The Prevalence of Sports Betting in Tanzania Secondary School Students

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Abstract
The purpose of this paper was to determine the prevalence of sports betting among secondary school students in Tanzania. The study was conducted in the Dodoma region and covered four secondary schools in Dodoma City. The probability sampling procedure was used to select students randomly for everyone to have the chance of being involved. The judgmental sampling technique were used to collect information from the head of discipline units and class teachers, and simple random sampling was used to select both public and private secondary schools. The study administered questionnaires and interview questions to students, classes, head of discipline units, and class teachers. The questionnaires and interview questions targeted at picturing out the rate at which sports betting was intruding students. The finding shows that students aged between 10-17 years were reported to have high interest and feelings to take the risks of betting. The findings also show that females students are less involved in betting activities compared to male students. Besides, it was found that male students spend more of their precious time 6-10 hours a day in betting compared to female students. Furthermore, it was revealed that majority of students had taken part in more than one bet among the identified games including bet-way, premier bet, sport pesa, and tutu Mzuka.s

Introduction
This paper discusses the prevalence of sports betting among secondary school students in Tanzania. The sample population assessed is the contextual representative of betting prevalence in Tanzanian secondary schools. Sports betting is a form of gambling that intends placing a wager (bet) on the outcome of sports events especially for international and national games (football match) with the prestigious English premier league, Spanish-La Liga, and Italian- Seria A league which have gained the most attention and local National league (Koros, 2016). Sports betting is one of the online gambling fastest growing in the world and a source of revenue for many nations. According to Bourdeau (2011); Conrad (2008); Davies and Abraham (2001); Koros (2016); Sammut (2010); the primary goal of sports bettors is to win money just like other gamblers based on the game he/she bets for on the bookmakers odds. The growth of the internet and mobile devices has made betting generally much more accessible in developing countries alike to developed countries particularly for young and youth adults.

The estimate shows that, between 50-70% of young people and youth adults in developing countries have been engaging in some form of gambling including sports betting, lotto, bingo, poker, and charity sweepstake (Adebayo, 1998; Devlin & Peppard, 1996; Engwall, Hunter & Steinberg, 2002; Koros, 2016). These reports further ascertain that, sports betting remains an illegal activity for young people under the age of 18 in many countries of the world including...
Tanzania. In recent years, the world has witnessed the increase of young people involved in sports betting something which needs attention of public health practitioners and policymakers attend the prevalence of this epic for underage as many adolescent bet daily (Bourdeau, 2011; Conrad, 2008).

The context of sports betting in Tanzania

In Tanzania, sportsbooks were legal since 1999, but it become famous until 2013 when the first license to go live was issued led to a drastic increase of online sports betting site services in the big cities (www.gamingzion.com/sportsbook/Tanzania). Sports betting are largely found in the metropolitan cities of Dar-es-salaam, Dodoma, Arusha, Mwanza, and Morogoro due to presence of network television programming with large sport viewing audiences (Davies and Abram, 2001). However, sports betting is becoming more or less popular even in the small towns and centers all over the country. Nowadays people of different statuses in Tanzania are enjoying online and mobile sports betting services at every corner of the country. It is offered through betting shops or by mobile phones and online platforms like TVs and radios for advertisement purposes. Some of the advertising messages aired include lottery SMS which always is forwarded to mobile phone users in the Swahili language; hongera! Bashiri mech 4 au 6 tu ushinde soka hadi 75,000,000; na hadi 60,000,000 inaweza kuwa yako leo ukibashiri mech 6 kwa mcchezo mpya soka jackpot! EPL serie A, Laliga zinacheza leo. (Translated congratulation! Bet 4 to 6 matches to win up to 75,000,000 to 60,000,000 million this can be yours if you bet today in EPL, Seria A, and Laliga matches).

In the globalized era, it is currently common in Tanzania to find children aged 13 up to 17 years owning mobile phones with accessibility to internet cafe services. It becomes very taxing to impinge children under 18 years old from sports betting since these games are played through mobile phones and internet services. The prevalence rate is recorded high among this age group as they active in sporting activities, and the case is more serious to boys than girls. The research report shows that the most betting games commonly for Tanzanian young generation are Biko, Bingo, Tatu Mzuka, Sport-Pesa, bet way, premier bet, and sport pesa. Research further shows that prevalence in sports betting among students is genuinely attached to betting feeling development due to attraction from advertisements posted and aired to them through social networking and media systems. Students who are bettors are more likely to take the risks of placing bets on different occasions with varying frequencies and environment. Therefore, this paper presents the prevalence rate of secondary school students on the development of feelings, the extent betting risks is taken, and the frequencies of betting involvement among students.

