

GAMBLING HABITS AMONG VIDEO GAME PLAYERS

Zoran Zoričić¹, Valentina Novak², Mirna Mikulčić¹, Josip Šimić³

¹Sestre milosrdnice University Hospital Center, 10 000 Zagreb, Republic of Croatia

²University North, 42 000 Varaždin, Republic of Croatia

³University of Mostar, 88 000 Mostar, Bosnia and Herzegovina

Received on 10.08.2023.

Reviewed on 27.08.2023.

Accepted on 05.09.2023.

ABSTRACT

Introduction: Gambling is a legal and socially accepted recreational activity that can progress into a serious public health problem. The prevalence of gambling is higher among men of younger age and lower economic status, and older divorced men. There are many similarities between playing video games and gambling that the industry encourages by implementing the elements gambling into video games, and the elements of video games in gambling, but despite the similarities, in problem use we recognize two separate behavioral disorders.

Methods and participants: The research was conducted on an intentional and judgmental sample of adolescents and young adults who play video games. A questionnaire containing questions on sociodemographic characteristics, video game playing and gambling habits, and the SOGS-RA was used to assess the gambling risk.

Results: Most of the participants gamble very rarely or not at all, but 5.1% of the participants gamble every day. Almost all of the participants play several types of games of chance, with lottery games, sports betting and games on electronic devices leading the way. Pronounced problems with gambling were recognized in 28.3% of the research participants.

Discussion: The lifetime prevalence of gambling in this research is similar to the results of other research conducted among video game players, although the results of all research in this area are not homogeneous. When comparing the results of gambling among video game players and the general population, the prevalence of gambling among video game players is significantly higher than in the general population.

Conclusion: Adolescent and young adult video game players play more games of chance, and prefer gambling games that have a higher addictive potential. Considering the age, easy accessibility and the difficult recognition of the development of problem gambling, it is important to focus preventive activities on the youngest age group.

Key words: games of chance, video game players, problem gambling

Corresponding author: Valentina Novak, mag.sorority

E-mail: vanovak@unin.hr

INTRODUCTION

Participating in games of chance (further referred to as gambling) has been a part of all cultures throughout history. Evidence of this has been found already in the years 2300 B.C. in China, 1500 B.C. in India, in ancient Greece at the time of the Trojan wars, in Persia, the Roman Empire, England... A legend says that Julius Caesar decided to cross the river Rubicon only after throwing a die, and the quote attributed to him: "Alea iacta est" (The die is cast) is still used today as a synonym for a made decision. The Bible also talks about gambling in both the Old and the New Testament. Although it does not prohibit gambling, it warns of the possible dangers of gambling. Betting, on the other hand, is a new age activity whose beginnings are usually attributed to France in the 19th century (1).

Although gambling is considered to be a type of game according to Sutton-Smith's categorization (2), and gambling, if lasting for a short period, does not cause any health or socio-economic consequences in most people, gambling that lasts for a longer period of time represents a risk for the development of addiction, the loss of assets, family, the incurrance of debt, and even committing a criminal offence (3). Looking at it historically, the attitude of rulers

towards gambling was mostly negative, exactly because of these consequences, although many of them gambled themselves, too (1).

The law on games of chance in Croatia defines games of chance as "games in which the participants have the possibility of gaining a profit in money, things, services or rights in return for a certain payment, by which the profit or loss predominantly depends on some uncertain event." By law, every person of age is allowed to gamble, if not regulated otherwise by the organizer (4). Because of the liberalization in market regulation, the number of consumers of games of chance is growing, and problem gambling, and betting, is growing at the same time. Accordingly, gambling is no longer viewed as social deviance. It is, instead, a legal, socially acceptable and promoted activity, although the risk of developing an addiction comes from every type of gambling, and gamblers are marginalized by the society (5).

