

## Psychosocial Predictors Of Problem Gambling Among Male College Students In Nigeria

Adeyemo Sunday<sup>1\*</sup>, Aluko Tolulope<sup>2</sup>

### Abstract

**Objective:** Problem gambling is a non-addiction issue that may arise even from recreational engagement with gambling activity. In Nigeria, not much has been written about this menace to the extent that the focus of interest of the government is on the economic gains of gambling activities rather than how to curtail the problems arising therefrom. Therefore, this study was aimed at investigating psychosocial predictors (age, suicidality, and financial strain) contributing either independently or collectively to problem gambling among male undergraduate students in Ogun state, Nigeria.

**Method:** This study adopted a correlational research design. 201 participants were recruited using a purposive sampling technique. Data were collected using standardized questionnaires that included bio-data information, Problem Gambling Severity Index developed by (Ferris & Whyne, 2001), Suicidal Behaviour Questionnaire-Revised (SBQ-R) developed by Osman, Bagge, Gutierrez, Konick, Kopper, & Barrios (2001) and Financial Strain Survey developed by (Aldana & Lijenquist, 1998).

**Results:** Multiple Regression Analysis was used to analyze the data, and the results revealed that financial strain contributed more significantly to problem gambling ( $t(196) = 5.348, P.001, = 36$ , while all psychosocial variables contributed collectively to problem gambling ( $F(3, 196) = 9.670, P.01, AdjR2 = .12$ ) among male undergraduate students in Ogun State, Nigeria.

**Conclusions:** The study concluded that psychosocial factors-age, financial strain, and suicidality collectively contributed to problem gambling while only financial strain independently significantly predicted problem gambling among male university students in Ago-Iwoye community of Olabisi Onabanjo University. The study recommended that students receive financial counselling and planning in order to manage their money effectively.

**Keywords:** Problem Gambling, Age, Financial Strain, Suicidality, Male Undergraduate Students.

### Introduction

Gambling behavioral activity is not new throughout the world. Archeological records showed that Egyptians and people from the Middle East gambled (Schwartz, 2007). So also is the behavioral problem arising from gambling behavior, as this was written about by Plato. A noble faux pas traceable to problem gambling was recorded by King Henry VIII when he threw away in betting

on the dice game the iconic bells of Jesus Christ in St. Paul's Cathedral, England (Meyer et al. 2009). Problem gambling is an addiction-like issue that involves the compulsion to gamble even when it is unwise to do so (Lungu, 2020). It is a non-substance addiction that includes being dependent on gambling and increasing the number of stakes on games just as it is in substance addiction.

The definition of problem gambling according to the Diagnostic Statistical Manual (DSM-V) of the American Psychological Association (2013) recognizes that this behavioral condition can lead to substantial clinical distress or impairments. But also, we can find those experiencing this

1. Department of Psychology, Faculty of Social Sciences, Olabisi Onabanjo University, Ago-Iwoye.

2. Department of Psychology, Faculty of Social Sciences, Chrisland University, Abeokuta, Nigeria.

\*Corresponding Author: Adeyemo Sunday Oladotun, Email: os.adeyemo@oouagoiwoye.edu.ng

problem among those who engage in gambling as a recreational activity which may not necessarily lead to any clinical condition (Machoka, 2020). Problem gambling is a risky behavior similar to maladaptive sexual activity (Farre et al., 2015), and it has been shown to lead to loss of school and hostel fees, absence from classes, sleep problems resulting from online overnight gambling, and culminating in academic failure most especially for youths in university (Stinchfield, et al., 2006). This social-public health menace has received lip service from relevant bodies in Nigeria because, rather than nipping it in the bud through the establishment of an agency to take care of problem gamblers, the government is setting up a regulatory body to harness the huge funds the gambling industry generates for them (Adigun, 2020).

Relatively, recent figures in Nigeria showed that money realizable from betting rose from 132 billion nairas in 2016 to 185 billion nairas in just one year (Awagyiram & Akinyelure, 2018). Surprisingly, 60 million Nigerians in their young and middle-aged groups bet on sports (News Agency of Nigeria, 2019). This suggests that this is an issue that needs the attention of all stakeholders—researchers, government, community, and religious organizations to stem the rising trend of the menace, as it will be disastrous if this problem is not well understood for proper regulations arise thereon. Essentially, gambling is a glamorous venture among university students who are known for risk-taking and adventure (Machoka, 2020; Alimi et al., 2020).