Methods

The study used a mixed approach which practically was quantitative and qualitative. The qualitative approach provided detailed content based on thematic understanding while the quantitative approach provided more computable generalized views on the problem domain respectively. On the other hand, the study employed a pragmatism philosophical foundation, which accepted the ideas to be applicable only if they supported actions. This included both positivist and interpretivism which was vital in exploring concepts from more than one world view by accepting multiple realities as they appeared on the ground (Creswell & Plano Clark, 2011).

The study participants involved form one up to form five students from four secondary schools of which two were publicly owned and two private-owned in Dodoma City, head of discipline units, and class teachers. The probability sampling procedure was used to select...
students randomly for everyone to have the chance of being involved. The judgmental sampling technique were used to collect information from the head of discipline units and class teachers, and simple random sampling was used to select both public and private secondary schools. The study used the popular standard formula for sample size calculation known as Cochran's sample size formula (1977) to get a proper representative sample.

The selected sample size enabled the study to gather detailed information and be able to administer the instrument easily. \( n = \frac{Z^2pq}{e^2} \).

Whereas \( n = \) is the sample size, \( Z = \) is the Z-score (1.96) corresponding to 95% confidence level, \( p = \) is the proportion in the target population (0.5), \( q = 1-p \), \( e = \) is the desired margin error considered to be 5% = 0.05.

| SN | Population | Number of respondents | Remarks |
|----|------------|------------------------|---------|
| 1  | Class teachers | 20 | 5 @ School |
| 2  | Discipline heads | 4 | 1 @ School |
| 3  | Students | 359 | 90 @ School |
| **Total** | **Number = 383** | **Respondents** |

Table 1. Respondent sample size

Given the study problem domain, the methods of data collection used were questionnaires and semi-structured interviews. The combination of these methods permitted triangulation of various data sources and increased the reliability and validity of the information. The quantitative information was coded, cleaned, and entered into the computer through Statistical Package for Social Sciences (SPSS) version 16. The analysis of quantitative information was done by descriptive statistics to produce the background information of the students' respondents and prevalence rate. Additionally, other statistical analyses such as cross-tabulation, chi-square test, and symmetric measures were used to measure the significant relation between betting and variables like prevalence. Emerging themes, through interview were identified and contently paraphrased.

Results and Discussion

The study administered questionnaires and interview questions that targeted at picturing out the extent at which sports betting was taking place among students population. The responses were analyzed using the descriptive statistics to generate tables, percentage, frequencies and bar graph. The results are shown as per study objectives.

Demographic information of students' by sex, age, and class level

Table 1 presents students' respondents by sex, age, and class level in a fair distribution. In respect to age assessment, the majority of students 73.8% were under unlawful age qualification to involve themselves in betting as their age was below 18 years. This indicates the risks of having early betting involvement among school-going adolescents.

| # | Sample Category | Sex | Frequency (n) | Percentage (%) |
|---|----------------|-----|---------------|----------------|
| **Sex** | Students | Males | 198 | 55.20 |
| | | Females | 161 | 44.80 |
| **Age** | Students | 10-17 | 282 | 73.8 |
| | | 18-25 | 77 | 20.1 |
| | | 26+ | 23 | 6.1 |
| **Class level** | Students | Form one | 68 | 18.94 |
| | | Form two | 73 | 20.33 |
| | | Form three | 77 | 21.45 |
Response on the development of feelings to bet

The study pictured out the levels at which sampled students felt betting and their responses were: about 104 (29.00%) students reported to have too high feelings, 66 (18.4%) felt highly to take part in betting, whereas 91 students (25.3%) had low feelings and the 98 (27.3%) had too low feelings to bet. Cumulatively, 47.4% of the students had the too high and high betting feelings, this reflected a big number of students with positive feelings development related to betting as shown in Table 2.

Table 2. Prevalence rate betting feelings

| Prevalence rate; ever had feelings to bet | Frequency | Percent |
|------------------------------------------|-----------|---------|
| Too high                                 | 104       | 29.0    |
| High                                     | 66        | 18.4    |
| Low                                      | 91        | 25.3    |
| Too low                                  | 98        | 27.3    |
| Total                                    | 359       | 100.0   |

The development of feeling to bet by sex

In determining the rate of betting feelings both of males and female students regardless of their feeling variations was assessed. The findings show that, 198 (55.2%) male and 161 (44.85) females had high betting feelings. However, from this analytical point of view, it shows that males had more betting feeling than females.

