International Journal of

Physical Education, Recreation and Sports (IJPERS)

Online Sports Betting and Demographic Factors' Effects on Student-Athletes' **Mental Health** Dr. Gathoni Ndung'u Benson (Ph.D), Dr. Simon Munayi (Ph.D), Dr. Janet Wanjira (Ph.D), Prof. Daniel Apaak and Dr. Evans Kwako Amakye AIRFIT

IPRJB
INTERNATIONAL PIER REVIEWED
JOURNAL AND BOOK PUBLISHING

Vol.2, Issue 2, No.1. pp. 1 - 11, 2024

www.iprjb.org

Online Sports Betting and Demographic Factors' Effects on Student-Athletes' Mental Health

^{1*}Dr. Gathoni Ndung'u Benson (Ph.D), ²Dr. Simon Munayi (Ph.D), ³Dr. Janet Wanjira (Ph.D), ⁴Prof. Daniel Apaak, ⁵Dr. Evans Kwako Amakye ¹Lecturer, Department of Physical Education Exercise & Sport Science, Kenyatta University
 ^{2,3}Senior Lecturer, Department of Physical Education and Sport, University of Nairobi ⁴Department of Health, Physical Education and Recreation, University of Cape Coast, Cape Coast, Ghana
 ⁵Department of Research, University of Ghana

Article History

Received 10th March 2024

Received in Revised Form 11th April 2024

Accepted 8th May 2024



How to cite in APA format:

Gathoni, B., Munayi, S., Wanjira, J., Apaak, D., & Amakye, E. (2024). Online Sports Betting and Demographic Factors' Effects on Student-Athletes' Mental Health. *International Journal of Physical Education, Recreation and Sports*, 2(2), 1–11. https://doi.org/10.47604/ijpers.2550

Abstract

Purpose: The objective of the study was to determine how the interaction between the volume of online sports betting and the demographic factors affects how student-athletes perceive the repercussions on their mental health.

Methodology: Cross-sectional survey research was used for this study. Thirty-eight universities both public and private were sampled. Self-reporting questionnaires, key interview schedules and an observation plan were all used by the researcher. With the help of the SPSS version 25 programme, the data were coded and examined. Testing the impact of demographic factors on the connection between dependent and independent variables involved regression analysis with an interaction effect. The link between the independent variables was investigated using correlation analysis. Data was presented in form of tables and figures.

Findings: The findings demonstrate a substantial and positive correlation between the level of gambling and mental health (r = 0.411, P>0.0001). The findings of the regression of coefficients showed a positive and significant relationship between the severity of gambling and students' mental wellness (r = 0.576, P>0.0001). The R1 Squared value was greater than 0.169 (without interaction) at 010.731 (with demographic factors interaction). The interaction impact of the demographic parameters was significant (p-value = 0.012).

Unique Contribution to Theory, Practice and Policy: This suggests that the association between the intensity of gambling and mental wellness is significantly influenced by the combination of demographic factors. According to study, regular bettors are more likely to attempt or commit suicide because they are more prone to feel anger, rage, and guilt after suffering significant losses. Particularly when students are under stress, this is true. Online sports betting has also been linked to high levels of addiction, just like alcohol, drugs, and items related to smoking.

Keywords: Online Sports Betting, Gambling, Mental Health

©2024 by the Authors. This Article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0

IPRJB
INTERNATIONAL PIER REVIEWED
JOURNAL AND BOOK PUBLISHING

Vol.2, Issue 2, No.1. pp. 1 - 11, 2024

www.iprjb.org

INTRODUCTION

Online sports betting is said to have a high level of exposure, particularly during the COVID-19 pandemic, which caused widespread lockdowns and the cancellation of sporting events worldwide (Auer, Malischnig & Griffiths, 2023). Due to these factors, the popularity of online sports betting "exploded". This explosion may have had a negative impact on mental health; and different people perceive its effects differently in terms of their social-economic status, mental health, and academic performance (Browne, Langham, Rawat, Greer, Rose & Best, 2016; Hkansson, 2020). It is crucial to look into the potential economic, social, mental health, and academic disadvantages of excessive online betting following a deluge of betting advertisements in which the media encourages, endorses, and normalizes online gambling (Hing, Russell, Lamont, and Vitartas 2017). According to Zsédelyand Bóka (2023) as majority of university students take online betting as a source of income failure to achieve this they server serious mental health wondering what next, thus have consequences on their academic output (Gathoni,2022; Avenyo, Kwashie & Demuyakor, 2024).