Moreover, technology and internet services have enhanced the accessibility of gambling activities (Derevensky et al., 2004; Zhao et al., 2018; Bankole, 2019). While the effect of problem gambling is raising its ugly head in Nigeria, the efforts to arrest it are not yet domesticated as research opinions about it are gleaned from Western literature. It is therefore important for this study to investigate psychosocial risk factors (age, suicidality, and

financial strain) of pathological gambling among university undergraduate students in Nigeria.

The National Lottery Act of Nigeria (2005) criminalizes anybody less than 17 years old playing gambling. Meanwhile, evidence has shown that older age influences problem gambling (Kristiansen & Jensen, 2014). More empirical evidence has shown that research on gambling and problem gambling is more focused on adolescents (Blin-Pike et al., 2010; Riley et al., 2021)—these adolescents are shown to be more developmentally different than youths (Defoe et al., 2015). According to Livazovic & Bojic (2019), in a study on the role of sociodemographic traits, family quality, and risk behavior in adolescents' problem gambling behavior, they found that their older respondents get a higher score on problem gambling measures. However, McBride and Derevensky (2016) concluded that age groups were not different for the problem gamblers category in their study. This explains why age differences and gambling disorders need more research attention, especially among university students.

The area of research concerning suicidality and pathological gambling among young adults is luxuriant. Suicidality is a term that means suicide intention, plan, attempt, and even completed suicide. Suicidality, especially ideating about committing suicide, occurs more among young people. Blaszczynski and Farrell (1998) conducted psychological autopsies for all suicide deaths that happened over 3 years in Victoria, Australia. Their study revealed that 44 people died of gambling-related suicide. These authors also established that depression, hopelessness, helplessness, and psychological pain could predispose an individual to suicide. Moreover, suicide ideation and suicide attempts, which could all be syndromes of mood disorders, have relationships with gambling disorders (Ronzitti et al., 2017; Komoto, 2014). A recent study that investigated the relationship between suicidality and problem gambling among

young adults living in Great Britain found that both men and women who were suicide attempters at some point in the past also had problems with gambling (Wardle & McManus, 2021). Similarly, in an African-based study, Kagwa et al. (2022) reported that the most common gambling-related suicide was seen among university students who had used their school fees to gamble and then lost. Engaging in gambling activity can help university students from low socioeconomic backgrounds live more comfortably (Lungu, 2020); however, the financial gain can also play an important role in gambling disorder (Lelonek-Kuneta & Bartczuk, 2021). Interestingly, gamblers tend to increase their stakes when they have been on winning streaks and vice-versa when they have been losing (Xu & Harvey, 2014). The financial support that gambling provides is serving as a means of existence for students who engage in it. The very concept of gambling, in which after staking, a gambler expects something in return, ensures that money could be one of the motivations for engaging in gambling. According to Bankole (2019), this leads gamblers to fantasize that the benefits of gambling would rub off positively impact many aspects of their lives. Alternatively, financial strain, which is viewed as economic distress and being unable to meet financial goals (Adam et al., 2016), interlinks with maladaptive, uncontrollable behaviors such as substance use (Shaw et al., 2011) and risky sexual behavior (Farre et al., 2015). Bankole et al. (2019), while investigating personality and financial strain as predictors of gambling behavior revealed that financial strain presupposes gambling behavior. Speaking about problem gambling, a more direct result from Koomson et al. (2022) believed that there is a positive association between problem gambling and financial stress. This suggests that as there is more engagement in problem gambling activities, there tend to be more losses in finances. Evidence has shown research efforts on gambling behavior activity in Nigeria among youths and

university students (Bankole, 2019; Bankole et al., 2019 and Olatunji et al., 2020), but little attention has been paid to problem gambling or any psychosocial variables that could influence it among Nigerian university students. Therefore, this study aimed at investigating the role of age, suicidality, and financial strain among university students. We hypothesized that there would be significant independent and joint contributions of age, suicidality, and financial strain on problem gambling among students in Olabisi Onabanjo University, Ago-Iwoye, Ogun state, southwest Nigeria. This study will add to the burgeoning literature on the risk factors of problem gambling in Nigeria and also provide evidence for directions of intervention.

