

Prevalence, Risk Factors and Protective Factors Associated With Problem Gambling Among
Strathmore University Students in Nairobi County, Kenya

by

Collins Barsulai

A thesis presented to the School of Human and Social Sciences
of

Daystar University
Nairobi, Kenya

In partial fulfillment of the requirements for the degree of

MASTER OF ARTS
in Counselling Psychology

August 2022

APPROVAL

PREVALENCE OF PROBLEM GAMBLING AMONG THE STRATHMORE UNIVERSITY STUDENTS IN NAIROBI COUNTY, KENYA

by

Collins Barsulai
17-0640

In accordance with Daystar University policies, this thesis is accepted in partial fulfillment of the requirements for the Master of Arts degree in Counseling Psychology


Date:


Caroline Ayuya, Ph.D.,
1st Supervisor


31/08/2022


Susan Chang'orok, Ph.D.,
2nd Supervisor

31/08/2022


Susan Muriungi, Ph.D.,
HoD, Counselling Psychology

31/08/2022


Kennedy Ongaro, PhD.,
Dean, School of Human and Social Sciences

31/8/22

Copyright © 2022 Collins Barsulai

DECLARATION

PREVALENCE OF PROBLEM GAMBLING AMONG THE STRATHMORE
UNIVERSITY STUDENTS IN NAIROBI COUNTY, KENYA

I declare that this thesis is my original work and has not been submitted to any other college or university for academic credit.

Signed: *Collins B.*
Collins Barsulai
17-0640

Date: 31/08/2022

DAYSTAR UNIVERSITY

DEDICATION

I dedicate this thesis to the psychology department of Daystar University, parents with youthful children, rehabilitation centers, and the social science fraternity of the world.

May this study aid to solve the problems of gambling afflicting young adults.

DAYSTAR UNIVERSITY

ACKNOWLEDGEMENTS

First of all, I thank God for I have been able to write this thesis through Christ who strengthens me. The completion of this thesis was made possible by the assistance, guidance, and cooperation from my 2nd supervisor Dr. Susan Chang'orok who was empathetic and always on time to return my corrections. I thank my 1st supervisor, Dr. Caroline Ayuya for her positive remarks when I achieved various milestones in the event of writing and for the mentorship, she provided for the accolade I am supposed to give my superiors. Special thanks go to my HoD, Dr. Susan Muriungi. I thank my parents for pushing me to use forced creativity and focus on scholarly writing. In equal measure, I thank my sister Joan Barsulai and my friends who gave me positive reinforcements when we socialized.

DAYSTAR UNIVERSITY

TABLE OF CONTENTS

DECLARATION	iii
DEDICATION	iv
ACKNOWLEDGEMENTS	v
TABLE OF CONTENTS	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
ABBREVIATIONS AND ACRONYMS	xi
ABSTRACT	xii
CHAPTER ONE	1
INTRODUCTION AND BACKGROUND TO THE STUDY	1
Introduction	1
Background to the Study	3
Statement of the Problem	15
Purpose of the Study	16
Objectives of the Study	16
Research Questions	17
Justification for the Study	17
Assumptions of the Study	18
Scope of the Study	18
Limitation and Delimitation of the Study	19
Definition of Terms	19
Summary	20
CHAPTER TWO	22
LITERATURE REVIEW	22
Introduction	22
Theoretical Framework	22
General Literature Review	32
Empirical Literature Review	69

Conceptual Framework.....	75
Discussion.....	75
Summary.....	77
CHAPTER THREE.....	78
RESEARCH METHODOLOGY.....	78
Introduction.....	78
Research Designs.....	78
Target Population.....	78
Sample Size.....	79
Sampling Techniques.....	80
Data Collection Instruments.....	81
Data Collection Procedures.....	83
Pretesting.....	83
Data Analysis Plan.....	84
Ethical Considerations.....	84
Summary.....	85
CHAPTER FOUR.....	86
DATA PRESENTATION, ANALYSIS, AND INTERPRETATION.....	86
Introduction.....	86
Analysis and Presentation.....	86
Summary of Key Findings.....	147
CHAPTER FIVE.....	150
DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATION.....	150
Introduction.....	150
Discussion of Key Findings.....	150
Conclusion.....	157
Recommendations.....	157
Recommendation for Further Research.....	158

REFERENCES 159

APPENDICES 182

 Appendix A: Informed Consent..... 182

 Appendix B: Questionnaire..... 183

 Appendix C: Ethical Clearance..... 188

 Appendix D: Research Permit 189

 Appendix E : Plagiarism Report 190

 Appendix F: Authorization Letter to Collect Data204

 Appendix F :Authorization Letter.....147

DAYSTAR UNIVERSITY

LIST OF TABLES

Table 4.1: Response Rate.....86
Table 4.2: Age Distribution of the Respondents87
Table 4.3: Risk Factors Linked with Problem Gambling92
Table 4.4: Protective Factors Associated with Problem Gambling95

DAYSTAR UNIVERSITY

LIST OF FIGURES

<i>Figure 2.1: Measuring gambling-related harms: a framework for action.....</i>	<i>30</i>
<i>Figure 2.2: Social Development Strategy.....</i>	<i>66</i>
<i>Figure 2.3: Conceptual framework.....</i>	<i>75</i>
<i>Figure 4.1: Gender of the Respondents</i>	<i>87</i>
<i>Figure 4.2: Problem Gambling.....</i>	<i>88</i>
<i>Figure 4.3: State of the Respondents</i>	<i>89</i>
<i>Figure 4.4: Keep their Family or Friends from Knowing how much they Gambled... </i>	<i>90</i>
<i>Figure 4.5: Respondents asking for Money to help in Problem Gambling</i>	<i>90</i>

DAYSTAR UNIVERSITY

ABBREVIATIONS AND ACRONYMS

ADHD	Attention Deficit Hyperactivity Problem
BBC	British Broadcasting Cooperation
BBGS	Brief Biosocial Gambling Screen
CTC	Community That Cares
CBT	Cognitive Behavioral Therapy
DSM-5	Diagnostic and Statistical Manual of Mental Problem
NACADA	National Authority for the Campaign Against Alcohol and Drug Abuse
SSPSS	Statistical Package for the Social Sciences
SDM	Social Development Model
VIP	Very Important Person

ABSTRACT

Problem gambling is a phrase that is used to define a syndrome of gambling-related behaviors that often causes substantial harm to individuals, others close to the gambling addict, and the community. This study investigated the prevalence of problem gambling and its associated risk and protective factors among Strathmore University Students in Nairobi County, Kenya. Its objectives were to identify the prevalence of problem gambling, risk factors and protective factors linked to it. Quantitative data were analyzed using the Statistical Package for Social Sciences (SPSS) version 23.0. The study employed a descriptive survey research design. The target population was students at Strathmore University between the ages of 17-35 years. However, the researcher was able to access participants between the ages of 18-35 only. Purposive sampling was used to select respondents and data was collected using questionnaires. 183 participants (72%) reported to having experience problem gambling. The key risk factors from this study were peer influence at 68%, cognitive distortions at 46%, familial influence at 48% and media influence at 32%. The main protective factors were family attachment at 72%, parental supervision at 71% and pro-social participation at 63%. The study revealed that gambling activities among students are very rampant with negative side effects. The institution should take precautionary measures to guide the students against the negative impacts of gambling and measures should be taken to ensure that the students have a genuine and continuous source of income-generating activities. Further research needs to be done to establish the association between social support and problem gambling.