Gambling disorder is the first behavioral addiction included in the Diagnostic and Statistical Manual of Mental Disorders (DSM) of the American Psychiatric Association (APA). As all other behavioral addictions, gambling disorder is difficult to recognize and diagnose, and long-term

handling by an educated multidisciplinary team is needed in order to treat it and rehabilitate the patient.

The goals of this research is to investigate the gambling habits among video games players in adolescence and the young adult age, as well as the prevalence of gambling and the prevalence of problem gambling, and to analyze gambling according to sex and the type of gambling.

Gambling

Gambling as the investment of money or material values into an event of an uncertain outcome with the goal of material profit (6) has a very wide spectrum of subtypes. Most often we talk about card-playing, sports betting, the lottery, games on gambling machines, roulette, gambling or card-playing in casinos, betting on animal racing, poker, or slot machines. Gambling is possible online or in casinos, and most gamblers use both of these possibilities to gamble, which makes the availability and the distribution of consumption easier (4). In regards to the potential for the development of an addiction, almost all types of gambling have an addictive potential to a lesser or a greater degree. The core of every game of chance is the uncertainty and the potential profit which leads to the condition of concealed

excitement, because gambling is primarily an exciting activity, and, secondary, a recreational activity (6).

Gambling machines have the highest addictive influence, while contests and lottery games are almost not associated with addiction because of the inability to play them fast, the changing rhythm of playing, the increase in the stakes and generally the influence of the dynamics of gambling. With every playing of a game of chance, the probability of the development of the addiction increases (5).

Research show that more than 60% of people play one of the games of chance at least once during their lifetime, and this number is even higher in adolescents (71%-82%) (7). However, this is mostly socially accepted gambling with the goal of socializing and recreation, without negative consequences. Looking at the difference in sex, boys gamble more often than girls, and mostly in ways that are connected with the development of problem gambling (8).

In literature, problem gambling is often also referred to as the gambling disorder, excessive gambling, pathological gambling, gambling addiction and others, and it is characterized by the loss of control over gambling with the undermining of everyday social and professional functioning. The American Psychiatric Association states

that the gambling disorder is manifested through a minimum of 4 out of 9 symptoms (investing increasingly bigger material means in order to achieve the desired excitement; restlessness or irritability when cutting back on gambling or during abstinence; repeated unsuccessful attempts to cut back on or stop gambling, compulsive thinking about gambling; gambling because of your own negative feelings; gambling after a loss in order to win back what has been lost; lying about gambling, endangering the emotional, professional, school or academic success because of gambling and leaning on others in order to ensure the material means for fixing the financial situation caused by gambling, and in order to continue gambling) lasting for at least one year (9).

The World Health Organization (WHO) introduced the diagnosis of pathological gambling into the International Classification of Diseases (ICD) already in 1980, and it characterizes pathological gambling by a pattern of long lasting or recurring gambling, be it online or offline, and it is manifested by impaired control over gambling, prioritizing gambling to the degree where gambling has a priority over other life interests and everyday activities, and by the continuation or escalation of gambling in spite of negative consequences.

The gambling pattern can be continuous or episodic and recurring, which leads to significant damages in the personal, family, social, educational, professional and other important areas of functioning (10).

The beginning of the disorder in men is often linked to early adolescence, while with women it is more common in the middle age. The assessments of prevalence in the world tell us that approximately 0.12 to 5.8% of the overall population suffers from the gambling disorder (11), and it is estimated that around 40,000 people in Croatia are addicted to gambling, in a 5:1 ratio of men to women (1). The gambling disorder is connected to comorbidities such as alcoholism and substance addiction (12), suicidal ideas and a higher risk for suicide (13). Except age and sex (younger men), Ciarrocchi (2001) lists ancestry (close family suffering from the gambling disorder) as a risk factor for the development of the gambling disorder (14), while Kessler (2008) adds a low level of education, lower socio-economic status and unemployment to the existing risk factors (13). Further research conducted among pathological gamblers, especially those of a more mature age, showed that the marital status is a further risk factor (single and divorced people had a higher probability of developing the disorder) (14); followed by

the type of game (electronic devices for games of chance and online gambling) and comorbidities from the specter of mental illnesses (15).