Due to technology improvements, the sports gambling industry in Kenya has seen a rapid evolution, with the number of licensed sites rising from 13 to over 30 (Mwandime, 2017). Mwandime added that the issuing of permits to sports betting businesses and facilities should be based on demand rather than supply. It was also advised that, despite the fact that sports betting has certain positive economic effects, the market price should always be taken into account and that no license for internet gambling should be provided until the inflationary effect overcomes the social cost. Because of this, every decision to permit internet gambling should be based on a cost-benefit analysis (Dense, 2009). The analysis ought to be based on the effects on the university students, who will be the next generation (Gathoni, 2022).

The majority of the current Kenyan university athletes' significant time is spent daydreaming about making large winning bets every single day (Gathoni, 2022). Additionally, earlier research has shown that student-athletes tend to feel awkward seeking counseling outside of the departments of sports (Benson, Munayi, Wanjira & Inyega, 2021). This can be a result of a worry of not being understood by mental health specialists who are unrelated to sports and do not comprehend their way of life (Watson & Kissinger, 2007). Due to their distinctive representation of the university's health image and their ability to be easily identified, student-athletes command admiration for their athletic prowess and accomplishments and often enjoy celebrity status on campuses. Additionally, they have a variety of unique challenges as a result of their participation in sports.

Recent studies on the influence of online sport betting on mental health have revealed that anxiety, distress, and depression levels have been particularly high among university students, more specifically the students athletes (Savolainen, Vuorinen, Sirola, & Oksanen, 2022). According to Petzold et al (2020), Hyland., et al (2020) university students cope with stressful academic and sprinting demands in various ways. It is reported that majority of students among them students athletes gamble or play digital games online as a way of relieving stress or escaping reality.

Without a doubt, the online sports betting sector has established itself as a major issue that has a significant impact on not only social and economic issues but also academic and mental health issues (Alushula, 2017; Benson, Munayi, Wanjira & Inyega 2021). Correctively recognized as

IPRJB
INTERNATIONAL PER REVEWED
JOURNAL AND BOOK PUBLISHING

Vol.2, Issue 2, No.1. pp. 1 - 11, 2024

www.iprjb.org

significant risk variables for an increased probability of participation in online sports betting among student-athletes are the internet and sports betting (Marchica & Derevensky, 2018).

On the other hand, compared to non-student athletes, student athletes' mental health is regarded to be damaged by internet gambling. Hangovers, low moods, insomnia, material and drug addictions and anxiety are a few examples of reported mental health issues that is associate with absences and poor academic performance (Flanagan 2013). In contrast to the general population's 1.1% rate, 13% of gamblers who attended a Gamblers Anonymous conference in the United States reported having considered suicide (Wolanin, Gross & Hong, 2015). The problem might be considerably worse for athletic programmes that frequently gamble online. Gamblers with a history of gambling addiction engage in a wide range of behavioral difficulties that are unrelated to their betting, such as drug abuse, alcohol abuse and sexual misconduct.

Statement of the Problem

Students at universities that participate in sports revere student-athletes. Because these student groups are viewed as the face of all things sporting, they are vulnerable to the lure of online sports betting because of their alleged skills, know-how and competence in a variety of sports. Additionally, university athletic competitions are unpaid; as a result, online sports betting gives them financial alternatives (Chumba, 2019). The students' welfare department and sports officials were held accountable for their ignorance of and disregard for the issues associated with placing internet sporting wagers (Roddock, 2015). Student athletes can now bet online anytime, anywhere, thanks to technological advancements. Additionally, betting on sports online was a socially acceptable kind of leisure time.

Objective of the Study

The objective of the study was to investigate the online sports betting and demographic factors' effects on student-athletes' perceptions of their mental health.

