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Demographic Analysis of the World Top 100 Men's Tennis Players

Muhammad Asrul Sidik [a,1,*], Fajar Ari Widiyatmoko [b,2], Panji Bana [c,3], Dani Primanata [d,4], Rizna Talitha Salsabila [e,5],

[a] Sport Coaching Education, Surabaya State University, Surabaya 60213, Indonesia
[1]muhammadsidik@unesa.ac.id *; [2]fajarariwidiyatmoko@upgris.ac.id; [3]panjibana@unesa.ac.id; [4] daniprimanata@unesa.ac.id; [5]rizna.22085@mhs.unesa.ac.id ;

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ABSTRACT

This study aims to analyze the demographic factors and career paths of the top 100 tennis players in the world, focusing on age, country of origin, and age when entering the professional circuit. Achieving a top 100 ATP ranking is a significant indicator in professional tennis, reflecting the quality of training and athlete development at the international level. Using data from the official ATP websites for the 2024 competition season, this study identifies trends in player age and correlations between player age, ranking, and the age at which they began their professional careers. The analysis shows that most top 100 players start their careers between the ages of 16-20, with an average age of 26.47 years. Players who start at a younger age tend to achieve higher rankings. Additionally, countries with a strong tennis tradition, such as France, the United States, and Italy, have the highest number of players in this ranking. These findings offer insights for tennis federations to develop more effective training programs to support young players in reaching the peak of their careers.

INTRODUCTION

In the world of professional tennis, achieving a top 100 ranking is very important in a player's career. This is a form of the result of seriousness, dedication and disciplined training carried out by a player and his team of coaches. Tennis federations in various countries continue to support athletes in reaching this highest level of competition (Sidik et al., 2023). These efforts include developing intensive training programs, investing in international standard facilities, and providing ongoing psychological and financial support. Federations also collaborate with coaches and sports experts to design data-driven coaching strategies to ensure every athlete has the maximum opportunity to compete on the international stage.

However, the availability of objective data that can be used as a benchmark for success in reaching the top 100 is still very limited, as revealed by Reid and Morris (2013). This suggests the need for further research to identify the key factors that support the success of players in achieving such elite rankings. A comprehensive data-driven approach can provide a strategic foundation for tennis federations to design more effective and measurable development programs. Therefore, this study aims to analyze the demographics and career journeys of the world's top 100 tennis players, focusing on country of origin, age, and age when entering the professional world.

The ATP (Association of Professional Tennis Players) top 100 ranking is often used as the main indicator in assessing the level of competition in the tennis world. The number of players from a country in this ranking reflects the level of tennis development in that country (Chen et al., 2023). This research not only examines ranking changes in the careers of elite players, but is also expected to provide valuable insights for young players who aspire to success in this sport (Ma S.M., 2013).

Previous research shows that professional tennis players typically achieve their best ranking at an average age of 21.5 years, while the average age of current top 100 players is 26.8 years (Reid & Morris, 2013). In addition, players who make it to the top 10 rankings tend to start playing tennis at a younger age and take less time to reach those rankings than WTA players (Chen et al., 2023).

Age trends in professional tennis show that top 100 players are getting older over time (Vaeyens et al., 2009). For example, in 2012, three out of ten singles players in the ATP top 100 ranking were 30 years of age or older, reflecting an almost four-fold increase over the previous two decades (Kovalchik, 2014a). These changes demonstrate the importance of endurance and physical fitness as key factors for success in modern tennis (Kovalchik, 2014a).

In addition, research has also revealed that the peak performance of professional tennis players is now achieved at an older age than a few decades ago (Lambrich J, 2022). For example, the average age of top 100 male players increased from 24.6 years in 1984 to 27.6 years in 2013 (Gallo-Salazar et al., 2015). On the other hand, although female players usually reach the top 100 rankings at a younger age than men, they tend to stay longer at that level (Gallo-Salazar et al., 2015). By analyzing the demographic data and career journeys of the world's top 100 tennis players, this study is expected to provide deeper insights into the factors that influence success in professional tennis. The findings are also expected to assist national federations and related parties in developing data-driven strategies to support young players to reach the top 100 ranking (Baiget E, 2016).