The availability of gambling in a certain area is also connected to the development of problem gambling, but in today's age, when there is a vast network of places that offer gambling and online gambling, which implicates that everyone is exposed to gambling, a strong emphasis is placed on the intrinsic risk factors, such as personality traits (impulsiveness, extrovercy, competitiveness), the need for excitement and neuroticism (1, 15).

Gambling and playing video games

Research show that people that gamble or play video games excessively have some common personality traits, such as a higher rate of aggressiveness, the need for excitement, more frequent problems with mental health, narcissism, the tendency to use illegal substances, or, on the other hand, the excessive use of legal substances and a tendency to be bored (19). Although there is a higher probability that video game players will gamble and that gamblers will more often play video games, research have not confirmed a causality within this relation (20). The industry of video games and games of chance alone is intertwined, and

combining gambling and playing video games by the developers themselves (digitalized gambling, the possibility of e-sports betting), as well as using elements of video games in gambling, can be noticed increasingly more often (21).

Gambling is a game, but also a significant socio-economic and health problem, especially among adolescents and young adults. Many authors connect gambling and playing video games (22), especially when talking about the development of the disorder. There are many similarities (behavioral addictions based on a reward system, impulsiveness, hyperreactivity (23), using material means (24), socialization and many others) that make distinguishing playing games and gambling increasingly more difficult (25). Programmers from both industries contribute to this problem by implementing elements of gambling into video games, and elements of video games into games of chance.

METHODS AND PARTICIPANTS

The quantitative methodology was used in order to achieve the goal of this research. A questionnaire was developed that consisted of socio-demographic questions (age, sex, employment status), questions determining video game habits (the length of playing

video games, the duration of playing and the type of video game), questions determining gambling habits (intensity, type of gambling, behavior connected to gambling), and the South Oaks Gambling Screen: revised for adolescents – SOGS-RA.

The SOGS-RA questionnaire (26) consists of 12 variables that analyze the gambling or betting activities in the last three months. The first question relates to the attempt of returning the loss and the questions are answered with the use of the Likert scale (1-4). The answers to further questions related to the planning or abstinence from gambling, borrowing money, and the changes in relationships caused by gambling are dichotomous (yes or no).

The overall result provides the data about the scale of the problem connected to gambling and classifies the examinees into 4 categories:

1. no problems connected to gambling (0 points)
2. insignificant problems connected to gambling (0-1 point)
3. moderate problems connected to gambling (1-2 points)
4. pronounced problems connected to gambling (2-4+ points).

The research was conducted using a Google forms form that was forwarded to video game players during August 2023. The criteria for including the participants was the affiliation to the subculture of video game players and the age between 17 and 35. All younger and older video game players were excluded from the research.

The results were processed using the program Python, Python Software Foundation, version 3.11.5.

SAMPLE

The sample of the research was intentional and judgmental, that is, it was chosen based on the judgement of the researcher about the individuals from the population of video game players that they will include in the research. The sample according to the socio-demographic characteristics (sex, age and employment status) and the characteristics connected to video game playing habits (the type of video game they prefer, the intensity of playing, the average duration of playing on the daily basis and the duration of playing video games from the very start) can be seen in table 3.1.

