# The impact of the changes made to the men's professional tennis tour system: A case study of Japanese players

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## **ABSTRACT**

In 2019, the International Tennis Federation implemented major changes to the men's professional tennis tour system in order to (1) reduce the number of professional players who cannot make a living, and (2) create a system that allows talented junior players to quickly transition to the professional level. These changes in the tour system are considered to have had a significant impact on the players' environment and psychological aspects. The purpose of this study is to examine the impact of the tour system changes on Japanese male tennis players. The subjects of the study were four Japanese male tennis players who participated in the ITF World Tennis Tour held in Japan. They were interviewed one-on-one for approximately 40 minutes using a semi-structured interview method. The interview was centered on the question "How did the change in the tour system affect you?" Interviewees were asked to give specific reasons for their answers. Following a qualitative inductive analysis of the verbatim transcripts of the interviews, five areas of impact were identified: feeling, game plan, status, environment, and requests.

**Key words:** Tennis professional, environment, competition system, qualitative research.

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## **INTRODUCTION**

In the world of professional tennis, the top ten most talented players in the world tend to earn relatively large amounts of money compared to the top players in other sports. For example, Roger Federer, the long-time world number one in men's tennis, had the seventh highest income among all athletes in the world in 2021 (Forbes, 2021). Also in 2021, the top two highest earners among all Japanese athletes were Naomi Osaka (women's tennis) and Kei Nishikori (men's tennis) (Forbes, 2021). This is due to the fact that the top players in professional tennis attract the attention of many people, and this leads to a large amount of sponsorship income. In fact, tennis has about 1.1 billion fans worldwide, the fifth largest after football, cricket, basketball, and field hockey (Sports Show, 2021). It is also the only one of these five popular sports that has a 50-50 ratio of male and female fans (Gemba, 2020). Furthermore, a small number of players (two or four) play a match on the court for a long time (Hotta, 2023), and the Grand Slam tournaments, which are called the four major tournaments, are televised from beginning to end (Gregg et al, 2006).

On the other hand, it is clear that most of the professional players registered with the International Tennis Federation (ITF) do not earn enough money, despite the spectacular success of these top players. In fact, of the 8,874 men and 4,862 women tennis players who played in international

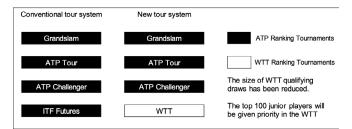




tournaments at the professional level in 2013, only the top 336 men and 253 women players were estimated to have income equal to or higher than their activity expenses (ITF, 2017). In other words, with the exception of a few top players, most professional players do not earn enough to sustain their livelihood. This is due to the fact that the organizers do not televise professional tennis tournaments in the lower tournaments, hence sponsorship income cannot be expected, and prize money is extremely low. In fact, the prize money for winning a singles title in the lower tournaments is only about 150,000 yen: approximately US\$1100 (Asia University, 2015).

Under these circumstances, it is impossible for prize money to cover even the cost of overseas tours (Ide, 2016). And the lives of many professional players are not affluent. It has also been pointed out that this situation is a factor that induces matchfixing (ITF, 2017). Furthermore, it has been reported that the professional players playing in these lower tournaments are getting older, which is an obstacle for talented young players to enter the market (ITF, 2017).

In response to this situation, in January 2019, the ITF implemented major changes to the professional tennis tour system to (1) reduce the number of professional players who cannot make a living and (2) create a system that allows talented junior players to quickly transition to the professional level (ITF, 2019). In fact, in the men's professional tennis tour, the ITF Futures was abolished and a new lower-level tournament, the ITF World Tennis Tour (WTT), was established. The changes are shown in Figure 1.



**Figure 1.** Men's Professional Tennis Tour System Changes for January 2019.

Previously, all matches in the ITF Futures were ranked based on the ATP Ranking, which meant that all professional players, regardless of their ranking or the level of tournament they played in, were listed on the same ranking. Consequently, lower-ranked players who primarily competed in lower-level tournaments had the opportunity to compete in higher-level tournaments, including ATP Challenger and ATP Tour tournaments.

On the other hand, in WTT, only points counted towards the WTT ranking are awarded with the exception of a few matches. In principle, only the top ranked WTT players are given the opportunity to participate in the ATP Challenger tournaments where they can get the ATP points. In other words, the WTT results are no longer directly related to the entry of the Grand Slam tournaments or ATP Tour tournaments. Thus, the ITF aimed to eliminate players who could not break out of the WTT and reduce the number of professional players who could not make a living by clearly positioning the WTT ranking as lower than the ATP ranking. In addition, the WTT aimed to reduce the cost of tournament management by reducing the size of the qualifying draw and by setting the tournament schedule within 7 days. In addition, the top 100 players in junior tennis were given priority to play in the main draw of the WTT, and a system was established to enable talented young players to quickly move up to the professional level.

