



Impulsivity, peer pressure, and social media usage as predictors of addictive gambling behavior among undergraduates

Impulsif, tekanan teman sebaya, dan penggunaan media sosial sebagai prediktor perilaku judi adiktif di kalangan mahasiswa

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ABSTRACT

The increased rate of gambling in our society has become a menace that affects nearly every Nigerian youth, including undergraduates. Studies using different predictors of addictive gambling behavior have produced varying results. Therefore, this study investigated impulsivity, peer pressure, and social media usage as predictors of addictive gambling behavior among undergraduates in Nigeria. A cross-sectional survey design using the purposive sampling technique was used to select three universities. Data were collected from 258 undergraduates using validated scales. The collected data were analyzed using zero-order correlation and multiple regression analysis. The result revealed that peer pressure was significantly correlated with addictive gambling behavior. Also, impulsivity, peer pressure, and social media usage jointly predicted addictive gambling behavior. However, only peer pressure independently predicted addictive gambling behavior. The conclusion is that peer pressure is a strong predictor of addictive gambling behavior. The implication of this finding is that parents, university authorities, and other stakeholders should design programmes and policies to reduce peer pressure on problem gambling.

KEY WORDS:

addictive gambling behavior; impulsivity; peer pressure; social media usage

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ABSTRAK

Meningkatnya tingkat perjudian di masyarakat kita telah menjadi ancaman yang mempengaruhi hampir setiap pemuda Nigeria termasuk mahasiswa. Penelitian yang menggunakan prediktor yang berbeda dari perilaku perjudian yang membuat ketagihan telah memberikan hasil yang bervariasi. Oleh karena itu, penelitian ini menyelidiki impulsif, tekanan teman sebaya, dan penggunaan media sosial sebagai prediktor perilaku perjudian yang membuat ketagihan di kalangan mahasiswa di Nigeria. Desain survei cross-sectional menggunakan teknik purposive sampling digunakan untuk memilih tiga universitas. Data dikumpulkan dari 258 mahasiswa dengan menggunakan skala yang telah divalidasi. Data yang dikumpulkan dianalisis dengan menggunakan korelasi orde nol dan analisis regresi berganda. Hasilnya menunjukkan bahwa tekanan teman sebaya berkorelasi secara signifikan dengan perilaku perjudian yang membuat ketagihan. Selain itu, impulsif, tekanan teman sebaya, dan penggunaan media sosial secara bersama-sama memprediksi perilaku perjudian yang membuat ketagihan. Namun, hanya tekanan teman sebaya yang secara independen memprediksi perilaku perjudian yang membuat ketagihan. Kesimpulannya adalah bahwa tekanan teman sebaya adalah prediktor kuat dari perilaku perjudian yang membuat ketagihan. Implikasi dari temuan ini adalah bahwa orang tua, otoritas universitas, dan pemangku kepentingan lainnya harus merancang program dan kebijakan untuk mengurangi tekanan teman sebaya pada masalah perjudian

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perilaku perjudian adiktif; impulsif; tekanan teman sebaya;
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Introduction

Every nation of the world desires development and growth. In order to achieve this, human, material and natural resources are needed. Youths are the engines of this development. However, what is prevalent in Nigerian society is the high involvement of youths in addictive gambling behavior. The Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR) of the American Psychiatric Association (APA, 2013) defines addictive gambling behavior as a persistent and recurrent problematic behavior that leads to clinically significant impairment or distress indicated by the individual exhibiting four or more symptoms in a 12-month period. These symptoms are the needs to gamble with increasing amount of money in order to achieve the desired excitement; being restless or irritable when attempting to cut down or stop gambling, resorting to

gambling when feeling distressed in form of anxiousness or depression, and lying in order to conceal the extent of involvement with gambling (DSM-5-TR).