Table 3.1. The description of the sample according to the socio-demographic characteristics and video game playing habits

			Number of participants 99 (N)	100%
1.	sex	female	40	40.4
		male	59	59.6
2.	Age	17-18	4	4
		19-20	24	24.4
		21-23	39	39.4
		24-26	9	9.1
		27-30	4	4
		30- 35	19	19.2
3.	employment status	Student	6	6.1
		university student	47	47.5
		Employed	30	30.3
		Unemployed	2	2
		student employee	14	14.1
4.	type of video game	casual games	12	
		Puzzles	20	
		sports games	17	
		MOBA	38	
		shooter games	34	
5.	gaming intensity	Daily	31	31.3
		3-5 times/week	19	19.2
		1-2 times/week	18	18.2
		less than once per week	31	31.3
6.	average gaming duration	up to 1 hour/day	36	36.4
		1-3 hours	38	38.4
		3-6 hours	13	13.1
		7-8 hours	7	7.1
		more than 8 hours	5	5
7.	duration of gaming through lifetime	less than a year	18	18.2
		1-3 years	6	6.1
		3-6 years	11	11.1
		6-10 years	7	7.1
		more than 10 years	57	57.6

The research was conducted on a sample of a total of N=99 participants. The sample had a slightly larger number of male video game players, 59.6% of them (n=59), and 40.4%

(n=40) of video game players were female. By analyzing the participants of the research according to age, the lowest percentage of them were 17-18 years old

(n=4), and most of the participants of the research were between 21 and 23 years old (n=39).

According to the employment status, participating in the research were students 6.1% (n=6), university students 47.5% (n=47), employed video game players 30.3% (n=30), unemployed video game players 2% (n=2) and video game players that are employed and studying at university part-time 14.1% (n=14). The participants of the research could choose more games or types of games that they frequently play. They mostly played strategy action games

(MOBA) (n=38) and first and third person shooter games (FPS, TPS) (n=34), and the least played games were simple casual games (Casual) (n=12). The participants play video games equally daily (31.3%) and less than once per week (31.3%). On average, most of the participants spend 1-3 hours daily playing video games (38.4%), after that up to one hour (36.4%), while 12.1% of the participants spend more than 7 hours per day playing video games. More than a half of the participants have been playing video games for more than 10 years (57.6%).

RESULTS

As shown in table 4.1, one fifth of the research participants do not gamble at all,

while 45.4% of them gamble very rarely. However, 5.1% of them gamble every day.

Table 4.1. Games of chance playing habits

		N (99)	%
Playing games of chance	yes	78	78.8
	no	21	21.2
Intensity of playing games of chance	Daily	5	5.1
	several times per week	9	9.1
	once per week	7	7.1
	several times per month	12	12.1
	less than once per month	45	45.4
	Never	21	21.2

Considering the type of video game, the participants could choose more than one type of game of chance that they play (table 4.2.). They mostly use lottery games

(45.1%) and scratch cards (47.7%), followed by sports betting and games on gambling machines in the same percentage (42.3%).

Table 4.2. Frequency of answers according to type of game of chance among players of video games

		N (78)	%
Type of game of chance	sports betting	33	42.3
	lottery games	43	45.1
	TV Bingo	14	18
	Bingo in the casino	6	7.7
	scratch cards	45	47.7
	games on gambling machines	33	42.3
	Roulette	31	39.7
	card games in the casino	14	17.9
	virtual races	18	23
	online casinos	20	25.6
	betting at Hrvatska Lutrija	13	16.7

Although almost half of the participants (48.5%) have not reported having a gambling problem, 28.3% of the participants reported having more than

three problems on the SOGS-RA questionnaire and they fulfil the criterion of having pronounced problems connected to gambling (table 4.3.).

Table 4.3. SOGS-RA

Gambling problems		N	%
	no problems connected to gambling score 0	48	48.5
	insignificant problems connected to gambling (score 0-1)	15	15.2
	moderate problems connected to gambling (score 1-2)	12	12.1
	pronounced problems connected to gambling (score 2-4+)	28	28.3

When analyzing the results according to scored items of the SOGS-RA questionnaire (table 4.4), the participants most often admit to feeling guilty (30.3%), to hiding the evidence of gambling in front

of family members and friends (11.1%), to losing control over the intensity of gambling and to gambling repetitively after a loss in order to regain what has been lost (9.1%).