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

Introduction

Sports betting and other methods of gambling are becoming a spectacle across Africa. After South Africa and Nigeria, Price Waterhouse Coopers ranked Kenya as the third-largest gaming market in the African region in terms of income (Biko, 2018). A comprehensive study of the prevalence of youth problem gambling found that 0.2 percent to 12 percent of youths globally are problem gamblers and that they are particularly vulnerable to gambling online (Calado & Griffiths, 2016).

According to a 2017 Geopoll survey, it was discovered that Kenyan youth were leading regionally with the peak figure of young people who had bet previously at 76 percent followed by Uganda at 57 percent. The report noted that, while betting was once a month in other nations, in Kenya it was weekly signaling that the youth might be developing a betting addiction. Additionally, the Geopoll Investigation discovered that 79% of bets positioned in Kenya are on soccer games, causing the nation to have the highest number of citizens who place football bets in sub-Saharan Africa. The majority of these bets are put on English Premier League games because of their popularity in Kenya (Ochieng & Nyayieka 2019).

In Kenya, sports betting is on the rise, and it is precipitated by amplified internet saturation and the usage of mobile phones. Kenya has an internet penetration rate of 84 percent, with over 43.33 million individuals online, which is greater than the East African Community average of 32 percent. A smartphone is owned by about 43% of the overall population with phones. As a result of the widespread usage of

smartphones, sports betting has become more accessible (Ochieng & Nyayieka, 2019).

Within the borders of the country, the identification of sports betting systems has been a source of worry. Betting has become cultural (Koross, 2016). An individual's cultural beliefs as well as his or her society's beliefs influence socio-cultural attitudes. When it comes to gambling, attitudes can change over time. For example, as consumerism becomes more prevalent, society's view of gambling becomes more positive. When a society view gambling favorably, it becomes normalized, making it easier for people to gamble on a regular basis (Abbott et al., 2018). Among the youth attending university, there is a high degree of gambling. Since numerous students have more freedom at this age, and are frequent users of internet, university students have been designated as an at-risk group. They also fall into the age category when problem gambling is most prevalent (Koross, 2016).

Generally, the youth have been astute in adopting the usage of these new technological advancements to gamble. Consequently, their gambling problems are frequently referred to as a "hidden addiction." They might not be as obvious as substance abuse/dependence or other risky behaviors, but their brief- and lasting consequences can be disastrous. Hence problem gambling among youth is an important community well-being issue that must be solved (Pisarska & Ostaszewski, 2020).

Notwithstanding findings that submit that most gamblers in their formative years gamble in a controllable way and have scarce undesirable betting-related deeds, there is solid proof that they constitute a susceptible cluster for gambling disorder (St-Pierre & Derevensky, 2016). Therefore, this study addressed the present information

regarding the risk features and shielding influences linked with problematic gambling among the youth with a special focus on Strathmore University students as a case study.

Background to the Study

Gambling is described as wagering money on an unknown outcome in order to win money. The basic distinction between ordinary and problem gamblers is their attitude to money. In gambling, money is allocated entirely arbitrarily rather than according to meaningful principles, which can lead to a scenario in which the essential purpose and significance of money in the real world are obliterated (Latvala et al., 2019).

A gambling problem is defined as serialized or continuous problematic gambling behavior that causes dysfunction or emotional turmoil (American Psychiatric Association [APA], 2013).

Most researchers in public health, epidemiology, and psychology use the term “problem gambling” to characterize anyone who qualifies for professional therapy due to a desire to focus on the consequences of gambling (Delfabbro, 2013). In its non-clinical definition, problem gambling is characterized as an out-of-control activity that destroys personal, familial, financial, and job relationships (Reith, 2006). These issues can arise in a short amount of time, and the consequences are frequently estimated to affect as many as seven persons who come into contact with the gambler (Banks, 2008).

The behavior-persistent gambling with negative consequences-is the issue on which to focus. People have the problem, but they are not the problem. For example, calling someone a “problem gambler” can reduce them to one thing: a problem. Describing the situation rather than labeling the person-for example, “someone who has a

gambling problem” or “someone with problem gambling” -is less blaming and reduces stigma (Wynne, 2002). Therefore, in this study, the researcher used the term “problem gambling” to wisely refer to all forms of problem gambling to protect the participants from experiencing stigma.

Millions of young people are exposed to betting each year through family card games, sporting events, and unpremeditated chances to play other sports. They are exposed to the thrill of chasing the jackpot, as their gaming becomes more serious and frequent without the knowledge of those close to them. The dangers of betting are often overlooked by parents when they converse with their teenagers concerning the consequences of drug abuse and carnal promiscuousness. Though addiction does not always manifest itself immediately, those who are active gamblers at a tender stage are more probable to turn out to be problem gamblers in their adulthood (The Hidden Addiction, 2013).

An earlier commencement of gambling is linked with further serious problematic gambling and psychiatric difficulties (Tanner & Mazmanian, 2016). Youth susceptibility to gambling involvement and gambling problems suggests that college and campus students are chiefly exposed group. Many students have spare time, cash, independence, accessibility, and curiosity to play diverse gambling sports (Kam et al., 2017).

The aforementioned group of youth belongs to a cohort that has been exposed to online gambling in the age of technological revolution where land-based gambling sites were transferred to digital platforms. The word cohort denotes to persons who were born within a specific time range and are hence susceptible to comparable ecological factors. In a school setup, a cohort is referred to as a group of students who

enroll in university at the same time (Voorhees & Lee, 2009). A cohort outcome, consequently, arises when people from a cohort are influenced psychologically by such environmental resemblances. For example, a cohort of people of the same age who are going through the age of risk for gambling issues while betting prospects are expanding, may have larger and rising exposure to, engagement with, and societal acceptability of gambling throughout their lives than a cohort of individuals of the same age who are at risk during periods when gambling possibilities are limited (Staff, 1999).