However, even though ATP rankings cannot be earned in the WTT, the ATP ranking holders are given priority in the selection of players to participate in the WTT, and since this change in the tour system, opportunities to participate in the WTT have been effectively taken away from those with low or no WTT rankings. Therefore, in May 2019, the ITF implemented another change to the tour system, returning

the ATP ranking to the WTT and re-expanding the size of qualifying draws (ITF et al, 2019). In addition, the priority quota for junior players was reduced and the number of tournament days was extended up to eight days. However, the WTT ranking is maintained and the ATP ranking and the WTT ranking are used together.

Thus, the repeated changes in the tour system are considered to have a great impact on the players' activity environment and psychological aspects. Therefore, it is important to understand how these changes in the tour system have affected the players and to take measures to help their competitive activities.

Until now, issues and conditioning related to overseas travel of top athletes have been examined for various athletic events. For example, Gould et al. (2002) reported that travel to the venue, availability of sponsors, relationship with sponsors, schedule during the tournament, and time difference affected the performance of athletes who participated in the Olympic Games. Greenleaf et al. (2001) conducted an interview survey of athletes who participated in the Olympic Games and reported that psychological and physical preparation including sleep and motivation, support from surroundings, and adaptability to the Olympic environment were important factors for their performance. The results show that psychological and physical preparation including sleep and motivation, support from surroundings, and adaptability to the Olympic environment are important factors for performance. In other words, athletes feel a great deal of stress during overseas expeditions due to environmental factors such as travel, time differences, and difficulties in maintaining motivation. In response to this, Murakami et al. (2011) examined the psychological conditioning of Japanese athletes who participated in the Olympic Games. As a result, it was reported that the success factors of performing well included "demonstration of psychological skills," "usual feelings and behaviors," and "support from surroundings," while the failure factors included "lack of psychological skills," "maladaptation to the Olympic environment," and "inadequate support system." Therefore, it is pointed out that psychological aspects may have a significant influence on the performance in a long-term expedition.

However, as seen in the situation where the ITF has implemented two major changes in the touring system in a short period of time, there have been few studies that have analyzed the impact of the change in the tournament system itself on the athletes. Therefore, the purpose of this study is to examine the impact of the change in the men's professional tennis tour system on Japanese players from environmental and psychological perspectives.

## **PROCEDURES**

The attributes of the subjects of this study are shown in Table 1. The subjects were four Japanese male athletes who were competing in the WTT held in Japan.

Mr. A is a veteran player in his 30s and has a high ranking among the WTT competitors. Mr. B and Mr. C are in their 20s, the average age of professional athletes, and their ranking is middle to low among WTT contestants. Mr. D is young, in his teens, and his ranking is in the upper to middle level of WTT competitors, which is amongst the top in Japan in his generation.

**Table 1** *Demographics.* 

Player	Age	Career-high ranking
Α	Early 30s	200 - 300
В	Early 20s	1000 - 2000
С	Early 20s	701 - 1000
D	Late teens	501 - 700

The survey period was from April 2019 to July 2019. In this study, the semi-structured interview method was adopted from two viewpoints: (1) to keep the structure of the interview so that there is no difference in the interview content among the subjects by preparing the interview items in advance, and (2) to secure the freedom to change the wording and order of the questions according to the subjects' situations and responses. After obtaining the subject's consent, a one-on-one interview of about 40 minutes was conducted. The interview was centered on the question "How did the change in the tour system affect you?" and the interviewees were asked to give specific reasons for their answers.

### **DATA ANALYSIS**

A qualitative inductive analysis was conducted. First, we made a verbatim transcript of the speech data recorded by an IC recorder during the interview. Next, sentences that were considered to be related to the influence on the players themselves were extracted from the verbatim transcripts. Extracted sentences were separated by meaningful phrases and coded. The sentences were grouped according to the similarity of their coded contents and subcategorized with appropriate and concise words. Similar sentences in the subcategories were combined and categorized.

