Statistical Analysis of the Study Variables

	Proximity Mastery	Mastering Recusal	The results are Close.	Recuse (A Judge Etc)	Self-Implementation	Sports Performance
M	32.7500	17.5703	31.8984	11.3984	35.8828	51.3828
SD	5.58823	4.26612	6.27812	4.22654	8.18835	9.02413

Gender Differences

The findings reveal significant gender differences in the goal orientation dimensions of mastery-approach and performance-avoidance among teenage tennis players. Female athletes demonstrated a higher average score for mastery-approach goals (35.4364) compared to their male counterparts (30.7260). Conversely, male athletes exhibited a higher average score for performance-avoidance goals (12.1507) than female athletes (10.4000). These results indicate a distinct divergence in the goal orientation structures between male and female athletes. Male players tend to focus more on self-oriented (achievement) goals, whereas female players are more inclined toward task-oriented (mastery) goals. This study corroborates existing research on gender differences in goal orientation structures (Honoré, 1992; Roberts & Nolen-Hoeksema, 1989; Russo & Schoemaker, 1992), confirming that male athletes are more likely to adopt achievement-avoidance goals, while female athletes are more inclined to pursue mastery-approach goals.

Age Differences

A comparison of achievement goal orientation scores across different age groups reveals significant differences. The group aged 13 years and below scored higher on mastery-approach orientation (35.4074) compared to the group aged 14 years and above (32.0396). Conversely, the older group scored higher on achievement-approach orientation (33.0000) than the younger group (31.5185), with these differences being statistically significant. These findings suggest that younger athletes are more inclined toward mastery-oriented goals in sports, whereas older athletes tend to adopt performance-oriented goals (Guinoubi & Mouelhi-Guizani, 2023; Mouelhi-Guizani & Guinoubi, 2023; Gromeier & Meier, 2020; Mouelhi-Guizani & Guinoubi, 2022). As

International Journal of Instructional Cases
ISSN: 2399-830x

athletes mature, their psychological development becomes more sophisticated, with abstract logical thinking gaining prominence. Additionally, a heightened sense of "adulthood" and "independence" emerges in their self-awareness. Influenced by competition pressures and other external factors, their perceptions of sports competitions shift significantly.

Older athletes increasingly recognise the necessity of achieving exceptional athletic results to secure a promising future. They understand that comparing their present performance with past achievements is insufficient and that competing with others is essential for improving their performance. Consequently, younger athletes exhibit stronger mastery goal orientation, while older athletes demonstrate a greater focus on performance-approach goals. Children up to the age of 12 generally display a clear mastery orientation in sports, but as they transition into early adulthood, a shift toward performance orientation becomes evident. Figure 2 illustrates the various developmental stages of junior tennis players.

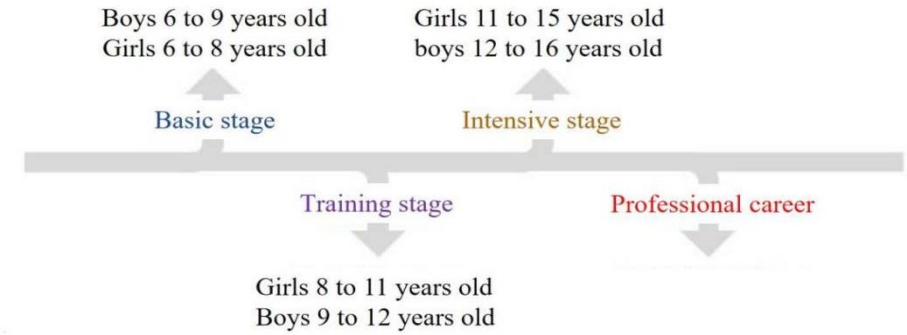

Figure 2: Stages of Development of Junior Tennis Players

Fundamentals of Self-Implementation in Junior Tennis Players

Gender Differences

The study identified significant gender differences in self-actualisation among male and female junior tennis players. From a personal perspective, male athletes tend to emphasise an adventurous spirit and exhibit higher negative expectations compared to female athletes. In competitive contexts, male athletes are more likely to be driven by high-stakes motivations, such as avoiding the risk of losing self-esteem, taking greater risks, or ceasing effort altogether. These motivational tendencies directly influence performance outcomes (Arıkan & Doğan, 2022; Rice & Roach, 2022; Cepeda,2021). Furthermore, the findings highlight divergent attitudes towards effort and skill between male and female athletes. Female athletes place a greater emphasis on effort, perceiving it as a critical prerequisite for success. In contrast, male athletes view skills as innate traits that largely determine success, often downplaying the role of effort.