Theoretical Review

Theory of Reasoned Action

The Theory of Reasoned Action (TRA), developed by Martin Fishbein and Icek Ajzen in 1975, posits that an individual's behavior is determined by their intention to perform the behavior, which is itself influenced by their attitude towards the behavior and subjective norms. The main theme of TRA is that behavioral intentions serve as the most significant predictor of actual behavior, considering both personal attitudes and societal expectations (Fishbein & Ajzen, 1975) .. In the context of online sports betting, TRA can be applied to understand how attitudes and perceived social norms influence betting behaviors among student-athletes. Moreover, demographic factors such as age, gender, and cultural background can affect the attitudes and norms, thereby impacting the mental health of student-athletes involved in online betting activities

METHODOLOGY

The present research used cross-sectional survey methodology. The target population was 74 publicly and privately universities and colleges in Kenya by recognized the Commission for University Education. A total of 38 institutions, 19 of which were public and 19 of which were private universities were sampled. Random sampling was employed for the selection of sports and

IPRJB
INTERNATIONAL PER REVIEWED
JOURNAL AND BOOK PUBLISHING

Vol.2, Issue 2, No.1. pp. 1 - 11, 2024

www.iprjb.org

games officials, sports patrons and dean students of chosen institutions from government institutions. Fifty percent (38) of the sample was from private universities and colleges. There were a total of 38 athletics officials and 385 student-athletes.

Self-reporting questionnaires, key interview schedules and an observation plan were used by the researcher. The SPSS 25 application was used to code and analyze the data. The information was coded and examined. To organize and aggregate data for descriptive statistics, such as proportions, means and frequent patterns, cross-tabulation was used.

Testing the impact of demographic factors on the connection between dependent and independent variables involved regression analysis with an interaction effect. The association between the independent variable (amount of online sports betting) and the dependent variable (mental wellbeing) was investigated using correlation analysis.

FINDINGS

Descriptive Results for Mental Well-Being

The study looked at the impact of gambling on mental health, including attempts at suicide after bets, the emotional toll of losses, the physical impacts of winning or losing and anxiety associated to betting patterns. Illustrations are as per Table 3.

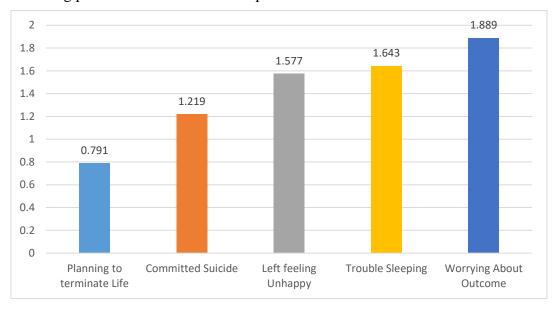


Figure 1: Impact of Gambling on Mental Health

The majority of respondents said they had occasionally heard about a team mate planning to kill themselves as a result of results from online sports betting. With a mean of 0.79 ± 1.03 . According to replies, the majority of the respondents had knowledge about acquaintances who had committed suicide after partaking in online sports betting. Mean of 1.21 ± 0.87 with a response mean of 1.57 ± 0.98 , respondents reported that they were most unhappy after online sports betting efforts. The mean of 1.64 ± 1.09 indicates that they frequently experienced headaches and disrupted sleep after a loss or win on online sports betting. The response' mean of 1.88 ± 1.09 indicates that respondents



Vol.2, Issue 2, No.1. pp. 1 - 11, 2024

www.iprjb.org

were nervous or concerned about the outcome of the online sports bet which affected their mental wellbeing. According to the conclusions of the interviews, there is a link between mental wellness, online sports betting and alcohol and substance misuse. It was discovered that in cases of substance and alcohol misuse, student-athletes are more influenced to engage in online sports betting.

Effect of Online Sports Betting on Mental Wellbeing of Students

The study looked at the consequences of online sports betting on students' mental health. The association between online sports betting and mental well-being factors was investigated using correlation and regression analysis. The interaction of respondents' demographics on the association between online sports betting and mental wellness was tested using general linear modeling.