Globally, gambling sector has grown rapidly as the result of the increase in the sport betting companies, gambling outlets and affiliated gambling enterprises. Studies have revealed other reasons many undergraduates participated in addictive gambling behavior to include winning money, fun, social interaction, excitement, to relieve boredom, to enhance feelings of self-worth (Mond et al., 2019).

Some factors have been implicated to predict addictive gambling behavior. One factor considered in this study is impulsivity, which is the tendency to act on impulse, displaying a behavior characterized by little or no forethought, reflection, or consideration of the consequences (The DSM-IV-TR, APA, 2013). Impulsivity as a complex multidimensional construct is associated with several personality disorders such as antisocial and borderline disorders, attention deficit, bipolar, eating, substance use and gambling disorders (Congdon & Canli, 2005; Flack & Buckby, 2020; Sharma et al., 2014). The DSM - 5-TR (APA, 2013) classifies addictive gambling behavior as a disorder of impulse control. Impulsive individuals react rapidly in decision making or behaviour with a lack of forethought (Strayhorn, 2002) as it is closely related to deficits in self-control expressed as a lack of self-discipline, self-regulation or difficulty in delaying gratification. Impulsive behaviour and gambling-related cognitions have been recognized as two major psychological factors in the emergence and retention of problem gambling which has the potential of leading to gambling addictive behaviour (Suen et al., 2017).

The behavioural theory is used in this study to explain the concept of impulsivity. The theory focuses on the idea that behaviours are learned through interaction with the environment and that behaviour is a response to stimuli. This means that individuals who engage in impulsive behavior would be rewarded for doing so which in turns reinforces the behavior and makes it more likely to occur in the future. For example, if an individual learns that spending money impulsively would lead to a temporary feeling of pleasure, they would be more likely to engage impulsive spending behaviors in the future, thus making impulsivity a learned behavior. When applied to this study, it means that because addictive gambling behavior originated from impulse, it can be learned through observable stimulus-response and reinforcement over time. Studies have revealed that individuals who scored high in the impulsivity scale would score high in addictive gambling behavior

scale (Choi & Kim, 2021; Ioannidis et al., 2019). For example, Lee et al. (2012) impulsivity in Internet addiction and addictive gambling behavior and found that individuals suffering from Internet addiction showed increased levels of trait impulsivity which are comparable to those of individuals diagnosed with addictive gambling behavior.

The second factor considered in this study is peer pressure which is defined as the influence exerted by a peer group on its individual members to fit in with or conform to the group's norms and expectations (American Psychological Association, 2013). Peer pressure allows members of the same social group to influence other members to do things that they would be resistant to or might not otherwise choose to do. In this study, peer pressure is when undergraduates are engaged in behaviours that are not considered socially acceptable and desirable such as experimentation with gambling. Studies have found that individuals who scored high on peer pressure scale would score high in addictive gambling behavior scale (Oyetunji-Alemede et al., 2019).

The third factor considered in this study to predict addictive gambling behavior is social media which is a collective term used for websites and applications that focus on communication, community-based input, interaction, content sharing and collaboration (Harvey, 2014). Social media exists in different forms such as Facebook, Twitter (X), TikTok, WhatsApp, Eskimi, Instagram, WeChat, Skype, 2go, etc. Youths including undergraduates who have access to smartphones and Internet are using social media to engage in online gambling activities which tends to lead to gambling addictive behaviour (NoiPolls, 2019). Offor et al. (2021) found in a study on the causes of online gambling among male undergraduates in a Nigerian university that they engaged in gambling as a result of their access to android phones and Internet facilities and access to gambling websites.

In order to explain social media usage and addictive gambling behavior, the Uses and Gratification Theory (UGT) is used. The theory was developed by Blumler and Katz in the 1970s has been revised over the years (Kasirye, 2022). UGT is a communication theory which explains that individuals use social media to satisfy their specific needs such as information, entertainment, socialization, and personal identity. It says that individuals are selective in their social media usage, choosing specific media channels or content that would meet their needs or interests. For example, some individuals may seek information by using social media to obtain news, knowledge, and information

about the world around them. Others may use it for the socialization process. For example, many undergraduates used Facebook, Twitter (X) and Instagram to connect with friends, family, and acquaintances and to establish new relationships (NoiPolls, 2019).

