DEPRESSION, ANXIETY, STRESS AND GAMBLING BEHAVIOUR OF YOUNG PEOPLE IN MAKURDI METROPOLIS

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ABSTRACT: This study assessed the influence of depression, anxiety and stress on the gambling behaviour of young people in Makurdi Metropolis, Benue State, Nigeria. One hundred and thirty-seven participants were purposively sampled for this study. The Depression, Anxiety and Stress Scale (DASS-21) and Problem Gambling Severity Index (PGSI) were used for data collection. This study utilized a cross-sectional survey research design, and univariate analysis of variance was the statistical tool used for data analysis. Three hypotheses were tested, and the results revealed that there was a significant main effect of depression on gambling behaviour among youths in the Makurdi Metropolis [$F_{(2,137)} = 8.968$, $P<.01$], with an effect size of 14.2., indicating high effect the predictor variable on depression. However, anxiety [$F_{(3,137)} = .775$, $P>.05$] and stress [$F_{(2,137)} = .099$, $P>.05$] had no significant main effects on gambling behaviour among the participants. Multiple comparisons of depression levels showed that youths with normal depression significantly differed from those with mild (7.6; $p<.05$), moderate (30.04; $p<.05$) or extremely severe depression (7.97; $p<05$) in terms of gambling behaviour. The results also revealed that the gambling behaviour of youths with mild depression significantly differed from that of youths with moderate depression (5.51; $p<.05$) but not those with extremely severe depression (.41; $p>.05$). Similarly, youth with moderate depression did not significantly differ from those with extremely severe depression (4.49; $p>.05$). Based on these findings, the researchers recommended urgent public health interventions for young people with depression as a way of minimizing problem gambling among the young people in the study area.

Keywords: Gambling Behaviour, Depression, Anxiety, Stress, Young People.

INTRODUCTION

Gambling addiction is a significant problem among youths globally and has been associated with numerous adverse effects (Afifi et al., 2016; Derevensky & Gilbeau, 2015). Previous studies have reported inconceivably large increases in gambling behaviour among young people, particularly those between the ages of 10 and 24 years (Boak et al., 2018; Calado et al., 2017). An empirical study indicated that the rates of gambling behaviour, especially problematic gambling, among youths are substantially greater than those among adults

(Botella-Guijarro et al., 2022). In a sample of students attending universities in the United Kingdom, at least 44% had engaged in at-risk gambling and 6% in problematic gambling, and this has remained a major challenge that is responsible for crime, insufficient academic performance and poor general wellbeing (Zolkwer, 2022). Similarly, in a survey of 3,879 youths aged between 17 and 35 years (based on the African Youth Charter) in Kenya, Uganda, South Africa, Ghana, Nigeria and Tanzania, 54% of youth in sub-Saharan Africa engaged in some form of gambling activity (Kibuacha 2022; GeoPoll, 2017). Importantly, some of these studies pointed to a significant burden of gambling problems among young people in sub-Saharan Africa (Collins & Barr, 2001; Abdi, Ruiter & Adal, 2015). For example, one study conducted among adolescents in Ethiopia reported that 73% of adolescents had ever gambled. Of these, 37% were at risk for severe problematic gambling, while 7% were already problematic or pathological gamblers, as screened by the DSM-IV-Juvenile checklist (Abdi, et al., 2015).

In Nigeria, despite the serious health and criminal consequences of gambling for young people, the rate of gambling in this population has continued to increase astronomically (Oyebisi, et al., 2012; Chimizie, & Omotosho, 2016; Ede, et al., 2020). This is worrisome considering that gambling behaviour is associated with substantive correlates, including criminal behaviour, poor quality of life, substance use, anxiety and depression (Potenza, et al., 2019). In fact, some studies on young people have reported that a high level of gambling is associated with mental health problems (Dowling et al., 2020; Goodyear-Smith et al., 2006; Moore et al., 2013). Gambling behaviour is also associated with disruption of relationships, impaired academic performance and work activities as well as poor psychological outcomes, including low self-esteem, depression, and suicidal ideations and attempts (Derevensky, 2008; Gupta & Derevensky, 2000). Therefore, given the negative consequences associated with gambling behaviour among youths, greater attention is needed to unravel psychological risk factors for effective intervention.

