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Influence of Demographic and Psychological Factors on Attitudes Toward Sport Betting Among Young Adults in Southwest Nigeria

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Abstract
Prediction and wager on the outcome of games/matches are known as sports betting. Positive attitudes toward sports betting may, in the long run, predict sports betting behavior and gambling-related problems. This study, therefore, examined the influence of gender, age, sports betting knowledge and peer-based gambling on attitudes toward sports betting among young adults in Nigeria. The ex-post facto design was adopted in this cross-sectional survey. The participants were 749 students (42.9% females) of a large tertiary institution in southwest Nigeria. A standardized questionnaire comprising demographics and measures of attitudes toward sports betting, sports betting knowledge and perception of peer gambling behavior was utilized in the study. Results revealed that attitudes toward sports betting are positive for older males who are knowledgeable about sports betting and have friends who gamble. Sports betting knowledge and peer-based gambling stood out as significant predictors of attitudes toward sports betting. The social circles of young adults may be the starting points for initiatives to develop healthy attitudes toward sports betting and preventing gambling-related problems.

Keywords Attitude toward sports betting · Demographic · Nigeria · Peer influence · Psychological factors · Young adults

Introduction
Gambling is a form of behavior that has potential risks and benefits to the health, well-being, and crimesrelated behavior of individuals, families, and communities. Collins (2003) defined gambling as the staking of something valuable in the hope of winning a prize where the outcome depends on the outcome of events, which are unknown to the participants at the time of the bet. It can also be defined as the act of risking the loss of something
of small value (usually money) in an exchange, based on chance and uncertainty, for winning something of greater value (usually money) in future time (Dickerson 1990; Ferentzy and Turner 2013). Gambling can be classified into four main headings; the first involves the exchange of money or a valuable item (e.g. casino, poker machine play), second is betting on future event (e.g. football match, race, video games), the third is lotteries (e.g. National lottery, Raffle draw) and lastly is speculating on investments, insurance and stock market dealings (Appiah and Awuah 2016).

Sports betting is a popular form of gambling where people made predictions about sporting results and place a bet (wager) on its outcome with the hope of winning a set prize (National Lottery Act 2005). The higher the number of matches an individual predicts the higher the expected outcome if the prediction is right at the end of the match (Oyebisi et al. 2012). Internet and social media platforms have made sports betting and other forms of gambling more “ubiquitous and socially acceptable” for young people (King et al. 2010). Many of adolescents now consider gambling, smoking, and drinking as a rite of passage into adulthood (Hardoon and Derevensky 2001; Stinchfield 2000). There are reports of young male sports fans using sports betting as a form of social and group cohesion (e.g. Deans et al. 2016).

The participation rate of adults in legalized gambling activities is reported at approximately 80% in most western countries (Doran and Young 2010; Vasiliadis et al. 2013). A recent poll evaluating mobile gambling-related activities among 3879 youths in some African countries found that Kenya has the highest number of youths who had previously participated in gambling or betting at 76% followed by Uganda at 57% while Ghana has the lowest number at 42% (GeoPoll 2017). Similarly, a betting poll involving nationwide telephone interviews of 1000 randomly selected Nigerians revealed that 41% of Nigerians aged between 18 and 35 years engaged in some forms of betting and 92% of residents from the South-West zone admitted that sports betting is highly prevalent in the country (NOIPoll 2017). This prevalence was also confirmed by undergraduate students in South-West Nigeria (Oyebisi et al. 2012). The betting poll also revealed that betting, pools, and lotteries are the most popular gambling platforms in Nigeria (NOIPoll 2017).

News Agency of Nigeria (Vanguardngr.com 2014) reported that about 60 million Nigerians spend up to N1.8 billion on sports betting daily with an average bet of #3000 per day. Indeed, some young people in some African cities perceived gambling as an acceptable activity and alternative source of livelihood toward which they would rather devote substantial time and energies (Ahaibwe et al. 2016; Heap 2010; Scott and Barr 2013). Oyeleke et al. (2017) reported that 78% of sports bettors in Ibadan, Nigeria have been gambling for at least 6 months and on the average usually spent more than 2 h at the bet parlors each time they gamble. Furthermore, more than half (53%) of bettors in Nigeria bet every day (NOIPoll 2017).