So, the cohort of young adults who have been seduced by sports betting see their participation in risky businesses as rewarding while not being cognizant of the instant costs and bad effects of such businesses. Consequently, they're at a greater risk of acquiring gambling complications. In the same vein, research matching alcohol studies revealed that youths suffering from gambling problems are aware of the pros and cons affiliated with gambling. The study finalized that those suffering from gambling problems are conscious of the risks involved but estimate that these are non-current risks and when they become problematic, they shall have stopped their gambling (Harvanko et al., 2013).

Consequently, postponing the commencement of gambling experience for as lengthy as feasible might be a key protective element, especially because, throughout the transition, from adolescence to young adult, the progress from recreational gambler to a problematic gambler is considerably faster than in adults (Derevensky & Shek, 2011).

Research has found that men of all ages preferred competitive games, while women and the elderly preferred chance games (Tanner & Mazmanian, 2016). Furthermore,

men are more prone than females to be problem gamblers (Moore et al, 2013). According to data, males are more likely to engage in online gambling in Australia, particularly among the educated. Female involvement rates in both venue and online gambling are increasing, according to studies, and it's been believed that women may be more drawn to online gambling due to its related safety and ease (Ly, 2010).

The bulk of research has focused on male gamblers because gambling addiction is more common in men than in women (King et al., 2010). However, the increased popularity of internet gambling might be changing the demographics of women experiencing problem gambling. Compared with men, women usually are older at the beginning of the gambling (Hing et al., 2015). Furthermore, girls appear to acquire gambling problems faster than boys and exhibit a wide range of other mental health disorders in conjunction with their betting (Huic et al., 2017).

Given the greater perception of security over land-based venues, internet gambling might be a perceived risk variable for women. Females started gambling online at a younger age than males, (McCormack et al.,). Their use of digital gambling may explain why new investigation from numerous jurisdictions shows fast increases in female problem gambling, particularly amid younger females (Dowling, 2013).

Gender disparities in gambling motivations and perceptions have also been discovered by other scholars (King et al., 2010). Female problem gamblers, for instance, were shown to have worse mental health problems than male gambling addicts in a study of internet gamblers. In addition, women had a higher degree of over-indebtedness and higher scores on screening items linked to financial implications, and women did not have a reduced risk of substance-related issues than males, according to the current study. According to the evidence gathered, the problem may be at least as significant

—and maybe more severe in terms of comorbid psychological discomfort—in women as it is in males (McBride & Derevensky, 2017).

On the same note, because they have stronger positive expectations, young males are more likely to engage in addictive activities. Men can also reduce the danger of gambling and maximize the advantages gained. Men may also gamble more as a result of gender variations in role socialization (Dowling et al., 2014).

In the experience of the male gender, masculinity is frequently accomplished, and severally this entails acts of skill and bravery in particular scenarios (Beynon et al., 2020). Gambling, predominantly high stakes games of chance may give males the chance to demonstrate their capacity of braveness. Given this societal norm, it should come as no surprise that males engage in more skill-based gambling, such as blackjack or card games (Welte et al., 2011). In the context of these findings, it's critical to dig deeper into gender variances in gambling-related risk factors (King et al., 2010).

Even though only a small number of gendered gambling research has been done in the last decade, gender variations in problem gambling development, gambling choices, and motives are evident. Using literature such as social capital theory, gender role theory, socialization, and cultural geography, researchers can better understand why, for example, certain elderly women's gambling rises when their gendered care role declines (Holdsworth et al., 2012). Still, under the dynamics of sociodemographic characteristics, the data of nonwhite ethnic groups in a study which used a select sample of participants from New Jersey suggested that the cultural influence, familial and community attitudes concerning gambling, together with the availability of opportunities and the programming effects of reinforcement could subsequently lead

to gambling problems in select minority subgroups (Holdsworth et al., 2013). According to Maney (2013), Blacks and Hispanics are nearly twice as likely as Whites to have a gambling problem.

Given the high accessibility of gambling in Australia and its association with entertainment, a study that surveyed problem gambling and its associates among global and local college students found that students from overseas countries, particularly those whose country-of-origin restricted gambling, may be particularly vulnerable (Moore et al., 2012). Furthermore, students who travel from their native nation to a different nation may be at a higher risk of developing a gambling issue than inland students. These foreign students endure extra stresses connected to alienation and social exclusion imposed on them by being distant from family, acquaintances, and native country, in addition to the regular challenges connected with transitioning to maturity and adapting to campus life (Leung, 2001).

In Kenya, there are currently more than 30 approved betting companies and casinos (Wangari, 2019). In addition to these existing premises, gambling happens online, especially through smartphones. Facilities like M-Pesa by Safaricom permit handlers to place bets, wage losses, and get prizes on their handset without requiring a bank account (Mutua, 2019). The growth of the smartphone sector, as well as the following introduction of mobile payment services, has significantly contributed to the expansion of online sports betting in the nation. It meant that anyone with a mobile device could place bets on the Internet, even if they didn't have a Visa, MasterCard, or a bank account. This drastically transformed the country's sports betting business (Reporter, 2018).

The advertising budget of prominent betting businesses demonstrates the increasing industry's success. According to the most recent data from Reelforge, many gaming firms have surpassed the usual top ten ad spenders (Wangari, 2019). Betting businesses' relentless promotion, which allows you to gamble on your phone for as little as Sh1 and peddles such enticing lingo as "guaranteed bets," has seduced the younger (Cheruiyot & Mbugua, 2019).

According to research done by Geopoll in Sub-Saharan Africa, the cellphone has become the handiest instrument for individuals who gamble. Around 75% of individuals who gamble do so via their cellphones, with Kenya holding the greatest percentage of cellphone gambling users at 96 percent (Ochieng & Nyayieka, 2019).

According to a study, people who have a proclivity for one addiction are more likely to develop another. A combination of genetic and neurological factors could be at play. Some individuals who are addicted to gambling could also be addicted to illegal substances. This could be due to genetic susceptibility to addiction (Nordqvist, 2012).

It should be taken into account that the social motive to gamble is about as powerful as the money motivation when it comes to skill games gamblers and never drops through time. This contrasts with the case of gamblers who play chance games and experience a significant drop in social contact (Derevensky et al., 2014).

The results from a comparative study on the prevalence of gambling in Midwest universities showed that college students gamble and, on many occasions, on sporting events. Fascinatingly, just 2.6% of the participants said games of chances influenced their schoolwork, but several pointed out secondary activities related to gambling can indirectly take a substantial chunk of their time vacant for study (Delfabbro et al., 2009).