Objectively, while variations in individual skill levels exist, the belief that effort has a

International Journal of Instructional Cases
ISSN: 2399-830x

limited impact on skill-driven outcomes is more pronounced among male athletes. This perception can result in diminished emphasis on effort among males, whereas females are more inclined towards self-renewal strategies to enhance their performance. In conclusion, the observed gender differences in self-hindering behaviours among junior tennis players can be attributed to intrinsic personality traits and differing perceptions of ability between genders (Beyer & Bowden, 1997; Kidd, 1970). These findings underscore the need to address these disparities to foster equitable developmental opportunities in junior tennis. Details are shown in Table 3.

Table 3: Gender Differences in Achievement Goal Orientation, Self-Implementation among Junior Tennis Players (M±SD)

	Male (N=73)	Female (N=55)	T	Sig (2-Tailed)
Proximity Mastery	30.7260±5.30791	35.4364±4.79492	5.178	0.000***
Mastering Recusal	17.9041±4.55572	17.1273±3.84445	-1.020	0.310
The Results are Close	31.1233±6.05976	32.9273±6.46888	1.620	0.108
Recuse (A Judge Etc)	12.1507±4.75415	10.4000±3.17747	-2.361	0.020*
Self-Implementation	37.3562±8.75654	33.9273±6.97311	-2.388	0.018*

Age Differences

Analysis of variance reveals a significant age effect on self-handicapping scores. The 12-year-old group scores lower than older athletes, with self-handicapping increasing with age. This behaviour is more likely in older athletes due to heightened competition, social comparison, and pressure from coaches or parents. While there is a significant difference between 12-year-olds and other age groups, no such difference exists among older athletes (Pradas & de,2021; Rodríguez-Cayetano & Hernández-Merchán, 2022; Pluim & Jansen, 2023; Pradas & Sánchez-Pay, 2021; Yang & He, 2021). This may be due to the developing self-awareness in younger athletes, who, as they approach adolescence, become more aware of the widening gap between effort and ability. The group of 12-year-olds exhibited the lowest incidence of self-sabotage. As athletes age, their self-awareness gradually develops and intensifies. The significant physiological and psychological changes they undergo make them more inclined to pursue self-esteem, striving to maintain a positive image and social status. By this stage, they have also developed certain impression-management techniques, enabling them to consciously use self-blocking strategies to influence others' perceptions of their abilities. For athletes in the older age group, their self-awareness is largely established. In contrast, younger athletes have yet to fully mature in all aspects of self-awareness, with this developmental process continuing as they grow older. Figure 3 illustrates the relationship between self-awareness and self-sabotage across different age groups. Specific data are shown in Table 4.

International Journal of Instructional Cases
ISSN: 2399-830x

Table 4: Age Differences in Achievement Goal Orientations of Junior Tennis Players (M±SD)

	Group 13 Years and Under (N=67)	Group 14 and Over (N=61)	T	Sig (2-Tailed)
Proximity Mastery	35.4074±6.13476	32.0396±5.24008	2.859	0.005**
Mastering Recusal	17.7037±3.99822	17.5347±4.35331	0.182	0.856
The results are Close.	31.5185±5.99596	33.0000±6.37652	-2.535	0.012*
The Results Recusal	10.9630±5.20711	11.5149±3.94617	-0.601	0.549