## **Method**

### **Participants and Procedure**

This research was a correlational study. The sampling technique used in this study was purposive sampling. This is informed because the participants would be better able to describe the phenomenon of the researchers' interest. The researchers contacted betting game shop owners who would recognize bettors who visited their establishments. Participants were approached by research assistants who had been trained on how to approach them. The research assistants were psychology students who were familiar with the research setting. The research assistants got the consent of the participants before asking them to fill out the questionnaires. The inclusion criteria were being male, having self-identification as a regular student at the university, and already paying for games at the betting shops. At the time of data collection, there were five (5) betting shops in the community. The research assistants gathered information from bettors who attended these betting establishments. The data was collected over three weeks. All students who lived off campus in the Ago-Iwoye community, which is the university town, were

eligible to participate, but only two hundred and (201) undergraduate students were chosen from the total students. The setting of the research was Olabisi Onabanjo University (OOU), Ago Iwoye, Ogun state. This university is owned and operated by the Ogun state government in Nigeria and runs on a multi-campus model. This university is mainly an off-campus entity, so participants were accosted at places where they engaged in betting activities in the communities where they stay.

### **Ethical Statement**

The research was conducted with strict adherence to ethical protocol. Participants were assured that their participation was voluntary and that they could withdraw their participation at any time. The information of the consenting participants was anonymized.

### **Measures**

Data were collected using scales that included demographic information (age and types of games played), financial stress, suicidal behavior, and problem gambling. It was divided into five sections, numbered A through E.

#### **Section A:**

The elicited responses from subjects based on demographic information. Specifically, questions about the respondents' ages betting agents, betting devices, and the types of games they play were the focus of the information provided in this section. The games could be either offline or online.

Section B: This evoked responses concerning financial strain, which were measured using a financial strain scale. Aldana and Liljenquist created an 18-item rating scale (1998). The scale aids in the identification of people who are experiencing financial hardship as well as potential negative health consequences. The scale's response format ranged from never (1) to always (5). The scale includes items such as, there are disagreements about money in my home; do you

ever get headaches from worrying about money; and I find it difficult to pay my bills. For this study, a Cronbach's reliability coefficient of .80 was estimated. The study by Bankole (2019) reported a reliability coefficient of .91.

**Section C:** Section C: This scale was used to elicit participant responses to suicidal behavior, and it was measured using the Suicide Behavior Questionnaire-Revised (SBQ-R), which was developed by Osman, Bagge, Gutierrez, Konick, Kopper, and Barrios (2001). It is a four-item scale that assesses lifetime suicidal ideation and attempts, suicidal ideation frequency over the previous year, the threat of suicidal behavior, and self-reported likelihood of future suicidal behavior. This study obtained a Cronbach's reliability coefficient of .68.

**Section D:** This elicited a response on problem gambling and it was measured with Problem Gambling Severity Index (PGSI) by Ferris and Wynne (2001). It is the standardized measure of at-risk behavior in problem gambling. It is a tool based on research on the common signs and consequences of problematic gambling that is meant to measure problem gambling among the general population. The scale is a 9-item questionnaire. Participants will respond to these questions on a 4-point scale anchored at 0 (never) and 4 (always). One item was negatively worded to control for response bias. The higher the score on the scale, the greater the risk of having a gambling problem. The scale yielded a Cronbach's reliability coefficient of .85. A relatively recent study by Ahmadi & Gorbani (2021) indicated a 0.79 Cronbach alpha score.

### **Method of data analysis**

The scores derived during the data collection from participants were subjected to analysis using the Statistical Package for the Social Sciences 20. The formulated hypothesis was tested using multiple regression analysis. Before that, the zero-order correlation was computed to map out the variables that are associated with one another.