Relationship between Gambling Severity and Mental Wellbeing of Student Athletes

A correlation value of zero implies that there is no linear link between two continuous variables, whereas a correlation coefficient of -1 or +1 shows a perfect relationship. As the correlation between variables becomes greater, the correlation coefficient approaches one.

Table 1: Correlation between Gambling Severity and Mental Wellbeing

		Problem Gambling	Mental health
Problem Gambling	Pearson Correlation	1	.411**
	Sig. (2-tailed)		0.000
	N	254	247

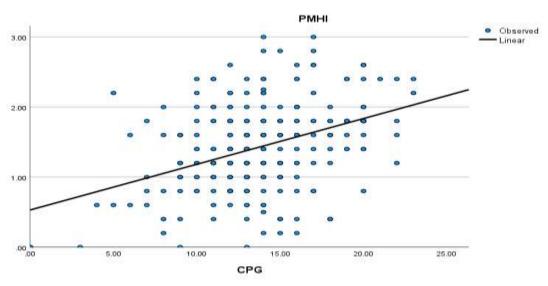
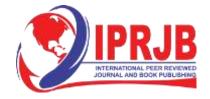


Figure 2: Gambling Severity and Mental Ill-Being

The findings indicate a positive and significant correlation between gambling severity and mental ill-being (r = 0.411, p < 0.001). This implies that higher levels of gambling severity are associated with poorer mental health among students.



Vol.2, Issue 2, No.1. pp. 1 - 11, 2024

www.iprjb.org

Table 2 shows the model summary of the analysis investigating the relationship between gambling severity and mental wellbeing.

Table 2: Model Summary- Gambling Severity and Mental Wellbeing

R	R Square	Adjusted R Square	Std. Error of the Estimate
.411a	0.169	0.165	0.55095

The results demonstrate the fitness of the regression model. The value of R squared was 0.169. This demonstrates that the severity of gambling explains 16.9% of students' mental well-being. This also means that other variables not incorporated in the model account for 83.1% of the variation in students' mental well-being.

Table 3 shows the ANOVA model analysis of the relationship.

Table 3: ANOVA - Gambling Severity and Mental Wellbeing

	Sum of Squares	df	Mean Square	F	Sig.
Regression	15.074	1	15.074	49.659	.000b
Residual	74.368	245	0.304		
Total	89.442	246			

The results demonstrate the fitness of regression model. The value of R squared was 0.169. This demonstrates that the severity of gambling explains 16.9% of students' mental well-being. This also means that other variables not incorporated in the model account for 83.1% of the variation in students' mental well-being.

Table 4: Regression Coefficients -Gambling Severity and Mental Wellbeing

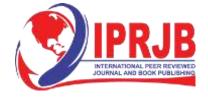
	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
	В	Std. Error	Beta		
(Constant)	0.548	0.131		4.183	0.000
Problem Gambling	0.576	0.082	0.411	7.047	0.000

Students' gambling intensity and mental well-being are positively and significantly connected, according to coefficient regression results (β =0.576, P>0.0001). This means that for every unit rise in gambling severity, students' mental well-being increases by 0.576. Therefore;

Mental wellbeing = 0.548 + 0.576(gambling severity) + e

Hypothesis Testing

The interaction effect of demographic characteristics on the link between gambling severity and students' mental well-being was investigated and findings were presented using generalized linear regression modeling to test the hypothesis.



Vol.2, Issue 2, No.1. pp. 1 - 11, 2024

www.iprjb.org

Table 5: Hypothesis Testing of Gambling Severity and Mental Wellbeing with Interaction

	Type III Sum		Mean		
Source	of Squares	Df	Square	F	Sig.
Corrected Model	35.792a	109	0.328	1.668	0.012
Intercept	2.738	1	2.738	13.906	0.000
v.S1.1 * v.S1.2 * v.S1.3 *					
v.S1.4 * v.S1.5 * v.S1.6 *					
v.S1.7 * Problem Gambling	35.792	109	0.328	1.668	0.012
a R Squared = .731 (Adjusted)	R Squared $= .293$	3)			

The interaction effect of demographic characteristics on the connection between gambling intensity and student athletes' mental well-being had an F-value of 1.668, according to the findings. The R Squared value was 0.731 (with interaction of demographic components), which is greater than 0.169 (without interaction). The interaction impact of demographic factors was significant (p-value =0.012). As a result, this implied a rejection of the null hypothesis. This implies that demographic characteristics have a strong interaction effect on the connection between gambling severity and mental wellness.