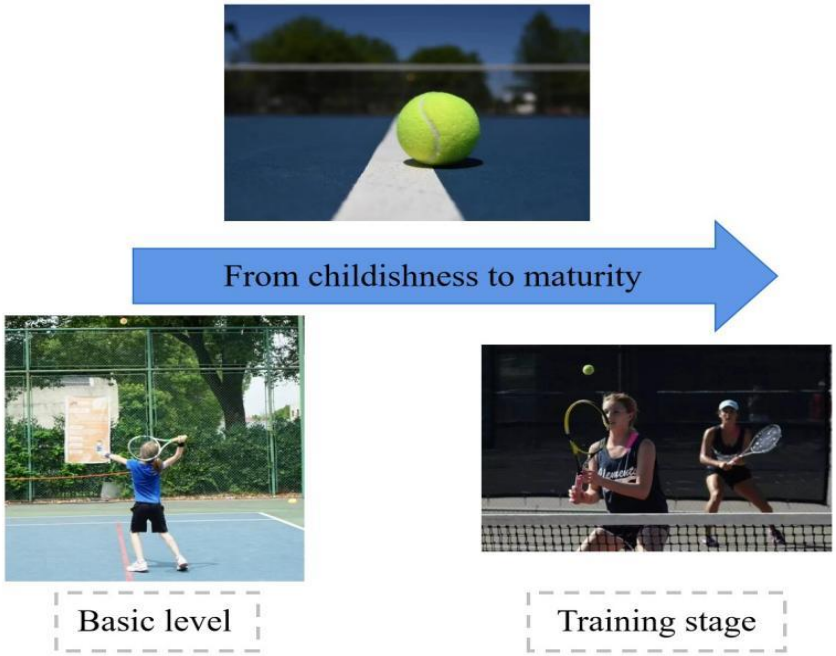

Figure 3: Dramatic Physical and Psychological Changes in Adolescents

Movement Level Differences

We examined athletes' self-implementation by categorising them according to their sport level to investigate differences in self-implementation between high-performing and average athletes. An ANOVA revealed significant differences in self-hindrance across sport levels. Post hoc multiple comparisons showed that Level III athletes scored significantly higher on self-hindrance than Level II athletes, indicating that Level III athletes experience more self-sabotage (Yip,2021; Wunderlich & Corten,2024). Additionally, Level II athletes had significantly higher self-hindrance scores than Level I athletes, suggesting that self-hindrance decreases as athletes progress through the levels. Level I athletes, typically elite performers with superior technical skills and outstanding athletic performance, generally demonstrate lower levels of self-implementation. They tend to view the mastery of technical skills and the development of abilities as essential prerequisites for good performance. Unlike less experienced athletes, they do not attribute failure to external factors but instead engage in introspection, analysing the reasons for failure and striving to improve their

International Journal of Instructional Cases
ISSN: 2399-830x

performance.

Impact of Gender Differences on the Development of Junior Tennis Players

Strengths and Opportunities for Men's Players

Male athletes have better coaching teams, training facilities, and more opportunities for personalized instruction, which enhance their performance. Men's tennis, with its higher profile, often attracts more sponsorship and financial support, reducing training and playing costs. As a result, male youth players benefit from greater competition opportunities, training resources, and sponsorship compared to female players.

Challenges and Constraints Faced by Women Players

Youth tennis athletes face numerous challenges that significantly impact their career development. One of the most prominent issues is the unequal distribution of competitive opportunities and resources. Female athletes often have fewer opportunities to compete, receive lower prize money, and attract less sponsorship compared to their male counterparts. This disparity not only restricts their ability to showcase their talents but also undermines their achievements. The relative anonymity of female athletes in the sport is another critical issue. The lack of media and public attention diminishes their visibility and can lead to a decline in self-confidence, which may negatively affect their careers. Furthermore, social stereotypes and gender biases have a detrimental effect on female athletes. These biases can undermine the perceived competitive strength of female players, limiting their opportunities for development and acceptance within the tennis community. Such prejudices harm not only the social recognition of female athletes but also their self-perception, creating an additional barrier to their success. See Figure 4 for details.