Also, actions for example binge drinking and drug abuse go hand in hand with gambling (Gainsbury et al., 2014). This can rob more time away from school obligations and lay down frustrations upon students. A significant number of students who indulge in gambling are ignorant of the fact that these activities accompany each other (Calado & Griffiths, 2016). The possibility of actualizing this ignorance occurs because gambling is a hidden problem in which visible manifestations aren't as plausible as other addictions. Thus, people may not recognize or willingly admit they possess a problem or that gambling contributes to these other abuses and addictions (Gainsbury et al., 2014). They may deceive family members and acquaintances to conceal their behavior and may seek financial assistance from others. Some gamblers desire thrill or pleasure in their gaming, while others seek escape or numbness (Wangari, 2019).

Another cause for concern centers on the amount of money students spend on gambling. Low-income students have a chance of lacking the capability to settle their debt because the income of students is lower than that of an earning adult and many college students suffer from debt due to misuse of their funds (Moore et al., 2012). Hence these individuals would likely indulge in gambling in the hope of managing to pay off their debt. Consequently, they stand a chance to increase the risk of developing financial problems affiliated with problem gambling behavior (Krawczyk & Własiuk, 2021).

In 2019 the Kenya government ordered telecommunication firm, Safaricom to shut down the playbill numbers and short codes of 27 online betting companies whose licenses were yet to be renewed (Achuka & Wafula, 2019). The telecommunications industry, which has reaped the benefits of the widespread betting frenzy, was

expected to be severely harmed (Report, 2019). The betting industry in Kenya depends almost entirely on mobile money transactions by gamblers. Those who win also collect their winnings through the same wallets, unless the amount won is so big that the payment has to be made through a cheque (Achuka & Wafula, 2019).

Between 2016 and 2018, the number of Kenyan youths on credit bureau blacklists increased from 150,000 to 500,000, according to a study by think tank CGAP (Igadwah, 2019). However, it's hard to measure the precise association between digital borrowing plus mobile betting because borrowers may be unwilling to disclose that they utilize their mobile loans to bet. In a survey, just 3 percent of digital borrowers outlined sports betting as the purpose for borrowing loans. Nevertheless, when participants were inquired whether they have once participated in mobile betting, digital borrowers were about double as likely to relay having tried mobile betting in comparison to nondigital borrowers (Kaffenberger et al., 2018).

Furthermore, figures from the betting business present a bleak image of compulsive betting, which has resulted in social unrest, economic catastrophe, and sometimes even suicides (Igadwah, 2019). These calamities pointed out the necessity to clean up the gambling sector which is destroying our family and children (Cheruiyot & Mbugua, 2019). Several Kenyans are committing suicide as a result of gambling (Amutabi, 2018). After losing KSh 80,000 in sports betting, a Kenyatta University student killed himself. The dead left behind a statement stating that the money he was given to pay school fees had vanished in gambling and that he saw no reason to live (Kasami, 2016). The most catastrophic example is that of Kennedy Kosgei of Eldoret, who borrowed Sh45,000 from Kenya Commercial Bank and used it all on online

betting company Sport-pesa. Soon after, he was discovered hanging from a tree, after his favorite team was defeated by a solitary goal (Makana, 2016).

There have been several media reports like this in Kenya, to the degree that hearing similar stories is now commonplace. The Nation conducted a spot check and discovered that some young men and women have grown addicted to sports betting, which is usually motivated by a desire to make quick money. They gamble on the growing number of betting platforms that have sprouted up in Kenya (Otieno, 2016). Families are unable to pay school fees and rent because the breadwinner has gambled away their only source of income. There have been cases of university students dropping out because they gambled their fees away (Amutabi, 2018). A Maseno University student lost KSh 40,000 in a football bet that was supposed to pay his fees. The money was a loan, and he would have to repay it in the future. The student was compelled to quit out since he couldn't afford to pay for his education (Hussein, 2016). This is an important issue that needs to be addressed urgently (Amutabi, 2018).

A study showed that the peer group influenced to a large extent the betting behavior among students with most painting the glamorous side of sports betting (Barrault & Varescon, 2013). Social care and social attachment are among the protective variables concerning gambling issues (Oksanen et al., 2019). The absence of actual social sustenance from loved ones is a recognized risk feature for the growth and maintenance of problems related to gambling (Räsänen et al., 2016).

All gamblers, including those who aren't pathological, are prone to cognitive illusions. Due to a range of cognitive distortions in the processing of chance, skill, and probability, one of the defining characteristics of gamblers' cognitions is the tendency to overestimate the possibility of winning. (Clark, 2014). In the treatment of problem

gamblers, research on cognitive distortions is critical. The severity of gambling disorders is linked to the degree of cognitive errors. The desire to recoup one's losses, as well as the emotional stimulation generated by gambling, have been the cognitions that were most strongly linked to the severity of gambling disease (Romo et al., 2016).

Families play a crucial part in the evolution of gambling and are harmed when one of their members engages in disordered gambling (Grant et al., 2015). Older adult gamblers discovered that extended family members had typically introduced them to gambling at a young age (Ohtsuka & Chan, 2014). Relationship issues, disagreements, financial difficulties, and intimate partner violence have all been reported as detrimental effects of disordered gambling on the family in a number of studies (Dowling et al., 2009).

The consequence of gambling problems on cherished relationships have been split into three clear-cut phases: 1. the denial phase, 2. the stress phase, and 3. the exhaustion phase (Ferentzy, 2015). The cherished relationships of individuals with gambling problems include unhealthy communication, relationship, and sexual discontent, conflict, and quarrel, and thoughts of separation or divorce (Conlin & Sillence, 2021).

On the explanation of the impact of gambling problems on the family environments, people with gambling problems are likewise characterized by increased levels of vexation and quarrel together with low degrees of clear and constructive communication, high dependency, less participation in intellectual and cultural pursuits, a lack of devotion and support, the minimal direct utterance of feelings, and reduced participation in social and relaxation activities (Vegni et al., 2019).

Moreover, the youngsters of individuals with gambling problems are disclosed to a scope of family stressors, together with financial and emotional impoverishment, physical separation, erratic discipline, parental abandonment, poor role exemplar, family conflict, and minimal security and stability (King et al., 2015).

As a result, the importance of family members remaining attentive must be highlighted, as many families are ignorant of the full level of financial devastation caused by gambling, owing to older adult gamblers' reluctance to disclose the severity of loss with younger family members. Families must also be educated not to allow gambling because of respect for the elder. It's also obvious that many older adult gamblers moderate their conduct in response to familial pressure. Family members must be educated so that they can urge people to seek help so that treatment and recovery can begin as soon as possible. (Subramaniam et al., 2017).

Positive psychology is also addressing substance abuse and its association with positive aspects like prosocial behavior. Regardless of the substance of abuse, there is a negative link between the two factors, therefore prosocial behaviors function as a protective factor against gambling addiction (Esparza-Reig, Martí-Vilar et al., 2021). As of now, steps have been taken to legalize gambling in many parts of the world (Gitau, 2018). In Kenya, betting is legal but controlled by a board responsible for permitting and regulation of betting. Rules controlling this sector were enacted in 1966 when betting was started. Based on Betting Act 131, betting is restricted to persons above 18 years, public betting is illegal, and betting companies must be taxed (Mutuku & Vyas, 2013).