Because social media allows individuals to identify with characters or personalities and develop their sense of self, undergraduates have extended the social media usage to play online betting (gambling). Hence, UGT suggests that social media content would provide different gratifications for different individuals such as the use of the platform to seek information on gambling activity. This explains why some gambling platforms make use of the social media to advertise their services and the youth seeking information about their gambling activities on social media. When applied to this study, UGT explains why individuals engage in gambling activities and the gratifications they derive from it.

Although some studies on the addictive gambling behavior have been done among general populations, such studies among undergraduates are sketches, thus leaving a gap in knowledge to be filled. Therefore, this study was aimed to examine whether impulsivity, peer pressure and social media would jointly and independently predict addictive gambling behavior among undergraduates in Ibadan, Oyo State, Nigeria. The research questions raised to guide this study were: Would there be a positive relationship among impulsivity, peer pressure and social media on addictive gambling behavior among undergraduates in Ibadan, Oyo State, Nigeria? And would impulsivity, peer pressure and social media jointly and independently predict addictive gambling behavior among undergraduates in Ibadan, Oyo State, Nigeria?

The study would bring fresh insight into the roles of impulsivity, peer pressure and social media on addictive gambling behavior among undergraduates in Ibadan, Oyo State, Nigeria. Also, mental health professionals would have handy data on how to manage undergraduates suffering from addictive gambling behavior. Finally, the government and other stakeholders would utilize the findings in this study to organize seminars, trainings and conferences to regulate the gambling industry and help youths who are already addicted to the gambling behavior.

Empirical Review

Studies have revealed that gamblers have higher level of impulsivity than the non-gamblers (Dussault et al., 2011; Iliceto et al., 2016; Lutri et al., 2018) and

that impulsivity predicts gambling addictive behaviour (e.g., Lightsey & Hulse, 2002). Also, some studies have found that childhood impulsivity levels would predict addictive gambling behavior emerging in adulthood (Dussault et al., 2011; González-Ortega et al., 2013; Valenciano-Mendoza et al., 2023). Also, Choi and Kim (2021) found impulsivity to have a direct effect on irrational gambling beliefs which in turns has a direct effect on addictive gambling behavior. A closely related finding by Brunborg et al. (2016) found a positive association between trait impulsivity and high gambling-related cognitive biases among college students. Further meta-analysis by Ioannidis et al. (2019) revealed that addictive gambling behavior to be associated with elevated impulsivity on motor inhibition, attention inhibition and decision-making tasks. Allami et al. (2017) have found impulsivity as a specific disorder of gambling that showed behavioural vulnerability and gambling addictive behaviour. Finally, a seminal study by Marmurek et al. (2014) has compared gambling involvement between community members and university students and found that gambling involvement was significantly related to problem gambling severity for the community sample but not for the student sample.

Some studies have been conducted on the influence of peer pressure on addictive gambling behavior with varying results. For example, (Oyetunji-Alemede et al. (2019) found that peer pressure had a significant influence on addictive gambling behavior among undergraduates of the Obafemi Awolowo University in Nigeria. In a comparative study between American and Finnish samples, Kong et al. (2014) found that undergraduates who identified strongly with offline peer groups reported lower engagement in addictive gambling behavior than those with strong identification with online peer groups. Also, studies have revealed that gambling family and peer group significantly encouraged youths to engage in addictive gambling behavior (Kong et al., 2014; Yip et al., 2011)

Finally, studies that examined the influence of social media and addictive gambling behavior have varying results. Some studies have found social media usage to significantly influence addictive gambling behavior (Bradley & James, 2021; Feddersen et al., 2020), other studies have reported negative results (Leung et al., 2015; Wu et al., 2011).