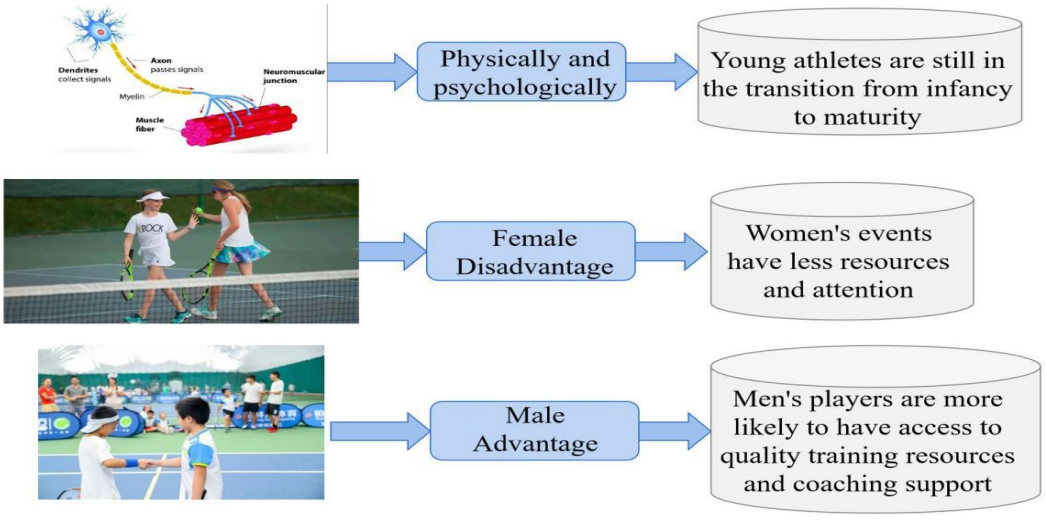

Figure 4: Gender Differences in Youth Tennis Development

International Journal of Instructional Cases
ISSN: 2399-830x

Measures to Promote Gender Equality

Increasing women's tennis events and media exposure will enhance the visibility and influence of female players. It is essential to provide equal development opportunities and resources, including training facilities, coaching teams, scientific methods, and nutritional support, to help female athletes improve their skills. Gender-responsive training and coaching will enable women to reach their full potential. Additionally, breaking down gender stereotypes through education and awareness campaigns will foster social recognition and respect, encouraging more women to pursue and thrive in their tennis careers.

Relationship Between Junior Tennis Tournament Opportunities and Developmental Opportunities

Targeting of the Junior Tennis System

The target positioning of our tournament serves as the foundational framework for the development of sports competitions. In China, the youth tennis tournament system operates across two primary sectors: the sports system and the education system. Both sectors are focused on youth development, promoting healthy growth and enhancing physical fitness. The tournament structure is organised into a four-tiered system (as shown in Figure 5), open to all players, both professionals and amateurs, from across the country.

Figure 5: CTA Tournament Level and Corresponding Technical Levels

Registered players are classified into 10 levels based on internationally accepted standards for graded tournaments. This classification system ensures that athletes are grouped according to their skill levels, allowing for fair and competitive play. Moreover, the method of setting up the hardware for the China Tennis Tour tournament venues is illustrated in Figure 6. According to the latest ranking statistics from the China Tennis Tour Points System as of December 2022 (following the season finals) (see Figure 7), the total number of players registered in the China Tennis Tour

International Journal of Instructional Cases
ISSN: 2399-830x

system is 3,336. Of these, 2,292 are male players and 1,044 are female players. The number of Chinese players (including those from Hong Kong, Macao, and Taiwan) accounts for 99.61% of the total player registration.

