

## Original Scientific Paper

# The Attitudes of Montenegrin Billiard Players towards Health and Professionalism

Gordana Radoicic<sup>1</sup>, Zoran Milosevic<sup>2</sup>, Boris Zarkovic<sup>2</sup>, Bojan Masanovic<sup>3,4</sup>

<sup>1</sup>Independent Researcher, Podgorica, Montenegro, <sup>2</sup>University of Novi Sad, Faculty of Sport and Physical Education, Novi Sad, Serbia, <sup>3</sup>University of Montenegro, Faculty for Sport and Physical Education, Niksic, Montenegro, <sup>4</sup>Montenegrin Sports Academy, Podgorica, Montenegro

## Abstract

The aim of this research is to examine attitudes of billiard players from Montenegro towards health and professionalism. The sample includes 78 active billiard players from Montenegro, average age of  $33.35 \pm 7.94$  years, who expressed their attitudes by choosing one of offered answers to the asked question. The instrument of this research is a survey questionnaire. The first and third part of this questionnaire were created by these research authors, while second part of the questionnaire is taken over and modified from the research of Međimurec (2013). The results are analysed by the Google Forms platform. Based on the results of this research, it is concluded that Montenegrin billiard players have acceptable health habits and professional attitudes towards billiards.

**Keywords:** Attitudes, Snooker, Game, Health Behaviour, Public Health

## Introduction

Most people who never tried playing billiards easily takes a stand that it is only a game. However, billiards is considered a sport, due to the great psycho-physical effort that a player must invest in, often, several hours of training or matches (Elmaged, 2017). Nikola Tesla's observation is recorded, he said among other things that in billiards there is an extraordinary connection between human mind and physical motor skills (Petrić, 2019). This statement most precisely reflects the experience of most players (Mishima & Sukanuma, 2016; Park, Choi, & Kang, 2017; Borysova, Nagorna, Shytova, & Mytko, 2019). That connection between idea, that is, personal perception of way of next shot performance and way of how body should perform it, is essence of this game (Radoičić, 2020). These two aspects of connection skill represent the playing style of a particular player. Also, it should not be forgotten that taking the correct stance is considered as crucial element of technique for all beginners in billiards, and that it is a precondition for every quality shot performance (Mishima & Sukanuma, 2016).

The first recognizable form of billiards was noticed in France in 1340. Back then it was played outside, on the lawn. Later, at the beginning of the 18th century, billiards became a favorite among the French and English nobles, and it was played indoors. In the 19th century, in period of Industrial revolution, billiards was developed

in form we know today (sky HISTORY, n.n.). From then until today, many billiards varieties were developed, the most popular are snooker and pool, and in pool four games, eight ball, nine ball, ten ball and straight pool (Elmaged, 2017). Billiards first appeared in Montenegro in 1836, when the then ruler, Petar II Petrović Njegoš, brought the first and only billiards in Montenegro from Vienna to Cetinje (Montenegro Travel, n.n.). Nowadays in Montenegro are played the first three aforementioned pool games, and snooker is on the rise.

Motives for participation in billiards are very various, from enjoyment, goal achievement, competition, to socialization, gambling, mental rehabilitation, or wish to spend time with a close person or to get benefits when enrolling at the university (Park, Choi, & Kang, 2017). Result have shown that most of them, 26% of respondents, plays billiards solely out of pleasure. However, not only affinity to some sport is enough for playing it, psychophysical health is also one of the most important preconditions (Borysova, Nagorna, Shytova, & Mytko, 2019). Namely, the key moments of each game (last shot in basketball, penalty, decisive ball in billiards, etc.) depend on the extremely good psychophysical condition of the player and athlete (Borysova et al., 2019), because the nervous system is responsible for a high level of movement accuracy, levels of stress and muscle mobility. The reason for that is actually that in billiards, every next situation at the table is al-

Correspondence:

**Montenegro  
Sport**

G. Radoicic  
Independent Researcher, Dalmatinska 78, 81000 Podgorica, Montenegro  
E-mail: gordanaradoicic17@gmail.com

ways different from the previous one and requires a lucid solution. Therefore, it is necessary for the players to be psychophysically healthy and prepared before every match, and they can achieve that by taking care of themselves and their way of life. Exactly body activity is significant protective health factor.