However, the abovementioned Act applies only to land-based gambling sites and now we have evolved and are using online platforms to gamble. So, it was revised in 2017

but it still has blatant lapses and subterfuges, which are causing the current difficulties experienced in the sector (Mwadime, 2017). Nevertheless, majority of the nations in Africa miss sufficient control and legislation that can guard those who are exposed and underage and give constraints and systems to guard against money laundering (Yawe & Ssenooba, 2014).

Statement of the Problem

Problem gambling is clinically recognized as a gambling disorder. It is an addiction ingrained in the brain. It afflicts individuals of all ages ranging from adolescents as young as 10 years to adults in their elderly age (Yau & Potenza, 2015). The online sports betting industry in Africa is being fed by faster internet, cheaper phones, and a love of the English Premier League. One government minister called this “a curse on youth” (Smith & Senga, 2019). The latest Infotrak survey on gambling which polled 1,048 persons representing Kenya’s 19.4 million adult population indicates that 70 percent of those who bet are youth aged between 18-35 years. Men lead this pack of gamblers with 74 percent compared to women with 26 percent (Kajilwa, 2019).

A 2017 GeoPoll survey found that Kenya has the highest number of youths in sub-Saharan Africa who range between the ages of 17-35 and gamble frequently. Uasin Gishu County leads in the number of betting individuals with 30 percent followed by Nairobi 19 percent and Central 12 percent. Nyanza, Coast, and North-Eastern regions have the least number of people involved in gambling all below ten percent (Kajilwa, 2019).

Problem gambling may easily befall youth who are at a higher risk, have never been exposed to gambling, or don't comprehend how it works. Any time gambling causes problems in the life of a gambler, he or she is by definition experiencing problem

gambling. Moreover, gambling affects the financial situation and, there can also be a serious impact on mental health.

According to the Royal College of Psychiatrists, problem gamblers are more likely than others to suffer from low self-esteem, develop stress-related disorders, become anxious, have poor sleep and appetite, develop a substance misuse problem, and suffer from depression. Due to the increased cases of gambling, several studies by (Dowling et al., 2017; Koross, 2016; Mwadime, 2017; Ogachi et al., 2020) have sought to research diverse psychological and behavioral problems associated with gambling. This study seeks to fill the gap concerning the prevalence of problem gambling and its associated risk factors and protective factors among students of Strathmore University in Nairobi County. This study is highly distinguished from the study done by (Koross, 2016) because she examined the effects of betting on the behavior of Kenyan university students.

Purpose of the Study

The purpose of this study was to determine the prevalence of problem gambling and its associated risk factors and protective factors among the students of Strathmore University.

Objectives of the Study

The study was steered by the following research objectives:

1. To identify the prevalence of problem gambling among students of Strathmore University in Nairobi County, Kenya.
2. To identify the risk factors associated with problem gambling among the students of Strathmore University in Nairobi County, Kenya.
3. To identify the protective factors associated with problem gambling among the students of Strathmore University in Nairobi County, Kenya

Research Questions

The study was directed by the following questions

1. What was the prevalence of problem gambling among students of Strathmore University?
2. What were the risk factors associated with problem gambling among university students of Strathmore University?
3. What were the protective factors associated with problem gambling among university students of Strathmore University?

Justification for the Study

Kenya is regarded as the Mecca of sports betting. According to (Mwadime, 2017) majority of gamblers in Kenya are under the age of 40. Youth with post-secondary education make the majority of the country's population involved in gambling. 29% of gambling participants are students (Wangari, 2018), and more than 78% of university scholars in Kenya wager once a week at the very least (Koross, 2016). It has also been determined that university students are especially vulnerable to gambling disorders compared to the general population (Hing, et al., 2015). As gambling, and particularly sports betting, becomes pervasive in the country, its adverse effects continue to get acute (Dahir, 2017). Therefore, it was crucial to carry out this study that fills a gap through determining the prevalence of problem gambling and its associated risk factors and protective factors among the youth in Strathmore university.

Significance of the Study

Learning more about youth gambling and problem gambling can increase awareness of risk factors and protective factors associated with problem gambling. Results from this research could also update gambling prevention programs in universities as they

specify which groups are more susceptible. Peer educators can use this information to educate students about how gambling occurs and the risks of placing bets. Plus, what to do if they suspect problem gambling is affecting one or more of their classmates. Authors can obtain information from this study and use it as a source of knowledge to write publications that can enlighten parents about the importance of speaking about gambling addiction, the low odds of winning from sport betting opportunities, and the need to speak about the risk of problem gambling just as they would speak to them about the dangers of drug and alcohol abuse. his study can also be useful in helping counseling psychologists to create treatment plans for college students who need help for their problem gambling, support, and treatment. Finally, NACADA and other rehabilitation centers can use the results from this study to develop more effective treatment plans for gambling addicts.

Assumptions of the Study

The assumptions of this research were that:

1. There was a high prevalence of problem gambling among a sample of university students.
2. There were risk factors to gambling among students of Strathmore University
3. Respondents were honest in answering questionnaires.
4. Protective factors were lower in problem gamblers than non-problem gamblers.

Scope of the Study

The study was done amid a sample of Strathmore university students in Nairobi West ward Nairobi County. A sample of 264 students of the university was chosen to partake in the study. These partakers were young adults between the age of 17 and 35

and from the general population. The researcher carried out the study between July and October of 2021.

Limitation and Delimitation of the Study

1. Stigma: people suffering from gambling addiction may experience stigma therefore some students may not be willing to share truthful information to protect themselves from stigmatization. To overcome this, the researcher informed the participants that he is governed by a counseling code of ethics which disciplines him to practice confidentiality.
2. Openness: Participants may be reluctant to provide the information demanded on the questionnaire. So, the researcher worked with willing participants.
3. Cooperation: Students may be uncooperative. Consequently, the researcher collaborated with students' leaders of Strathmore University who can assist him to collect information.
4. Ignorance: Some respondents may not know the types of gambling and whether sports betting is classified as gambling. To solve this, the researcher educated them about the types of gambling in the event of data collection.

Definition of Terms

Gambling: Gambling is described as the staking of money or valuable personal things on random events or activities with unknown consequences (Hing, Russell, Tolchard, & Nower, 2016). In this study, gambling implies a situation in which a better is willing to risk money in the hope of winning more money.

Problem gambling: Difficulties regulating the amount of money and/or time spent gambling, resulting in negative effects for the gambler, those in his social network, or the community (Neal et al., 2005). The words problem gambling was used as a

synonym for pathological and disordered gambling recognizing that every gambling addict is a problem gambler but not every problem gambler is a gambling addict.