## Results

**Table 1:** Summary of data showing the demographics of the respondents in the study

Variables	Group	Frequency	Percentage
Age	19-21	60	29.9%
	22-25	91	45.3%
	26-above	50	24.9%
	Total	201	100%
Betting Agent	Bet9ja	98	48.8%
	Nairabet	47	23.4%
	Surebet	36	17.9%
	Betking	20	10%
	Total	201	100%
Type of game	Virtual	41	20.4%
	Color/color	37	18.4%
	Racing	24	11.9%
	Sport bet	76	37.8%
	Casino	9	4.5%
	Lotto	14	7.0%
Total	201	100%	
Gambling Devise	Laptop	47	23.4%
	Smart Phone	102	50.7%
	Tablet	20	10.0%
	Offline	32	15.9%
	Total	201	100%

The table above outlines the frequency distribution of the four demographic variables in the study. The total of 201 respondent

responded across the variables. For age 19-21, 22-25, 26 and above. 60(29.9%) respondents were between the first age group, 91(45.3%), 50 (24.9%) respectively for the two other groups. The highest number of respondent fall between age 22-25. For the demographic variable on sport agent 48.8% of respondent picked sport bet ahead of Nairabet, Surebet and Betking. For the type of game 37.85 of respondents identified with sport bet ahead of virtual (20.4%), color-color 37(18.4%), racing 24(11.9%), casino9 (4.5%), Lotto 14(7%). For Devise used for betting: Laptop 47(23.4%), Smart Phone102 (50.7%), Tablet 20(10%) Offline 32(15.9).

The result of zero-order correlation analysis presented in table 2 shows significant positive relationships between age and financial strain ( $r = .16, P < .005$ ). In the same token, a significant positive relationship between financial strain and problem gambling ( $r = .35, P < .001$ ). This implies that the more people experience financial strain the more is the experience of problem gambling. However, there is no significant relationship between age and suicidality ( $r = .01, P > .005$ ), no significant relationship between age and financial strain ( $r = .08, P > .005$ ), no significant relationship between age and problem gambling ( $r = .04, P > .005$ ) and no significant relationship between suicidality and problem gambling ( $r = -.01, P > .005$ )

**Table 2** Zero-Order Correlation Showing Relationship among Age, Suicidality, Financial Strain, and Problem Gambling

	1	2	3	4	X	SD
Age	—				1.95	0.74
Suicide	.01	—	6.63	3.17		
Financial Strain	.08	.16*	—		11.05	5.09
Gambling	.04	-.01	.35**	—	28.28	5.95

\*\* Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).



## Hypothesis Testing

The hypothesis which stated that age, suicidality, and financial strain will significantly jointly and independently predict problem gambling among male students of Olabisi Onabanjo University, Ago-Iwoye, Nigeria was tested with a Multiple Regression Analysis. The result is presented in table 3.

**Table 3:** Multiple Regression Analysis Showing Influence of Age, Suicidality, and Financial Strain on Problem Gambling

Predictors	R	R <sup>2</sup>	F	Sig	$\beta$	t	Sig
Age					0.013	0.192	.848
Suicidality	.359	.129	9.670	.000	-0.064	-0.946	.345
Financial Strain					0.362	5.348	.00

The result in table 3 reveals a significant joint influence of age, suicidality, and financial strain on problem gambling ( $F(3, 196) = 9.670$ ;  $P < .01$ ,  $AdjR^2 = .12$ ). The result further shows the impact of all the predicting variables jointly accounted for about 12.9% of the variation in problem gambling. Furthermore, result also reveals only financial strain  $\{t(196) = 5.348$ ,  $P < .001$ ,  $\beta = .36\}$  independently predicted problem gambling significantly while age  $\{t(196) = 0.192$ ,  $P > .005$ ,  $\beta = .013\}$ , suicidality  $\{t(196) = -0.946$ ,  $P > .005$ ,  $\beta = -.064\}$  could not. This means that financial strain is a strong factor that made male undergraduate students to experience problem gambling. Therefore the hypothesis is partially accepted.