Table 4.4. The frequency of answers according to scored items of the SOGS-RA questionnaire

Scored items		Never/some of the time	Most of the time/ Every time
How often have you gone back another day to try and win back money you lost gambling/betting?	n= %	90 90.9	9 9.1
		NO	YES
When you were gambling/betting, have you ever told others you were winning money when you were not?	n= %	88 88.9	11 11.1
Has your gambling/betting money ever caused any problems for you such as arguments with family and friends, or problems at school?	n= %	97 98	2 2
Have you ever gambled or betted more than you had planned to?	n= %	88 88.9	11 11.1
Has anyone criticized your gambling/betting, or told you that you had a gambling/betting problem (whether you thought it true or not)?	n= %	89 89.9	10 10.1
Have you ever felt bad about the amount of money you bet, or about what happens when you gamble/bet money?	n= %	69 69.7	30 30.3
Have you ever felt like you would like to stop gambling/betting, but did not think you could?	n= %	96 97	3 3
Have you ever hidden from family or friends any betting slips or money from games of chance, or any other signs of gambling/betting?	n= %	83 83.8	16 16.2
Have you had money arguments with family or friends that centered on gambling/betting?	n= %	86 86.9	13 13.1
Have you borrowed money to gamble/bet and not paid it back?	n= %	99 100	0 0
Have you ever skipped or been absent from school or work due to gambling/betting activities?	n= %	96 97	3 3
Have you borrowed money or stolen something in order to gamble/bet or to «cover» gambling activities?	n= %	99 100	0 0

Men gamble statistically more often by sports betting, using electronic devices or online casinos and betting on virtual races (table 4.5.).

Table 4.5. The difference between preferred type of gambling according to gender

Type of game of chance	Male (N)	Female (N)	Chi2	p<0,05
sports betting	30	3	18.253	0.00001
lottery games	27	16	1.303	0.71
TV Bingo	10	4	0.462	0.49
Bingo in the casino	4	4	0	1
scratch cards	23	22	1.862	172
Roulette	19	12	0.0001	0.99
games on gambling machines	25	8	4.409	0.03
card games in the casino	11	3	1.606	0.2
virtual races	16	2	6.423	0.01
online casinos	17	3	5.46	0.01
betting at Hrvatska Lutrija	9	4	0.2	0.64

Legend: N - the number of participants; Chi2 - H_i^2 test; p - statistical significance

DISCUSSION

The goal of this research was to investigate the habits and characteristics of gambling in the video game player population. The results show that the lifetime prevalence of gambling among video game players is 78.8%, while the monthly prevalence is 33.4%, which concurs with the results of the research conducted by Sanders et al (2019), which showed that the yearly prevalence of gambling among video game players is 78.5%, and they also research the prevalence of playing video games among gamblers, which was a bit lower (70.7%) (19). Comparing these results with those of similar research, the yearly prevalence of gambling among adolescents in Spain was 20.6%(27), and the yearly prevalence of gambling in Croatia among the general population, between the ages of 15 and 64, is 60.3%, and it is the highest between the ages of 25 and 34 (64.5%) (28). It is noticed that the prevalence of gambling among video game players is considerably higher, and it is a bit higher among men (65.7%) than among women (54.8%). Although research show that men gamble significantly more, especially during adolescence and young adulthood, the increase in the number of women that seek help because of problem gambling can also be noticed (29).

When considering gambling according to the type of game of chance and gender, we notice a statistically significant difference. Men gamble significantly more by sports betting, using gambling machines, online casinos and by betting on virtual races, and we have already mentioned that these have the highest addictive potential. This is similar to the results of a research conducted in Poland that showed that gambling in online casinos and sports betting is more preferred by younger men (30).