Concerned about the increasing popularity of sports betting in Nigeria, this paper aims at assessing how knowledge about sports betting processes and peers’ influence affect attitudes toward sports betting among Nigerian youths. As opposed to the burgeoning literature exploring gambling in Western nations (Abbott 2017; Calado and Griffiths 2016), there is a paucity of research on gambling behavior in Sub-Saharan Africa (Ssewanyana and Bitali 2017). Many of the existing studies on gambling and sports betting in Nigeria have investigated a relatively limited set of psychosocial factors (Oyeleke et al. 2017; Oyebisi et al. 2012). This present study, as suggested by Stinchfield (2000), is aimed at filling the gap in the literature by simultaneously examining how socio-demographic factors, peer-based gambling, and sports betting knowledge may interact with one another to shape young adults’ attitudes toward sports betting.
Attitude is defined as the predisposition or tendency to respond positively or negatively towards a certain idea, object, person, or situation. It comprises of three components namely the cognitive component based on factual information that you possess, the affective component based on emotional reaction to a situation and the behavioral component which is the tendency to act when faced with a particular situation.

The Theory of Planned Behavior (TPB; Ajzen 1991) can be used as a theoretical framework to postulate the relationship between knowledge, attitudes, and intentions to engage in a behavior. It identifies one’s attitude to a behavior, subjective norms and perceived behavioral control as the three independent determinants of intention. The TPB model asserts that as the attitude, subjective norm, and perceived behavioral control regarding a behavior become more favorable, so does the individual’s intention to perform that behavior. Attitudes are determined by beliefs or knowledge about the behavior, subjective norms are based on the acceptance of such behavior by person’s family and/or friends and perceived behavioral control refers to the motivation to comply with these perceived norms and take actions. Further, according to TPB, behavioral intentions positively correlate with behavioral activities (Ajzen 1991).

With respect to sports betting, one’s knowledge about gambling (sports betting) and the subjective norms of one’s in-group (i.e. one’s family, friends or the social group one belongs to) toward sports betting can influence one’s attitudes, intention, and motivation to bet. The influence of personal, social, and beliefs of control all appear to shape gambling behavior, albeit in different ways (Flack and Morris 2017). One’s attitudes can reliably explain and predict whether the person will engage in gambling (Wood and Griffiths 2004) and experience gambling-related problems (Chiu and Storm 2010). Empirical evidence (e.g. Canale et al. 2016; Flack and Morris 2017) on the relationship between attitudes towards gambling, frequency of gambling and gambling problems revealed that people who had more favorable attitudes towards gambling were more likely to participate in gambling activities and to have gambling-related problems. Similarly, previous studies established that positive attitudes towards gambling are associated with more gambling (Canale et al. 2015; Lee et al. 2013; Orford et al. 2009; Salonen et al. 2014). Also, empirical studies confirmed that both gambling frequency and gambling problems are positively associated with gambling-related attitudes (Bouju et al. 2014; Flack and Morris 2015). Epidemiological studies likewise identified higher gambling frequency as a pointer to an increase in gambling problems (Afifi et al. 2014; Hansen and Rossow 2012). Though attitudes are not the only factors that affect behaviors; behaviors are the results of the interaction among attitudes, memory, environment, habits, and expectations (Kağıtçıbaşı 1999). Therefore, analyses of gambling attitudes and gambling participation (e.g. sports betting) are needed for the effective prevention of gambling-related harm (Salonen et al. 2017).

Sports betting knowledge refers to one’s understanding of the sports betting processes. Many football fans use their understanding of the current form of football teams, home advantage, and previous head-to-head to bet on the teams with the longer odds (those less likely to win) to increase their chances of winning money. Pitt et al. (2017) revealed that individuals with a strong belief in their knowledge about sport teams and competitions would have a positive perception of their certainty of winning, as they have the skill to predict a side that would be a winner in a match or race. Such knowledge evidently gives them a feeling of control over the outcomes of gambling and positive gambling attitudes (Taormina 2009). Black South Africans are more likely to participate in gambling activities involving dice and cards that are perceived to be ‘fairer’ and depend on their competence as opposed to lottery and casino based activities that are seen to be ‘rigged’ and unfair (Scott and Barr 2013). But research has found that misunderstanding of one’s perceived skill in
chance-based games can lead to gambling problems (Messerlian et al. 2004; Spurrier and Blaszczynski 2014). An investigation into the influence of personality traits and cognitive distortions in pathological gambling among 469 lottery gamblers in Ibadan, Nigeria by Oyeleke et al. (2017) revealed that cognitive distortion as a result of fallacious reasoning plays a significant role in gambling behavior.

Peers have been identified by studies as one of the socialization agents that facilitate individuals’ gambling attitudes and behaviors (Thomas 2014; Hardoon and Derevensky 2001). Peer-based gambling refers to having peer groups who engage in gambling behaviors (Situ and Mo 2016). Rooted in social learning theory (Bandura 1977), susceptibility to peer pressure tends to encourage positive social norms toward sports betting and gambling behavior (Ahaibwe et al. 2016; Hanss et al. 2014; Pitt et al. 2017).