Table 1: Summary of data showing the demographics of the respondents in this study

Table 2: Zero order correlation showing the relationships among age, suicidality, financial strain and problem gambling

Table 3: Multiple Regression Analysis showing

influence of age, suicidality and financial strain on problem gambling

## Discussions and Conclusions

The primary aim of this study was to investigate the role of age, suicidality, and financial strain on problem gambling among students staying off-campus at a university. The importance of this study cannot be underemphasized because research into

gambling and gambling disorders among university students in Nigeria needs to gain traction. The challenge that problem gambling creates for youths is similar to the features of addiction. As indicated by Ahmadi et al. (2021), problem gambling mischaracterizes attentional abilities, which makes those suffering from it continue to engage in it.

This current study ran a multiple regression analysis to determine the role of psychosocial variables such as age, suicidality, and financial strain on problem gambling. The result showed only the role of financial strain in accurately predicting problem gambling. This means that financial strain will create a hole in the pockets of problem gamblers. The study of Hu et al. (2014) provided a likely reason for this. Their study supported a notion called the gambler's fallacy, which is a belief that a gambler who had consistently lost some games would continue to lose because he would keep on staking riskier odds despite evidence of less money. Furthermore, Koomson et al. (2022) simplified this

by explaining that problem gamblers experience an inability to maintain savings, are highly in debt, and are unable to meet up with emergency funding, which are characteristics of financial strain. The effect of this on university students could be such damning that they could use their school fees to chase their losses.

Age was shown not to independently influence problem gambling among the participants of this current study. Livazovic et al. (2019), in their study, showed that the older participants experienced more problems with gambling than the younger ones. It should be noted that Livaszovic et al. were conducted among adolescents while this present study was among college students. Problem gambling has been observed to be different among adolescents by Defoe et al. (2015). They opined that adolescents who are aged 11-19, are fundamentally different from adults in their appraisal of risk, which characterizes gambling activity. An extension of this could be that adults in the university may be better at being able to appraise risk more than adolescents because the pre-frontal part of the brain for executive function, which is the seat of decision, is more fully developed in adults than in adolescents. The study of Olatunji et al. (2020) agreed with the finding of this current study and advanced the reason that university students were less receptive to gambling problems because of the focus and concentration dedicated to academic and vocational work more than other domains of their lives.

This present study discovered that suicidality did not independently contribute to problem gambling among male college students. The result of Wardle et al. (2020) was a disparity with this present study. The point of difference could be the focus on the participants of the two studies. Wardle et al.'s participants were youths recruited online and

from age 16-24, while the participants of this study were undergraduate students who were physically recruited at the betting shops off the campus of Olabisi Onabanjo University. Moreover, while studies in this part of the world have yet to establish the role of suicidality in problem gambling but have found something of a semblance of interlink between mood problems and gambling behavior (Bankole, 2019), there has been a preponderance of evidence for depression and other mood symptoms such as suicidality (suicide ideation, attempt) associated with gambling disorder (Ronzitti, et al., 2017; Komoto, 2014) in some literature. Therefore, there should be more research efforts in this area in Nigeria. Further studies should explore the impact of some psychosocial factors on problem gambling.

Much emphasis is placed on the profits made from gambling rather than the harm that problem gambling causes to Nigerian youths. However, this study has been able to establish empirical evidence for the prediction of problem gambling by financial strain. This implies that government and university authorities should ensure that students receive teaching on financial literacy and planning so that they know how to manage their finances better and how to engage the money in positive activities. Moreover, awareness and sensitization programs about the financial shortfalls that problem gambling can cause should be prioritized amongst students. As it is common in addiction prevention programs, harm reduction concerning problem gambling should be a concern for all stakeholders involved in training university students. In addition, problem gambling counseling services can be established as part of a treatment strategy for problem gambling. All these are important because the future of the country rests squarely on the better mental health status of the youth.

This study concluded that psychosocial factors

such as age, financial strain, and suicidality all contributed to problem gambling, but only financial strain independently significantly predicted problem gambling among male university students at Olabisi Onabanjo University's Ago-Iwoye community. This study employed male participants, so applying the results to the female gender should be done with caution. Further studies can ensure that both genders are adequately represented. The outcomes of this study should be conservatively interpreted among the general population as the participants were a subset of the general population in the university. Other researchers can undertake similar studies within the general population. The operationalization of gambling disorder according to the scale used suggests that caution should be applied when the results of this study are to be used because other studies may utilize other scales with strict definitions of gambling disorder.