METHODS

This study used data from the ATP and WTA official websites. Data were collected for players ranked in the top 100 during the 2024 competition season. Analysis was conducted using descriptive statistical methods to describe the distribution of the data and inferential methods to test the relationship between demographic variables and player rankings (Söğüt et al., 2019).

RESULTS AND DISCUSSION

Research Results

Based on the ATP Top 100 data analysis, here are some key findings:

1.

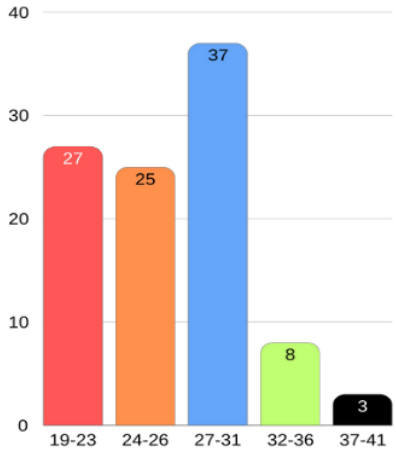

Diagram 1. Age distribution of players

Analysis of ATP Top 100 data revealed that the average age of professional tennis players at the elite level is 26.47 years old, showing a balance between young players just starting their careers and more experienced players. The youngest player was recorded at 19 years old, reflecting the emergence of new talent in the sport, while the oldest player was 38 years old, highlighting the incredible physical and mental endurance to remain competitive at the highest level. These findings reflect the diverse age dynamics in tennis, where experience and youthful energy both contribute to the quality of competition.

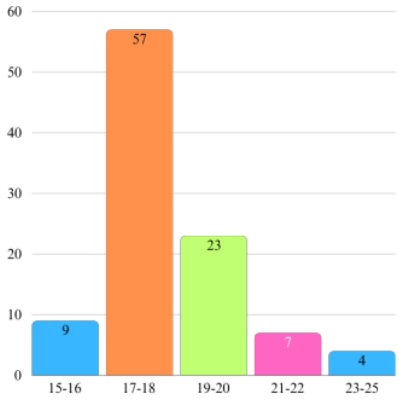

Diagram 2. Age Distribution When Becoming a Professional

Most tennis players in the ATP Top 100 begin their professional careers in the 16-20 age range, marking an important phase in the transition from junior athletes to world-level competition. This age range reflects the optimal time to develop skills, improve physical performance, and prepare mentally for the challenges of the professional arena. This phenomenon also demonstrates the importance of nurturing athletes early on to support their journey to the pinnacle of their tennis careers.

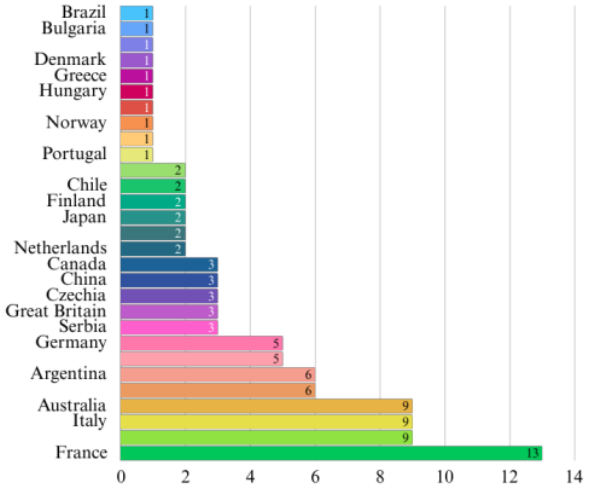

Diagram 3. Distribution of Players by Country:

The results of the analysis show that the world's top 100 tennis players come from various countries, with the highest concentration from France (13 players), followed by the United States, Italy, and Australia who have 9 players each. Spain and Argentina contribute 6 players each, while Germany and Russia have 5 players each. In terms of age, the majority of players are in the 24-28 years range, with an overall average age of 27 years, reflecting the peak period of athletes' performance. In addition, there are several veteran players over the age of 35, demonstrating career continuity at the highest level. The average age of players when they first turned professional was 18, highlighting the importance of coaching from a young age to compete at the international level

Table 1. Correlations between Age, Rank, and Age of Becoming a Professional

Model Fit Measures

					Overall Model Test			
Model	**R**	**R²**	**Adjusted R²**	**RMSE**	**F**	**df1**	**df2**	**p**
1	0.158	0.0249	0.0150	28.5	2.51	1	98	0.117
2	0.385	0.1480	0.1305	26.6	8.43	2	97	< .001

Data was obtained from model 1, which is the age of the current tennis player that can affect the ranking. The analysis shows that the age of current tennis players is not strong enough (p = 0.117, above the 0.05 significance threshold). This indicates that there is no significant relationship between a player's current age and their ranking position. For descriptive analysis, the age of current tennis players does not affect ranking (Deshpande & Klotzman, 2022). This is due to things like competition

experience, the age when players turned professional, or their technical ability during training and competition (Buhamra et al., 2024).

Then for model 2, namely the age of the player when he first participated in the professional championship. This is shown to be significant ($p < 0.001$) which means that the younger the age at which players join as professionals, the better their chances of having a higher ranking (Polách et al., 2023). It should be added that the younger a player starts their professional career (van den Berg et al., 2021), the better their chances of having a higher ranking because players who start early have more time to develop, practice, and gain experience at the professional level (Sanchis-Gomar et al., 2017).

Discussion

Relationship This study obtained data that the average age of male tennis players ranked 1-100 in the world is 26.47 years. Data taken in 2024, shows most male tennis players started their professional career at the age of 16-20 years. A study conducted by Reid & Morris (2013) which states that male players start their initial professional career starting at the age of 21.5 years, then the average age of 1-100 ranked players is 27.6 years old. In addition, in a study conducted by (Kovalchik, 2014) noted an increase in the number of players aged 30 years and over, this indicates that physical ability and endurance are important keys to maintaining performance at the highest level so that players can still compete competitively. Research results from Chen et al. (2023), mentioned that players who start their professional careers at a young age have a greater chance of achieving higher rankings in the ATP. By starting early, players have a longer time to develop technically, physically, and mentally. This of course must be supported by a good team (Li et al., 2018).

In terms of country of origin distribution, this study shows that countries such as France, the United States, Italy, and Australia place a large number of players in the top 100 rankings. This result is related to the ITF report (2023) which mentions that these countries have a good coaching system, including supportive training infrastructure facilities, then coaching programs in early childhood development Diaper et al. (2009), as well as financial support from government or private sponsors and the availability of psychological experts, for young players who are ready to help at any time (Rome-Gosselin, 2021).

This research has a high urgency in supporting the development of tennis, especially in the results of this study provide objective data about the optimal age of players starting a professional career and the average age of players ranked 1-100 in the world (Adriano Pereira et al., 2016). This information is important for Pelti as the highest tennis organization in Indonesia and coaches to develop better training programs (Maquirriain, 2014). The increasing average age of players ranked 1-100 in the world is 25-33 years, confirming that it is very important to maintain the physical endurance of a player's body by conducting a long-term performance maintenance program, (Rees et al., 2016). This must be

programmed from an early age so that Indonesian players have strong physical endurance so that they have a long career in tennis, (Burgess & Naughton, 2010).

CONCLUSION

Demographic analysis of the world's top 100 tennis players provides important insights into the factors that influence success in this sport. Geographic distribution and early age of professional entry are two major factors that contribute to a player's career progression. By understanding these trends, we can identify effective strategies to support the development of elite tennis players in the future (Hornery et al., 2007).

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