Although most previous studies on adolescents’ attitudes toward gambling have not investigated peer approval of gambling as potential correlates (Hanss et al. 2014) but a study on individual, family, and peer correlates of adolescent gambling conducted by Langhinrichsen-Rohling et al. (2004) among 1846 American adolescents from three different states found that inclination to peer influence may be a general risk factor for experimentation with gambling behaviors. Hardoon and Derevensky (2001) and Jacobs (2000) also demonstrated that excessive peer-based gambling is a risk factor for youth gambling.

The male and female genders have been shown to differ in their attitudes toward sports betting with young males typically holding more positive attitudes than women (Chiu and Storm 2010; Stinchfield 2000; Wood and Griffiths 2004). A study by Hanss et al. (2014) using cross-sectional data from 2055 representative sample of 17-year-olds in Norway revealed that males have more favorable attitudes toward gambling than females. Similarly, data collected from a cross-sectional randomly selected sample in 2011 (n=4484) and 2015 (n=4515) by Salonen et al. (2017) in Finland affirmed that male respondents display a significantly higher level of gambling attitudes and behavior than their female counterparts. Although, studies are showing a rise in the numbers of young females’ involvement in web-based lotteries and other “closet” forms of gambling (Ahaibwe et al. 2016; Louw 2017; Salonen et al. 2017; Scott and Barr 2013).

Older students have been reported to gamble more often than younger students (Stinchfield 2000; Williams et al. 2006). Likewise, Wickwire et al. (2007) found that students over 21 years of age were more likely to gamble than younger students. But Govoni et al. (1996) argued that the age of high school students does not differentiate them in their rates of gambling behavior.

Thus, in order to gain more understanding of the relationship between the variables, we proposed four hypotheses:

**Hypothesis 1** Socio-demographic variables, peer-based gambling and sports betting knowledge would have a significant relationship to attitudes toward sports betting.

**Hypothesis 2** Sports betting knowledge and peer-based gambling will jointly and independently predict attitudes toward sports betting.

**Hypothesis 3** Male participants will significantly score higher on attitudes toward sports betting than female participants.

**Hypothesis 4** Older participants will score significantly higher on attitudes toward sports betting than younger participants.
Methods

Design and Sampling

The ex post facto design was adopted while the cross-sectional survey was used for this study. Three faculties were randomly selected from the five faculties at a large tertiary institution in southwest Nigeria while a purposive sampling technique was used to recruit students as participants into the study. The participants in this study only include students who were offering introductory psychology courses in the Faculties of Business/Communication, Engineering, and Financial/Management.

Participants

The participants were 749 students and they ranged from 16 to 30 years of age (Mean 21.8; SD = 2.8). There were 428 (57.1%) male and 321 (42.9%) female participants. The Faculty of Business/Communication had 261 (34.8%) participants, 239 (31.9%) were from Engineering, and 249 (33.2%) from Financial/Management. The sample is an adequate representative of the general student body at the institution in terms of the age range and gender ratio.

Instruments

Socio-demographic information such as age, sex and faculty were collected from the participants.

Attitudes Toward Sports Betting Scale

Was adapted from the 8-item version of the Attitudes towards Gambling Scale (ATGS-8) by Orford et al. (2009). The rephrased scale had the word gambling replaced with sports betting and specifically measures participant’s attitudes and opinions towards sports betting. Sample items include “People should have the right to sports betting whenever they want”. Participants answered the items on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The reliability score for the current study is 0.84 while Cronbach’s alpha for the original scale was 0.88. The sum of the eight items ranges between 8 and 40 where a score of 24 represents an overall neutral attitude towards sports betting, while scores above 24 indicate a favorable (positive) attitude and those below 24 an unfavorable (negative) attitude.

Sports Betting Knowledge

Was measured by two questionnaire items developed by Hanss et al. (2014): ‘I know how most betting games work’ and ‘I could easily learn how most betting games work.’ Participants answered No (1) to Yes (2) to the items. An index was computed by
averaging the answers. Higher scores indicate greater levels of perceived knowledge. Cronbach coefficient of 0.74 was reported by the authors and in the current study too.

**Peer-Based Gambling**

Used two items adapted from Delfabbro and Thrupp (2003) to measure peers’ approval and frequency of gambling. The scale used categorical questions (e.g. \textit{yes} = score 2/\textit{no} = score 1) like ‘Most of my friends approve of gambling?’ and ‘Most of my friends gamble a lot?’. A composite score was computed by averaging answers to the two items ($\alpha = 0.74$ by the author). Higher scores indicate greater peer approval of gambling. A Cronbach alpha of 0.84 was obtained for this scale.