In the process of this analysis, a total of three analysts, two sport psychologists with tennis coaching experience and one with tennis experience, discussed the results until they reached a consensus. Afterwards, a new sports psychologist with tennis coaching experience, who did not participate in this discussion, was added to the group and the results were re-examined. According to Lincoln & Guba (1985), repeating this procedure establishes triangulation and improves the reliability of the analysis results. The responses with ambiguous contents and those with unclear meanings were excluded in the process of analysis.

## **ETHICAL CONSIDERATIONS**

Prior approval was obtained from the Research Ethics Review Committee of Senshu University (Approved on April 25, 2019, Reception No. 2018-1219). In addition, the consent of the organizer of the WTT held in Japan was obtained prior to the implementation of the survey. The purpose of the study was explained to the survey subjects both in writing and orally, and the following conditions were also given: (1) the results would not be used for any purpose other than the research purpose, (2) cooperation in the interview would be voluntary, (3) no disadvantages would arise from nonparticipation in the study, (4) participation in the study could be cancelled even during the course of the study, and (5) that the interviewee could ask any questions or clarify any doubts about the research at any time, and obtained consent in writing. It was

also informed that the privacy of the contents of the interview would be strictly protected.

## **RESULTS**

Following a qualitative inductive analysis of the verbatim transcripts of the interviews, five areas of impact were identified: feeling, game plan, status, environment, and requests.

## Feeling

The "feeling" category consisted of three subcategories: anxiety, motivation, and goals. First, in the subcategory of "anxiety," respondents indicated their anxiety about the decline in ranking and the transition to the ATP Challenger level, such as "I have anxiety about the tournaments I cannot participate in, regardless of my current ranking" (Mr. A), "I am anxious and impatient that I will not be able to move up to the Challenger level no matter how long I stay active" (Mr. B), and "I am anxious that I will not be able to participate in tournaments that I was able to participate in before" (Mr. C).

On the other hand, one respondent said, "I had ATP points, so it didn't make much difference, I was a little lucky" (Mr. D).

Next, in the sub-category of "motivation," there were responses related to decreased motivation, such as "I wonder how long I should continue my activities as an athlete without being able to participate in my target tournaments" (Mr. B), "I felt depressed because I thought I would not be able to get ATP points" (Mr. C), and "I lost my motivation because I thought I couldn't get ATP points" (Mr. D). On the other hand, there were also answers related to increased motivation, such as "I have to keep fighting and grab the Challenger's qualification, I have to be determined to do it" (Mr. A), "It is a chance for me" (Mr. D), and so on.

In the sub-category of "goals," some respondents answered that they would like to improve their goals, such as "I would like to aim for more ATP points if I have the chance, and my goal is to become an ATP Challenger" (Mr. C) and "I used to be able to aim for the top 300 by only competing in ITF Futures, but now I have to compete in ATP Challenger tournaments to reach the top" (Mr. D). Mr. D also answered, "Since the ranking points are divided between WTT and ATP, I have started to think strategically about which ranking to focus on".

# Game plan

The category of "game plan" consisted of two subcategories: changes in the level of tournaments entered and increase in the number of tournaments played. First, in the sub-category of "changes in the level of tournaments played", there were responses such as "I now select more M25 tournaments (WTT tournaments with a prize pool of \$25,000), than M15 tournaments (WTT tournaments with a prize pool of \$15,000) because I can earn ATP points if I make it to the finals" (Mr. A). These responses reflect a focus on playing in higher-level tournaments.

On the other hand, there were some responses regarding the decline in the level of the tournaments they participated in, such as "Compared to the WTT, the Japan Tennis Association (JTA) tournaments earn more prize money, so I have been participating in those tournaments more" (Mr. C).

Next, in the sub-category of "increase in the number of tournaments", there were responses related to an increase in the number of tournaments entered, such as "I have entered more ITF tournaments in order to move to the challenger level" (Mr. A). And Mr. C said, "After the change in the system, I made a point of actively participating in the competitions I was able to enter" (Mr. C).

### **Status**

The "status" category consisted of two subcategories, ranking and player selection. First, in the subcategory of "ranking," there were responses related to improving one's status, such as "I am now seeded" (Mr. D). In contrast, there were some responses regarding the decline in their ranking, such as, "I used to have a high ranking, but I am no longer seeded, and it has become more common for me to participate in the qualifying instead of the main draw" (Mr. B).