Based on facts that in general sportsmen are group of people who should strive to healthy lifestyle (Kotarska, L. Nowak, Szark-Eckardt, & M.A. Nowak, 2019), that some researchers state that even 70% of whole sport result depends on sportsmen nutrition (Burns, Schiller, Merrick, & Wolf, 2004), and that primarily individual meaning of professionalism is loyalty and perseverance to perform profession or activity in the best possible way (Vrcan, 1971), aim of this research is to determine attitudes of Montenegrin billiard players towards health and to estimate their health behaviour, and to determine their attitudes towards professionalism in billiards.

**Methods**

The population of this retrospective cross-sectional study includes 78 active billiard players from Montenegro, average age of 33.35±7.94 years. All respondents are adults with permanent residence at Montenegrin territory who are actively playing billiards (most of them longer than 5 years). The sample was selected to cover as many Montenegrin municipalities as possible. It is necessary to remind that all participants voluntarily participated in this research and they had the ability to resign their participation in this research at any point.

The instrument of this research is a survey questionnaire consisted of 21 questions divided in three subsystems. The first five questions from the questionnaire are related to socio-demographic characteristics of Montenegrin billiards players (gender, age, profession, educational background, city of residence). The following six questions are related to attitudes of Montenegrin billiards players towards health and health behaviour (alcohol consumption, cigarette consumption, regularity of breakfast, number of daily meals, daily meal schedule, extent of physical activity). The

next ten questions are related to attitudes of Montenegrin billiards players towards professionalism (playing experience, weekly frequency of play, daily frequency of play, weekly practice of another sport, participation at Montenegrin tournaments, participation at regional tournaments, possession of equipment, monthly financial investment, financial gain). The first and third part of this questionnaire which include examination of socio-demographic characteristics and attitudes towards professionalism were created by this research author, while the second part of the questionnaire which includes examination of attitudes towards health is partly taken over and modified from research of Medimurec (2013).

This researcher was conducted online, via the Google Forms platform in the period between October 10th and 24th in 2020. Questions were closed. Respondents at most questions had optional offered answers, and for a few questions they had to write their own answer. It is important to notice that the survey was anonymous and that all answers were strictly confidential. Also, this research author precisely checked and corrected, that is, removed all the questionnaires that were not neatly filled, and there were eight of them.

By filling out the questionnaire in Google Forms all results were automatically sent to a Google spreadsheet in percentage.

**Results**

Based on answers to questions from first subsystem (socio demographic characteristics) it is noticed: that billiards is dominantly played by male players (Figure 1); that Montenegrin billiards players are at average age of 33.35 years; that their professional orientation is diverse (entrepreneur, IT expert, private businessman, air traffic controller, caterer, architect, economist, engineer, aircraft mechanic, communicator, professor, student etc.); that Montenegrin billiards players are mostly university educated, then secondary educated, and in 6.4% they have a master's degree (Figure 2). City of residence of Montenegrin billiards players is mostly Podgorica (52.56 %), then Bijelo Polje (20.51 %), Nikšić (12.82 %), Bar (8.97 %), Danilovgrad (3.85 %) and Budva (1.28 %).



FIGURE 1. Gender affiliation

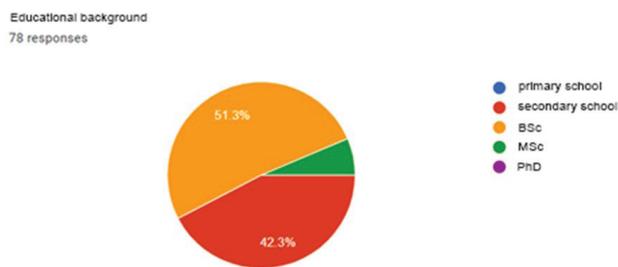


FIGURE 2. Educational background

Based on answers to questions from second subsystem (attitudes towards health and health behavior) is noticed: that not a single player uses alcohol daily, but periodically is used by vast majority of players (Figure 3); that players are dominantly

non-smokers, but also large number of them uses cigarettes daily (Figure 4); that Montenegrin billiards players are dominantly having breakfast daily, more than twice less percentage of them have it sometimes and the lowest percentage of them never have