While there is no single factor that causes people to indulge in gambling, there are multiple risk factors that may increase susceptibility. Within the youth context, the most salient risk factor associated with gambling and subsequent development of gambling addiction is experiencing stress (Misra & Castillo, 2004; Torrado et al., 2020). Exposure to stressful life events has been strongly implicated in the elevated rates of gambling behaviour among young people (Lee, et al., 2012; Temitope, 2019). Research on gambling among young people has shown that potential stressors such as economic hardship, poverty, unemployment, accommodation changes, academic/peer pressure and social conflicts are usually experienced by young people. Gambling is strongly correlated with stress. Youthful life necessarily includes stressful elements such as peer pressure, transition to school, unemployment, coordination between study and work/family, payment of tuition fees, accommodation and having an inactive and limited social life; this could result in the use of gambling as a coping strategy to feel more in control. However, the efficacy of this behaviour in alleviating or reducing stress may be transient, and over time, it can lead to gambling addiction.

In addition, anxiety has been found to play a significant role in gambling behaviour (Potenza, et al., 2019). Anxiety, which has to do with being worried or anxious, is a salient correlate of gambling behaviour among young people (Cicolini, et al., 2018). Students who are exposed to stressful life events and lack the needed assistance may resort to gambling as a coping mechanism, thereby increasing vulnerability to gambling addiction. Anxiety is strongly

associated with increased levels of gambling in both the general (i.e., nonyouth) and youth populations (Dowling et al., 2020; Goodyear-Smith et al., 2006; Moore et al., 2013).

Furthermore, depression is an important predictor of gambling behaviour. According to Dowling et al. (2020), higher levels of gambling behaviour among youth populations are associated with depression. In a longitudinal study, Parhami et al. (2014) reported that mental health problems, including depression, are associated with increased problematic gambling. This suggests that depression is a risk factor that increases susceptibility to gambling behaviour among young people. Similarly, in a study on the patterns and prevalence of gambling behaviour, Temitope (2019) reported the predictive influence of age, financial strain, personality and depression on gambling behaviour. More worrisome, a high prevalence of depression has been reported among young people (Ladi-Akinyemi, 2023; Gobir, 2018), making it imperative to assess associations among these variables. However, research examining this association is scarce.

One of the few existing studies that have examined gambling behaviour among youths in Nigeria included a large sample of youths in Southwest Nigeria, Oyo and Ekiti states. In this study, Temitope (2019) reported age, financial strain, personality and depression as predictors of gambling behaviour. The direct and combined influence of psychological factors such as stress, depression and anxiety has not been examined, which makes the related knowledge poorly understood. Examining this influence reveals more distinct patterns of association (e.g., stress, depression, anxiety and gambling behaviour) and provides more robust information necessary for planning psychological intervention for the problem.

Given the limited existing research, there is a need for further investigations in this area, with particular attention given to depression, anxiety, stress and gambling behaviour. Thus, the purpose of this study was to investigate stress, depression, anxiety and gambling behaviour among youths in the Makurdi Metropolis.

It was therefore hypothesized that:

1. Depression has a significant effect on gambling behaviour among youth in the Makurdi metropolis
2. There is a significant main effect of anxiety on gambling behaviour among youth in the Makurdi metropolis
3. There will be a significant main effect of stress on gambling behaviour among youth in the Makurdi metropolis.

METHODS

Study Design

A cross-sectional survey design was used for this study. This type of observational research analyses the data of variables collected at one given point in time across a sample population or predefined subset (Setia, 2016). In this cross-sectional study, the researchers collected data from different bettors at the Wadata, High-Level, Wurukum and North Bank areas of the Makurdi Metropolis at a single point in time through the use of a questionnaire. A cross-sectional design is preferred because the researcher did not manipulate any variable but

examined the relationship between the variables under study (depression, anxiety, stress and gambling behaviour), as already existed in the sample of young people in the Makurdi Metropolis.