Risk factor: Risk elements are conditions affiliated with a rise in the probability of problem gambling (Dowling et al., 2017). These factors refer to elements that add to the development of gambling problems or trouble stopping it.

Protective factors: Protective elements are behavioral or social ecological factors that are linked with a decreased risk of problem gambling, or that alter the effects of risk variables (Carlo, Crockett, Wilkinson, & Beal, 2010). In this context, protective factors shall refer to circumstances or characteristics of people, families, and community which, when they exist, can reduce or remove the risk of youth problem gambling.

Sports betting: The act of placing a monetary stake on the result of a specific sporting game ("Gambling legislation and regulations", 2016) In this study, it is synonymously used to refer to gambling through placing a financial stake on the result of a football game.

Youth: A person who has reached 18 years and hasn't reached 35 years (The Kenya Constitution 2010: Article 35). However, for this study, the researcher focused on the youth aged 17-35 years to include the younger students in the general population of Strathmore university student fraternity and the term young adult shall be synonymous with youth.

Summary

The first chapter of the study offered the introduction of the study, background to the study, statement of the problem as well as the drive of the study. From the problem

statement, study objectives and research questions were drawn. The chapter also focused on significance, justification, assumptions, limitations, and delimitations as well as the scope of the study. At the end of the chapter is the definition of terms used in the study.

DAYSTAR UNIVERSITY

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter looked at the available literature relevant to this study. It encompasses an introduction, a general literature review that looks at problem gambling, issues that have emerged as a result of gambling, the empirical literature review that looks at various studies that have been done on prevalence and risk factors of gambling, the conceptual framework and the summary of the chapter.

Theoretical Framework

Cognitive Behavioral Therapy

Cognitive-behavioral therapy is a canopy term for several diverse therapies that share some mutual fundamentals (Mcleod, 2019). It is now regarded as the most effective approach of treating a gambling addiction. This style of therapy assumes that irrational ideas related to a person's capacity to control the game and foresee the outcome are the primary variables that govern the development and maintenance of this disorder (Rizeanu, 2018). At their core, CBTs share three central proposals i.e., mental activity influences behavior, mental activity may be observed and changed, and finally wanted behavior modification may be attained through mental alteration (Dohson, 2017).

That fundamental assumption asserts that ideas, beliefs, attitudes, and thinking, rather than incidences, are the primary drivers of human emotions and conduct. As a result, altering one's mindset causes emotional and behavioral changes (Edelstein, 2017).

While the source of illogical and flawed mental beliefs and schematics stays mysterious, social learning understandings, secondhand and involved acquaintance to

familial and peer-related betting, mass media depictions, religiosity, and cultural impacts, and individual experiences have altogether been hypothesized to play noteworthy parts (Rickwood et al., 2010). These aspects aid to form a person's attitudes on the way to, and acceptance of, gambling as a leisure activity that offers chances to the enhancement of one's salary via winning (Dowling., 2005).

Mental falsifications can be generally defined as those involving ability and judgment (misapprehensions of control), which exaggerate the confidence in one's own skill to influence the outcome of random occurrences. On certain occasions, gamblers share the belief that randomness is an illusion. These gamblers generally believe that the result of sports games could be predicted. This is the famous belief that causes random events to appear peculiar (Rickwood et al., 2010).

Next in order, mental misrepresentations can be categorized into those connecting to ownership of traits or characteristics. This might play a serious part in gambling behavior. Plus, it can direct gamblers to possess an illogical expectation to earn and to draw a general conclusion about their sense of control. Conversely, through the banging of divination sticks to the rattle of huckle bone dice, gambling has been carried out by humans since paleontology (Lee, 2010). There is a belief in ritual behaviors that increases one's probability of winning. In fact, the hallmark of gambling is its uncertainty which plays a crucial role in gambling attraction (Kim et al., 2015).

Furthermore, gamblers who lost a bet seem to use these fluke occurrences to rationalize the outcome whereas those who were victorious brushed off their significance. Hence selective recall plus prejudiced memories of aftermath lead to the center of attention to be positioned on victories (Güngör et al., 2018). Gamblers in the

mirage of control conditions showed prejudice in their assessment of results in the initial round and focused on personal skills. They dismissed losses or affiliated them with outside unforeseen factors (Devos et al., 2020).

Finally, mental distorts can be categorized as flawed perceptions about likelihoods, independence of events, and prospects of forthcoming wins after losing streaks (gambler's fallacy). These rational prejudices, which are described by attributional theory, may take part in a critical part in the growth and preservation of gambling activities (Winters & Derevensky, 2019). The thinking-aloud procedures provide entry to point of view on which mediations could be founded in the curing of problem gambling (Russell et al., 2018).

The ABC Method of Irrational Beliefs, formulated by Albert Ellis in 1957, is a major supporter of the CBT Theory which was founded by Aaron Beck. Dr. Ellis argued that it is not the triggering event (A) that creates negative emotional and behavioral consequences (C), but rather that a person interprets these experiences incorrectly, resulting in an irrational belief system (B), which contributes to the consequences (C) (McLeod, 2019). The critical questions are: "are my C's (the way I feel right now and the way I am behaving or intending to behave), helpful or hindering to me?" and "how are my B's influencing my C's?" (Scott, Bell, & Wybron, 2016).

To demonstrate the operation of the ABC Model, the researcher considered the behavior of a young adult whose alias name is John Doe. The activating event (A): John Doe wants money which he can use to buy sports shoes and computer games. He is psycho-triggered by an announcement in the news of a lucky Kenyan winner receiving a cheque of ksh10 million from Betway Kenya and wonders whether he should also use his pocket money to place a jackpot bet worth ksh10,000 to try his

luck and probably be a lucky winner too. His thoughts at the moment belief (B) are: If I take a risk by placing a Ksh10,000 bet at Betway Kenya, I stand a chance to win the jackpot like the Kenyan I saw in the news. All my money problems would be over, and I shall afford anything I wanted. (Note: notice how some of the beliefs (B) are about the causes of the activating event (A) “my money problems will be over” and some are about the implications (the future) of the (A), “I shall afford anything I wanted”). Consequence (C): John Doe feels excited and is compelled to place a Ksh10,000 bet via SMS. Unluckily, he doesn’t win and feels disappointed and cheated out of Ksh10,000.

A psychotherapist who uses the CBT approach aids a client to understand and alter their thinking style by using proof and rational views (Cognitive Behavioral Therapy Part 1 -An Overview, 2010). In this case, the counselor would aid John Doe to realize that there is no evidence that he stands a chance to be a lucky winner and that his probability of winning the jackpot is small (45 million to 1). It would therefore be nice to have the cash, but this likelihood mean he will be short of pocket money and Ksh10,000 is a lot to lose in his circumstance.