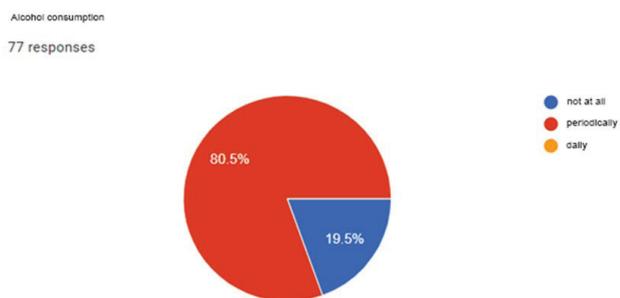


FIGURE 3. Alcohol consumption

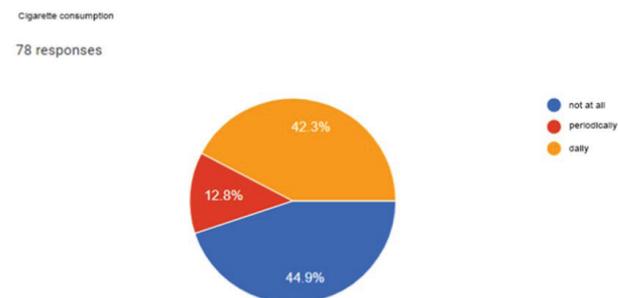


FIGURE 4. Cigarette consumption

I have breakfast  
77 responses

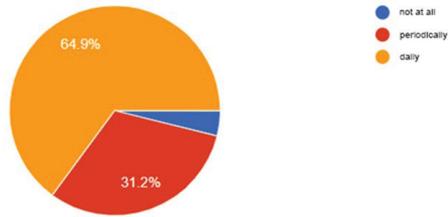


FIGURE 5. Regularity of breakfast

Number of meals per day  
78 responses

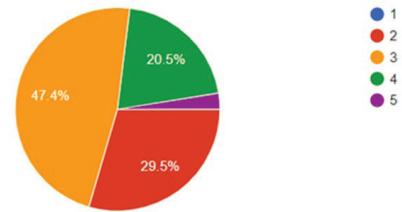


FIGURE 6. Number of daily meals

breakfast (Figure 5); that vast majority of Montenegrin billiards players mostly has three daily meals (Figure 6); that only 1.3% of Montenegrin billiards players has pause between last daily meal and first meal next day longer than 16 hours, and that pause is required in order to activate natural process of autophagy, so it

is clear that they dominantly don't follow most accurate trends and data about health nutrition (Figure 7); that Montenegrin billiards players are mostly performing physical activity 3-5 times per week, which means that besides billiards they perform some other activities (Figure 8).

Pause between the last daily meal and the first following day  
78 responses

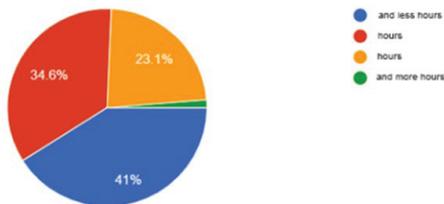


FIGURE 7. Daily meal schedule

I am engaged in physical activity  
78 responses

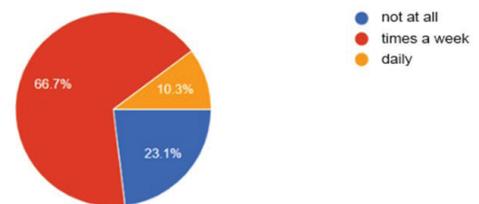


FIGURE 8. Extent of physical activity

Based on answers to questions from third subsystem (attitudes towards professionalism) it is noticed: that Montenegrin billiards players in the largest percentage are playing billiards longer than 5 years (Figure 9); that they are dominantly playing billiards 3-4 and more times per week (Figure 10); that, when playing, they spend more than 2 hours at the pool table (Figure 11); that vast majority of Montenegrin billiards players are engaged in some other physical activities 3-5 times per week (Figure 12); that those activities

besides billiards are diverse (gym, running, walking, cycling, mini football, basket, tennis); that participation at tournaments is various (equally large percentage of those players who participate at almost every and those who rarely participate), and it is interesting that it is also identical percentage ratio between those who participate at each one and those who don't participate at any (Figure 13); that a extremely low percentage of players goes to tournaments outside the borders of Montenegro (even in region) (Figure 14);