Setting

This study was conducted among residents of Makurdi Metropolis who were engaging in sports betting at selected betting shops within the Makurdi Metropolis. Makurdi is the state capital of Benue State in North-central Nigeria. The Makurdi Metropolis consists of four major locations or towns, namely, Wadata, High Level, Wurukum and the North Bank. Different betting shops, such as Bet9ja, BetKing, Bet365, Betway and 1XBet, were found within Makurdi Metropolis, and participants were targeted at these shops when they came to stake their bets. Five betting shops were selected from each of the four locations in the metropolis, bringing the total number of shops selected to 20.

Population, Sampling and Procedure

The total projected population for Makurdi is 491,554 (National Population Commission and National Bureau of Statistics, 2023). A sample of 137 participants was obtained using a purposive sampling technique. Their ages ranged from 18 to 45 years, with a mean of 26.02 years (minimum: 18 years; maximum: 45 years). In terms of sex, 85 (62%) were male, while 52 (38%) were female. Sixty (43.8%) participants had a high income, while 77 (56.2%) participants had a low income. Purposive sampling was preferred because it allowed the researchers to select bettors or individuals who were knowledgeable or experienced with the phenomenon of the researchers' interest. The researchers visited 5 betting game shops in each of the 4 main locations (Wadata, High Level, Wurukum and North Bank) of the metropolis to intimate the shop owners about the study. During the data collection, the researchers waited for the bettors to stake their bets, after which the researchers obtained the consent of the participants before asking them to complete the research questionnaires. Participants were randomly selected as the researcher allows three bettors to stake their bets, then selects the fourth person. Ultimately, 34 participants responded to the questionnaire at Wadata, Wurukum and North Bank, while 35 participants responded to it at a high level. The inclusion criteria were being a young person between the ages of 18-45 years, residing in Makurdi Metropolis, and already paying for games at the betting shops.

Method of Data Collection

A questionnaire was used for data collection. The first section of the questionnaire collected demographic information, including sex, age and average monthly income.

Depression, Anxiety and Stress Scale-21 Items (DASS-2)

The second section of the questionnaire is DASS-21, which was developed by Lovibond and Lovibond (1995). It is a set of three self-report scales designed to measure the emotional states of depression, anxiety and stress of young people who engage in sport gambling. Each of the three DASS-21 scales contains 7 items divided into subscales with similar content. The depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest or involvement, anhedonia and inertia. The anxiety scale assesses autonomic arousal,

skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The stress scale is sensitive to levels of chronic nonspecific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/overreactive and impatient. The scores for depression, anxiety and stress were calculated by summing the scores for the relevant items.

Problem Gambling Severity Index (PGSI)

The third section of the questionnaire measured the PGSI, which was used to obtain information on the gambling behaviour of participants. It was developed by Ferris and Wynne (2001), and it assesses at-risk behaviour 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, and participants responded to items using a 3-point scale where 0 = never, 1= sometimes, 2= most of the time and 3 = always. The scores indicate that the higher the score on the scale is, the greater the risk of having a gambling problem. A study by Ahmadi and Gorbani (2021) reported a Cronbach's alpha of 0.79. Using a university sample in Nigeria, Sunday and Tolulope (2023) obtained a Cronbach's alpha reliability coefficient of .85.

Ethical Issues

This study was conducted in adherence to the ethical protocol. Participants were assured that their participation was voluntary and that they could withdraw their participation at any time. The information provided by the consenting participants was anonymous, as they were not required to write their names to ensure the confidentiality of their information. All participants were debriefed after completing the questionnaire. All the sources of materials, including the questionnaire used, were duly acknowledged.

Method of Data Analyses

The collected data were coded and analysed using the Statistical Package for Social Sciences Version 20. 0 (SPSS 20.0). Descriptive statistics, mainly frequencies and percentages, were used to analyse demographic data. Univariate analysis of variance was used to test the research hypotheses.

