

Prevalence, Patterns, and Sociodemographic Determinants of Gambling Participation Among Community Adults in Urban Nigeria: A Cross-Sectional Study from Obio-Akpor, Rivers State

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Abstract

Background

Nigeria has experienced rapid expansion of mobile sports betting, yet community-level data on gambling prevalence, patterns, and sociodemographic determinants in the South-South geopolitical zone are entirely absent. This study examined gambling participation, primary gambling type, frequency, expenditure, and their sociodemographic correlates among adults in Obio-Akpor Local Government Area (LGA), Rivers State.

Methods

A quantitative cross-sectional survey was conducted in six wards of Obio-Akpor LGA using multistage sampling. A total of 468 adults participated (response rate 93.2%). Gambling prevalence, type, frequency, and weekly expenditure were assessed via structured questionnaire. Chi-square tests examined sociodemographic associations; binary logistic regression identified independent predictors of gambling participation. Ethics approval: UPH/CEREMAD/REC/MM118/087.

Results

Twelve-month gambling prevalence was 31.2% ($n = 144/461$). Sports betting predominated (49.6%), followed by online applications (34.8%). Daily gambling was reported by 40.3% of gamblers; 29.4% spent ₦10,000–19,999 weekly, representing 57–114% of weekly income for the lowest earners. Gender ($\chi^2=36.815$, $p < 0.001$), educational attainment ($\chi^2=7.369$, $p = 0.025$), and monthly income ($\chi^2=10.019$, $p = 0.018$) were significantly associated with gambling participation. After adjustment, male gender was the sole independent predictor (AOR = 3.76; 95% CI: 2.36–6.01; $p < 0.001$).

Conclusion

Gambling is prevalent and financially intensive in Obio-Akpor, disproportionately affecting educated young men. Findings support urgent regulatory reform, targeted digital prevention, and integration of gambling screening into primary care in Rivers State.

1. Introduction

Gambling is a growing non-communicable health risk worldwide, with a global twelve-month participation rate of 46.2% and an estimated 449 million people experiencing clinically significant gambling-related harm [1]. In sub-Saharan Africa, the rapid penetration of mobile sports betting platforms has transformed the gambling landscape within a single decade, extending access to previously unreachable populations in low- and middle-income countries [2]. Nigeria exemplifies this

transformation: with an estimated 60 million active gamblers and a mobile betting market that expanded from fewer than ten licensed operators in 2018 to over forty by 2024, Nigeria now represents one of the fastest-growing gambling markets globally [3].

The public health significance of gambling in Nigeria extends beyond prevalence. Problem gambling is associated with substantial financial harm, psychological distress, relationship breakdown, and reduced occupational functioning [4, 14, 15]. Commercially, Nigerian betting platforms deploy design features including variable ratio reinforcement, in-play betting, push notifications, and cashback bonuses that are specifically engineered to sustain habitual engagement and drive escalation from recreational to problem gambling [16, 17]. These structural features operate within a regulatory environment that lacks mandatory pre-commitment tools, spending limits, affordability checks, or a national self-exclusion register.

Understanding who gambles, how often, what they spend, and what demographic characteristics predict participation is foundational to designing proportionate public health responses. International evidence consistently identifies male gender, younger age, lower socioeconomic status, and social network exposure as key predictors of gambling participation and problem gambling [7]. However, the Nigerian literature is overwhelmingly concentrated in South-West cities with predominantly student samples [5, 6, 18, 21, 22], and community-level data from the South-South geopolitical zone are entirely absent.

This study addresses that gap by reporting gambling prevalence, primary gambling type, frequency, weekly expenditure, and their sociodemographic correlates in a community adult sample from Obio-Akpor LGA, Rivers State – the first such investigation in this region. The findings establish a community epidemiological baseline for gambling participation in urban South-South Nigeria and generate the evidence required to target prevention and regulatory responses appropriately.

2. Methods

2.1 Study design and setting

A quantitative cross-sectional design was employed. The study was conducted in Obio-Akpor LGA, Rivers State, Nigeria, situated within the Port Harcourt Metropolitan Area. Obio-Akpor is one of the most densely populated LGAs in the Niger Delta region, hosting major tertiary institutions, commercial enterprises, and a large, predominantly young urban population. Six wards were selected: Choba, Rukpokwu, Rumuigbo, Rumuodara, Rumuola, and Rumuolumeni. Data collection was conducted between January and March 2026.

