

## VOLLEYBALL REFEREES – A STUDY FOR BUCHAREST, ROMANIA

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**Abstract.** *Through this paper, we intend to create a precise image of the particularities of volleyball referees in Bucharest. The present research highlights the personal indicators, social profiles and sports history of 45 out of the 60 certified referees in Bucharest. The tasks of the research were: creating a questionnaire survey, distributing the questionnaire and collecting the responses, processing, analysing and interpreting the data and processing the responses. The synthesised conclusion has revealed the following: 71% of referees are male; their age ranges between 18 and 66 years; their most common occupations are: student (27%), teacher (22%), economist (18%); regarding their level of education, 49% have a bachelor's degree, 24% - a master's degree, and 2% - a doctor's degree; their favourite spare time activities are related to sport, and 67% of them mention volleyball as their preferred leisure activity; they commonly started their sports activity when they were between 6 and 12 years old and generally stopped it when they were between 16 and 20 years old as a result of having less free time; most of them are registered in school sports clubs and only 5% have not signed up for a regular championship; most of them had their first match as referees very soon after graduating from the referee school; 62% of the investigated group have an experience of over 100 refereed matches, and 27% have at least one experience as international referees.*

**Keywords:** *sports referee's background, referee's gender, referee's indicators.*

### Introduction

Sports competition is an important part of today's society. People feel the need to escape from everyday life, to experience real emotions even if through other people. During the contemporary period, our lives are protected from dangers and situations in which experiences are real and exciting. To fulfil the desired goal, the sports show needs athletes (as main actors), organizers (as accomplished scenographers) and referees (as directors of great talent). There is no competitive sport that can be played in the absence of referees, whether they have the role of rating the technical merit or artistic impression, ensuring compliance with the rules or keeping track of the results and performances obtained.

Refereeing is considered one of the main pillars in sports competitions. Referees have a great responsibility: they need to be careful and focused on decision-making as they are the only ones who have the authority to make decisions and apply the articles of the law during the game, which is why they must have many psychological skills to perform their work efficiently.

The responsibility of referees is summarised by Guillén and Feltz (2011), who state that sports referees have a challenging job due to the many aspects of the game that they must take into account, the speed and complexity of the decisions they must make, the consequences of their actions, the number of people involved in a match and sometimes the hostility of the spectators participating in a sporting event.

Referees are very often at the forefront when refereeing errors occur. Journalistic articles about the most serious errors in football are common, starting with the very first edition of the 1930 World Cup, when the host nation, Uruguay, received unexpected help from a policeman standing at the side of the football field, who discreetly kicked the ball back on the pitch, allowing Peregrino Anselmo to race forward and score. Football also gave the famous phrase “The Hand of God” as a reference to the goal scored by Maradona and unsanctioned by the referee.

The environment in which matches are played is often stressful, as Nevill et al. (2002) state: “The presence of crowd noise had a dramatic effect on the decisions made by referees” (p. 261). In the study by Samuel et al. (2018), “the referees exhibited higher levels of trait self-control compared with professional soccer players and the general population” (p. 167). In our opinion, this finding would also apply to volleyball referees, even if volleyball is considered a sport where verbal clashes between athletes, technicians and officials are not frequent. Rainey (2012) also points out that reports of trash talk are most common in ice hockey (58% of games) and football (41% of games) and least frequent in athletics (3%) and volleyball (2%).

According to the rules of volleyball, a whole team of referees is required. This team includes: the first referee, the second referee, the scorer and the line judges. The first referee is the main authority that controls the play from the stand throughout the game and makes undeniable decisions. The second referee (also called umpire) assists the main referee and is primarily focused on network play across the floor. This official has a complementary role and can be considered a second pair of eyes of the main referee. Line judges need excellent eyesight and agility as they move along the sideline to get the ball and avoid collision with the best perspective of the player. These officials reflect the importance and level of a volleyball competition. The regulation requires the presence of four line judges in large-scale competitions, given that the ball flies at a higher speed than that allowed for a car on the highway. The points earned by each team, the dynamics of obtaining them and other aspects to be monitored are the scorer’s responsibility.

It is interesting to support refereeing with technology, which is a result of the fact that the FIVB is officially committed to using new technology to assist referees in the decision-making process so that the game runs fairly in relation to athletes’ actions. Even though technology has increasingly helped refereeing in recent times, and “team sports such as volleyball require accurate and robust tracking systems that do not affect either the players or the court” (Szlag et al., 2019, p. 202), the widespread use of technology is still at the beginning. We can mention the system of volleyball training assistant decision support described by Xu and Liu (2021) and the method proposed by Kurowski et al. (2018) to detect touches on the ball and determine “accurate trajectory and impact positions of the ball to support referees” (p. 296).

Because volleyball referees have been studied quite a bit in the scientific works of interest for our paper, we wanted to create a clearer picture of volleyball referees in Bucharest. We aimed to create a profile including personal indicators (age, gender), social indicators (work, profession, education), sports experience, preferred ways of spending free time. We believe that the objectification of these indicators could better direct the efforts of the Romanian

Volleyball Federation and the Bucharest Municipal Volleyball Association towards attracting new people and expanding the body of volleyball referees.