Discussion

According to the report, students were aware of a colleague planning to commit suicide as a result of the consequences of online sports betting. Furthermore, the survey showed that gamblers were unhappy following online sports betting attempts and frequently suffered from headaches and disrupted sleep following a loss or gain on online sports betting. When students abuse alcohol, they are more likely to indulge in online sports betting.

According to Wolanin, Gross, and Hong (2015), the prevalence of depressive symptoms among university student-athletes ranged from 15.6% to 21%, compared to 17% among college students overall. Suicide, suicide thoughts and suicide attempts are claimed to be widespread among habitual bettors, especially when they are depressed, because online sports bettors bring disappointments, rage and guilty sentiments because of significant losses (Parke, & Griffiths 2006). Furthermore, internet sports betting has been linked to an addictive potential, similar to narcotics, tobacco-related products, and alcohol. According to Engwall, Hunter and Steinberg (2004), the use of both alcohol and drugs has led to depressive inventories and pondered suicides despite having never attempted suicide (Stuhldreher, Stuhldreher & Forrest, 2007).

According to the findings, students learned about another student who attempted suicide as a result of the outcomes of online sports betting. Furthermore, the survey showed that gamblers were dissatisfied with their online sports betting efforts and that headaches and sleep difficulties were widespread following a loss or triumph in online sports betting. When students consume alcohol, they are more likely to engage in online sports betting.

CONCLUSIONS AND RECOMMENDATIONS

The impacts of interaction between the expansion of online sports betting and demographic variables on the perceived mental health implications of student-athletes are considerable. Suicide and attempted suicide have been found to be common among frequent bettors, especially when

IPRJB
INTERNATIONAL PER REVEWED
JOURNAL AND BOOK PUBLISHING

Vol.2, Issue 2, No.1. pp. 1 - 11, 2024

www.iprjb.org

they are agitated, because online sports bettors experience disappointments, fury, and guilt as a result of substantial losses. Furthermore, internet sports betting has been linked to addiction in the same way as narcotics, tobacco-related products, and alcohol have.

Sports betting is becoming more accepted in society and within university settings and has become a culture among students - the athlete sub-section - so there is a need for strategies to educate students on the harm caused by addictive gambling on their social, economic, mental, and academic progress through campaigns aimed specifically at students.

