

**PROBLEM GAMBLING SEVERITY OF STUDENTS SPORTS BETTORS AND ITS
RELATIONSHIP AMONG THE DIMENSIONS OF STUDY HABITS:
IMPLICATIONS FOR COUNSELLING**

ABSTRACT

Gambling is a well-known activity in most nations. Problem gambling as an index of gambling refers to the adverse effects on the gambler, on other individuals, his/her social life or even on the community as a result of the individual's excessive gambling behaviour. Hence, problem gambling refers to all the harmful behaviours resulting from constant gambling. The purpose of this study was to investigate problem gambling severity and its relationship with the dimensions of study habits of students' sport bettors in the University of Cape Coast. Descriptive survey design was adopted for the study. A population of 4,172 of level 400 students from four colleges of the university of Cape Coast were used for the study. Using the Krejcie and Morgan table, a fair representation of a population of 4,172 is 351. The researchers further used disproportionate stratified sampling technique to draw from each college the number required for the study. The PGSI items and Essuman Study Habit Inventory recorded Cronbach alpha of .76 and .97 respectively. The ordinal logistic regression was used to determine whether problem gambling severity had any relationship with any of the dimensions of study habits. The findings showed that the dimensions of study habit has a predictive relationship on gambler sub-type. It was recommended among other things that a proposed 'Gaming Research Unit' under the auspices of the Department of Education and Psychology should ensure the screening of students who are low risk, moderate-risk or problem gambler and with difficulties in their study habit should be referred for guidance and counselling.

Keywords: Problem gambling; Study habit; Students' sports bettors, Counselling

1. INTRODUCTION

It is believed that roots of gambling cannot be known but it has been in existence since prehistoric times. Human society since ancient times has been exposed to gambling and the taking of risk [1]. Six-sided dices (as a divination) were used in Mesopotamia in the period around 3000BC to predict events [2]. Gambling was recorded in the times of the stone age prior to the time history was written [2]. Problem gambling, therefore is often used to distinguish between pathological, professional and social gambling [3]. Mayer et al opined that, the term "problem gambling" refers to all the patterns of disruptive or damaging gambling behaviour.

In Africa, Koross [4], examined the effects of betting on students' behaviour and found that majority of Kenyan university students spend more hours gambling than reading and attending to school work. This was an indication that gambling has an influence on students'

behaviour as well as the student's study habit. Mwadime [5], Ssewanyana and Bitanihirwe [6], examined the impact of sport betting on vulnerable users and how to control and legislate gambling activities. Mwadime [5], concluded that majority of underage (below 40years) individuals engaging in sports betting were aware of the risks posed by sports betting. Ssewanyana and Bitanihirwe [6] proposed that a strict implementation and enforcement of underage gambling laws, education and public awareness campaigns regarding problem gambling is a necessity and lastly Ssewanyana and Bitanihirwe suggested a social policy creation and productive public health intervention for the treatment of youth and adults with problem gambling. The works of Mwadime [5] and Ssewanyana and Bitanihirwe [6], though sited in Africa was done outside the context of students' study habit. Similarly, in Ghana, Glozah, Tolchard and Pevalin [7] through an exploratory study investigated the attitudes of SHS students towards gambling and found that there was a positive attitude towards gambling.

It has been very difficult to manage student learning with sports betting among Ghanaian students on university campuses. School administrators are, for instance, challenged to control sports bets by rendering all sports betting sites unavailable via Wi-Fi for students at the Kwame Nkrumah University of Science and Technology, Ghana. Students strongly disagreed as they responded that even without a university's Wi-Fi link they could still bet. Citi Newsroom records a similar story on March 28, 2019 when students of Sunyani Technical University (STU), Ghana, highly patronized operations of one of the betting companies which has opened their premises in front of the main campus. In the same report, Dr. Justice Solomon Korantwi- Barimah, the Pro Vice-Chancellor of the STU stated that; "Many of the students in the STU use their tuition fees for sports betting and many of them owe the University. He told reporters that management had already consulted the Student Representative Council (SRC) on the matter and regretted that many students spend time on sports gambling instead of focusing on their books. He also called on the Ghana Education Service and relevant institutions to cooperate effectively to control sport bets among young people across the country." Citi newsroom, GNA (2019, March 28).

Though there have been a lot of foreign studies on the issue of student gambling, its prevalence and its related behavioural issues, there seems to be no local study in any university in Ghana on problem gambling severity and study habits of students' sports bettors. Hence, the purpose of this study is to investigate problem gambling severity and its relationship with the dimensions of study habits of students' sport bettors in the University of Cape Coast.