## References

- Adams, D. R., Meyers, S. A., and Beidas, R. S. (2016). The relationship between financial strain, perceived stress, psychological symptoms, and academic and social integration in undergraduate students. *Journal of American College Health, 64*(5), 362-370.
- Adigun, A. (2020). *Gambling Problem among Nigerian Youth: A short update*. GRIN Verlag, <https://www.grin.com/document/538173>
- Akwagyiram, A. & Akinyelure, D. (2018). *Online betting firms gamble on soccer-mad*. Lagos: Reuters
- Ahmadi, E. & Gorbani, F. (2021). Investigating the psychometric properties of problem gambling severity index in students. *Iranian Journal of Health Psychology: 4*;1, 49-58
- Aldana, S.G. & Lijenquist, W. (1998). Validity and reliability of a financial strain survey. *Financial counselling and planning: 9*(2); 11-19
- Alimi, A.E., Aderoju, M.A. & Falade, A.A. (2020). An appraisal of online gambling on undergraduate students' academic performance in University of Ilorin, Nigeria. *International Journal of Innovative Technology Integration in Education. 3*(2) 45-54
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th edn) (DSM-5) Arlington: American Psychiatric Publishing.
- Blaszczynski, A. and Farrell, E. (1998). A case series of 44 completed gambling related suicides. *Journal of Gambling Studies, 14*, 93-110.
- Bankole, .E.T. (2019). Patterns and prevalent of gambling behaviour among youths in south-west Nigeria: A case study of youths in Oyo and Ekiti state. *British Journal of Psychology Research; 7*(2), 24-26
- Bankole, E.T., Adebunmi, O. & Bankole, A.M. (2019). Personality traits and financial strain as determinants of gambling behaviour among youths in Nigeria: A case study of youths in Oyo State and Ekiti State. *American International Journal of Social Science Research: 4*(1); 1-8, ISSN 2576-103X E-ISSN 2576-1048
- Blinn-Pike, L.; Lokken Worthy, S. & Jonkman, J.N. (2010). Adolescent gambling: A review of an emerging field of research. *Journal of Adolescent Health, 47*, 223-236.
- Defoe, I.N., Dubas, J.S., Figner, B., & van Aken, M.A. (2015). A meta-analysis on age differences in risky decision making: Adolescents versus children and adults. *Psychological Bulletin, 141*(1), 48-84. doi: 10.1037/a0038088
- Derevensky, J., Gupta, R., Messerlian, C., & Gillespie, M. (2004). Youth gambling problems: A need for responsible social policy. In J. Derevensky & R. Gupta (Eds.), *Gambling problems in youth: Theoretical and applied perspectives*. NY: Kluwer Academic/Plenum Publishers, 231-252.
- Farre, J.M., Fernandez-Aranda, F., Granero, R., Aragay, N., Mallorqui-Baque, N., Ferrer, V., More, A., Bouman, W.P., Arcelus, J., Saviddou, L.G., Penelo, E., Aymami, M.N., Gomez-Pena, M., Gunnard, K., Romaguera, A., Menchon, J.M, Valles, V. &