### *Research questions*

As our paper falls into the category of descriptive research, the following research questions have been formulated:

- a. What are the personal indicators of a volleyball referee officiating in Bucharest?
- b. What is the social profile of a volleyball referee officiating in Bucharest?
- c. What is the sports history of a person who chooses to be a volleyball referee?

### *Methodology*

The bibliographic study method was used to verify the information available in the literature. The bibliographic research included books and articles existing in the Library of the National University of Physical Education and Sport in Bucharest and international databases. The keywords used to identify the specialised works were: volleyball + referee, volleyball + umpire, referees + background, referee's gender.

To collect the data needed for the research, the questionnaire survey method was used, which included closed-ended questions and open-ended questions.

In the preliminary stage, we established the topic of the investigation and determined the population to be investigated, namely referees of the Bucharest divisional group. In the next stage, the pre-test, we developed the questionnaire and applied it to five participants to see if it was well designed and if the Google Forms platform allowed us to collect the data obtained. The results were revised and the final form of the questionnaire was drawn up. Then, it was distributed online to all referees in Bucharest via e-mail.

The questionnaire items were:

1. Your gender: \*  Male  Female

2. Your age is in the group: \*

25 - 18 | age group

35 - 26 | age group

45 - 36 | age group

55 - 46 | age group

65 - 56 | age group

• over 66 years

3. Your profession: \*

4. Work:

*Optional*

5. Education - Last degree obtained: \*

Baccalaureate degree

• Bachelor's degree

• Master's degree

• Doctor's degree

○ Other:

6. How do you spend your free time? (open-ended question)

*Your hobbies:*

7. Experience as an athlete

7.1 Sports branch: (name) \* (open-ended question)

*If you play/played several sports, you can list all of them.*

7.2 At what age did you start sports activities? \*

12 - 6 | age group

17 - 13 | age group

22 - 18 | age group

○ Other:

7.3 At what age did you stop playing sport? \*

I have not stopped playing sport.

< 10

15 - 11 | age group

20 - 16 | age group

25 - 21 | age group

30 - 26 | age group

○ > 30

7.4 Why did you stop playing sport? \*

*If you have not stopped playing sport, specify this.*

7.5 At what club/clubs did you play during your sports activity? \*

*Ex.: CSS 6 Bucharest, CS Rapid, CTF Mihai I*

8. Experience as a referee:

8.1 In what year did you graduate from the referee school?

8.2 In what year did you have your first experience as a line judge/scorer?

8.3 In what year did you have your first experience as a first/second referee? \*

8.4 How many official games have you refereed so far? \*

• 1 - 10 matches

• 11 - 50 matches

• 51 - 100 matches

Over 100 matches

8.5 Have you refereed so far in a county other than Bucharest? \*

○ Yes

○ No

8.6 Have you refereed so far in a country other than Romania? \*

○ Yes

○ No

To maximise the response rate, the recipients of the questionnaire were all volleyball referees authorised to officiate volleyball matches in Bucharest. The total number of referees was 60, but we collected data from 45 people. We were pleased with this response rate, taking into account that the literature mentions a response rate of 25-50% to online surveys (Guin et al., 2012), and in our study we collected data from 75% of participants. Given this considerable percentage, we can focus on a more accurate picture of all referees and generalise the interpretation of the results.

The research started on 01.11.2020 with the study of specialised publications in the Library of the National University of Physical Education and Sport, even though access to the reading room was restricted to a small number of people due to the SARS-CoV-2 pandemic. The exploration of documents on physical support lasted until 21.11.2020 - enough time to make sure that there were no equivalent data in the Romanian literature. The study of specialised bibliography continued in the online environment using Google Scholar and Web of Science.

The initial form of the questionnaire (<https://forms.gle/MUoi7FEvZ6vkn5XR9>) was distributed in November 2020, receiving responses within one week. It was distributed online via e-mail because it was risky to meet the respondents physically as long as the restrictions to prevent the spread of the SARS-CoV-2 virus were still in force.

The final form of the questionnaire (<https://forms.gle/yoQVTwGgcJExYMz9>) was drafted in December 2020 with data collected by February 2021. Data collection ended on 21.02.2021, obtaining 45 completed questionnaires. Data processing started in March and ended in May.

## Results

### 1. Gender

All participants responded to question 1 regarding “Gender”.