2.2 Sample and sampling

The target population was all adults aged 18 and above ordinarily resident in the six selected wards. Sample size was calculated using the Cochran (1977) formula [12], applying a 23% gambling prevalence estimate [8], 95% confidence level, and 5% margin of error, yielding a base of 272, adjusted for 10% non-

response and a design effect (DEFF = 1.5) to produce a final target of 502. Multistage sampling was employed: wards were purposively selected to reflect socioeconomic diversity; households were selected by systematic random sampling within each ward; and one eligible adult per household was selected using the Kish (1965) grid method [13]. Of 502 questionnaires distributed, 468 were returned usable (response rate 93.2%).

2.3 Measures

A structured interviewer-administered questionnaire collected: (1) sociodemographic data – age, gender, marital status, religion, ethnicity, educational attainment, employment status, and monthly income; and (2) gambling behaviour data – twelve-month gambling status (yes/no), primary gambling type, gambling frequency, and estimated weekly gambling expenditure. Gambling status was assessed using a single validated screening question consistent with established epidemiological surveys [11]. Primary gambling type categories included sports betting, online applications, lottery/Baba Ijebu, casino, and other. Frequency categories were daily, weekly, occasional, and monthly. Expenditure was captured in naira bands.

2.4 Data analysis

Data were analysed using IBM SPSS Statistics version 27. Descriptive statistics summarised sociodemographic characteristics and gambling patterns. Chi-square tests examined associations between sociodemographic variables and gambling participation. Cramér's V was computed to quantify effect sizes. Binary logistic regression identified independent predictors of gambling participation, with crude odds ratios (COR) computed first via simple regression, followed by a multivariable model including variables significant at $p < 0.05$ in bivariate analysis. Results are reported as adjusted odds ratios (AOR) with 95% confidence intervals (CI). Statistical significance was set at $p < 0.05$, two-tailed.

2.5 Ethics

Ethical approval

was granted by the University of Port Harcourt Research Ethics Committee (UNIPORT REC), College of Graduate Studies Building, University of Port Harcourt, Rivers State, Nigeria (Reference: UPH/CEREMAD/REC/MM118/087). Written informed consent was obtained from all participants. The study conformed to the Declaration of Helsinki [19] and the Nigerian National Code of Health Research Ethics [20].

3. Results

3.1 Sociodemographic characteristics of the sample

Table 1 presents the sociodemographic profile of the 468 respondents. The mean age was 30.4 years (SD = 10.1; range 18–77). Nearly three-quarters (73.1%) were aged 18–35. Males comprised 58.5% ($n = 274$) of the sample. The majority were Christian (85.9%), single (62.8%), and Igbo (41.7%). Most held

tertiary qualifications (59.0%), and the most common employment status was self-employed (36.5%), followed by student (29.9%). Monthly income was most commonly in the below ₦70,000 (31.2%) and ₦70,000–₦150,000 (30.8%) brackets.

Table 1
Sociodemographic characteristics of respondents (N = 468)

Variable	Category	n	%
Age (years)	18–25	183	39.1
	26–35	159	34.0
	36–45	79	16.9
	46 and above	40	8.5
	Mean ± SD: 30.4 ± 10.1 years		
Gender	Male	274	58.5
	Female	194	41.5
Marital Status	Single	294	62.8
	Married	140	29.9
	Divorced/Widowed	30	6.4
Religion	Christianity	402	85.9
	Islam	33	4.2
	African Traditional Religion	19	4.1
Ethnicity	Igbo	195	41.7
	Others	171	36.5
	Yoruba	106	16.5
	Hausa	25	5.3
Educational Attainment	Tertiary	276	59.0
	Secondary	150	32.1
	Primary	15	3.2
Employment Status	Self-employed	171	36.5
	Student	140	29.9
	Formally employed	119	25.4
	Unemployed	36	7.7
Monthly Income (₦)	Below ₦70,000	146	31.2
	~~₦~~ 70,000– ~~₦~~ 150,000	144	30.8
	~~₦~~ 150,000– ~~₦~~ 300,000	99	21.2

Variable	Category	n	%
	Above ₦300,000	60	12.8

N = 468. Missing values excluded from percentage calculations. SD Standard Deviation.