Table 3. Development of betting feeling by sex

| Prevalence rate; ever had feelings for betting | Male | Female | Total |
|----------------------------------------------|------|--------|-------|
| Too high Count                               | 61   | 43     | 104   |
| % within Prevalence rate; ever had feelings to bet | 58.7% | 41.3% | 100.0% |
| % within Demography; Sex                     | 30.8% | 26.7% | 29.0% |
| % of Total                                   | 17.0% | 12.0% | 29.0% |
| High Count                                   | 32   | 34     | 66    |
| % within Prevalence rate; ever had feelings to bet | 48.5% | 51.5% | 100.0% |
| % within Demography; Sex                     | 16.2% | 21.1% | 18.4% |
| % of Total                                   | 8.9%  | 9.5%   | 18.4% |
| Low Count                                    | 55   | 36     | 91    |
| % within Prevalence rate; ever had feelings to bet | 60.4% | 39.6% | 100.0% |
| % within Demography; Sex                     | 27.8% | 22.4% | 25.3% |
| % of Total                                   | 15.3% | 10.0% | 25.3% |
| Too low Count                                 | 50   | 48     | 98    |
| % within Prevalence rate; ever had feelings to bet | 51.0% | 49.0% | 100.0% |
| % within Demography; Sex                     | 25.3% | 29.8% | 27.3% |
| % of Total                                   | 13.9% | 13.4% | 27.3% |

Using the Chi-Square Test of Independence (the study used \( \alpha = 0.05 \)) and having run the test, the key result in the Pearson Chi-Square value was 3.407. The footnote for this statistics to the expected cell counts assumption such that the expected cell counts were all greater than 5
and no cells had an expected count of less than 5. Therefore, this assumption was met, because the statistic test was based on a 4x2 cross-tabulation table of which the degrees of freedom ($df$) was $df=(R-1)\times(C-1)=(4-1)\times(2-1)=3$ while the corresponding $p$-value was $p = 0.333$. Since the cross-tabulated $p$-value was greater than the chosen significance level ($\alpha = 0.05$), therefore the study accepts the null hypothesis and concluded that there was enough evidence to suggest betting feelings does not depend on sex.

Table 4. Chi-Square Tests on betting feelings by sex

| Chi-Square Tests                  | Value | Df | Asymp. Sig. (2-sided) |
|-----------------------------------|-------|----|-----------------------|
| Pearson Chi-Square                | 3.407 | 3  | .333                  |
| Likelihood Ratio                  | 3.409 | 3  | .333                  |
| Linear-by-Linear Association      | .392  | 1  | .531                  |
| N of Valid Cases                  | 359   |    |                       |

a. 0 cells (.0%) have an expected count less than 5. The minimum expected count is 29.60.

In the same vein, the study runs a symmetric measure to picture out the strength of association between betting feelings and sex. The analysis shows that the value for Phi was 0.097 and the value for Cramer's V was also 0.097. The symmetric measure shows no difference in figures presented in under Phi and Cramer's V as the strength of association for both test was found to be very weak. Therefore, the study concluded that there is no association between the development of betting feelings and sex differences.

Table 5. Symmetric measures on betting feelings by sex

| Symmetric Measures              | Value  | Approx. Sig. |
|--------------------------------|--------|--------------|
| Nominal by Nominal              | Phi    | .097         |
|                                | Cramer's V | .097        |
| N of Valid Cases                | 359    |              |

The development of betting feeling by age

In determining the rate of betting feelings in respect to age groups ranging from 10-17 and 18-25 years with varied magnitude of betting feeling was assessed. The results show that, 282 (78.6%) of respondents ranging 10-18 years had more betting feeling than 77(21.4) of age groups ranging from18-25 years. In principle, a large group of secondary school students are below the age of 18 years and still groomed by government laws for protection. In respect to age, the study runs the Pearson Chi-Square row to show the association between betting feelings and age representation (used $\alpha = 0.05$). The key result in the Pearson Chi-Square value test was 1.913. The footnote for such statistic pertains to the expected cell count assumption such that the expected cell counts were all greater than 5 and no cells had an expected count of less than 5. This means that, the assumption was met because the statistic test was based on a 4x2 cross-tabulation table of which the degrees of freedom ($df$) for such test statistic was $df=(R-1)\times(C-1)=(4-1)\times(2-1)=3$ and the corresponding $p$-value was $p = 0.591$. Since the cross-tabulated $p$-value was greater than the chosen significance level ($\alpha = 0.05$), therefore, the study concluded that there was enough evidence to suggest that betting feelings does not depend on age.