Research Hypothesis

H₀1: There is no significant relationship between problem gambling severity (PGSI gambler sub-types) and the dimensions of study habits of students' sports bettors.

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2. METHODOLOGY

Descriptive survey design was adopted for the study. With descriptive design research, the nature of a certain phenomenon is defined and events are determined and reported the way they exist and the researcher aims to generalize the sample to a population so that the conclusions on some features, attitudes or behaviour of the population can be made [8]. A population of 4,172 of level 400 students from four colleges of the university of Cape Coast were used for the study. Using the Krejcie and Morgan table, a fair representation of a population of 4,172 is 351 [9]. The researchers further used disproportionate stratified sampling technique to draw from each college the number required for the study. Out of the total sample size of 351; 126 (11.8%) was sampled for College of Education Studies, 42 (6.3%) for College of Health and Allied Sciences, 150 (8.8%) for College of Humanities and Legal Studies and 33 (4.5%) for College of Agric. and Natural Science. Lastly, individual participants from the sample were randomly selected.

A questionnaire was used to conduct the study. A questionnaire is a research tool for self-reports on general and personal issues [10]. The questionnaires; Problem Gambling Severity Index (PGSI) of the Canadian Problem Gambling Index (CPGI) was adopted while Essuman Study Habit Inventory was adapted for the study. The PGSI 9 - items are scored between 0-27. The 9 items below are scored as; 0 for each response of "Never", 1 for each "sometimes," 2 for each "most of the time," and 3 for each "almost always." A score of between 0 and 27 points is possible. There are four classification categories based on the following cut-points for PGSI scores: 0 = non-problem gambler, 1-2 = low risk gambler, 3-7 = moderate risk gambler 8+ = problem gambler. Depending on a respondent's score on these nine PGSI items, he or she may be classified as being in one of four gambler sub-types, namely: (a) non-problem gambler, (b) low risk gambler, (c) moderate risk gambler, and (4) problem gambler." Scoring the 9-item PGSI is key hence no item was altered in anyway. The researchers adapted five scales of Essuman Study Habit Inventory for the study because they were sufficiently necessary for the study." These are: 'Allotment of Time', 'Concentration', 'Consultation', 'Procedure in Studying', and 'Reading and Library Use'. All the items in the SHI are rated on a 5-point Likert-type Scale: Very True (5), True (4), Somewhat True (3), Not True (2) and Not at all True (1). The research instrument was subjected to a reliability test. A pilot-test of the instrument was conducted within the Cape Coast Technical University. The PGSI items and Essuman Study Habit Inventory recorded Cronbach alpha of .76 and .97 respectively. In addition ethical issues such as anonymity and confidentiality were adhered to. The ordinal logistic regression was used to determine whether problem gambling severity had any relationship with any of the dimensions of study habit. Ordinal logistic regression analysis was used because problem gambling severity was ranked and the dimensions of study habit were scale variables.

3. RESULTS

The researchers sought to examine the relationship between problem gambling severity (PGSI gambler sub-types) and the dimensions of study habits (Allotment of Time, Concentration, Consultation, Procedure in Studying, Reading and Library use) of students.

3.1. ASSUMPTIONS

To determine whether there is a statistically significant relationship between the dependent/criterion variable and the independent/predictor variables, various assumptions were checked; the Q-Q plot of the predictor variables showed a relatively normal distribution with a few outliers which were removed from the analysis but the criterion variable was not normally distributed that instigated the use of ordinal regression. The variance of errors differ at different values (between 3 to -3) of the predictor. This indicated a heteroscedasticity. A low to moderate multicollinearity among the predictor variables; the Tolerance of each variable was greater than 0.2 and the VIF less than 5 indicating low/moderate multicollinearity. Durbin-Watson's d test showed a no auto-correlation in the data, ($d = 1.667$). That is, ($1.5 < d > 2.5$) shows a no autocorrelation.

3.2. PROBLEM GAMBLING SEVERITY (PGSI GAMBLER SUB-TYPES) AND THE DIMENSIONS OF STUDY HABITS OF STUDENTS' SPORTS BETTORS.

The 9-item Canadian Problem Gambling Severity Index and 5-point Likert-type scale of Essuman's study habit inventory were used to gather responses from respondents. The responses are presented in Table 1.