As a result, instead of betting on the jackpot, John Doe chooses to place a single bet of Ksh100 by SMS (you never know!) and save the rest of the money, which he uses to buy a computer game he has desired for a long time. He is pleased with his decision not to put all of his eggs in one basket. This “self-talk” may be constructive and supportive, or it may be negative, irrational, and self-defeating. Positively talking to oneself to triumph over the impulse to gamble or to interrupt the dependency of gambling can be effective. Self-talk can be the most immediate way to stop the compulsion to place a bet, and it helps make gambling behavior less automatic.

According to the cognitive model, pre-existing ideas and attitudes, as well as familial and social connections, impact the chance that an individual would choose to gamble after being exposed to gambling chances. Early victories may lead to the assumption that betting is a simple way to get money. Credulous myths emerge in reaction to random relationships between external factors being misunderstood as causally related, with wins serving to promote the illusion of control and confidence in luck (illusory correlations) (Rickwood et al., 2010).

Most people who have a problem with gambling understand at a certain stage that there is no way they will secure all the money they have lost but they continue to “pursue their losses”. They gamble greater to recover what they have already misplaced. In other phrases, they rationally recognize the truth, however, when they get into the situation their mind and ideas end up irrational (“Cognitive Behavioral Therapy (CBT) | Gambling, Gaming & Technology Use,” 2013). At this juncture, we realize that by elaborating the activating event that drives a problem gambler to gamble when practicing to rationally build self-control, such "discerning" ways of examining can aid him to learn techniques of how to handle his thoughts and conduct. He will be maneuvering the occurrences the moment he begins to think differently. Eventually, He shall accomplish being adept in responding to his behavior and ability to change it positively (Rizeanu, 2018). The gambler's fallacy (a belief that a win will come after a string of losses); cognitive remorse (regret over quitting too soon and losing out on the next win); and entrapment (chasing losses) are all cognitive variables that contribute to gambling persistence (motivation to maintain a course of action because one has already invested so much to date). Although cognitive theories have empirical validity, they do not explain the functional relationship between

cognitions, arousal, and reinforcement, nor the transition from recreation to problem gambling (Rickwood et al., 2010).

The purpose of using the CBT model in this study was to aid the researcher and reader to obtain an explanatory understanding of problem gambling which is still a virgin problem that is affecting youth in the sub-Saharan region. This theory aimed to lay the groundwork which provides a knowledge base of how the gambling problem develops and brings to light its associated risk and protective factors.

Ecological Systems Theory

This theory, released in 1979, inspired many psychologists in terms of studying the individual and the consequences of many environmental systems that he meets (Sincero, 2012). The need to understand many sorts of social circumstances of human behavior is based on social psychology. Consequently, the researcher chose Urie Bronfenbrenner's ecological theory of human growth to provide a theoretical framework for this research because it permits the researcher to move past the individual and to observe the immediate and the wider environmental influences in the evolution of problem gambling (Bronfenbrenner, 2005).

The ecological system approach also allows for the integration of the shared contributions of individual, family, and social-related forces in the progression of problem gambling (Halgreen, 2012). Most crucially, risk and protective variables for youth gambling disorders are best understood through an ecological model that acknowledges the interwoven interaction that occurs between the individual and his or her environment (Derevensky, 2011). A literal definition of ecology is the study of life at home. Emphasis is laid upon the sum or pattern of association between creatures and their environment. It can therefore be perceived as the basic cornerstone

in which all items in nature are associated with one another in a complicated but orderly way (Higgins et al., 2012).

Courtesy of this theory, we can explain why we behave differently when we compare our conduct in the company of our family to our behavior while we are at school (Sincero, 2012). Students from families who are not opposed to youth gambling and who cannot appreciate the consequences of youth gambling are more likely to struggle with gambling disorder. They're also more likely to develop gambling issues if they're already risk-takers and hang out with classmates who gamble and battle with other problematic behaviors (Canallatos, 2019).

The contexts of development can be organized into five levels of external influence in the ecological model. These levels are categorized from the most intimate level to the broadest (Sincero, 2012). On a personal level, individual-psychological characteristics that upsurge the chances of gambling disorders are assessed. Interpersonal rank impacts report the likelihood of associations with a partner to mold someone's gambling behavior (Welte et al., 2015).

One of the most important discoveries made by Urie Bronfenbrenner in his research of ecological systems is that siblings may experience radically distinct surroundings even though they are in the same ecological system. The ecological theory may show the diversity of connected impacts on youth development by investigating the many ecological systems (Bronfenbrenner, 2005).

The present cohort of young adults is at an age of participating in risky behaviors when gambling opportunities have been increased. The online setting in particular provides several possibilities for gambling activity (Oksanen et al., 2021).

To that effect, the social-ecological framework will investigate the emergence of gambling issues from the perspective of nested spheres that include both personal and situational elements. The sections are based on the basic principles provided by the social-ecological model, which demonstrates that human behavior and evolution occur in a variety of environments ranging from micro to macro and are dependent on a person's unique qualities (Bronfenbrenner, 2005).

Risk factors and protective variables associated with problem gambling can be structured using the socioecological model within a multi-level framework that takes into account the many settings in which these factors occur (Dowling, 2017). The socio-ecological model has three levels: 1. Person level: Factors particular to the individual, such as health and psychological difficulties; 2. Relationship level: A person's closest social sphere – family members, peers, educators, and other close contacts – that donate to their array of experience; 3. Community-level: The surroundings in which communal relations happen, such as schools, offices, and localities; and .4. Societal level: Wide-ranging societal factors, for instance, social & cultural customs and social guidelines that contribute to financial and/or social disparities between inhabitants (Dowling et al., 2017). Awareness of the contexts in which students find themselves can aid us in noticing variances in how they act in different situations (Psychology Notes HQ, 2013). The aforementioned spheres are represented in figure 2.1.



Figure 2.1: Measuring gambling-related harms: a framework for action
 Source: Wardle et al. (2018)

Intrapersonal elements associated with gambling behavior have been properly settled in research. Problem gambling is increasingly common among younger adults (Calado & Griffiths, 2016). The degree to which males gamble is higher than females in general, and gambling is the source of more setbacks for males in comparison to females (Dowling et al., 2017). Other intrapersonal parameters associated with individuality are also crucial for comprehending problem gambling. Likewise, some individuals have a higher chance of taking risks and this has on occasion been affiliated with problem gambling (Slutske, Capsi, Moffitt & Poulton, 2005).