The hypotheses generated for this study were: (1) There is an expected significant relationship among impulsivity, peer pressure, social media usage and addictive gambling behavior among undergraduates in Ibadan, Oyo State, Nigeria, and (2) Impulsivity, peer pressure and social media usage would

jointly and independently predict gambling addictive behaviour among undergraduates in Ibadan, Oyo State, Nigeria.

Method

The study adopted a cross-sectional survey research design using validated scales to gather data from the participants. The independent variables for the study were impulsivity, peer pressure and social media usage while the dependent variable was addictive gambling behavior. The settings of the study were in three universities: The University of Ibadan (public), Ladoke Akintola University of Technology (state) and Lead City University (private) all in Ibadan, Oyo State, South-west, Nigeria.

The study adopted purposive sampling technique to select the three universities while convenience and snowball sampling techniques were used for the distribution of questionnaires to the potential participants. Closely related to sampling technique was the calculation of the sample size which was executed using Cochran formula, $n = z^2/4e$ with 0.05 level of significance and the Z score = 1.96, a sample size of 384 was calculated.

The study used four validated questionnaires for data collection. The first was the Dickman Impulsivity Inventory (DII) developed by Dickman (1990). This was used to measure impulsivity. It is a 23-item scale presented in a 4-point Likert's format with responses of totally false, in part false, in part true, and totally true. Sample items include: "I don't like to make decision quickly" and "I am good at taking advantage of unexpected opportunities". Pechorro et al. (2021) validated the scale among young adults in the University in Portugal and reported a Cronbach's alpha of 0.86 for Dysfunctional impulsivity factor and 0.83 for Functional impulsivity factor. For this study, the overall Cronbach's alpha was 0.72.

The second was Gambling Symptom Assessment Scale (G-SAS) by Kim et al. (2009) used to assess addictive gambling behavior among study participants. It is a 12-item scale presented on a 5-Likert's format with the responses that ranges from none, mild, moderate, severe, and extreme. Examples of items are: "If you had unwanted urges to gamble during the past WEEK, on average, how strong your urges were?" and "During the past WEEK how much emotional distress (mental pain or anguish, shame, guilt, embarrassment) has your gambling caused you?" The authors reported Cronbach's alpha of 0.87 while in this study, Cronbach's alpha of 0.85 was computed.

Peer Pressure Scale Questionnaire-Revised (PPSQ-r) by Zulkifly et al.

(2022) was used to measure peer pressure influence among participants. It is a 25-item scale presented on a 5-point Likert's format with the responses ranges from strongly disagrees to strongly agree. Sample items include: "Sometimes I miss classes because my friends urge me to do so" and "I cannot resist going for a late-night party with friends." Zulkifly et al. (2022) reported Cronbach's alpha of 0.93. For this study, Cronbach's alpha of 0.90 was computed.

Finally, the Bergen Social Media Addiction Scale by Andreassen et al. (2012) was used to evaluate social media usage. This is a 6- item scale presented on a 5-point Likert's format ranges from very rarely, rarely, sometimes, often to very often. Sample items are: "You feel an urge to use social media more and more" and "You spend a lot of time thinking about social media or planning how to use it". Shin et al. (2022) validated the scale among the Korean population (young adults) and reported a Cronbach's alpha of 0.86. For this study, Cronbach's alpha of 0.76 was calculated.

Authority letter to conduct the study was obtained from the Department of Psychology, University of Ibadan, Nigeria to identify the researchers. The researchers approached each of the selected universities after the letters of introduction was shown and discussed with the relevant authorities in the universities. Potential participants were met in the Café, Common Rooms, relaxation joints, lounges, lecture halls, residential halls, etc. They were told of the purpose of the study and their consents were sought for. Those who agreed to participate in the study were assured of the confidentiality of their responses. They were duly informed that participation was voluntary. There was no financial inducement. Based on their acceptance to participate, they were given questionnaires which took about 23 minutes to complete. A total of 384 were distributed across the three universities of which 314 were retrieved (i.e., 82% response rate). When the questionnaires were screened, 56 were found to have missing items and were discarded thus left with 258 used for the analysis.