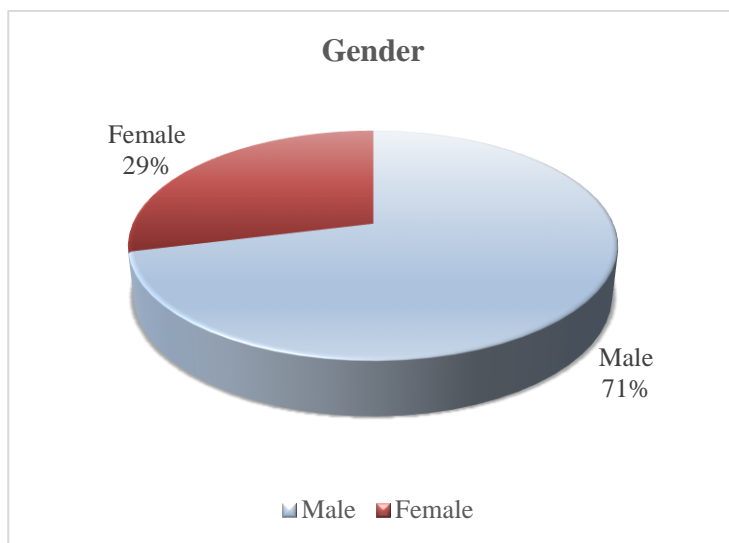


Figure 1. Gender

As can be seen in the data presented above (Figure 1), most referees are male (71%), while the female gender is in the minority (29%).

### 2. Age

Question 2, “Age”, was completed by all participants, being a mandatory item. The distribution of data for this question was as follows:

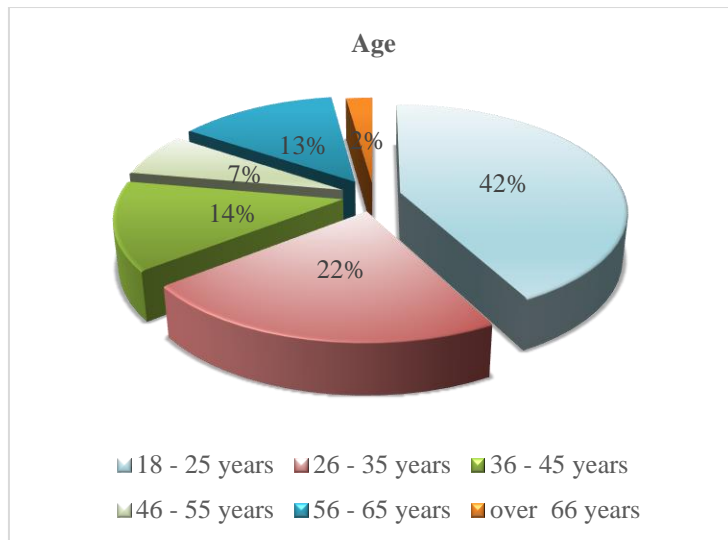


Figure 2. Age

The data presented above (Figure 2) show that the most prevalent age group for referees is between 18 and 25 years, with 42%, while the next age group is between 26 and 35 years, with 22%. The last place is occupied by people over 66 years old, with a percentage of only 2%, and the other places, by age groups between 36-45 years (14%), 46-55 years (7%) and 56-65 years (13%).

### 3. Profession

For question 3, “Profession”, we gathered only 45 responses from the 60 people, and the results obtained were as follows:

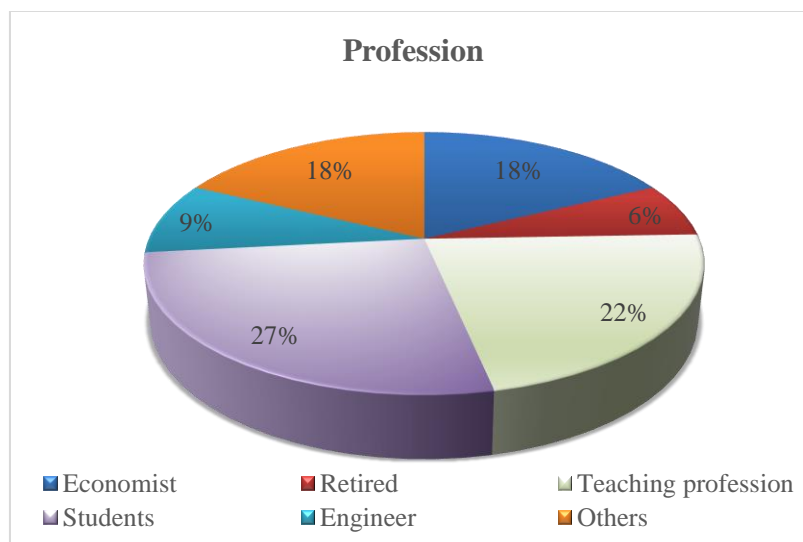


Figure 3. Profession

As can be seen in Figure 3, 27% of respondents are still students, and this result is natural because the previous question indicates a large number of referees that fall into the age group

between 18-25 years. The student profession is followed by the teaching profession with 22%, which is close to the first place. In the next place, we find the profession of economist and the category “others”, with an equal percentage of 18%, while the last places are occupied by the profession of engineer and the category of retired people, with 9% and 6%, respectively.

#### 4. Workplace

Question 4, “Workplace”, was an optional item. However, 15 people chose to respond, but the 15 responses did not help us classify the results because they were diversified and could not be grouped into a category. The jobs collected from the questionnaire responses show that they are active on the labour market, working for the following companies: Marsh, Ministry of Public Finance, Lidl Discount SRL, Hyundai Auto Romania, “Henri Coandă” International Airport, Romanian Volleyball Federation, KinetoZen, ING Bank, Home, Grigore Moisil CN, Fitness Gym, “Lucian Blaga” University of Sibiu and Belor Galați CSU, while one participant is a student of economic studies. It is interesting that two referees do not work in Bucharest. Checking the data, we found that one of them chose to be accredited for Bucharest (instead of his place of residence), and the other changed his place of residence but retained his accreditation for Bucharest.