Next, in the sub-category of "player selection," there were responses related to the decrease in the number of tournaments options, such as "For the first time, I was not able to participate in a tournament I had planned to participate in" (Mr. A) and "In the past, I had a chance to qualify for the ATP Challenger tournament in Japan" (Mr. B). Mr. A added, "The rule is not fair to junior players who cannot compete in ITF junior tournaments due to financial or academic reasons, players who want to become professionals after going to college, and veteran players who believe in their chances". On the other hand, there were some responses regarding the increase in the number of tournaments options, such as "junior players can enter the main tournament based on their junior world ranking, so it is easier for them to move up, and there are more opportunities for young players" (Mr. D).

## Environment

The category of "environment" consisted of five subcategories: sponsors, schedule, expenses, clarification of goals, and tournament level. First, in the subcategory of "sponsors," respondents answered that "it is a disadvantage when acquiring new sponsors" (Mr. B), "it is tough if you do not have at least ATP points, and ATP ranking is important for acquiring sponsors" (Mr. D) regarding the loss of sponsors. On the other hand, some respondents answered that there was no impact on their sponsors, such as "There is no impact on sponsors at this time" (Mr. A) and "I was able to renew my contract this year, and I was told to continue to do my best" (Mr. C).

Next, in the sub-category of "schedule," there were responses regarding the busy schedule, such as "It depends on the tournament, but sometimes I play two qualifying matches a day on Mondays, and I am exhausted by the time I play the main draw" (Mr. B). Related to this, there was also a response regarding the change of training method, such as "We changed our training method to two-part training in order to fight through the tournament" (Mr. A).

In the sub-category of "expenses," there were responses related to cost reduction, such as "The tournament is now held from Monday to Sunday, so the cost of lodging has been reduced" (Mr. B). Mr. A also made a similar comment regarding the reduction of accommodation expenses.

In the sub-category of "clarification of goals," there were responses related to the clarification of the path to the top, such as "It is easier to understand the path to the top, and if you are really good, you can get to the top faster in this system"

(Mr. D). In addition, Mr. A said "While I was worried about the system change, I was determined to win if I had the chance to participate in the tournament, and my goal was clear" (Mr. A).

Furthermore, in the sub-category of "tournament level," there were responses regarding the improvement of the tournament level, such as "It is tougher than before, there are more strong opponents and young players from the first round, and only players who are really aiming for the top are competing" (Mr. D). Mr. A also said, "I can't participate in any qualifying matches of the challenger tour, and I feel that it has become more difficult than before" (Mr. A).

### Requests

The "requests" category consists of five subcategories: improvement of treatment, method of holding tournaments, number of tournaments, domestic tournaments, and provision of information. First, in the sub-category of "improvement of treatment," there were responses such as "Compared to overseas tournaments, Japanese tournaments are inconvenient because there are no parking lots, few practice courts, and practice balls are not prepared" (Mr. B), "If transportation from the hotel is more thorough, it would be easier for overseas players to come. (Mr. B), "I think it would be easier for foreign players to come to Japan if they are thoroughly picked up from their hotels" (Mr. B).

In the "Method of holding the tournament" subcategory, participants made comments about tournaments held in Japan every March for six consecutive weeks, traveling across various regions of the country. One participant said, "I would like organizers to stop holding the tournament for six consecutive weeks in March because it is difficult to move around" (Mr. B), while another participant mentioned that "It's pretty hard to fly around the country every week" (Mr. C).

In the sub-category of "number of tournaments," there were responses related to increasing the number of tournaments, such as "increase the number of M15 and M25 tournaments in Japan" (Mr. B) and "double the number of ATP Challenger tournaments in Japan" (Mr. D) and so on.

In the sub-category of "domestic tournaments," there were responses regarding the enhancement of domestic tournaments, such as "Players should take the initiative in enhancing domestic tournaments, rather than leaving it to JTA and tournament organizers" (Mr. A).

In addition, in the sub-category of "provision of information," there were responses regarding the provision of more information on the changes in the system, such as "I would like to know about the changes in the tour system and the conversion method of ATP points in the JTA rankings as soon as possible". In response to these requests, there were also responses regarding concrete actions, such as "I also raised the issues of the tour system changes on my blog via Facebook, and players responded to it, so I compiled their opinions and submitted them to the ITF" (Mr. A).

## **DISCUSSION**

## **Feeling**

The "feeling" category consisted of three subcategories: anxiety, motivation, and goals. First, in the sub-category of "anxiety," Mr. A, Mr. B, and Mr. C, who have different rankings and ages, reported their concerns that they would not be

able to participate in some tournaments due to the change of the tour system. On the other hand, since Mr. D is a young teenager and his ranking is sufficient to participate in the WTT, he thinks that the change in the tour system will be more advantageous to him than other competitors, and feels little anxiety about it. Therefore, it is considered that the change of the tour system has caused anxiety to the players, except for young players who already have the necessary ranking to participate in the WTT.