Considering the whole sample, half of the participants of the research (48.5%) do not report to having any problems connected to gambling, while 28.3% of the participants report to having more than three problems in the SOGS-RA questionnaire. Because of this, they satisfy the criteria for having pronounced problems connected to gambling. Considering the different methodologies and a small number of found research about gambling among video game players, it is difficult to compare the results, but looking at the results of the research conducted on the general population, we can see a higher prevalence of problems among video game players than among the general population. In Croatia, in the general population, this percentage is a bit higher by 8% for men (3.6% intense and 5% moderate intensity) and 1.4% for women

(0.7% intense and 0.7% moderate intensity) (28).

In recent times, we notice an increase in e-sport betting that prevails among younger employed, college educated men. Although it is not exclusively related to video game players (non-players also gamble), video game players gamble to a greater extent and more often because of their beliefs about their own e-sport knowledge and skills, which will ensure they gain a profit (31). Research showed that e-sport gamblers have significantly more problems with gambling than people gambling on traditional gambling activities. Actually, some authors consider video games to be a gateway into gambling, especially when talking about adolescents, often also

CONCLUSION

Most people have gambled at least once in their life, without any negative consequences, and the same is true for playing video games. Although these are two different activities, they have their similarities that are underscored by the developers by implementing the elements of the one into the other. Both activities are, in the first place, recreational with a possibility of developing behavioral addiction in a portion of the consumers. The goal of this research was to primarily

underage persons to whom e-sport betting is easily available (32), which is worrying, but, on the other hand, the results of some research do not show a correlation between playing video games and gambling (33).

Although this research included a very high percentage of video game players with a pronounced gambling problem, the research was conducted on a cross-sectional, intentional and relatively small sample of video game players, and the results cannot be generalized onto all video game players. Considering that gambling can be a serious social and public health problem, it is recommended that a causal research continues the research on a representative sample with an emphasis on causality.

investigate the gambling habits among video game players, and then the prevalence of problem gambling in the same population, which have shown to be alarmingly high, and the results cannot be generalized. The results of this research showed that video game players gamble more than the general population. Although the results cannot be generalized, considering that the research was conducted on young people and considering the potentially serious consequences, we recommend continuing the research, and to

intensify and systematize the prevalence as early in life as possible.

REFERENCES

1. Zoričić Z. Ovisnosti Prevenција, liječenje i oporavak. Zagreb: Školska knjiga; 2018. 235 p.
2. Sutton-Smith B. The ambiguity of play. Cambridge, Mass: Harvard University Press; 1997. 276 p.
3. Tomasic L, Kovacic Petrovic Z. Poremećaj kockanja - prevencija među adolescentima. Soc Psihijatr. 2022 Feb 3;49(3):179–201.
4. Zakon o igrama na sreću [Internet]. [cited 2023 Aug 24]. Available from: https://narodne-novine.nn.hr/clanci/sluzbeni/1998_03_3_6_448.html
5. Zoričić Z, Torre R, Orešković A. Kockanje i klađenje – ovisnosti novog doba. Medicus. 2009;18(2 (Adolescencija)):205–9.
6. Rober Torre. Kockanje-kako protiv ovisnosti. Zagreb: knjiga; 2017.
7. Griffiths MD, Calado F, & Griffiths, M.D. (2016). Problem gambling worldwide: An update of empirical research (2000-2015). Journal of Behavioral Addictions, 5, 592–613.
8. Calado F, Alexandre J, Griffiths MD. Prevalence of Adolescent Problem Gambling: A Systematic Review of Recent Research. J Gambl Stud. 2017;33(2):397–424.
9. Ricijaš N, Dodig Hundrić D, Huić A, Kranželić V. Kockanje mladih u Hrvatskoj - učestalost igranja i zastupljenost problematičnog kockanja. Kriminol Soc Integr. 2016 Dec 23;24(2):24–47.
10. Američka Psihijatrijska Udruga, Ur. hrvatskog izdanja: Vlado Jukić, Goran Arbanas. DSM-5 Dijagnostički i statistički priručnik za duševne poremećaj. 5. Jastrebarsko: Naklada Slap; 2014.
11. ICD-11 za statistiku mortaliteta i morbiditeta [Internet]. [cited 2023 Aug 24]. Available from: <https://icd.who.int/browse11/l-m/en#/http://id.who.int/icd/entity/1041487064>
12. Petry N. Pathological Gambling: Etiology, Comorbidity, and Treatment. Am J Psychiatry - AMER J PSYCHIAT. 2005 Jan 1;163.
13. Karlsson A, Håkansson A. Gambling disorder, increased mortality, suicidality, and associated comorbidity: A longitudinal nationwide register study. J Behav Addict. 7(4):1091–9.