Table 1. Results of ordinal logistic regression analysis showing the relationship between problem gambling severity (PGSI gambler sub-types) and the dimensions of study habits of students' sports bettors.

	Estimate (B)	Std. error (SE)	Wald	Odds ratio. Exp (B)	df	Sig.	Chi- Square (χ^2)	Pseudo R ²
<u>Independent variables</u>								
Allotment of Time	.563	.182	9.605	1.755	1	.002		
Concentration	.010	.206	.002	1.010	1	.960		
Consultation	.265	.177	2.246	1.304	1	.134		
Procedure in Studying	-.178	.225	.624	.837	1	.430		
Reading and Library use	.064	.177	.132	1.066	1	.721		
<u>Model fitting</u>								
Final (-2 Log Likelihood)					5	.000	22.927	
<u>Goodness of fit</u>								
Pearson					997	.237	1028.577	
Deviance					997	1.000	714.176	
<u>Test of Parallel Lines</u>								
General					10	.833	5.781	
<u>Nagelkerke</u>								.073

Source: Field survey (2020) n=343

From Table 1, the model fitting had a significant improvement in fit of the final model over the null model [$\chi^2 (5) = 22.927, p=.05$]. The goodness of fit shows that both the Pearson chi-square test [$\chi^2 (997) = 1028.577, p=.237$] and Deviance test [$\chi^2 (997) = 714.176, p=1.00$] are non-significant. Thus the model fit the data well. The Nagelkerke (Pseudo R²) shows that 7.3% of the variance in the outcome is explained by the predictor/independent variables. The test of parallel lines show a non-significant results [$\chi^2 (10) = 5.781, p=.833$]. This means that the relationships between the independents variable are the same across all possible comparison of the dependent/outcome variables.

On the regression coefficients (B), Allotment of time was a significant predictor of problem gambling severity index (PGSI). That is, a predicted increase of .563 in the odds of being on a lower level of PGSI, results in per unit increase of Allotment of time. This indicates that a

student scoring higher on allotment of time of his study habit is more likely to be on the lower levels of PGSI (i.e. either a non-problem gambler or a low-risk problem gambler). Thus, the odds ratio (exp. $B = 1.755$) > 1 indicates an increasing probability of being on a lower PGSI as scores increase on allotment of time on his study habit. On Concentration, just like consultation, reading and library use were not a statistically significant predictor of PGSI. For concentration, a predicted increase of .010 in the odds of being on a lower level of PGSI results in a per unit increase of concentration of one's study habit. Thus the odds ratio (exp. $B = 1.010$) > 1 indicates an increasing probability of being on a lower PGSI as scores increase on concentration of the individual's study habit. Similarly, procedure in studying was also not a statistically significant predictor of PGSI. For every per unit increase of the procedure in studying, there is a predicted decrease of .178 in the odds of being on a lower level of PGSI. Given that the odds ratio is (exp. $B = .837$) < 1 , this indicates a decreasing probability of being on a lower level of the PGSI variable as scores increase on procedure in studying of one's study habit. All the variables of study habit has the potential of predicting the level on which a student gambler may fall on the gambler sub-type. However, some of the variables like 'procedure in studying' has low predicting strength.

Overall, the predictor variables; Allotment of Time ($B=.563$, $SE=.182$, $Wald=9.605$, $P=.05$); Concentration ($B=.010$, $SE=.206$, $Wald=.002$, $P=.05$); Consultation ($B=.265$, $SE=.177$, $Wald=2.246$, $P=.05$), Procedure in Studying ($B= -.178$, $SE=.225$, $Wald=.624$, $P>.05$); Reading and Library use ($B=.064$, $SE=.177$, $Wald=1.32$, $P=.05$) were found to contribute to the model. The full model containing all predictors was statistically significant, [$\chi^2 (5, 343) = 22.927$, $P=.05$] indicating that the model was able to distinguish among the problem gambling severity index (problem gambler sub – types). Only one independent variables made a unique statistically significant positive contribution to the model, allotment of time ($B=.563$, $SE=.182$, $Wald=9.605$, $P=.05$). It was the strongest predictor with an odds ratio of 1.755. Concentration, consultation, reading and library use were not statistically significant predictor to the model but with an odds ratio greater than 1. Similarly, procedure in studying was not statistically significant predictor to the model. It was a negative contributor with an odds ratio less than 1. Since, the full model containing all predictors was statistically significant, this shows that there is a significant relationship between gambling sub-type and students' dimensions of study habits. Thus the null hypothesis of the study was rejected.