Next, in the sub-category of "motivation," Mr. B and Mr. C, who were anxious about whether they could participate in the WTT or not, reported a decrease in their motivation for playing tennis. On the other hand, Mr. A, who was ranked higher, was determined to aim for a higher level and was rather excited about it. In addition, Mr. D, who thinks that the change in the tour system will be advantageous to him, reported an increase in his motivation. This suggests that the change in the tour system may have had an effect of decreasing motivation on the players in the middle to lower rankings.

Next, in the subcategory of "Goals," the respondents reported that their goals had improved. This may be because it is no longer easy to maintain the ATP ranking without competing in ATP Challenger tournaments.

### Game plan

The category of "game plan" consisted of two subcategories: Changes in the level of tournaments entered and increase in the number of tournaments played. First, in the subcategory of "changes in the level of tournaments entered" the participants reported an increase or decrease in the level of tournaments competed in. Mr. A, who has a high ranking and is capable of winning the WTT, selected M25 tournaments more often than M15 tournaments because he could earn ATP points if he reached the finals. On the other hand, Mr. C, who is in the middle to the bottom of the ranking, has decreased in the number of tournaments he participates in. He chooses domestic JTA tournaments where he can earn more prize money more often. This may have had the effect of increasing the level of tournaments for the top-ranked players and decreasing the level of tournaments for the middle to lowranked players.

Next, in the sub-category of "increase in the number of tournaments played," the impact of the increase in the number of tournaments played was reported due to the difficulty of competing in the ATP Challenger tournaments.

## Status

The "status" category consisted of two subcategories, ranking and player selection. First, in the subcategory of "ranking," the effects of gaining and losing status were reported. The one who improved his status, such as being seeded, was Mr. D, a young player in the top to middle ranking. On the other hand, Mr. B, who was ranked lower, experienced a decline in his status, as he was no longer seeded or participated in the qualifying instead of the main draw.

Next, in the sub-category of "selection of players," the effects of the tournaments were reported in terms of an increase and a decrease in the choices of tournaments. The number of choices increased for the top-ranked, middle-ranked, and young players (Mr. D), while the number of choices decreased for the top-ranked players (Mr. A) and the low-ranked players

(Mr. B). This may reflect the reduction of draw sizes in the ATP Challenger and WTT, and the introduction of the junior priority quota.

### **Environment**

The category of "environment" consisted of five subcategories: sponsors, schedule, expenses, clarification of goals, and tournament level. First, in the sub-category of "sponsors," some players reported the loss of sponsors. This may be due to the fact that the WTT ranking is not directly related to the participation in Grand Slam tournaments, and thus the benefits of sponsors have decreased.

Next, in the sub-category of "schedule," some players reported that they had a busier schedule, and some of them changed their training methods to cope with the schedule change.

In the sub-category of "expenses," there were reports on cost reduction. This is considered to be due to the reduction of travel expenses caused by the shortening of the tournament schedule.

In the sub-category of "clarification of goals," there was a report on the clarification of the path to the top. This is considered to be due to the clarification of the point that only those players who have the ability to get out of the WTT can take the next step to the Grand Slam tournaments.

Furthermore, in the sub-category of "tournament level," there were responses concerning the improvement of the level of tournament. This may be due to the fact that higher ranked players are now competing in the WTT due to the reduction of draw size and other reasons.

# Requests

The "requests" category consists of five subcategories: improvement of treatment, method of holding tournaments, number of tournaments, domestic tournaments, and provision of information. First, in the sub-category of "improvement of treatment," it was reported that the parking lots, practice courts, and practice balls are not adequately prepared for WTTs in Japan. It was also pointed out that transportation to and from the official hotels is also insufficient.

Next, in the sub-category of "method of holding tournaments," it was requested that the WTT be held in the same venue as the WTT is held in Japan for six consecutive weeks in spring every year. Furthermore, these tournaments are run by university tennis club members, so it is also important to ensure the governance of the club (Hotta et al., 2022a; Hotta et al., 2022b).

In the sub-category of "Number of tournaments", there was a request to increase the number of M15, M25 and ATP Challenger tournaments in Japan.

In the sub-category of "domestic Tournaments", the need to enhance the domestic JTA tournaments was pointed out.

In the sub-category of "provision of information", it was reported that the information to the players regarding the changes in the tour system should be provided more promptly and better.