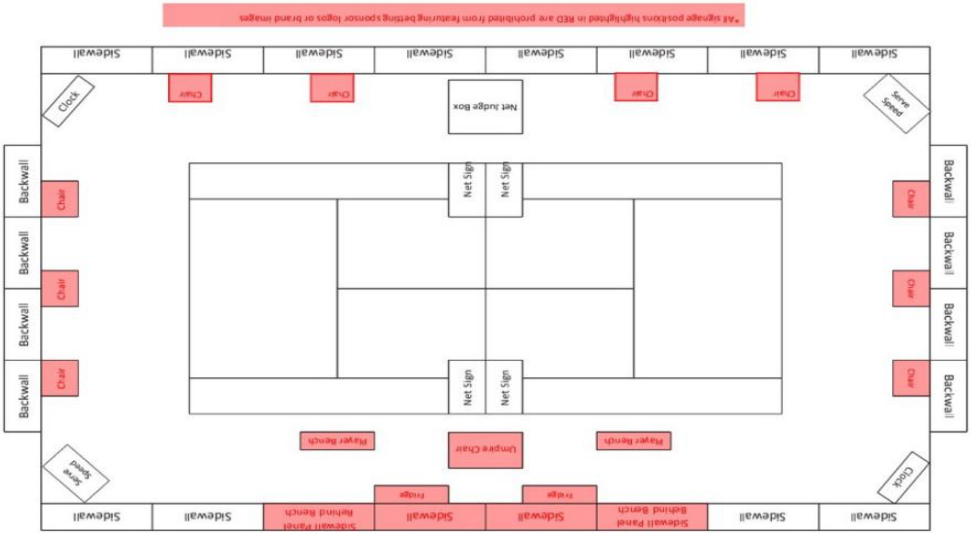

Figure 6: Setups of Competition Court of CTA Tour

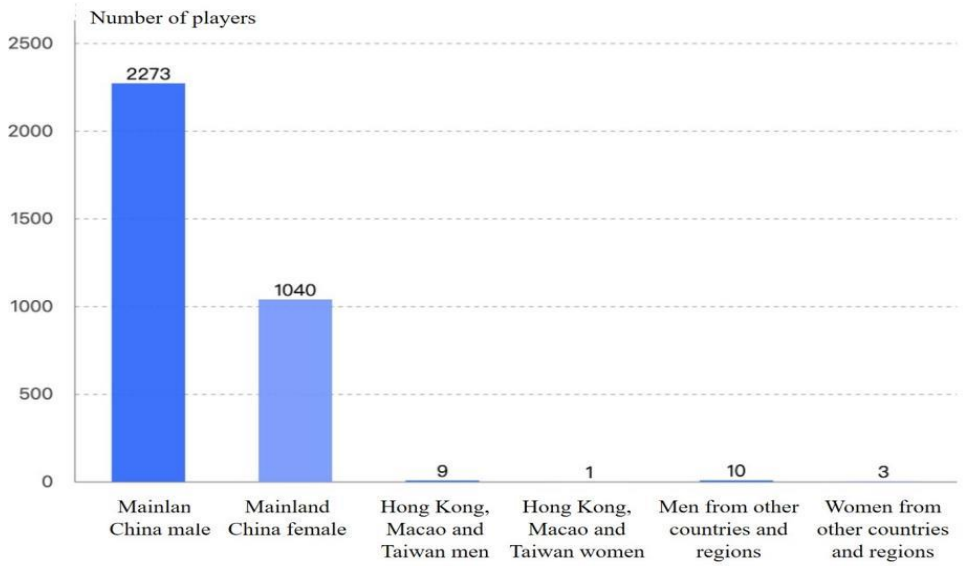

Figure 7: Total Amount of Official Registered Players in CTA

The organization of youth tennis tournaments in China is divided between the sports and education systems, leading to different goals. The sports system focuses on identifying and nurturing talent to develop elite players, while the education system emphasizes lifelong participation, encouraging students to move from spectators to participants, develop skills, and form lasting sports habits. However, differences in tournament objectives and policy implementation pose challenges. The differences in the target orientations of the two sectors—sports and education—lead to discrepancies in qualification standards, point rankings, and tournament designs, which in turn hinder the integration of educational and sports resources. This prevents the realization of the "sports and education fusion" approach. Specifically, when the

International Journal of Instructional Cases
ISSN: 2399-830x

event's organizational goals are not aligned, the education system offers fewer tennis tournaments for students, as most schools do not implement tennis programs. This results in an imbalanced development of youth tennis tournaments between the education and sports systems. In contrast, the sports system organizes tournaments aimed at young athletes, primarily focusing on identifying reserve talent, leading to more developed tournaments than those in the education system. Moreover, the long-standing separation of "sports" and "education" in policy and practice, with the implicit recognition of their distinct roles, undermines the potential for a unified system that blends both sectors effectively. This division poses a significant challenge to the development of an integrated sports and education tournament system.

Relationship Between Tournament Opportunities and Development Opportunities

In China's youth tennis, there are significant barriers between the "sports" and "education" sectors. The current governance model is largely one-dimensional, with the sports system and the education system each operating under separate organizations and management institutions, which are structured in a top-down, three-level management framework (national, provincial, and regional). Each sector has its own scope of authority, with the sports system focused on competitive sports and the education system responsible for school sports and student health. While both sectors are required to work together and share resources for the "integration of sports and education," there are notable challenges in communication and coordination. These difficulties arise from the inherent differences between "competitive sports" and "school sports." The sports system prioritizes the development of high-level athletes, while the education system focuses more on student health and physical education. This divide creates a gap in the collaboration between the two systems, hindering the potential for a more unified and effective approach to youth tennis development.

In China's youth tennis landscape, the education and sports systems operate separately, each with distinct event structures. The education system primarily organizes national, provincial, and regional level competitions, but these events generally lack upward mobility, with most being one-time events without a clear progression pathway. In contrast, the sports system offers a more structured progression from regional to provincial and national levels, as seen in competitions like the Nike Cup National Youth Tennis Ranking Tournament, which allows athletes to move up the ranks through successive event levels.