4. DISCUSSION

In agreement to the findings of the relationship between problem gambling severity indexes and allotment of time and concentration, Koross [4], asserts that majority of students 'very often lose' time from school and studying due to gambling. According to him, "It is through such behaviour of losing school time that leads to truancy and that students spend much of their time thinking about bets, how to match them so as to win at the expense of school work and assignments". Koross affirmed that "Kenyan universities students spend more hours gambling than concentrating on school work". In the same vein, Oh, Ong, and Loo [11], explained that there is no doubt that an adolescent's school performance would also be affected as their attention is being redirected to managing gambling-related problems. In

support of Oh, Ong, and Loo, the finding showed that consultation, reading, library use and concentration could contribute to the level of PGSI gambler sub-type.

Conversely, global research works [12, 13, 14] showed that study habits are the most important predictor of academic performance. Consequently, Vitaro, Brendgen, Girard, Dionne and Boivin [15], showed that there is significant concurrent correlations between gambling participation and academic performance of students. However, Vitaro, et al [15], cautioned that “there is the tendency for correlates of problem gambling such as substance use to obscure the link between gambling participation and academic performance”. Inferring from these studies, the researchers speculates that the findings of his study (i.e. the existence of relationship between PGSI and students’ study habit) could also relate or have a perceived effect on students’ academic performance. This is because of the empirical evidence of relationship between student’s study habit and student’s academic performance. Notwithstanding, as Vitaro et al [15] cautioned, the relationship may be mediated strongly by other correlates of problem gambling such as substance abuse. Thus, the finding showed that study habit has a predictive relationship on gambler sub-type.

5. COUNSELLING IMPLICATIONS

The results of this study have some implications for counselling. They include the following:

1. Counsellors should be aware of the ripple effects of problem gambling severity in order for them to assist clients who come to them with such an issue. Counsellors’ deep knowledge in problem gambling severity is a key factor in helping students who come with issues emanating from problem gambling.
2. Since the findings of this study established the fact that students’ study habits have predictive relationship with problem gambling severity, and time allotment for studies, counsellors are therefore supposed to help such clients to draw a personal time table that will be beneficial to student clients. This can be a coping strategy to clients who will be finding it difficult to quit sport betting.
3. Counsellors should be abreast that gambling can start from fun to an unhealthy obsession with various consequences. Problem gambling severity can ruin relationships, interfere with academic work, and lead to financial constraints. If counsellors lay this bare to beginners of gambling, it may serve as a deterrent or even preventive measures before it becomes a crisis situation.
4. There must be occasional outreach guidance programmes organised by the counselling centres/units of the various universities to sensitise the students about the addictive nature of gambling and how problem gambling severity can truncate their education if nothing is done to this phenomenon.
5. Counsellors must devise an effective study habit for all, especially sports bettors to mitigate their studies at the university. It must be stated in categorical terms that too much time spent on gambling can also lead to relationship and legal problems, mental health issues like obsessive compulsive disorder (OCD), depression and anxiety and even suicidal ideations. Counsellors must therefore ask some pertinent questions if clients visit them with such mental health issues. Not always but at times the trigger of such conditions must be as a result of problem gambling severity.

6. CONCLUSIONS

The study also showed a statistically significant relationship between problem gambling severity and allotment of time. The remaining four dimensions though statistically insignificant, could contribute to problem gambling severity. This could be concluded that problem gambling severity has a predictive relationship with one's study habit.

7. RECOMMENDATIONS

1. Since one's study habit has predictive relationship with problem gambling severity index, counsellors who come in contact with students' sport bettors should adequately explain the various dimensions of their study habits in relations to their gambling activities, and help them to plan and organise their studies to ensure effective and efficient study skills.
2. The researchers recommend "Gaming Research Unit" under the auspices of the Department of Psychology and Education should ensure the screening of students who are low risk, moderate-risk or problem gambler with difficulties in their study habits and refer them for guidance and counselling. Thus, counsellors or psychotherapists in the Faculty could suggest additional therapy by referring such students to the UCC hospital or any equipped institution around.
3. The researchers also recommend that the activities of the Study Habit Unit within the Counselling Centre in collaboration with the departments' academic advisers, hall counsellors and the recommended "Gaming Research Unit" of the department of Psychology and Education should intermittently run open forum where students can test their study habit level.

CONSENT

The respondent's consent was sought before the commencement of data collection.

ETHICAL APPROVAL

The conduct of this study strictly adhered to the ethnical codes in the conduct of research.

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