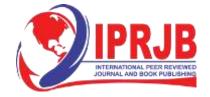
IPRJB
INTERNATIONAL PEER REVIEWED
JOURNAL AND BOOK PUBLISHING

Vol.2, Issue 2, No.1. pp. 1 - 11, 2024

www.iprjb.org

REFERENCES

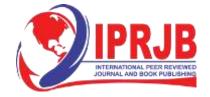
- Allen, K., Madden, J., Brooks, K., & Najman, J. (2008). The Virtual Jackpot! The socio-cultural and environmental context of youth gambling. Report prepared for Queensland Treasury.
- Alushula, P. (2017). Why Kenyans' love for quick riches is overshadowing normal investments. Standard Newspaper.
- Amutabi, M. N. (2018). Gambling Addiction and Threat to Development in Kenya: Assessing the Risks and Problems of Gamblers in Changing Society. Journal of African Interdisciplinary Studies: 2, 2, 90 103.
- Auer, M., Malischnig, D., & Griffiths, M. D. (2023). Gambling before and during the COVID-19 pandemic among European regular sports bettors: An empirical study using behavioral tracking data. International Journal of Mental Health and Addiction, 21(1), 20-27.
- Avenyo, S. J., Kwashie, N. S., & Demuyakor, J. (2024). Online sports betting in universities: Does online sports betting addictions impact the academic achievements and social relations of students? *Journal of Digital Educational Technology*, 4(1), ep2402.
- Babbie, E. R. (2010). The Practice of Social Science Research, Bemont, CA: Wards worth.
- Barnes, G. M., Welte, J. W., Hoffman, J. H., & Tidwell, M. C. O. (2010). Comparisons of gambling and alcohol use among college students and noncollege young people in the United States. Journal of American College Health, 58(5), 443-452.
- Benson, G. N., Munayi, S. P., Wanjira, J., & Inyega, J. (2021). Examining the effects of online sports betting on the perceived economic wellbeing of student-athletes. International Journal of Research in Business and Social Science (2147-4478), 10(7), 242-248.
- Black, D. W., Coryell, W., Crowe, R., McCormick, B., Shaw, M., & Allen, J. (2015). Suicide ideations, suicide attempts, and completed suicide in persons with pathological gambling and their First-Degree relatives. Suicide and Life-Threatening Behavior, 45(6), 700-709.
- Brown, G. T., Hainline, B., Kroshus, E., & Wilfert, M. (2014). Mind, body and sport: Understanding and supporting student-athlete mental wellness. Indianapolis, IN: National Collegiate Athletic Association.
- Browne, M., Langham, E., Rawat, V., Greer, N., Li. E., Rose, J., Bryden, G. (2016). Assessing gambling-related harm in Victoria: A public health perspective. Victoria Responsible Gambling Foundation.
- Chumba, J. M. (2019). Determinate of Under-presentation of Kenyan university students in selected ball games at the international competitions. Unpublished thesis, University of Nairobi
- Cottler, L. B., Campbell, W., Krishna, V. A. S., Cunningham-Williams, R. M., & Abdallah, A. B. (2005). Predictors of high rates of suicidal ideation among drug users. The Journal of nervous and mental disease, 193(7), 431.
- Crutcher, B. B. (2015). Examining the perceptions of wellness, stress, and social support among collegiate student-athletes and non-athletes. Michigan State University.



Vol.2, Issue 2, No.1. pp. 1 - 11, 2024

www.iprjb.org

- Dense, J. (2009). Whither State Lotteries? Gaming Law Review and Economics. 13 (5), 404-414.
- Derevensky, J. L., & Marchica, L. (2018). Fantasy sports wagering: IS it a concern and does it require more regulation? Gaming Law Review, 22(1), 55-60.
- Engwall, D., Hunter, R., & Steinberg, M. (2004). Gambling and other risk behaviors on university campuses. Journal of American College Health, 52(6), 245-256.
- Etzel, E. F. (2006). Understanding and promoting college student-athlete health: Essential issues for student affairs professionals. Naspa Journal ,43(3),518-546.
- Gathoni, B. N. (2022). Perceptions of Student Athletes and Sports Officers on the Effects of Online Betting in Kenyan Universities (Doctoral dissertation, University of Nairobi).
- Giacopassi, D., Stitt, B. G., & Vandiver, M. (1998). An analysis of the relationship of alcohol to casino gambling among college students. Journal of Gambling Studies, 14(2), 135-149.
- Griffiths, M. D. (2006). Impact of gambling technologies in a multi-media world. Casino and Gaming International, 2, 15-18
- Gupta, R., & Derevensky, J. L. (2000). Adolescents with gambling problems: From research to treatment. Journal of Gambling studies, 16(2), 315-342.
- Hammen, C. (2005). Stress and depression. Annu. Rev. Clin. Psychol., 1, 293-319.
- Hing, N., Russel, A. M. T., Lamont, M., & Vitartas, P. (2017). Bet anywhere, anytime: An analysis of Internet Sports Bettors' Responses to. Journal of Gambling Studies, 33:1051-1065.
- Hing, N., Russel, A. M. T., Lamont, M., & Vitartas, P. (2017). Bet anywhere, anytime: An analysis of Internet Sports Bettors' Responses to. Journal of Gambling Studies, 33:1051-1065.
- Huang, J. H., Jacobs, D. F., Derevensky, J. L., Gupta, R., & Paskus, T. S. (2007). Gambling and health risk behaviors among US college student-athletes: Findings from a national study. Journal of Adolescent Health, 40(5), 390-397.
- Hyland, P., Shevlin, M., McBride, O., Murphy, J., Karatzias, T., Bentall, R. P., ... & Vallières, F. (2020). Anxiety and depression in the Republic of Ireland during the COVID-19 pandemic. *Acta Psychiatrica Scandinavica*, 142(3), 249-256.
- Korn, D. A., & Shaffer, H. J. (1999). Gambling and the health of the public: Adopting a public health perspective. *Journal of gambling studies*, *15*(4), 289-365.
- LaBrie, R. A., Shaffer, H. J., LaPlante, D. A., & Wechsler, H. (2003). Correlates of college student gambling in the United States. Journal of American College Health, 52(2), 53-62.
- Ledgerwood, D. M., & Petry, N. M. (2004). Gambling and suicidality in treatment-seeking pathological gamblers. *The Journal of nervous and mental disease*, 192(10), 711-714.
- Mahan III, J. E., Drayer, J., & Sparvero, E. (2012). Gambling and fantasy: An examination of the influence of money on fan attitudes and behaviors. Sport Marketing Quarterly, 21(3), 159.
- Mihaylova, T., Kairouz, S., & Nadeau, L. (2013). Online poker gambling among university students: Risky endeavour or harmless pastime? Journal of Gambling Issues, (28), 1-18.