14. Ciarrocchi JW. Counseling Problem Gamblers: A Self-Regulation Manual for Individual and Family Therapy. Elsevier; 2001. 357 p.
15. Kessler RC, Hwang I, LaBrie R, Petukhova M, Sampson NA, Winters KC, et al. The prevalence and correlates of DSM-IV Pathological Gambling in the National Comorbidity Survey Replication. *Psychol Med.* 2008 Sep;38(9):1351–60.
16. Subramaniam M, Wang P, Soh P, Vaingankar JA, Chong SA, Browning CJ, et al. Prevalence and determinants of gambling disorder among older adults: a systematic review. *Addict Behav.* 2015 Feb;41:199–209.
17. Allami Y, Hodgins DC, Young M, Brunelle N, Currie S, Dufour M, et al. A meta-analysis of problem gambling risk factors in the general adult population. *Addict Abingdon Engl.* 2021 Nov;116(11):2968–77.
18. Dodig D. Izazovi procjene i odrednice izraženosti psihosocijalnih posljedica kockanja adolescenata. *Kriminol Soc Integr.* 2013;21(2):1–14.
19. Sanders J, Williams R. The Relationship Between Video Gaming, Gambling, and Problematic Levels of Video Gaming and Gambling. *J Gambl Stud.* 2019 Jun;35(2):559–69.
20. McBride J, Derevensky J. Gambling and Video Game Playing Among Youth. *J Gambl Issues.* 2016 Dec 1;34:156–78.
21. Zanescu A, French M, Lajeunesse M. Betting on DOTA 2's Battle Pass: Gambification and productivity in play. *New Media Soc.* 2020 Jul 17;23:146144482094138.
22. King DL, Gainsbury SM, Delfabbro PH, Hing N, Abarbanel B. Distinguishing between gaming and gambling activities in addiction research. *J Behav Addict.* 4(4):215–20.
23. Fauth-Bühler M, Mann K. Neurobiological correlates of internet gaming disorder: Similarities to pathological gambling. *Addict Behav.* 2017 Jan;64:349–56.
24. Sirola A, Savela N, Savolainen I, Kaakinen M, Oksanen A. The Role of Virtual Communities in Gambling and Gaming Behaviors: A Systematic Review. *J Gambl Stud.* 2021;37(1):165–87.
25. Steinmetz F, Fiedler I, von Meduna M, Ante L. Pay-to-Win Gaming and its Interrelation with Gambling: Findings from a Representative Population Sample. *J Gambl Stud.* 2022;38(3):785–816.
26. Winters K, Stinchfield R, Fulkerson J. Patterns and characteristics of