RESULTS

Table 2: Univariate Analysis of Variance

Source	Type III Sums of Square	df	Man Square	F	Sig.	η_p^2
Corrected model	2660.018	28	95.001	2.314	.001	.375
Intercept	20922.843	1	20922.843	509.678	.000	.825
Stress	8.148	2	4.074	.099	.906	.002
Depression	736.283	2	368.142	8.968	.000	.142
Anxiety	95.441	3	31.814	.775	.510	.021
Total	73754.00	137				

As shown in Table 2, there was no significant main effect of stress on gambling behaviour among youths [$F(2,137) = .099$, P>.05], also, there was no significant main effect of anxiety on gambling behaviour [$F(3,137) = .775$, P>.05]. However, there was a significant main effect of depression on gambling among youths [$F(2,137) = 8.968$, P<.01], with an effect size of 14.2., indicating a high effect of the predictor variable on depression.

Table 2 Multiple comparisons

Depression	1	2	3	4	X	SD
1. Normal	-	7.56*	3.04*	7.97.*	18.23	6.89
2. Mild		-	5.51*	.41	25.79	6.89
3. Moderate			-	4.49	21.27	6.29
4. Extremely severe				-	26.20	6.65

The LSD multiple comparison results in Table 2 show that the gambling behaviour of youth with normal depression significantly differed from that of youth with mild (7.6; p<.05), moderate (30.04; p<.05) or extremely severe depression (7.97; p<05). The results also revealed that the gambling behaviour of youth with mild depression significantly differed from that of youth with moderate depression (5.51; p<.05) but not those with extremely severe depression (.41; p>.05). Similarly, youth with moderate depression did not significantly differ from those with extremely severe depression (4.49; p>.05).

DISCUSSION

This study examined depression, anxiety, and stress as potential risk factors for gambling behaviour among youths in the Makurdi metropolis. One hundred thirty-seven youths in the Makurdi metropolis were purposively selected and examined in a cross-sectional survey using standardized instruments. In response to the identified research gaps, three hypotheses were identified, formulated and tested using univariate analysis of variance at the p<.05 level of significance.

Overall, the prevalence of gambling addiction was 22.2% among young people in the Makurdi Metropolis. On our first hypothesis, which examined the main effect of stress on gambling behaviour, univariate analysis of variance revealed that stress has no significant main effect on gambling behaviour among youths in the Makurdi Metropolis; thus, these findings failed to support previous studies (Misra & Castillo, 2004; Lee, et al., 2012; Temitope, 2019; Torrado et al., 2020) that found that individuals who experience stressful life events are more likely to indulge in gambling. Similarly, the influence of anxiety on gambling behaviour was also not statistically significant, contradicting many empirical findings (e.g., Dowling et al., 2020; Goodyear-Smith et al., 2006; Moore et al., 2013; Cicolini, et al., 2018). Regarding the third hypothesis, the findings revealed that depression had a significant main effect on gambling behaviour among youths in the Makurdi metropolis, with additional findings associating depression with an effect size of 14.2 on gambling behaviour. This result is supported by a plethora of empirical studies (Parhami et al., 2014; Temitope, 2019; Dowling et al., 2020) indicating that depression is associated with gambling behaviour among young people.

Therefore, from these findings, it can be concluded that the experience of depression among youths in the study setting is a significant factor that can contribute to their gambling behaviour. Therefore, while the study design prevents the suggestion of causation, it has provided preliminary evidence that depression is a significant risk factor that must be considered when assessing gambling addiction among youths. The study therefore recommended that clinicians and governmental and nongovernmental organizations who want to assess and provide interventions for youth gambling problems should consider approaches that can minimize depression among this population. By doing so, the incidence of depression can be reduced, making young people less vulnerable to gambling problems. The strengths of the present study include the use of standardized instruments and the use of sampling from betting shops where many youths are involved in gambling. This study is not without its own limitations. One major limitation is the use of a cross-sectional survey design, which lacks complete control over extraneous variables. Since variables were not manipulated and controlled, the reported gambling behaviour may not be fully explained by stress, anxiety and depression, thus posing a challenge to the validity of the results. Similarly, the small sample size may have affected the external validity of the study findings, which is a great limitation. Despite these limitations, the present study has contributed greatly to providing insight into the effects of depression, anxiety and stress on gambling behaviour among youths in the Makurdi metropolis.

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