Table 6. Development of betting feeling by age

| Prevalence rate; ever had feelings to bet | Demography; Age |
|------------------------------------------|-----------------|
| Demography; Age                          |                 |
### Prevalence rate; ever had feelings to bet * Demography; Age

|                | Demography; Age |
|----------------|-----------------|
|                | 10-17 | 18-25 | Total   |
| Too high       | Count  |
|                |        |       |         |
| % within Prevalence rate; ever had feelings to bet | 82.7% | 17.3% | 100.0% |
| % within Demography; Age                           | 30.5% | 23.4% | 29.0%  |
| % of Total                                           | 24.0% | 5.0%  | 29.0%  |
| High          | Count  |
|                |        |       |         |
| % within Prevalence rate; ever had feelings to bet | 77.3% | 22.7% | 100.0% |
| % within Demography; Age                           | 18.1% | 19.5% | 18.4%  |
| % of Total                                           | 14.2% | 4.2%  | 18.4%  |
| Low           | Count  |
|                |        |       |         |
| % within Prevalence rate; ever had feelings to bet | 74.7% | 25.3% | 100.0% |
| % within Demography; Age                           | 24.1% | 29.9% | 25.3%  |
| % of Total                                           | 18.9% | 6.4%  | 25.3%  |
| Too low       | Count  |
|                |        |       |         |
| % within Prevalence rate; ever had feelings to bet | 78.6% | 21.4% | 100.0% |
| % within Demography; Age                           | 27.3% | 27.3% | 27.3%  |
| % of Total                                           | 21.4% | 5.8%  | 27.3%  |
| Total         | Count  |
|                |        |       |         |
| % within Prevalence rate; ever had feelings to bet | 78.6% | 21.4% | 100.0% |
| % within Demography; Age                           | 100.0%| 100.0%| 100.0% |
| % of Total                                           | 78.6% | 21.4% | 100.0% |

The statistical findings are incongruent with some teachers’ views on students betting as they claimed that:

".....as a class teacher, we hear sometimes in some occasions whereby form three and four students’ being much more mounted up with the discussions on the English Premier League marches and the possibilities of winning the bets they have placed following their favors on the fixtures and the favorite players of their choices,. But very unfortunate those who are discussing are under age and I wonder where do they source this money they place in betting".

This testimony from teachers consequently justifies the involvement of the under aged students in betting activities even though was statistically insignificant.

**The development of feeling to bet by class representation**

The prevalence of betting and its feeling development class wise were assessed. The analysis on the responses towards betting prevalence and feeling development reflected rating categories of *too high*, *high*, *low*, and *too low betting feelings*. Considering, category of *too high betting feelings*, the results show that 17 (4.7%) forms one, 22 (6.1%) forms two, 27 (7.5%) form three, 15 (4.2%) form four, and 23 (6.4%) form five making a total of 104 (29.0%) who voted for too high betting feelings. The analysis also revealed that forms three students rated to have development betting feeling with *too high extent* than the rest of the classes. Category two was that of *high feelings* and its number of respondents was 9 (2.5%) form one, 15 (4.2%) form two, 12 (3.3%) form three, 17 (4.7%) form four, and 13 (3.6%) form five making a total of 66 (18.4%) who voted for too high betting feelings. The analysis moreover shows that, form four *had high betting feelings* compared to the rest of the classes.
Category three constituted low betting feelings and number of respondents voted to this variable included 20 (5.6%) form one, 16 (4.5%) form two, 22 (6.1%) form three, 19 (5.3%) form four, and 14 (3.9%) form five making a total of 91 (25.3%). Besides, the analysis shows that, form three had low betting feelings compared to the rest of the classes. The last category constituted too low betting feeling and respondents who voted to this variable were 22 (6.1%) form one, 20 (5.6%) form two, 16 (4.5%) form three, 20 (5.6%) form four, and 20 (5.6%) form five making a total 98 (27.3%). The analysis furthermore shows that, forms one had too low betting feelings to bet compared the rest of the classes.