Playing billiards  
78 responses

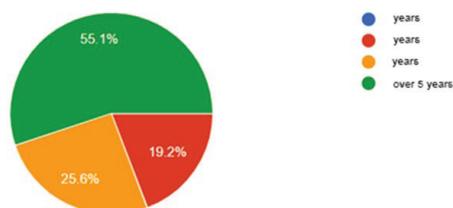


FIGURE 9. Playing experience

How much time I spend playing billiards weekly  
78 responses

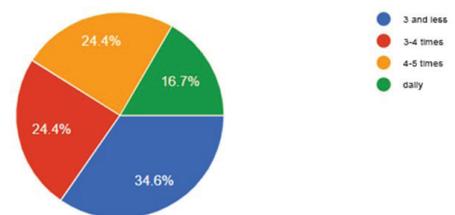


FIGURE 10. Weekly frequency of play

How much time I spend playing billiards Daily  
78 responses

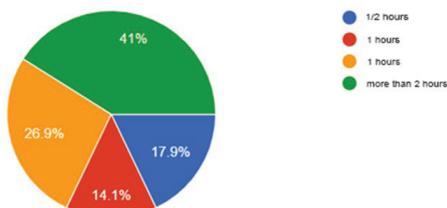


FIGURE 11. Daily frequency of play

I practice another activity  
78 responses

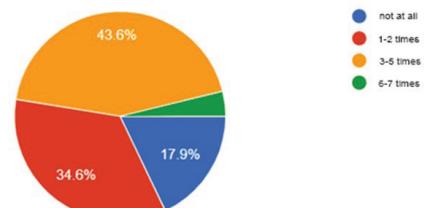


FIGURE 12. Weekly practice of another sport

I participate in tournaments in Montenegro  
78 responses

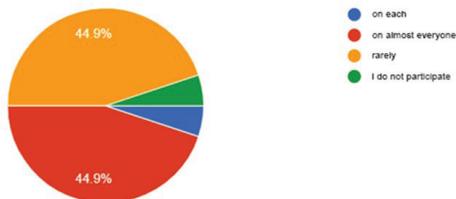


FIGURE 13. Participation at Montenegrin tournaments

I participate in tournaments in the region  
77 responses

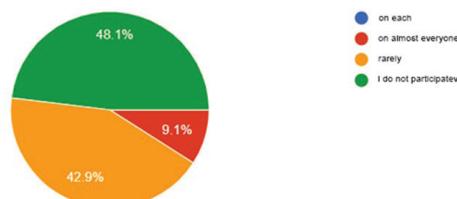


FIGURE 14. Participation at regional tournaments

I own my billiard equipment  
78 responses

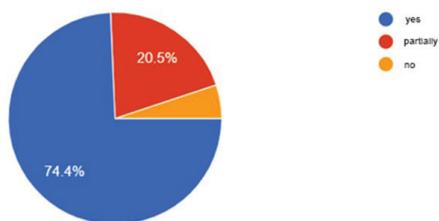


FIGURE 15. Possession of equipment

I invest in billiards on a monthly basis  
78 responses

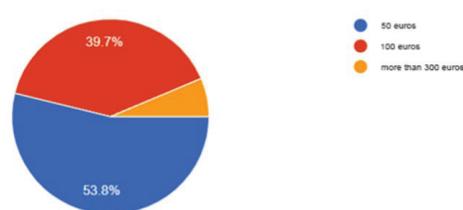


FIGURE 16. Monthly financial investment

Playing billiards brings me financial gain

78 responses

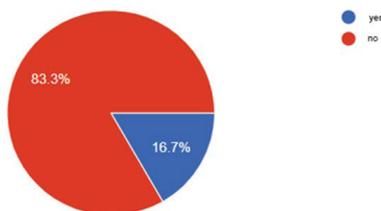


FIGURE 17. Financial gain

that players dominantly own personal billiards equipment (Figure 15); that players mostly don't invest large sums of money monthly (Figure 16); that there is extremely low percentage of those players who have financial gains by playing billiards (Figure 17).