- adolescent gambling. *J Gambl Stud.* 1993 Dec 1;9:371–86.
27. Pérez-Albéniz A, Gil M, Díez-Gómez A, Martín-Seoane G, Lucas-Molina B. Gambling in Spanish Adolescents: Prevalence and Association with Mental Health Indicators. *Int J Environ Res Public Health.* 2021 Dec 23;19(1):129.
28. Glavak Tkalić R., Sučić I., G.M. Miletić. Igranje igara na sreću u hrvatskom društvu [Internet]. Institut društvenih znanosti Ivo Pilar i Ured za suzbijanje zlouporabe droga Vlade Republike Hrvatske; 2017. Available from: 978-953-7964-48-1
29. Holdsworth L, Hing N, Breen H. Exploring women’s problem gambling: a review of the literature. *Int Gambl Stud.* 2012 Aug 1;12(2):199–213.
30. Lelonek-Kuleta B, Bartczuk RP, Wiechetek M, Chwaszcz J, Niewiadomska I. The Prevalence of E-Gambling and of Problem E-Gambling in Poland. *Int J Environ Res Public Health.* 2020 Jan;17(2):404.
31. Marchica L, Richard J, Mills D, Ivoska W, Derevensky J. Between two worlds: Exploring esports betting in relation to problem gambling, gaming, and mental health problems. *J Behav Addict.* 2021 Aug 25;10(3):447–55.
32. Hing N, Lole L, Russell AMT, Rockloff M, King DL, Browne M, et al. Adolescent betting on esports using cash and skins: Links with gaming, monetary gambling, and problematic gambling. *PLoS ONE.* 2022 May 5;17(5):e0266571.
33. Macey J, Hamari J. Investigating relationships between video gaming, spectating esports, and gambling. *Comput Hum Behav.* 2018 Mar 1;80:344–53.

NAVIKE KOCKANJA MEĐU IGRAČIMA VIDEOIGARA

Zoran Zoričić¹, Valentina Novak¹, Mirna Mikulčić², Josip Šimić³

¹Sestre milosrdnice, 10000 Zagreb, Republika Hrvatska

¹Sveučilište Sjever, 42000 Varaždin, Republika Hrvatska

²KBC Sestre milosrdnice, 10000 Zagreb, Republika Hrvatska

³Sveučilište u Mostaru, 88000 Mostar, Bosna i Hercegovina

SAŽETAK

Uvod: Kockanje je legalna i društveno prihvaćena zabavna aktivnost koja se može progredirati u ozbiljan javnozdravstveni problem. Prevalencija kockanja je veća kod muškaraca mlađe životne dobi i nižeg ekonomskog statusa i starijih razvedenih muškaraca. Postoji velik broj sličnosti između igranja videoigara i kockanja koje industrija potiče uvodeći elemente kockanja u videoigre i elemente videoigara u kockanje, no unatoč sličnostima, kod problematične upotrebe govorimo o dva zasebna bihevioralna poremećaja.

Metode i sudionici: Istraživanje je provedeno na namjernom prosudbenom uzorku adolescenata i mlađih odraslih osobama koji igraju videoigre. Korišten je upitnik s pitanjima sociodemografskih obilježja, navika igranja videoigara i kockanja i SOGS-RA za procjenu rizičnosti kockanja.

Rezultati: Većina sudionika kocka vrlo rijetko ili uopće ne kocka, no 5,1% sudionika kocka svaki dan. Gotovi svi igraju više vrsta igara na sreću, a prednjače lutrijske igre, sportska kladionica i igre na elektronskim aparatima. Izraženi problemi s kockanjem su prepoznati kod 28,3% sudionika istraživanja. Rasprava: Životna prevalencija kockanja u ovom istraživanju je slična rezultatima drugih istraživanja među igračima videoigara iako nisu rezultati svih istraživanja na tom području homogeni. Uspoređujući rezultate kockanja među igračima videoigara i u općoj populaciji, prevalencija kockanja među igračima je znatno viša nego u općoj populaciji.

Zaključak: Adolescenti i mlađi odrasli igrači videoigara igraju više igara na sreću, preferirajući kockarske igre koje imaju veći adiktivni potencijal. S obzirom na dob, laku dostupnost i teško prepoznavanje razvoja problematičnog kockanja, važno je usmjeriti preventivne aktivnosti na što mlađu dobnu skupinu.

Ključne riječi: igre na sreću, igrači videoigara, problematično kockanje

Autor za korespondenciju:

Valentina Novak, mag.med.techn.

E-mail: vanovak@unin.hr