From these requests, it can be understood that the improvement of the professional tennis tournament

environment in Japan is what is desired (Hotta, 2021), while the changes in the men's professional tennis tour system by the ITF have affected Japanese players in various ways.

#### **CONCLUSIONS**

Following a qualitative inductive analysis of the verbatim transcripts of the interviews, five areas of impact were identified: feeling, game plan, status, environment, and requests.

This study clarified the impact of the change in the men's professional tennis tour system on Japanese players from both environmental and psychological perspectives, and is considered to have provided valuable suggestions for the development of the tennis world. In the future, it is necessary to take measures to make it easier for professional tennis players to compete in international tournaments, based on this study.

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## **CONFLICT OF INTEREST AND FUNDING**

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#### REFERENCES

- Asia University. (2015). Asia University International Open Tennis. Asia Lawn Tennis Club.
- Forbes. (2021). Highest-Paid Athletes. https://www.forbes.com/athletes/ (Last viewed on June 29, 2022).
- Gemba. (2020). Closing the sports fan gender gap. http://thegembagroup.com/ news/closing-the-sports-fan-gender-gap/ (Last viewed on June 29, 2022).
- Gould, D., Greenleaf, C., Chung, Y., & Guinan, D. (2002). A Survey of U.S. Atlanta and Nagano Olympians: Variables Perceived to Influence Performance. Research Quarterly for Exercise and Sport, 73(2), 175-186. https://doi.org/10.1080/02701367.2002.10609006
- Greenleaf, C., Gould, D., & Dieffenbach, K. (2001). Factors influencing Olympic performance: Interview with Atlanta and Nagano U.S. Olympians. Journal of Applied Sport Psychology, 13, 154-184. https://doi. org/10.1080/104132001753149874
- Gregg, B., George, C., & Windy, D. (2006). Measuring the Marketing Communication Activations of a Professional Tennis Tournament. Sport Marketing Quarterly, 15, 91-101.
- Hotta, S. (2023). Constitutional Issues in Artificial Intelligence and Avatar Symbiotic Sports Society. JSAI Technical Report, SIG-FPAI 126, 1-7. https://doi.org/10.11517/jsaifpai.126.0\_01
- Hotta, S., (2021). The Relationship of Motivation and Satisfaction to Frequency of Officiation in Tennis Officials: A Study by Combining a Quantitative and a Qualitative Method. Tenisu no kagaku (Japanese Journal of TENNIS SCIENCES), 29, 13-25. https://doi.org/10.34351/tennis.29.0\_13
- Hotta, S., Yamamoto, M., Hirata, D., & Mitsuhashi, D. (2022a). A Survey on good governance in college tennis teams: Consideration based on the sports organizations governance code. Tenisu no kagaku (Japanese Journal of TENNIS SCIENCES), 30, 27-39.
- Hotta, S., & Yamamoto, M. (2022b). A practical example of strengthening governance in Japanese College Tennis Clubs. ITF Coaching & Sport Science Review, 30(87), 18–24. https://doi.org/10.52383/itfcoaching. v30i87.334
- Ide, N. (2016). Tenisu Puro wa Tsuraiyo [It's hard to be a professional tennis player] Kobunsya.
- ITF. (2017). ITF World Tennis Tour Calendar. https://www.itftennis.com/en/tournament-calendar/mens-world-tennis-tour-calendar/?startdate=2017 (Last viewed on June 29, 2022).
- ITF. (2019). The ITF Global Tennis Report 2019. http://itf.uberflip.com/i/1169625-itf-global-tennis-report-2019-overview/0? (Last viewed on June 29, 2022).
- ITF, ATP, & WTA. (2019). Changes to professional tennis, August 2019. https://www.jta-tennis.or.jp/Portals/0/resources/JTA/information/registration/pdf/changeruleAug2019\_en.pdf (Last viewed on June 29, 2022).
- Lincoln, Y. S. & Guba, E. G. (1985). Naturalistic inquiry. Sage Publication.
- Murkami, K., Suda, K., Sugao, T., Kukidome, T., Yanagisawa K., Akama, T., & Waku, T. (2011). An Examination of Factors Influencing Psychological Conditioning for Athens Olympians. Journal of mental training, 5(1), 39-48.
- Sports Show. (2021). Top 10 Most Popular Sports In The World 2021 Power Ranking. https://sportsshow.net/top-10-most-popular-sports-in-theworld/ (Last viewed on June 29, 2022).

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