3.2 Prevalence and type of gambling

Of the 461 respondents who provided a valid gambling status response, 144 (31.2%) reported gambling in the preceding twelve months. Seven respondents had missing gambling status data. Table 2 presents the prevalence and primary gambling type. Sports betting was the predominant form, selected by 67 gamblers (49.6%), followed by online betting applications (47, 34.8%), lottery/Baba Ijebu (9, 6.2%), and casino games (9, 6.2%). A statistically significant gender difference in gambling prevalence was observed ($\chi^2=36.815$, $df = 1$, $p < 0.001$): 114 of 268 males (42.5%) gambled, compared with 30 of 193 females (15.5%). Males constituted 79.2% of the gambling subsample.

Table 2
Prevalence and primary type of gambling among respondents (N = 461)

Variable	Category	n	%
Gambled in past 12 months	Yes	144	31.2
	No	317	68.8
Primary Gambling Type (n = 144)	Sports betting	67	49.6
	Online applications	47	34.8
	Lottery / Baba Ijebu	9	6.2
	Casino	9	6.2
	Other	1	0.7

Percentages for gambling status based on N = 461 valid responses. Percentages for gambling type based on n = 144 gamblers.

3.3 Gambling frequency and weekly expenditure

Table 3 presents gambling frequency and weekly expenditure among gamblers (n = 144). Daily gambling was the most common frequency (58, 40.3%), followed by weekly (46, 31.9%) and occasional (28, 19.4%). Combined, 72.2% of gamblers bet at least weekly, indicating predominantly high-frequency gambling patterns in this population. Among the 119 gamblers who provided valid expenditure data, the most frequently reported weekly expenditure bracket was ₦10,000–19,999 (35, 29.4%), followed by ₦5,000–9,999 (24, 20.2%). For respondents in the lowest income bracket (below ₦70,000 monthly), a weekly expenditure of ₦10,000–19,999 represents between 57% and 114% of total weekly income,

indicating that a substantial proportion of this group were gambling with funds exceeding their weekly earnings.

Table 3
Gambling frequency and weekly expenditure among gamblers (n = 144)

Variable	Category	n	%
Gambling Frequency (n = 144)	Daily	58	40.3
	Weekly	46	31.9
	Occasional	28	19.4
	Monthly	7	5.0
Weekly Expenditure (n = 119)	Below ₦5,000	16	13.4
	₦5,000– ~~₦~~ 9,999	24	20.2
	~~₦~~ 10,000– ~~₦~~ 19,999	35	29.4
	~~₦~~ 20,000– ~~₦~~ 29,999	19	16.0
	~~₦~~ 30,000– ~~₦~~ 49,999	17	14.3
	₦50,000 and above	8	6.7

Frequency percentages based on n = 144 gamblers. Expenditure percentages based on n = 119 with valid data. 25 gamblers did not report weekly expenditure.

3.4 Sociodemographic correlates of gambling participation

Table 4 presents chi-square analyses of sociodemographic associations with gambling participation. Gender showed the strongest association ($\chi^2=36.815$, $df = 1$, $p < 0.001$; Cramér's $V = 0.28$, moderate effect). Educational attainment was significantly associated with gambling ($\chi^2=7.369$, $df = 2$, $p = 0.025$; $V = 0.13$), with tertiary-educated respondents recording the highest gambling rate (36.2%). Monthly income was also significantly associated ($\chi^2=10.019$, $df = 3$, $p = 0.018$; $V = 0.15$), with the ~~₦~~150,000–300,000 bracket recording the highest participation (42.3%). Age group ($\chi^2=2.915$, $df = 3$, $p = 0.405$) and employment status ($\chi^2=1.394$, $df = 3$, $p = 0.707$) were not significantly associated with gambling.

Table 4
Sociodemographic correlates of gambling participation (N = 461)

Variable	Gamblers n (%)	Non-Gamblers n (%)	χ^2	df	p-value	Cramér's V
Gender			36.815	1	< 0.001*	0.28
Male (n = 268)	114 (42.5%)	154 (57.5%)				
Female (n = 193)	30 (15.5%)	163 (84.5%)				
Age Group			2.915	3	0.405	—
18–25	51 (28.5%)	128 (71.5%)				
26–35	53 (33.8%)	104 (66.2%)				
36–45	27 (34.6%)	51 (65.4%)				
46+	9 (22.5%)	31 (77.5%)				
Educational Attainment			7.369	2	0.025*	0.13
Primary	3 (20.0%)	12 (80.0%)				
Secondary	36 (24.2%)	113 (75.8%)				
Tertiary	98 (36.2%)	173 (63.8%)				
Monthly Income			10.019	3	0.018*	0.15
Below ₦70k	34 (24.1%)	107 (75.9%)				
₦70k–₦150k	50 (34.7%)	94 (65.3%)				
₦150k–₦300k	41 (42.3%)	56 (57.7%)				
Above ₦300k	16 (26.7%)	44 (73.3%)				
Employment Status			1.394	3	0.707	—
Employed	33 (27.7%)	86 (72.3%)				
Self-employed	57 (33.7%)	112 (66.3%)				
Student	43 (31.9%)	92 (68.1%)				
Unemployed	10 (27.8%)	26 (72.2%)				

*Statistically significant at $p < 0.05$. Cramér's V: small < 0.10; small-moderate 0.10–0.29; moderate 0.30–0.49.