**Procedure**

The study procedures were carried out in accordance with the Declaration of Helsinki and the research protocol was approved by the Ethics Committee of the General Studies Department, The Polytechnic, Ibadan, Nigeria. The researchers and four student research assistants administered the measures at the end of introductory psychology classes in the various faculties between August and October 2017. Participants were informed that the survey is an assessment of attitudes toward sports betting and that participation was voluntary and not a part of their course. They were told that their responses were anonymous and confidential. 810 questionnaires (270 per faculty) were distributed to consented students but 749 collected questionnaires were valid. These were analyzed with Statistical Package for the Social Sciences (SPSS) software version 22.

**Results**

**Hypothesis One**

That, socio-demographic variables, peer-based gambling and sports betting knowledge would have a significant relationship with attitudes toward sports betting was tested using correlation analysis. Results of the means, standard deviations and zero-order correlation of the variables in Table 1 show that gender (being female) ($r = -0.19$, $p < 0.01$) has significant and negative correlation with attitudes toward sports betting while age

| Variables                                | 1   | 2   | 3   | 4   | Mean | SD  | Alpha |
|------------------------------------------|-----|-----|-----|-----|------|-----|-------|
| 1. Gender (being female)                 | 1   |     |     |     |      |     |       |
| 2. Age                                   | 0.03| 1   |     |     | 21.79| 2.80|       |
| 3. Peer-based Gambling                   | -0.24** | 0.02 | 1   |     | 2.45 | 0.78 | 0.84  |
| 4. Sports betting knowledge              | -0.35** | 0.01 | 0.33** | 1 | 2.73 | 0.86 | 0.74  |
| 5. Attitudes toward sports betting       | -0.19** | 0.08* | 0.27** | 0.43** | 25.32 | 5.54 | 0.84  |

**Table 1** Descriptive statistics, Cronbach alpha and zero-order correlation of variables (N = 749)

**Table Note:**

*Correlation significant at $p < 0.05$

**Correlation significant at $p < 0.01$
Hypothesis One

Stated that peer-based gambling and sports betting knowledge are significant positive correlates of attitudes toward sports betting. Hypothesis one is tested and supported.

Hypothesis Two

Stated that sports betting knowledge and peer-based gambling will jointly and independently predict attitudes toward sports betting. This hypothesis was tested and analyzed using multiple regression analysis. The results presented in Table 2 show that sports betting knowledge and peer-based gambling jointly predict attitudes toward sports betting at \( R^2 = 0.21, F(2, 748) = 95.94, p < 0.05 \) with 21% explanation of the variability of the dependent variable. The remaining 79% variance was accounted for by other variables not considered in this study.

Similarly, sports betting knowledge independently predict attitudes toward sports betting \( (\beta = 0.38, t = 10.43, p < 0.01) \), i.e. sports betting knowledge shown 38 standardized regression coefficients which are the variance in the attitudes toward sports betting that can be accounted for by sports betting knowledge. There was also an independent predictor of peer-based gambling \( (\beta = 0.14, t = 4.03, p < 0.01) \) on attitudes toward sports betting with 14 standardized regression coefficient of which is the variance in its prediction on attitudes toward sports betting (Table 2). Hypothesis two is tested and supported.

Hypothesis Three

That male participants will score significantly higher on attitudes toward sports betting than female participants was tested using independent \( t \) test analysis and the results presented in Table 3 show that there is a significant difference between the gender of participants and attitudes toward sports betting \( (t = 5.41; df = 747; p < 0.001; \text{mean score of males} = 26.22 \text{ while the mean score of females} = 24.12) \). Hypothesis three is tested and supported.
Hypothesis Four

Which stated that older participants will score significantly higher on attitudes toward sports betting than younger participants was tested using independent \( t \) test analysis. The results presented in Table 4 show that there is a significant difference between the ages of participants and attitudes toward sports betting \((t = 2.06; \text{df} = 747; \ p < 0.05;\) mean score of older students (aged 22–30 years) = 25.73 while mean score of younger students (aged 16–21 years) = 24.90. Hypothesis four is tested and supported.

Table 4 Summary of independent \( t \) test showing age differences in attitudes toward sports betting

| Age                  | N  | Mean | SD  | t    | df  | Sig  |
|----------------------|----|------|-----|------|-----|------|
| Attitudes toward sports betting |    |      |     |      |     |      |
| Older students (22–30) | 379| 25.73| 5.50| 2.06 | 747 | 0.039|
| Younger students (16–21) | 370| 24.90| 5.56|      |     |      |

Discussion

The purpose of the current study was to examine the influence of sports betting knowledge and peer-based gambling on attitudes toward sports betting among young adults in Ibadan, Nigeria. Several major findings resulted from this study.