### Discussion

Billiards has been played in Montenegro since (Montenegro Travel, n.n.), and it's organizational level peak was reached in period of existence of national billiards association of Montenegro in period from 1996 to 2011 (personal communication, D. Šćepanović; personal communication, D. Garić). However, neither then, nor today, when this sport evidently stagnate, there was not enough data about billiards as a game, nor about the characteristics, attitudes and thoughts of billiard players in this area. So this study can be freely considered as pioneering when it comes to billiards, because it publishes data about attitudes of Montenegrin billiards players towards health, their health behaviour, and professional approach to this sport for the first time in public.

Results primarily indicate that Montenegrin billiards players gave an impression of organized group which gathers with aim to improve status of billiards in Montenegro. Having in mind for how long they successfully accomplish to organize and professionally work without an umbrella organization, it is easy to conclude that they are engaged in this with huge love for this sport. First subsystem questionnaire answers have shown that players are in very good ages for competition (average age of 33.35 years indicates presence at competitions of most of the players for next 15

years, for example, Ronnie O'Sullivan is 45 and has no intention of retiring), that billiards is played throughout Montenegro (Bijelo Polje – north region; Podgorica, Nikšić, Danilovgrad – central region; Bar, Budva – south region), also that players are highly educated (58% of players has BSc or MSc degrees). These facts are extremely encouraging because high education level indicates that there are well-situated and influential people, and they can raise this organization at a higher level. Only parameter that may be considered as negative is non-participation of females, which is a huge lag behind world billiards standards. One of the reasons is surely environment in which these competitions are organized, because those are mostly billiards clubs which are parts of some bars. The Montenegrin society, which is extremely traditional, still does not look with approval at the stay of women in those places, so for traditionally brought up Montenegrin women this will be brake for in following period for more massive engagement in organized competition system. Results of second questionnaire subsystem indicate that players pay attention physical fitness, that is, that physical engagement of players is from rated from extremely high to daily (as for 77% of players). According to International Federation of Sports Medicine, 1989, which says that every grown up person should be from 3 to 5 times per week (lasting 30 to 60 minutes) engaged in aerobic exercise programs such as walking, running, swimming, hiking, cycling etc., it may be concluded that, when it comes to Montenegrin billiards players, this segment is at very high level. But, all other parameters from this group of questions indicate that Montenegrin billiards players have inap-

appropriate health behavior. Moreover, alcohol and cigarette use is excessive (over 80% of players use alcohol sometimes; 55% use cigarettes and 42% of them use them daily) and familiarity with the newest trend of healthy nutrition are minimal. This part players should improve, because it is known that correct health behavior a key factor to achieving superior physical preparedness, and correct nutrition habits are the base for healthy sport behavior of every individual (Hodić & Železnik, 2020). It is inevitable again to mention Ronnie O'Sullivan who, realizing the positive impact of nutrition on health and quality of his game, in detail elaborated his own diet, and two years ago published a book named "Top of your game: Eating for mind and body". Results of the third questionnaire subsystem indicate that Montenegrin billiards players expressed exceptional professionalism level, which is even over expectations according to this sport's current status in society. Negative answers to the questions about participation at tournaments in Montenegro and in the region may be justified by not having an umbrella organization which could provide funds for participation at tournaments, because respondents in most majority answered that they don't have financial gain by playing this sport, so it is a need. That contradiction between this subsystem answers is very interesting, they indicate players' high level of professionalism which is not returned to them with financial gain. Božović has similar dilemma (2008), who in his paper "Amateurism and professionalism" notes that, dilemma of demarcation of amateurism and professionalism in sport is not easy at all, by stating that amateur sport unlike professional is much closer to properties of game while professional sport becomes a job, executive, without enjoyment in the game. This pleasure, it would be said, is not missing to Montenegrin billiards players, and it is hard to get rid of the impression that their results would be much better than current ones if players have better opportunities of competition organization and attendance at national or regional tournaments.