Vol.2, Issue 2, No.1. pp. 1 - 11, 2024

www.iprjb.org

- Nower, L., Caler, K. R., Pickering, D., & Blaszczynski, A. (2018). Daily fantasy sports players: Gambling, addiction, and mental health problems. Journal of gambling studies, 34(3), 727-737.
- Petry, N. M. (2009). Disordered gambling and its treatment. Cognitive and Behavioral Practice, 16(4), 457-467.
- Petry, N. M., & Weinstock, J. (2007). Internet gambling is common in college students and associated with poor mental health. The American Journal on Addictions, 16, 325–330.
- Petzold, M. B., Bendau, A., Plag, J., Pyrkosch, L., Mascarell Maricic, L., Betzler, F., ... & Ströhle, A. (2020). Risk, resilience, psychological distress, and anxiety at the beginning of the COVID-19 pandemic in Germany. *Brain and behavior*, 10(9), e01745.
- Pritchard, M., & Wilson, G. (2005). Comparing sources of stress in college student athletes and non-athletes. Athletic Insight: *The Online Journal of Sports Psychology*, 5(1), 1-8.
- Stuhldreher, W. L., Stuhldreher, T. J., & Forrest, K. Y. (2007). Gambling as an emerging health problem on campus. Journal of American College Health, 56(1), 75-88.
- Taherdoost, H. 2016. Sampling Methods in Research Methodology; How to Choose a Sampling Technique for Research. International Journal of Advance Research in Management, 5(2), 18-27.
- Watson, J. C., & Kissinger, D. B. (2007). Athletic participation and wellness: Implications for counseling college student-athletes. Journal of College Counseling, 10(2), 153-162.
- Wolanin, A., Gross, M., & Hong, E. (2015). Depression in athletes: prevalence and risk factors. Current sports medicine reports, 14(1), 56-60.
- Wolanin, A., Gross, M., & Hong, E. (2015). Depression in athletes: prevalence and risk factors. Current sports medicine reports, 14(1), 56-60.
- Savolainen, I., Vuorinen, I., Sirola, A., & Oksanen, A. (2022). Gambling and gaming during COVID-19: The role of mental health and social motives in gambling and gaming problems. *Comprehensive Psychiatry*, 117, 152331.
- Snaychuk, L. A., Ashley, A. M., McGrath, D. S., Hodgins, D. C., Williams, R. J., & Kim, H. S. (2023). Demographic, gambling, and psychological characteristics of sports bettors in a stratified sample of adults who gamble regularly. *Psychology of Addictive Behaviors*, *37*(8), 1089.
- Zsédely, Z., & Bóka, F. (2023). Egyetemisták sportfogadási szokásai: megélhetési forrás vagy hazárdjáték? = Students' sports betting habits: a source of livelihood or gambling? *recreation*, 13(1), 10-15.