First, the results confirm the relationship between age, gender, peer-based gambling, sports betting knowledge and attitudes toward sports betting. These findings support similar observations from other authors who examined the interaction of attitudes toward sports betting with age (e.g. Williams et al. 2006; Stinchfield 2000), gender (e.g. Louw 2017; Salonen et al. 2017; Chiu and Storm 2010), peer-based gambling (e.g. Situ and Mo 2016; Ahaibwe et al. 2016; Hanss et al. 2014) and sports betting knowledge (e.g. Pitt et al. 2017; Oyeleke et al. 2017; Scott and Barr 2013).

Second, young Nigerians have slightly positive attitudes toward sports betting (mean composite score of 25.32). Orford et al. (2009) noted that any value above 24 would indicate a positive attitude.

Third, sports betting knowledge and peer-based gambling impact on attitudes toward sports betting was established. This finding replicates findings of previous studies by Pitt et al. (2017) which revealed that knowledge about sports increases one’s attitudes toward sports betting, and Scott and Barr (2013) which stated that Black South Africans have positive attitudes to gambling activities that depend on their competence. This was also confirmed by Oyeleke et al. (2017).

Just like earlier studies carried out globally, our finding on the influence of peer-based gambling on attitudes toward sports betting was affirmed by Ahaibwe et al. (2016) and Hanss et al. (2014) who identified susceptibility to peer pressure as encouraging positive attitudes toward sports betting. Having gamblers as friends also make one have favorable attitudes toward sports betting and perhaps participate in sports betting (Har-doon and Derevensky 2001; Jacobs 2000; Situ and Mo 2016; Thomas 2014). A possible interpretation of this finding is that peer approval of gambling is an important motivator for perceiving sports betting as acceptable social norms among friends. Although, the
entertainment, relaxation, masculinity, and financial benefits from gambling also make many young people hold positive attitudes toward sports betting (Ahaibwe et al. 2016).

Fourth, gender and age differentiate one’s attitudes toward sports betting. The significant effect of gender on attitudes toward sports betting in our study was consistent with previous literature (Chiu and Storm 2010; Hanss et al. 2014; Salonen et al. 2017; Stinchfield 2000; Wood and Griffiths 2004) which revealed that males have more positive attitudes toward gambling than females. Although females are increasingly reporting more favorable attitudes toward sports betting (Ahaibwe et al. 2016; Louw 2017; Salonen et al. 2017; Scott and Barr 2013).

The tendency for older participants to hold more positive attitudes than younger ones to attitudes toward sports betting was confirmed by scholars like Stinchfield 2000 and, Wickwire et al. (2007). This relationship could be because gambling is an enduring activity or because older students may have either higher incomes or higher debt loads, which might create a greater preference to lay bets (Williams et al. 2006). However, these findings are not consistent with an earlier study by Govoni et al. (1996) which reported that age does not differentiate people’s attitudes in this regard.

Conclusion

The study is an examination of the influence of gender, age, sports betting knowledge, and peer-based gambling on attitudes toward sports betting among young adults in Nigeria. Older males with knowledge about sports betting and friends who gamble have positive attitudes toward sports betting.

The relatively small number of items used to measure sports betting knowledge and peer-based gambling is a limitation of this study. Nevertheless, the items were validated in previous research (e.g. Hanss et al. 2014; Delfabbro and Thrupp, 2003). Also, the data being self-report are subjected to standard limitations (e.g. memory recall biases, social desirability, etc.). Hence, caution must be taken in drawing causal or directional conclusions. Despite these limitations, the study provided further insight into the phenomenon of sports betting. Future studies may also examine the interaction of other psycho-social factors with sports betting.

The positive relationships between sports betting knowledge, approval of gambling by peers, and attitudes toward sports betting have implications for treatment and prevention initiatives. The social circles of young adults may be the starting points for initiatives to develop healthy attitudes toward sports betting and preventing gambling-related problems.

Authors' contribution OA and OP were responsible for the study conception and design; OA collected and analyzed the data; OA was responsible for manuscript preparation; OP and ACO made critical revisions to the paper; all authors read and approved the final version.

Compliance with Ethical Standards

Conflict of interest The authors hereby declare that there is no potential conflicts of interest and that we conducted the study procedures in accordance with the Declaration of Helsinki.

Informed Consent Informed consent of participants was obtained and they were at liberty to participate and withdraw voluntarily. We also ensured that their responses were anonymous and confidential.
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