The data obtained for this question show that volleyball referees in Bucharest have other predominant occupations in their lives, and refereeing is seen as a hobby.

#### 5. Education - Last degree obtained

For question 5, “Education - Last degree obtained” (Figure 4), we gathered 45 responses, participants having to choose between 4 options, namely: a baccalaureate degree, a bachelor’s degree, a master’s degree or a doctor’s degree. Linking these responses to the previous item (profession), it has been noticed that all referees in Bucharest are higher education graduates or students currently enrolled to obtain a university degree; therefore, for the latter, the last degree already obtained is a baccalaureate degree.

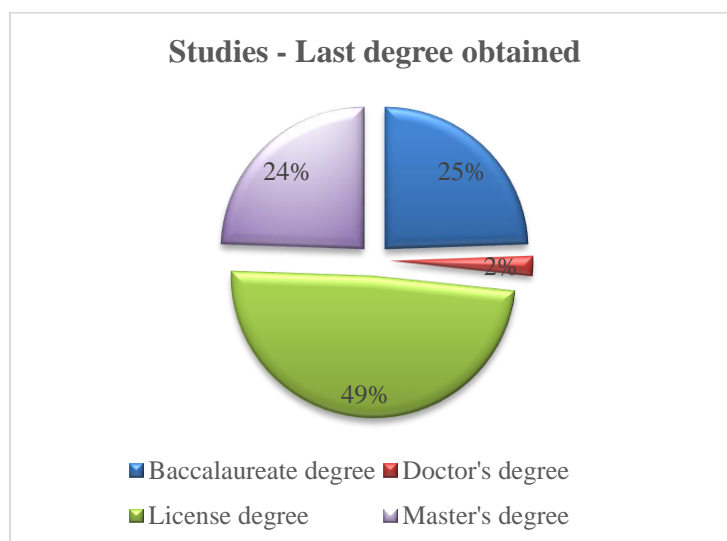


Figure 4. Education - Last degree obtained

Statistically, 49% of volleyball referees in Bucharest hold a bachelor's degree, 25% - a baccalaureate degree (those who are still students), 24% - a master's degree, and 2% - a doctor's degree.

#### 6. Leisure time hobbies

This question concerns the hobbies of volleyball referees in Bucharest. Each of them could choose any response, being an open-ended question. We received 45 responses and each one was different, so we decided to group them into three categories as follows: leisure activities in the world of sport, activities for recreation/socialisation and lack of free time.

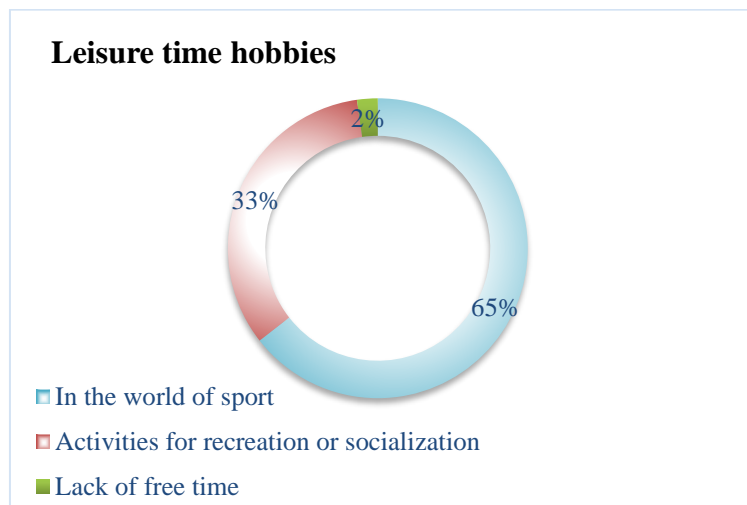


Figure 5. Leisure time hobbies

As can be seen in Figure 5, their leisure activities are related to the world of sport in a percentage of 65%, followed by activities for recreation or socialisation - with 15 people and a percentage of 33%. Only one referee opted for the lack of free time - a percentage of about 2%.

#### 7. Experience as a former athlete

For this item, "Experience as a former athlete", we addressed the following five questions: sports branch, age of starting sport, age of stopping sport, reason for stopping sport and club/clubs where they played during their sports activity.

##### 7.1. Preferred sport

The first question, "Sports branch", was an open-ended question allowing free responses. Athletes had played several sports branches, which were put in order according to their preferences. We classified the responses into four categories as follows: volleyball as the first option, the second option, the third option or other sports (Figure 6).