It is also worth noting that this study has achieved its goal: specifically, it has notably supplemented the existing database regarding the relation of Montenegrin billiards players towards health, their health behavior, and their professional approach to this sport. A sample of the examined population, gives a clear picture of what the situation was in Montenegro on this issue, because it covered the majority of active Montenegrin billiards players, but this study has limitations. The main limitation of this study was that data were based on self-assessment, therefore the recommendations for future research refer to the further expansion of the existing database about billiards as a sport itself, about characteristics (morphological, motor, psychological etc.), health behavior, attitudes and thoughts of billiards players, with usage of exact measuring instruments which would provide us more reliable results. Certainly, this does not call into question the significance of this pioneering study whose practical significance reflects in opportunity to use obtained data for improvement of current public attitude towards this sport which has its developing potential is proven at high level. It can also contribute to people

who are interested in development of billiards to, based on this research collected data, plan their operation because billiards in Montenegro should be, besides synonymous with Biljarda, become synonymous with successful national sport in future.

#### Acknowledgments

The authors wish to thank the all respondents - billiard players from Montenegro who participated in this research, and to Danijel Garić and Dragan Šćepanović for their help in conducting this research.

#### Conflict of Interest

The authors declare that there is no conflict of interest.

**Received:** 9 January 2021 | **Accepted:** 23 February 2021 | **Published:** 16 April 2021

#### References

- Borysova, O., Nagorna, V. Shytova, S., Mytko, A. (2019). Model characteristics of the psychophysiological state of highly-qualified athletes in a stressful situation. *Sport Science and Human Health*, 1(1), 12-17. doi: 10.28925/2664-2069.2019.1.1.
- Božović, R. R. (2008). Amaterizam i profesionalizam u sportu. *Sociološka Luča*, 2(2), 36-48.
- Burns, R.D., Schiller, M.R., Merrick, M.A., & Wolf, K.N. (2004). Intercollegiate student athlete use of nutritional supplements and the role of athletic trainers and dietitians in nutrition counseling. *Journal of the American Dietetic Association*, 104(2), 246-249.
- Elmaged, A.M. (2017). Is Billiards considered a sport? *International Journal of Physical Education, Sports and Health*, 4(3), 248-251.
- Hodić, V., & Železnik, D. (2020). Promocija zdravlja u vrhunskom sportu. In *10. Znanstvena konferenca z mednarodno udeležbo s področja zdravstvenih in socialnih ved* (90-105). Slovenj Gradec, Slovenija : Fakulteta za zdravstvene in socialne vede.
- International Federation of Sports Medicine. (1989). Physical exercise: an important factor for health. *International Journal of Sports Medicine*, 10(6), 460-461.
- Kotarska, K., Nowak, L., Szark-Eckardt, M., & Nowak M.A. (2019). Intensity of Health Behaviors in People Who Practice Combat Sports and Martial Arts. *International Journal of Environmental Research and Public Health*, 16(14), 2463.
- Medimurec, A. (2013). *Povezanost optimizma i zdravstvenog lokusa kontrole sa zdravstvenim ponašanjima studenata*. Neobjavljeni diplomski rad. Osijek: Filozofski fakultet.
- Mishima, M., & Suganuma, A. (2016, October). Development of stance correction system for billiard beginner player. In *2016 International Symposium on Intelligent Signal Processing and Communication Systems (ISPACS)* (1-5). Phuket, Thailand: IEEE Xplore. doi: 10.1109/ISPACS.2016.7824701
- Montenegro Travel. (n.n.). *Biljarda*. Retrieved from: <https://www.montenegro.travel/objekti/biljarda>
- Park, J. S., Choi, J. W., & Kang, S. G. (2017). Analysis on the Participation Motivation of Billiard Players. *Journal of the Korea Convergence Society*, 8(12), 369-378. doi: 10.15207/JKCS.2017.8.12.369
- Petrić, R. (2019, Maj 17). *Bilijar nije samo zabava, već i strast*. Retrieved from Vijesti Online website: <https://www.vijesti.me/vijesti/drustvo/384141/bilijar-nije-samo-zabava-vec-i-strast>
- Radoičić, G. (2020). *Stavovi crnogorskih igrača bilijara o zdravlju, profesionalizmu i potrebi osnivanja bilijar saveza*. Neobjavljeni diplomski rad. Nikšić: Fakultet za sport i fizičko vaspitanje.
- sky HISTORY. (n.n.). *History of Snooker and Pool*. Retrieved from: <https://www.history.co.uk/history-of-sports/history-of-snooker-and-pool>
- Vrcan, S. (1971). Sociolog pred fenomenom nogometa. *Sociologija*, 1.