Table 7. Development of betting feeling by class representation

| Prevalence rate; had betting feelings * Demography | Form one | Form two | Form three | Form four | Form five | Total |
|---------------------------------------------------|----------|----------|------------|-----------|-----------|-------|
| Too high                                          |          |          |            |           |           |       |
| Count                                             | 17       | 22       | 27         | 15        | 23        | 104   |
| % within Prevalence rate; ever had feelings to bet| 16.3%    | 21.2%    | 26.0%      | 14.4%     | 22.1%     | 100.0% |
| % within Demography; Class level                   | 25.0%    | 30.1%    | 35.1%      | 21.1%     | 32.9%     | 29.0% |
| % of Total                                        | 4.7%     | 6.1%     | 7.5%       | 4.2%      | 6.4%      | 29.0% |
| High                                              |          |          |            |           |           |       |
| Count                                             | 9        | 15       | 12         | 17        | 13        | 66    |
| % within Prevalence rate; ever had feelings to bet| 13.6%    | 22.7%    | 18.2%      | 25.8%     | 19.7%     | 100.0% |
| % within Demography; Class level                   | 13.2%    | 20.5%    | 15.6%      | 23.9%     | 18.6%     | 18.4% |
| % of Total                                        | 2.5%     | 4.2%     | 3.3%       | 4.7%      | 3.6%      | 18.4% |
| Low                                               |          |          |            |           |           |       |
| Count                                             | 20       | 16       | 22         | 19        | 14        | 91    |
| % within Prevalence rate; ever had feelings to bet| 22.0%    | 17.6%    | 24.2%      | 20.9%     | 15.4%     | 100.0% |
| % within Demography; Class level                   | 29.4%    | 21.9%    | 28.6%      | 26.8%     | 20.0%     | 25.3% |
| % of Total                                        | 5.6%     | 4.5%     | 6.1%       | 5.3%      | 3.9%      | 25.3% |
| Too low                                           |          |          |            |           |           |       |
| Count                                             | 22       | 20       | 16         | 20        | 20        | 98    |
| % within Prevalence rate; ever had feelings to bet| 22.4%    | 20.4%    | 16.3%      | 20.4%     | 20.4%     | 100.0% |
| % within Demography; Class level                   | 32.4%    | 27.4%    | 20.8%      | 28.2%     | 28.6%     | 27.3% |
| % of Total                                        | 6.1%     | 5.6%     | 4.5%       | 5.6%      | 5.6%      | 27.3% |
In picturing the strength of association between betting feelings and class representation, the symmetric measure was run. The findings show that, the Phi value was 0.165 and similarly to that of Cramer's V 0.095. The symmetric measure shows a big difference in terms of figures presented in the Phi and Cramer's V for both tests of strength association. Therefore the study realized that, strength of association between the variables was very strong hence concluded that there is a great association between the development of betting feelings and class level.

Table 8. Symmetric measure on development of betting feelings and class level

| Nominal by Nominal | Value | Approx. Sig. |
|--------------------|-------|--------------|
| Phi                | .165  | .634         |
| Cramer's V         | .095  | .634         |

The likeliness betting risks

Students' likeliness to take part in betting was assessed. They were asked to rate much, much, sometimes or not at all if to indicate likeliness of taking risks of betting. The findings reveal that, 90 (25.1%) rated very much likeliness, 85 (23.7%) much likely and 56 (15.6%) sometimes were prone to betting risks. Besides, student's frequency involvement in betting was analysed by paying attention if they had betting within the last six months, last three months earlier or daily betting. Following such involvement, they were requested to indicate preferred batting game.

Table 9. Betting frequency among secondary school students

| #   | Betting frequency               | Number of bettors | Percentage (%) |
|-----|---------------------------------|-------------------|----------------|
| 1   | Betting with six months         | 130               | 36.2           |
| 2   | Betting last three month earlier| 135               | 37.6           |
| 3   | Daily betting                   | 90                | 25.1           |
| 4   | Total                           | 355               | 98.9           |

Table 9 shows frequency scenario related to betting prevalence across time among secondary school students. This situation has been pictured in a small sample of 4 schools from five highlighted Tanzanian cities having a large number of betting shops including Dar es Salaam, Arusha, Mwanza, Dodoma and Tanga. Correspondingly, students were asked to identify the betting game they have ever participated in. Their responses show that, some students had
multiple involvement of betting activities based on their preferences while others had never been involved in such activities as presented in the figure 1.

![Figure 1. Showing betting games which students play](image)

**Conclusion**

The finding shows that, students aged between 10-17 years were highly interested to take the risks of betting. The evidence of their interest has been reflected in the Chi-Square test which shows a strong association of students and risk taking as far as betting is concerned. It is evident that, females students are less involved in betting activities compared to males. Besides, male students spend more of their precious time 6-10 hours a day in betting compared to female students. In comparing betting feeling at class level, the findings show that the form three students ever had too high betting feelings compared to the rest of the classes while form one had too low betting feeling equated to the rest of the classes. Practically, the majority of students got involved in more than one bet among the identified games including bet-way, premier bet, sport pesa, and tatu Mzuka. In respect to betting situation among students government and the community must be vigilant to control betting activities among those underage and betting shops for society protection.

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