Data collected were coded and analyzed using SPSS version 23. Both descriptive and inferential statistics were calculated. Descriptive statistics was used to summarize the descriptive variables while inferential statistics were used to test the hypotheses. Hypothesis 1 was tested using zero-order correlation statistics while hypothesis 2 was tested using multiple regression analysis. All hypotheses were accepted at $p < 0.05$ level of significance.

Result

Participants' Demographic Parameter

Table 1

Demographic Variables of the Study Participants

Variables	N	%	Mean	SD
Gender				
Male	210	81.40		
Female	48	18.60		
Total	258	100		
Age			20.88	2.91
Religion				
Christianity	210	81.40		
Muslim	46	17.80		
Others	2	0.08		
Total	258	100		
Ethnic Group				
Yoruba	230	89.10		
Ibo	16	6.20		
Hausa	3	1.20		
Others	9	3.50		
Total	258	100		
Marital Status				
Singles	255	98.80		
Married	3	1.20		
Total	258	100		
Whether Used Betting Platform				
Yes	255	98.80		
No	3	1.20		
Total	258	100		

Table 1 shows the demographic variables of the study participants. As depicted in Table 1, the majority of the participants were males (81.4%), professed to be of Christian faith (81.4%) with the mean age of 20.88 ± 2.91 and the majority of the participants were of the Yoruba ethnic group (89.1%). And more fundamental to this study, 98% of the participants reported using one form of betting platform or another for gambling.

H1: There would be a significant relationship among impulsivity, peer pressure, social media usage and addictive gambling behavior among

undergraduates in Ibadan, Oyo State, Nigeria. The hypothesis was tested using zero-order correlation statistics and the result is presented in Table 2.

Table 2
Zero-order Correlation of Study Variables

Variables	1	2	3	4	Mean	SD
1 Impulsivity					25.18	5.17
2 Peer Pressure	.30*				55.07	16.94
3 Social Media Usage	.24	.26*	-		16.60	5.21
4 Gambling Addictive Behaviour	.06	.25	.09	-	13.22	8.51

* Correlation is significant at 0.05

Table 2 shows the zero-order correlation statistics among variables of study. The result showed that peer pressure significantly correlated with social media usage ($r = .36, p < .05$) and addictive gambling behavior ($r = .25, p < .05$). Also, impulsivity correlated with peer pressure ($r = .30, p < .05$) and social media usage ($r = .24, p < .05$). However, there was no significant relationship between impulsivity ($r = .06, p > .05$) and social media usage ($r = .09, p > .05$) and addictive gambling behavior. Therefore, the hypothesis was partially supported.

H2: Impulsivity, peer pressure and social media usage would jointly and independently predict gambling addictive behaviour among undergraduates in Ibadan, Oyo State, Nigeria. The hypothesis was tested using multiple regressions analysis and the result is presented in Table 3.

Table 3
Multiple Regression Analysis Showing Joint and Independent Predictors of Gambling Addictive Behaviour among Undergraduates in Oyo State

Predictors	β	t	p	R	R ²	F	P
Impulsivity	-.02	-.37	> .05	.26	.07	4.76	<.05
Peer Pressure	.26	3.85	<.05				
Social Media Usage	.00	.05	>.05				

Dependent Variable: Addictive Gambling behavior

Table 3 shows multiple regression analysis of the joint and independent predictors of gambling addictive behavior among undergraduates in Ibadan, Oyo State, Nigeria. The result revealed that impulsivity, peer pressure and social media usage jointly predicted addictive gambling behavior among study participants [$R^2 = .07, F(4, 253) = 4.76, p < .05$]. This means that all the predictors jointly accounted for 7% of variance in the dependent variable. The result further revealed that peer pressure ($\beta = .26, t = 3.85, p < .05$) independently predicted addictive gambling behavior among undergraduates in Ibadan, Oyo

State, Nigeria. However, impulsivity ($\beta = -.02$, $t = -.37$, $p > .05$) and social media usage ($\beta = .00$, $t = .05$, $p < .05$) did not independently predict addictive gambling behavior among study participants. Based on these results, hypothesis 2 was partially supported.