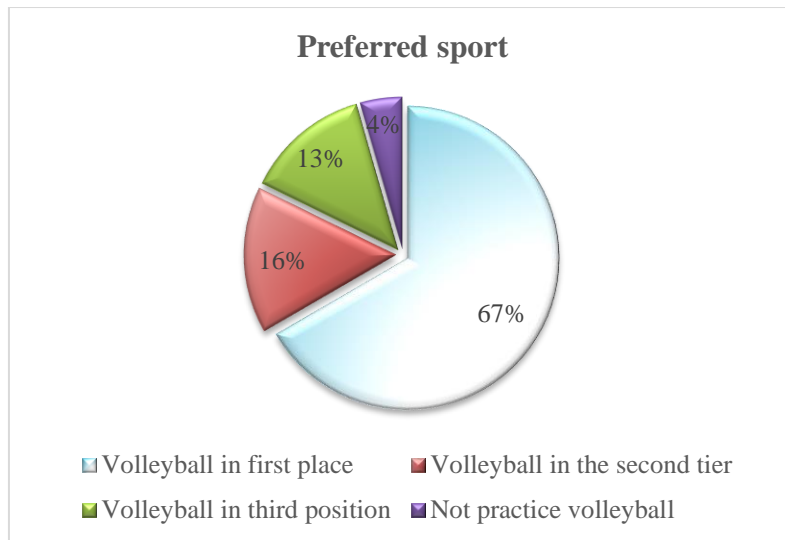


Figure 6. Preferred sport

According to statistics, although most referees had practised volleyball, they preferred to place it in different positions. Thus, 67% of the 45 responses placed volleyball in first position, 16% - in second position, 13% - in third position, and 4% did not play volleyball.

#### 7.2. Age of starting sport

The second question concerns the age of starting sport. Respondents had to choose between four options, and one of them could be preferential. The following age ranges were provided as response options: 6-12 years, 13-17 years, 18-22 years, other (Figure 7).

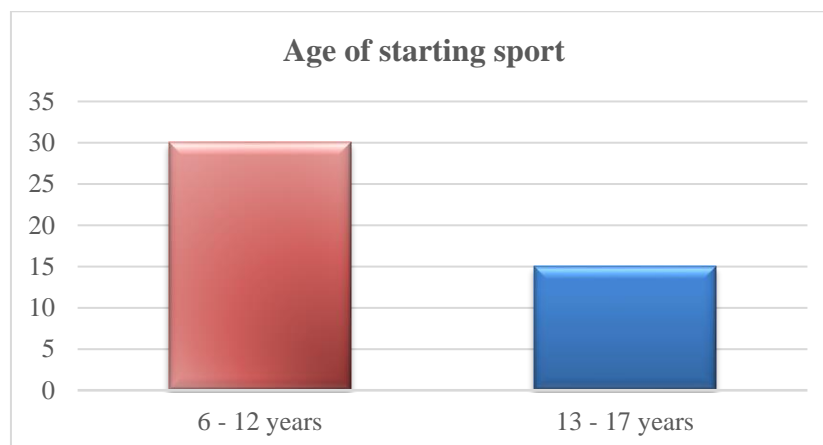


Figure 7. Age of starting sport

Responses to this question concerned only two age categories, namely between 6-12 years and 13-17 years. Most of the participants in this study started their sports activity between 6-12 years old (30 people), and the remaining 15 people started it at 13-17 years old.

### 7.3. Age of stopping sport

The next question was about the age of stopping sport and the following seven options were provided: < 10 years, 11-15 years, 16-20 years, 21-25 years, 26-30 years and > 30 years (Table 1 and Figure 8). All participants responded to this mandatory question.

Table 1. *Age of stopping sport*

Age of stopping sport	
< 10 years	1
11-15 years	1
16-20 years	19
21-25 years	8
26-30 years	3
> 30 years	5
I have not stopped playing sport	8

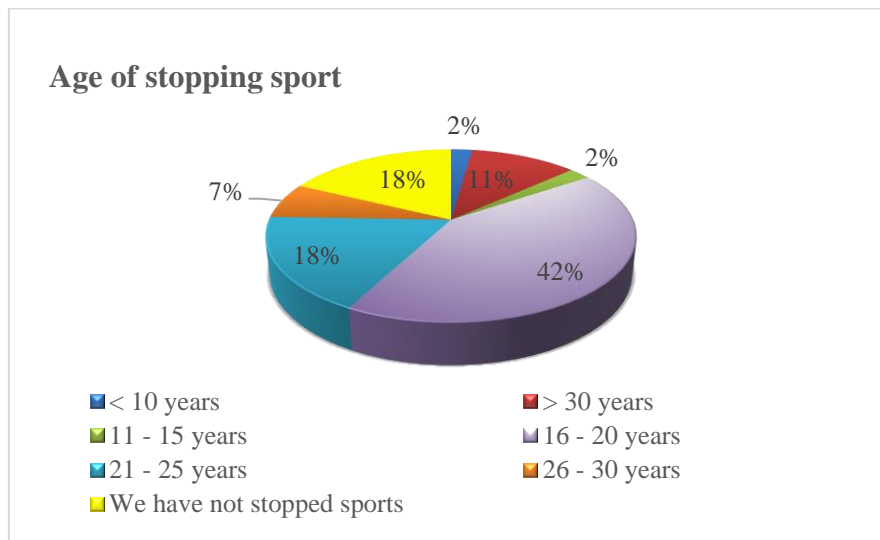


Figure 8. Age of stopping sport

This question had a wide range of responses, and the most common age of stopping sport was found in the period 16-20 years, with a percentage of 42%, and the rarest period was between 11-15 years, with a percentage of 2%, along with the category under 10 years, with the same percentage. The remaining age categories had the following percentages: 18% (I have not stopped playing sport), 18% (21-25 years), 11% (> 30 years) and 7% (26-30 years).