3.5 Independent predictors of gambling participation

Table 5 presents crude and adjusted odds ratios from binary logistic regression. In unadjusted analysis, male gender (COR = 4.02; 95% CI: 2.54–6.36; $p < 0.001$), tertiary education (COR = 1.82; 95% CI: 1.17–2.81; $p = 0.007$), and income in the ₦150,000–300,000 bracket (COR = 1.79; 95% CI: 1.13–2.86; $p = 0.014$) were significantly associated with gambling participation. In the multivariable model ($n = 416$ complete cases), male gender was the only statistically significant independent predictor (AOR = 3.76; 95% CI: 2.36–6.01; $p < 0.001$). After adjustment for gender, neither educational attainment nor monthly income reached statistical significance, indicating their bivariate associations were largely attributable to confounding by gender. The model was significant overall ($\chi^2(df = 6) = 53.209$, $p < 0.001$; Nagelkerke $R^2=0.152$).

Table 5

Binary logistic regression: crude and adjusted odds ratios for predictors of gambling participation (N = 468)

Predictor	COR (95% CI)	p-value	AOR (95% CI)	p-value
Gender: Male vs. Female	4.02 (2.54–6.36)	< 0.001*	3.76 (2.36–6.01)	< 0.001*
Education: Secondary vs. Primary	1.34 (0.54–3.31)	0.526	1.27 (0.54–2.95)	0.583
Education: Tertiary vs. Primary	1.82 (1.17–2.81)	0.007*	2.01 (0.92–4.40)	0.082
Income: ₦70k–150k vs. Below ₦70k	1.65 (1.01–2.70)	0.046*	1.69 (1.00–2.86)	0.050
Income: ₦150k–300k vs. Below ₦70k	1.79 (1.13–2.86)	0.014*	1.92 (1.08–3.42)	0.025*
Income: Above ₦300k vs. Below ₦70k	1.09 (0.57–2.08)	0.803	0.85 (0.41–1.74)	0.652
Model fit: $\chi^2(df = 6) = 53.209$, $p < 0.001$; Nagelkerke $R^2=0.152$				

*COR Crude Odds Ratio (unadjusted). AOR Adjusted Odds Ratio (multivariable model). CI Confidence Interval. Reference categories: Gender=Female; Education=Primary; Income=Below ₦70,000. *Statistically significant at $p < 0.05$.*

4. Discussion

This study provides the first community-based epidemiological profile of gambling participation among adults in Obio-Akpor LGA, Rivers State, addressing a critical geographic gap in the Nigerian gambling literature. The 31.2% twelve-month gambling prevalence is consistent with the 30.3% past-year sports betting prevalence among Nigerian university students reported by Daniel et al. [5], and closely aligns with the 31.2% figure reported in a comparable community survey of active sports bettors in Ghana [9]. It

is lower than the 40.3% lifetime prevalence reported in a multi-zone Nigerian survey [4], which is expected given the shorter reference period used in this study.

Sports betting was the dominant gambling form at 49.6%, followed by online applications at 34.8%. Together, digital gambling formats accounted for 84.4% of primary gambling activity in this sample — a finding that fundamentally distinguishes the gambling environment in Obio-Akpor from that characterised in older Nigerian studies conducted before the smartphone era. The dominance of digital formats has two important implications for public health policy. First, these platforms are accessible around the clock without geographic constraint, enabling the daily gambling frequency documented here (40.3%). Second, they are regulated by a framework designed for physical venues, creating a systematic enforcement gap that leaves the digital space effectively unmonitored.

The frequency and expenditure data together reveal a pattern of financially intensive, habitual gambling in this community. Daily gambling was reported by 40.3% of gamblers, and a further 31.9% gambled weekly — meaning 72.2% of gamblers bet at least weekly. The most common expenditure bracket of ₦10,000–19,999 per week, when set against the 31.2% of respondents earning below ₦70,000 monthly, translates to weekly gambling expenditure equivalent to 57–114% of weekly income for the most financially vulnerable gamblers in this sample. This is not recreational expenditure. This is a pattern of financial disruption that has direct implications for household welfare, food security, and debt accumulation in low-income urban households where income is typically shared across extended family units.