Discussion

The aim of this study was to investigate whether impulsivity, peer pressure, and social media usage would predict gambling addictive behavior among undergraduates in Oyo State, Nigeria. Two hypotheses were generated, tested, and accepted at $p < .05$ level of significance.

The hypothesis that there would be a significant relationship among impulsivity, peer pressure, social media usage, and addictive gambling behavior was partially supported. The result shows a positive relationship between peer pressure and gambling addiction among undergraduates in Oyo State. This implies that undergraduates who reported high levels of peer pressure also reported high levels of urges to gamble, which would lead to addictive gambling behavior. This finding supports Oyetunji-Alemede et al. (2019) result that peer pressure has a significant influence on addictive gambling behavior among undergraduates in another university in Nigeria. This explains the power of peer pressure since non-compliance would lead to being ostracized and alienated from the group they belong to, which calls for conformity. When directly witnessing the reward their friends and peers gained from gambling would motivate other undergraduates to engage in gambling because of the possible rewards of winning (Choi & Kim, 2021; Ioannidis et al., 2019). The hypothesis that impulsivity, peer pressure, and social media usage would jointly and independently predict addictive gambling behavior among undergraduates in Oyo state was also partially confirmed. All the independent variables jointly account for 6% of the variance in addictive gambling behavior among study participants. This finding supported previous results that impulsivity and pressure tend to be significant predictors of addictive gambling behavior across different populations and samples, including undergraduates (Choi & Kim, 2021; Ioannidis et al., 2019; Offor et al., 2021; Oyetunji-Alemede et al., 2019). Also, only peer pressure independently predicted addictive gambling behavior among study participants. This shows the power of peer pressure on addictive gambling behavior. This finding lent credence to previous results that social forces influenced individuals' lives in different ways, which then motivated them to engage in one behavior or another to feel a sense of belonging and be accepted in group membership such as gambling behaviour

(Cherniss & Sluke, 2002).

Conclusions

The study was aimed to establish whether impulsivity, peer pressure and social media usage would jointly and independently predict addictive gambling behavior among undergraduates in three universities purposively selected in Ibadan, Oyo State, Nigeria. Based on the findings of this study, impulsivity, peer pressure and social media usage jointly predicted addictive gambling behavior among undergraduates across the three universities in Ibadan, Oyo State, Nigeria. The finding that peer pressure both jointly and independently predicts addictive gambling behavior was confirmed in this study.

Based on the findings from this study, parents should endeavour to educate their undergraduates in universities and other institutions of higher learning on the danger of allowing their peers to influence them to be involved in activities that are not socially acceptable such as gambling behaviour. The university management should organize on regular basis awareness programmes to enlighten undergraduates on the menace of gambling and being addicted to the behavior. Finally, the government and other Non-Governmental Organizations (NGOs) should make concerted effort on ways by which gambling can be regulated so as to prevent addiction among the youths including the undergraduates.

This study suffered some limitations which should be addressed in further studies. Because of the sensitive nature of the study, many potential participants were not willing to participate which was reflected in the number of questionnaires wrongly filled. Further studies should use participant observation techniques to familiarize with the practicing gamblers. Also, the use of questionnaires was not devoid of response bias. Further would benefit by using key informant methods and group interviews to triangulate data collected using questionnaires. Finally, learned helplessness and personality traits should be incorporated in further studies on addictive gambling behavior.

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