### 7.4. Reason for stopping sport

This was an open-ended question regarding their reason for stopping sport. After receiving the results, we decided to list the responses as follows: lack of free time, injury, I have not stopped playing sport, other reasons (Figure 9).

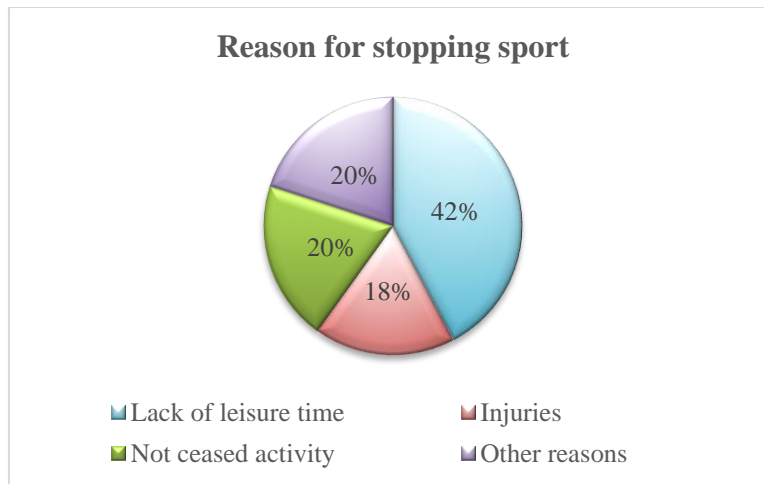


Figure 9. Reason for stopping sport

Most referees, namely 19 people (42%) stopped playing sport due to lack of free time. The categories “other reasons” and “I have not stopped playing sport” are in second place with an equal percentage (20%), and the “injury” category is in last place, with a percentage of 18%.

#### 7.5 The club/clubs where they played during their sports activity

The last question was about their experience as athletes in the club/clubs where they worked. To this open-ended question, we received 45 responses, most of them different, which were classified into three categories: “School Sports Clubs”, “Private Sports Clubs” and “Amateur”, so we could classify the results and interpret the data (Figure 10).

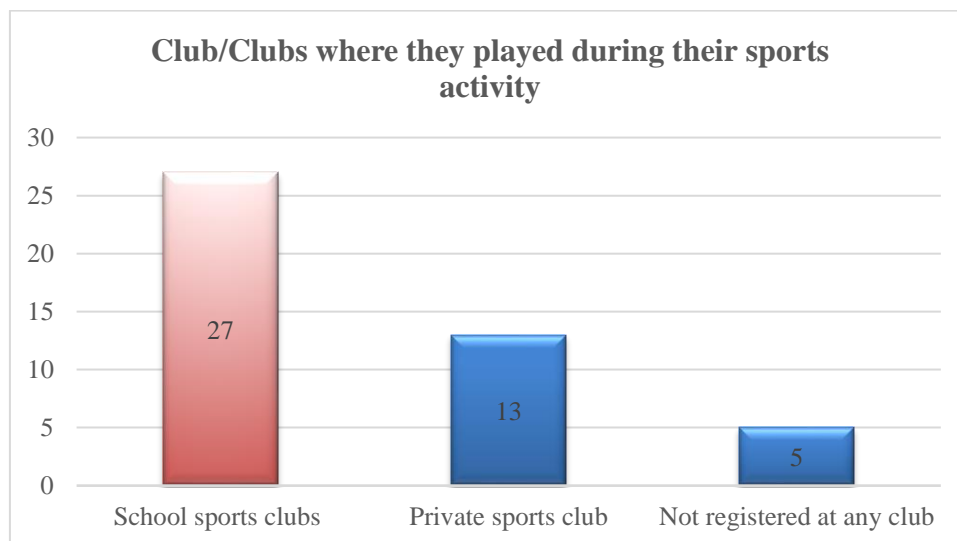


Figure 10. Club/Clubs where they played during their sports activity

The results showed that 40 referees had been engaged in competitive sport at different public or private clubs, while 5 of them had seen sport as a leisure activity and had not been members of any sports club. Thus, 27 participants were registered at school sports clubs and 13, at private sports clubs.

8. *Experience as referees*

8.1. Three questions were used to objectify the respondents' experience as referees. These questions were grouped in order to link their first experience of participation in a referee team with the year of graduating from the referee school (Table 2 and Figure 11).