- Jimenez-Murcia, S. (2015). Sex addiction and gambling disorder: Similarities and differences. *Comprehensive Psychiatry*, 56: 59-68
- Ferris, J., & Wynne, H. (2001). *The Canadian problem gambling index: Final report*. Submitted for the Canadian Centre on Substance Abuse.
- Kagawa, M.M., Mamun, M.A., Najjuka, S.M., Muwanguzi, M., Kule, M., Nkola, R., Favina, A., Kihumuro, R.B., Munaru, G., Arinaitwe, I., Rukundo, G.Z. & Griffiths, M.D. (2022). Gambling-related suicide in East African community countries: Evidence from press media reports. *BMC Public Health*: 22:158
- Komoto, Y. (2014). Factors associated with suicide and bankruptcy in Japanese pathological gamblers. *International Journal of Mental Health Addiction* 12, 600–606. <https://doi.org/10.1007/s11469-014-9492-3>.
- Koomson, I., Churchill, S.A. & Munyanyi, M.E. (2022). Gambling and financial stress. *Social Indicators Research*; <https://doi.org/10.1007/s11205-022-02898-6>
- Kristiansen, S.G., Jensen, S.M. (2014). Prevalence and correlates of problematic gambling among Danish adolescents. *International Journal of Social Welfare*; <https://doi.org/10.1111/ijsw.12021>.
- Lelonek-Kuneta, B. & Bartczuk, R.P. (2021). Online gambling activity, pay-to-win payments, motivation to gamble and coping strategies as predictors of gambling disorder among e-sports bettors. *Journal of Gambling Studies*. 37: 1079-1098
- Livazovic, G. & Bojic, K. (2019). Problem gambling in adolescents: What are the psychological, social and financial consequences? *BMC Psychiatry*; 19: 308, 1-15
- Lungu, C.T. (2020). Gambling among Nigerian youths: Implications for counselling. *International Journal for Research and Scientific Innovation*; 8(1), 179-183
- Machoka, F. (2020). *Effect of problem gambling on behaviour among students in Kenya in selected universities in Nairobi, Kenya*. A thesis presented to the School of Human and Social Sciences, Daystar University, Kenya
- Meyer, G., Hayer, T. & Griffiths, M. (2009). *Problem gambling in Europe: Challenges, prevention and interventions*. Springer
- McBride, J. & Derevensky, J. (2016). Gambling and video game playing among youth. *Journal of Gambling Issue*. <https://doi.org/10.4309/jgi.2016.34.9>.
- Nigerian National Lottery Act (2005). *National Lottery Trust Fund, 2005* (<http://nltf.gov.ng/wp-content/uploads/2018/02/National-Lottery-Act.pdf>).
- Riley, B.J., Oster, C., Rahamatullah, M. & Lawn, S. (2021). Attitude, risk factors, and behaviours of gambling among adolescents and young people: A literature review. *International Journal of Environmental Research and Public Health*. 18 (984), 1-15
- Ronzitti, S., Soldini, E., Smith, N., Potenza, M.N., Clerici, M., Bowden-Jones, H. (2017). Current suicidal ideation in treatment-seeking individuals in the United Kingdom with gambling problems. *Addictive Behaviour*. <https://doi.org/10.1016/j.addbeh.2017.05.032>.
- Olatunji, O.A., Idemudia, E.S. & Owoseni, O.O. (2020). Male undergraduates and online gambling in Nigerian private universities. *Gender and Behaviour*, 18, 2; 15551-15558
- Osman, A., Bagge, C.L., Gutierrez, P.M., Konick, L.C. Kopper, B.A. & Barrios, F.X. (2001). The suicidal behaviour questionnaire-Revised (SBQ-R): Validation with clinical and nonclinical samples. *Assessment*: 8(4): 443-54. doi: 10.1177/107319110100800409.
- Schwartz, D.G. (2007). Roll the bones: The history of gambling. *Journal of Gambling Issues*: 21, 135-137
- Shaw, B. A., Agahi, N., and Krause, N. (2011). Are changes in financial strain associated with changes in alcohol use and smoking among older adults?. *Journal of studies on alcohol and drugs*, 72(6), 917-925.

- Stinchfield, R., Hanson, W.E. & Olson, D.H. (2006). *Problem and pathological gambling among college students*. Wiley InterScience (www.interscience.wiley.com) • DOI: 10.1002/ss.196
- Wardle, H. & McManus, S. (2021). Suicidality and gambling among young adults in Great Britain: Results from a cross-sectional online survey. *Lancet Public Health*: 6; e39-49
- Xu, J., & Harvey, N. (2014). Carry on winning: The gamblers' fallacy creates hot hand effects in online gambling. *Cognition*, 131(2), 173–180.
- Zhao, Y., Derevensky, J., Marchica, L. & Ivoska, W. (2018). Mobile gambling among youths: A warning sign for problem gambling? *Journal of Gambling Issues*; 38(14), DOI: <http://dx.doi.org/xxx-xxxx-xx>



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