However, there is a clear lack of integration between the two systems. There are no horizontally interconnected events, meaning that athletes in the sports system and education system rarely overlap or have opportunities to participate in joint events. This divide stems from China's long-standing dual track system, where the sports system focuses on competitive achievements and the education system emphasizes cultural or academic achievements, often overlooking the broader concept of comprehensive human development. Recent reforms in China's sports and

International Journal of Instructional Cases
ISSN: 2399-830x

educational sectors have aimed at bridging this gap, with sports increasingly returning to the education system as shown in Figure 8. The establishment of youth tennis specialty schools is a product of this period, marking a shift towards integrating competitive sports and education, and offering new opportunities for holistic athlete development.

To improve the system of youth tennis tournaments in China within the framework of integrating sports and education, it is essential to establish a well-structured, grassroots-level competition system involving both schools and social organizations. This system would create a continuous tournament pipeline, starting from primary schools and progressing through secondary schools to high schools. Schools should regularly organize both intra-school and inter-school tournaments, organized by grade levels, to foster early talent development and competition experience.

Additionally, it is crucial to establish vertical promotion channels, enabling smooth progression from primary school to high school. This would allow talented athletes to be identified and selected through representative teams at the grassroots level. These athletes could then participate in selection events, followed by training camps and professional competitions, serving as a pipeline for identifying potential athletes for municipal, provincial, and national teams. This approach would not only enhance the integration of sports and education but also ensure a more systematic and comprehensive development pathway for youth tennis in China, providing clear routes for talent progression at every stage.

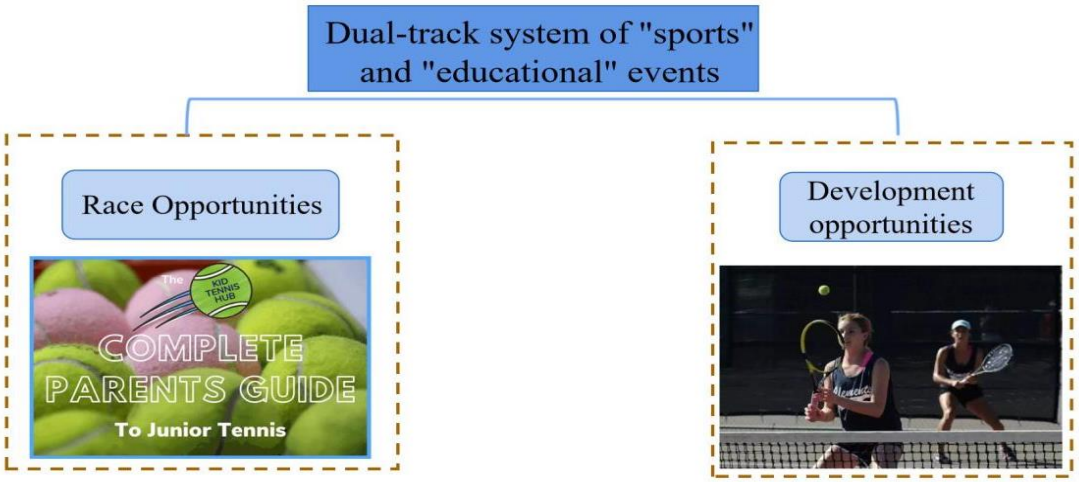

Figure 8: Dual-Track System of "Sports" and "Education" Events System

Conclusion

Developmental opportunities are critical components of the junior tennis system, encompassing factors such as training resources, coaching support, and sponsorship partnerships. Research has highlighted gender disparities in junior tennis tournaments, with men's tournaments often receiving more attention, larger

International Journal of Instructional Cases
ISSN: 2399-830x

tournament sizes, and higher prize money, thereby offering more development opportunities for male athletes. In contrast, girls' tournaments tend to receive fewer resources and less attention, which could restrict the development potential of female players. Future research should address these gender disparities by expanding the sample size to include a broader range of participants. Additionally, while this study focuses on junior tennis players, it is important to broaden the scope of research to include a wider range of athletes across different levels. By including a more diverse sample, further studies can provide deeper insights into the factors influencing athletic performance, ultimately supporting performance improvements across a broader athlete population. Achievement goal orientation in specific situations results from the interaction between an individual's stable goal orientation and situational factors. However, it is unclear whether situational and trait goal orientations can be directly compared, or what interventions are needed to align their effects. Additionally, while self-handicapping has gained attention in sports psychology, more research is needed, especially since many self-handicapping scales developed by Western psychologists may not fully apply to Chinese contexts.