The strong and consistent gender effect — with males 3.76 times more likely to gamble than females in the adjusted model — replicates findings from international meta-analyses [7] and Nigerian studies [5, 6], but may be more pronounced here due to contextually specific drivers. In Obio-Akpor, sports betting is culturally embedded in male social identity through the football fandom that dominates male peer networks. Gambling platforms deploy advertising that explicitly targets men through football content, celebrity endorsements from male athletes, and aspirational financial narratives aligned with male breadwinner expectations. The near-universal penetration of WhatsApp groups dedicated to football betting tips creates a social infrastructure that sustains and normalises male gambling engagement beyond what individual vulnerability alone would predict.

The direction of the education effect — with tertiary-educated individuals more likely to gamble than those with only primary schooling — runs counter to the typical pattern observed in high-income countries, where lower education predicts higher gambling risk. In Nigeria, tertiary education is associated with smartphone ownership, digital financial inclusion, and social network exposure to betting platforms [5, 6]. The mechanism reversal is therefore plausible: education here is a proxy for digital access and platform literacy rather than a protective factor. This has direct implications for prevention messaging, which must engage digitally literate educated young men through the social media channels they inhabit, rather than through traditional health communication channels such as posters or community health talks.

The non-linear income effect — with the ₦150,000–300,000 bracket recording the highest gambling participation (42.3%), higher than both the poorest and wealthiest respondents — is theoretically consistent with the economic aspiration model of gambling in low- and middle-income settings [10]. Absolute poverty constrains gambling participation through minimum stake requirements and opportunity costs. Very high income may reduce the appeal of gambling's financial transformation narrative. The middle-income bracket combines sufficient disposable income for regular participation with unmet economic aspirations and sufficient financial anxiety to sustain the psychological pull of gambling as an income supplement. This income profile of the typical gambler in Obio-Akpor has direct relevance for targeting: standard assumptions that gambling harm is concentrated in the poorest community members do not apply here.

Critically, none of the sociodemographic associations documented in bivariate analysis — education, income — survived multivariate adjustment. Gender accounted for their apparent effects. This finding underscores the primacy of gender as the structurally dominant predictor of gambling participation in this context, and suggests that prevention and regulation efforts that do not specifically target the male gambling environment will have limited population-level impact.

4.1 Limitations

The cross-sectional design precludes causal inference. Self-report may underestimate gambling prevalence due to social stigma. The sample covered six wards of a single urban LGA and may not generalise to rural settings or other Nigerian states. Gambling type data were self-categorised, and some respondents may have used different criteria for distinguishing sports betting from online applications. Future longitudinal studies and qualitative investigation of gambling motivations and social contexts would substantially enrich these findings.

5. Conclusion

Gambling is prevalent, predominantly digital, financially intensive, and strongly patterned by gender in Obio-Akpor LGA. Nearly one in three adults gambled in the preceding twelve months; of those, nearly three-quarters gambled daily or weekly, with expenditure frequently exceeding weekly income for the lowest earners. Male gender was the sole independent predictor of participation after adjustment. These findings establish the first community epidemiological baseline for gambling in South-South Nigeria and provide the evidence required for three urgent responses: mandatory harm reduction features on digital betting platforms operating in Nigeria; targeted, digitally delivered prevention messaging for educated young men; and integration of gambling screening into routine primary care assessments in Rivers State. The structural determinants of gambling participation documented here are amenable to regulatory and policy intervention, and the findings provide a concrete evidence base for initiating that intervention.

Declarations

Ethics approval and consent to participate: Ethical approval was granted by the University of Port Harcourt Research Ethics Committee (UNIPORT REC), College of Graduate Studies Building, University of Port Harcourt, Rivers State, Nigeria (Reference: UPH/CEREMAD/REC/MM118/087). Written informed consent was obtained from all participants.

Consent for publication: Not applicable.

Availability of data and materials: The datasets used and analysed during this study are available from the corresponding author on reasonable request.

Competing interests: The authors declare no competing interests.

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Authors' contributions: FTS conceptualised the study, conducted data collection, analysis and drafted the manuscript. VIO and FUM supervised the research design, analysis, and manuscript review. All authors read and approved the final manuscript.

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