Table 2. *Experience as referees*

Experience as referees	
They graduated from school in the same year that they officiated as first referees, second referees or scorers	23
They graduated from school but officiated as first referees one year later	14
They graduated from school but officiated as first referees in the following years	8

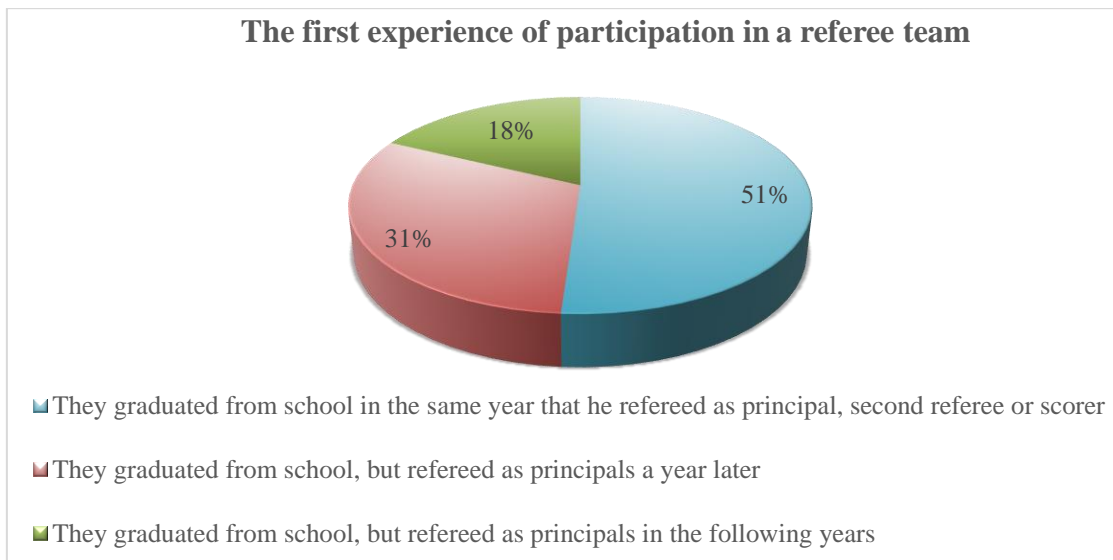


Figure 11. The first experience of participation in a referee team in connection with the year of graduating from the referee school

It can be noted that more than half of the people included in the research sample had their first official experience as referees the very year of graduating from the referee school. If they do it in the first year, they have a very good chance to further work as referees. At the opposite pole, 18% of referees started their work more than a year after school graduation. Only four out of five referees had the experience of officiating very soon after graduation. We can say that one should referee no more than a year after graduating from the referee school in order to remain in this field.

8.2. Number of refereed matches. To this question, respondents could choose only one of the four options provided (1-10 matches, 11-50 matches, 51-100 matches, over 100 matches) (Figure 12).

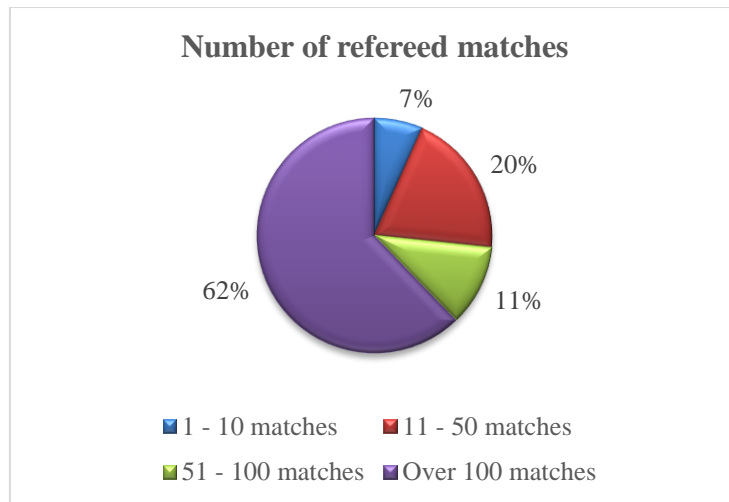


Figure 12. Number of refereed matches

In the investigated sample, most respondents (62%) refereed in over 100 matches. The lowest percentage (7%) was recorded by beginners, who refereed in less than 10 games. Perhaps the figures would have been different if this study had not been conducted during the SARS-CoV-2 pandemic, when competitive activity was suspended. After completing the data collection, we realised that the referees' experience would have been better objectified if the question had not been closed-ended, with the possibility for each of them to note exactly the number of officiated matches. This may be a topic for future research.

8.3. Regarding the places where they officiated as referees, two response options were provided: only in Bucharest or in another county (Figure 13).