References

Anbarci, N., Arin, K. P., & Lee, J. (2014). Gender differences in response to contingent rewards: Evidence from a natural experiment of junior tennis. *Journal of Behavioral and Experimental Economics, 53,* 131-137. https://doi.org/10.1016/j.socec.2014.09.003

Anbarci, N., Lee, J., & Ulker, A. (2016). Win at all costs or lose gracefully in high-stakes competition? Gender differences in professional tennis. *Journal of Sports Economics*, *17*(4), 323-353. https://doi.org/10.1177/1527002514531788

Arıkan, Ş., Doğan, İ., Revan, S. (2022). Analysis of grand slam tennis tournaments by gender. *Gaziantep Üniversitesi Spor Bilimleri Dergisi, 5(1),* 69-80. https://doi.org/10.31680/gaunjss.692793

Bańkosz, Z., Winiarski, S., Malagoli Lanzoni I. (2020). Gender differences in kinematic parameters of topspin forehand and backhand in table tennis. *International Journal of Environmental Research and Public Health, 17(16),* 5742. https://doi.org/10.3390/ijerph17165742

Beyer, S., & Bowden, E. M. (1997). Gender differences in seff-perceptions: Convergent evidence from three measures of accuracy and bias. *Personality and Social Psychology Bulletin*, *23*(2), 157-172. https://doi.org/10.1177/0146167297232005

Cepeda, I. (2021). Wage inequality of women in professional tennis of the leading international tournaments: Gender equality vs market discrimination?. *Journal of International Women's Studies, 22(5),* 407-426. https://vc.bridgew.edu/jiws/vol22/iss5/25

Cigercioglu, N. B., Guney-Deniz, H., Unuvar, E., et al. (2021). Shoulder range of motion, rotator strength, and upper-extremity functional performance in junior tennis players. *Journal of sport rehabilitation, 30(8),* 1129-1137.

International Journal of Instructional Cases
ISSN: 2399-830x

https://doi.org/10.1123/jsr.2021-0038

Fernandez-Fernandez, J., Loturco, I., Pereira, L. A., et al. (2021). Change of direction performance in young tennis players: A comparative study between sexes and age categories. *The Journal of Strength & Conditioning Research, 36(5),* 1426-1430. https://doi.org/10.1519/JSC.0000000000003484

Fernández-García, Á. I., Torres-Luque, G., Nikolaidis, P. T., & Blanca-Torres, J. C. (2019). *Differences in competition statistics between winners and losers in male and female tennis players in Olympic Games*. https://doi.org/10.1007/s12662-019-00608-y

Ghosh, D., Adhikari, A. (2020). Effect of physical training on gender difference in trained personal. *International Journal of Research in Hospital and Clinical Pharmacy, 2(2),* 54-59. https://doi.org/10.33974/ijrhcp.v2i2.213

Gneezy, U., Niederle, M., & Rustichini, A. (2003). Performance in competitive environments: Gender differences. *The quarterly journal of economics*, *118*(3), 1049-1074. https://doi.org/10.1162/00335530360698496

Gneezy, U., & Rustichini, A. (2004). Gender and competition at a young age. *American Economic Review*, *94*(2), 377-381. https://doi.org/10.1257/0002828041301821

Guinoubi, S., Mouelhi-Guizani, S., Chtara, M., et al. (2023). Competence Needs Satisfaction in elite junior tennis: Gender differences. *International Journal of Sports Science & Coaching, 18(6),* 2117-2124. https://doi.org/10.1177/17479541221128936

Gromeier, M., Meier, C., Schack, T. (2020). Group differences and similarities in mental representation structure of tennis serve. *Frontiers in Psychology, 11,* 552676. https://doi.org/10.3389/fpsyg.2020.552676

Honoré, B. E. (1992). Trimmed LAD and least squares estimation of truncated and censored regression models with fixed effects. *Econometrica: journal of the Econometric Society*, 533-565. https://doi.org/10.2307/2951583

Kidd, J. B. (1970). The utilization of subjective probabilities in production planning. *Acta psychologica*, *34*, 338-347. https://doi.org/10.1016/0001-6918(70)90029-6

Kowalik, Z., Lewandowski, P. (2021). The gender gap in aversion to COVID-19 exposure: Evidence from professional tennis. *Plos one, 16(3),* e0249045. https://doi.org/10.1371/journal.pone.0249045

Mouelhi-Guizani, S., Guinoubi, S., Chtara, M., et al. (2023). Relationships between flow state and motivation in junior elite tennis players: Differences by gender. *International Journal of Sports Science & Coaching, 18(2),* 490-499. https://doi.org/10.1177/17479541221082990

Mouelhi-Guizani, S., Guinoubi, S., Teyeb, N., et al. (2022). Effect of practice hours on elite junior tennis players' burnout: Gender differences. *International Journal of Sports Science & Coaching, 17(6),* 1418-1427. https://doi.org/10.1177/19417381211062834

Palacios-Huerta, I., & Volij, O. (2008). Experientia docet: Professionals play minimax in laboratory experiments. *Econometrica*, *76*(1), 71-115. https://doi.org/10.1111/j.0012-9682.2008.00818.x

International Journal of Instructional Cases
ISSN: 2399-830x

Paserman, M. D. (2023). Gender differences in performance in competitive environments? Evidence from professional tennis players. *Journal of Economic Behavior & Organization*, *212*, 590-609. https://doi.org/10.1016/j.jebo.2023.05.042

Powell, J. L. (1986). Symmetrically trimmed least squares estimation for Tobit models. *Econometrica: journal of the Econometric Society*, 1435-1460. https://doi.org/10.2307/1914308

Pradas, F., de la Torre A., Castellar, C., et al. (2021). Physiological profile, metabolic response and temporal structure in elite individual table tennis: differences according to gender. *International journal of environmental research and public health, 18(22),* 11898. https://doi.org/10.3390/ijerph182211898

Pradas, F., Sánchez-Pay, A., Muñoz, D., et al. (2021). Gender differences in physical fitness characteristics in professional padel players. *International Journal of Environmental Research and Public Health, 18(11),* 5967. https://doi.org/10.3390/ijerph18115967

Pluim, B. M., Jansen, M. G. T., Williamson, S., et al. (2023). Physical demands of tennis across the different court surfaces, performance levels and sexes: a systematic review with meta-analysis. *Sports medicine, 53(4),* 807-836. https://doi.org/10.17605/OSF.IO/MDWFY

Rice, R. P., Roach, K., Kirk-Sanchez, N., et al. (2022). Age and gender differences in injuries and risk factors in elite junior and professional tennis players. *Sports health, 14(4)*, 466-477. https://doi.org/10.1177/19417381211062834

Roberts, T.-A., & Nolen-Hoeksema, S. (1989). Sex differences in reactions to evaluative feedback. *Sex Roles*, *21*, 725-747. https://doi.org/10.1007/BF00289805

Rodríguez-Cayetano, A., Hernández-Merchán, F., Manuel De Mena-Ramos, J., et al. (2022). Tennis vs padel: Precompetitive anxiety as a function of gender and competitive level. *Frontiers in Psychology, 13,* 1018139. https://doi.org/10.3389/fpsyg.2022.1018139

Russo, J. E., & Schoemaker, P. J. (1992). Managing overconfidence. *Sloan management review*, *33*(2), 7-17. https://doi.org/https://sloanreview.mit.edu/article/managing-overconfidence/

Sagar, S. S., & Lavallee, D. (2010). The developmental origins of fear of failure in adolescent athletes: Examining parental practices. *Psychology of Sport and Exercise*, *11*(3), 177-187. https://doi.org/10.1016/j.psychsport.2010.01.004

Schubert, R., Brown, M., Gysler, M., & Brachinger, H. W. (1999). Financial decision-making: are women really more risk averse? *American Economic Review*, *89*(2), 381-385. https://doi.org/10.1257/aer.89.2.381

Wunderlich, F., Corten, C., Furley, P., et al. (2024). Home advantage in tennis exists independent of competition level, gender and COVID-19 restrictions: Evidence from German team tennis competitions. *International Journal of Sport and Exercise Psychology, 22(7),* 1759-1775. https://doi.org/10.1080/1612197X.2023.2235592

Yip, A. (2021). Pinning down the gap: gender and the online representation of

International Journal of Instructional Cases
ISSN: 2399-830x

professional tennis players. *Corpora, 16(3),* 349-378. https://www.euppublishing.com/doi/abs/10.3366/cor.2021.0227

Yang, X., He, Y., Shao, S., et al. (2021). Gender differences in kinematic analysis of the lower limbs during the chasse step in table tennis athletes. *Healthcare. MDPI, 9(6),* 703. https://doi.org/10.3390/healthcare9060703