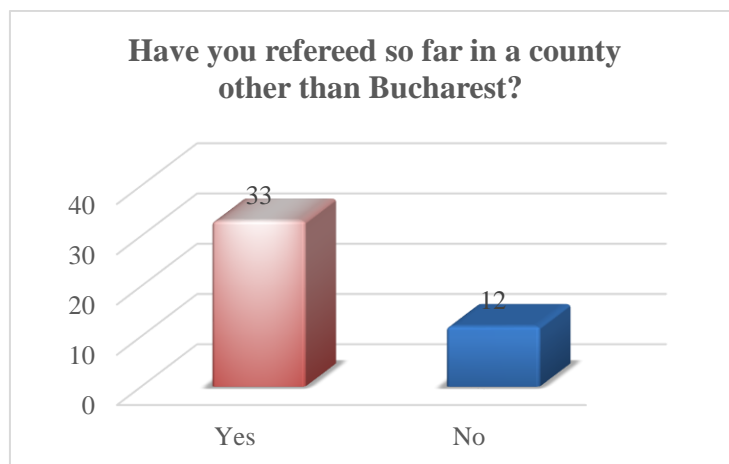


Figure 13. Places where they officiated as referees

We noted that most respondents refereed matches outside Bucharest. Only 27% of them officiated only in Bucharest. In our opinion, this can also be attributed to the fact that the number of referees in Bucharest is greater than in any county, so they are required to officiate throughout the country.

8.4. Matches refereed abroad (Figure 14). For the investigated sample, the response options were “Yes” and “No”.

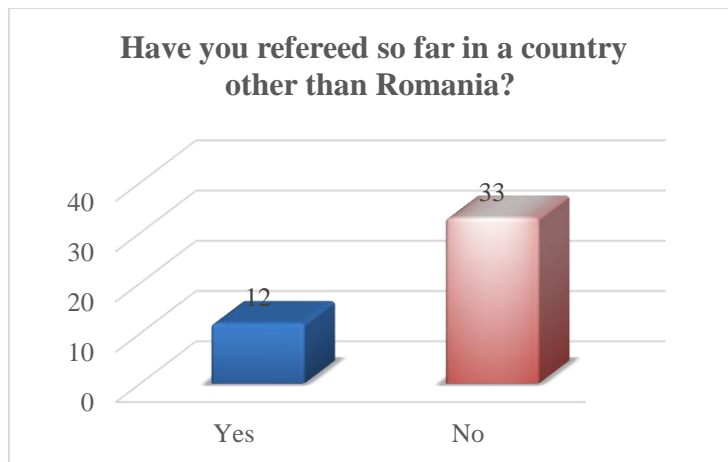


Figure 14. Matches refereed in other countries

## Discussion

Even if our research was not aimed at investigating the opinion of coaches, our lived experience and published papers (Ridinger et al, 2017; Sabo et al., 2016; Kane & LaVoi, 2018; Samuel et al., 2018) show that some coaches may have biases against female referees. This is possible to make refereeing less attractive to women. Today, both genders have legal equal rights to sports participation as athletes or official sports referees. Lee et al. (2017) state that “being a referee is not only a confirmation of one’s capabilities, but it is also a symbol of personal development and recognition in the context of gender-inequity” (p. 1277). Thus, in our research, we found substantially fewer female referees (29%) than male referees (71%), which might be due to the fact that women tend to focus on other responsibilities than their careers as referees.

According to Leighton (2017), only about 20% of novice officials continue in this role for more than two years. In our research sample, we did not encounter the alarming problem related to the aging population of current officials, as reported by Erzar (2017). However, we believe that the total number of volleyball referees in Bucharest is too small for a city of 2 million inhabitants.

Continued refereeing activities are particularly important, being related to psychometric factors (Diotaiuti et al., 2020) and personal factors (VanYperen, 1998). Considering the age of the sample investigated in Bucharest, we do not encounter the problem reported by Cuskelly and Hoye (2013), who say that “with declining numbers of officials, particularly early career officials, organizations are also facing management problems in relation to the retention of existing officials” (p. 451).

We think that the presence of students in the sample of referees, especially physical education and sport students, is welcome and could even be more pronounced, as Wahl-Alexander and al. (2019) point out: “Officiating competency needs to be intentionally developed during Sport Education, and teachers should allocate ample time for students to

practice and improve their officiating abilities, because officiating serves as an important integral part of this pedagogical model” (p. 568). The relatively high percentage of referees who are still students is gratifying.

We agree with Avugos et al. (2021) that most studies on sports officials ignore the variation of data in terms of individual differences. We stress that, in our country, there is no scientific work about volleyball referees. Perhaps these important actors of the sports competition should be studied more and perhaps team-building activities should be organized because, as Kellett and Shilbury (2007) point out, “umpires enjoyed the social world they share with other umpires and identified social interactions among umpires as a key reason for continuing to umpire” (p. 209). We also agree with Giel and Breuer (2020), who believe that compatibility with the occupation and private life is highly important.

Most of the referees in our sample played volleyball and spent their free time playing sports. However, our initial conceptualisation was limited because we did not add an item on private life (married/single), a missing aspect that we intend to correct in future research.

## Conclusion

Synthesising as much as possible, we could say that the most probable profile of a referee in Bucharest will be: male, between 18 and 35 years old, teacher or student, with a profession not related to sport, with higher education, a person for whom refereeing is a hobby. They spend their free time playing sports, played volleyball probably until they were 20 in a school sports club and abandoned sports life due to lack of time. They refereed in the first year after gaining their referee’s qualification, refereed over 100 official matches, refereed outside Bucharest and in other countries.

Even if there may have been additional information to add, we believe that the findings of this study can facilitate the improvement of effectively attracting, gender equality and retention as strategies of the Romanian Volleyball Federation responsible for referees.

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