Monetary risk-taking is also rampant among the youth. Studies also point out that individuals with low self-esteem might be inspired to gamble (Oksanen et al., 2017). When it comes to interpersonal factors, they comprise of individual's social bonds. Problem gamblers record under perceived social support (Canale et al., 2017). Albeit offline social bonds supply a protective factor that combats problem gambling, online

social bonds entail risk factors associated with problem gambling (Savolainen et al., 2019) particularly on social network sites where gamblers effortlessly participate in various social quorums (Kaakinen et al., 2018) that might also bring risk in the direction of problem gambling. Furthermore, fitting into social standards which involve sports betting affects gambling behavior (Savolainen et al., 2020).

On the organizational level, elements comprise communities, institutions, and wider infrastructure that aren't limited to a few individuals. One example of such institutions is gambling establishments such as electronic sport betting sites. Entry to the online sport betting community and the rest of the gambling content is quicker and easy online (Sirola et al., 2020). Moreover, gambling communities usually pay attention to sharing gambling tips. These kinds of communities were categorized as a risk factor for problem gambling in a former study from Finland that also recognized these tribes, which youth frequent online, usually center on gambling communities and tips more willingly than negative effects generated by gambling or healing from gambling problems (Sirola et al., 2018). Alternative organizational elements also command gambling behavior. Emerging opportunities for granting cash and borrowing, have been justified as a great risk for financial hardship, particularly for the youth (Worthy et al., 2010).

These loans happen through the Internet and are intensively marketed to browsers. On top of that, problem gamblers appear to acquire greater advertisements related to gambling, which are liable to psycho-trigger their gambling (Abarbanel et al., 2016). At the moment, online marketing provides extra preying on and personalization in contrast to before, and problem gamblers have a greater chance of receiving advertisements concerning both gambling prospects and instant credit on their social platform (Parke et al., 2014).

At the communal level, factors covering the impacts of the larger setting in which the person resides are presented. Therefore, upon taking into account gambling behavior among the youth, supply, accessibility, and marketing of games of chances in the community are especially important (Deans et al., 2017). Many a time, problem gamblers function in a bubble, and breaking out of such a bubble is hard when marketing algorithms regularly mark the gamblers for gambling advertisements (Savolainen et al., 2020). Finally, the societal domain is rooted in the conceptualization of societies or broader unions (e.g., the African Union) as macrosystems that affect people regularly.

This entails legislation to be specific, notwithstanding cultural and societal elements also perform a task (Calado & Griffiths, 2016). Worldwide, the prevalence of problem gambling stretches from 0 to 6%, and regardless of some variation in prevalence estimates, results across nations are relatively steady (Calado & Griffiths, 2016). Fresh results reveal that gambling problems are notably major among young adults in Spain (Newall et al., 2019), simultaneously, the U.S.A, South Korea, and Finland are pretty more equivalent in their young adult problem gambling prevalence estimates (Kang et al., 2019).

In summary, the ecological theory gives a suitable framework for comprehending the host of perilous factors and protective variables associated with gambling disorder amid the youth and the complicated correlations that are present amidst the factors embedded inside the various ecological systems.

General Literature Review

Gambling is a multicultural and worldwide activity which as a rule includes the staking of money on a result that is ruled by chance (Ssewanyana & Bitanihirwe,

2018). Problems arising from too much gambling are a worldwide concern. At the moment, gambling is growingly done online, and ordinary social network sites uncloak users to the gambling hustle and bustle (Oksanen et al., 2021).

Globally, the prevalence of problem gambling stretches from 0 to 6%, and regardless of some variation in prevalence estimates, results across nations are relatively steady (Calado & Griffiths, 2016). The prevalence rate of Gambling Disorder in the general population is estimated to be between 0.4 and 1.0 percent. It is roughly 0.2% in women, whereas 0.6% in men (American Psychological Association, 2013).

In the United States, the generation prevalence of gambling addiction has been estimated to be 0.42 percent, which is similar to the rate found in Western European nations (Costes et al, 2011). Concerning male youth, they appear to be more active gamblers than their female counterparts (Derevensky, 2012).

Horse races, which were large sporting events that drew large crowds, were the first form of sports betting in Europe. People used to go to horse races to put bets in the early 1990s. Bookmakers began accepting bets over the phone and, eventually, over the Internet. People began to gamble on European football matches as the sport expanded in popularity, and as technology improved communication channels, sports betting increased alongside it. Between 2010 and 2011, gambling revenues in the United Kingdom were £5.5 billion, with sports betting accounting for more than half of it (53 percent) (Mao et al., 2015).

During the 1990s, as states rushed to establish commercial casino enterprises, legal gambling spread across the United States at an unprecedented rate. To date, all but two states have legalized some sort of gambling; casino gaming is permitted in more

than 20 states, with 500 licensed casinos in operation, and forty-one states and the District of Columbia have legalized lotteries, all of which have resulted in a major rise in gambling activity and income. Since the first comprehensive national poll on gambling behavior in America was sponsored by the Commission on the Review of National Policy Toward Gambling in 1975, the gambling sector has grown tenfold (Volberg, 2001).

The first national assessment of college gambling concentrating on the regularity of college gambling and its related risk factors was undertaken by (LaBrie and colleagues, 2001). According to the findings, alcohol-related behaviors, notably binge drinking, were the highest risk indicators of gambling, while being a man was the biggest demographic driver of gambling (Conrad, 2014).

Young adults are far more likely than older people to wager on major categories of games of chance. In a poll of 17,000 individuals in South Australia, for example, it was discovered that 51 percent of those aged 18 to 24 had gambled on gaming machines in the preceding 12 months, compared to 29 percent of those aged 45–54 and 29 percent of those aged 65–74 (Rickwood et al., 2010).

Youth are the predominant users of the Internet and social network sites and therefore at distinct risk of developing problems associated with gambling. In the sub-Saharan Africa (SSA) region, the youth find themselves gravitating towards gambling-related events; a problem, that if left unrestrained, can head to unfavorable side effects including financial strains, crime, and mental wellbeing issues (Bitanihirwe & Ssewanyana, 2021).

Currently, gambling problem is classified in “Substance-Related and Addictive Problems,” reflecting a change from the previous categorization of Impulse Control

Problems. This puts it in the same category as drug and alcohol abuse (American Psychiatric Association, 2013).

At the core, gambling conduct is comprised of risk-taking, can require minimum skill, and can ultimately be conceptualized on an ongoing process ranging from non-gambling, recreational gambling, to problem gambling and pathological. Pathological gambling usually happens with various problems and its social, economic consequences conceptually rise once the brink of problem gambling is passed (Heiskanen & Egerer, 2018).

Prevalence of Problem Gambling

Gambling is widespread among university students but under-rated. The students barely perceive it as highly risky behavior. Instead, they view gambling as a harmless recreational activity that is more accessible as compared to consuming alcohol (Yang, Zhong, Wu, Li, Li, 2016). In spite of the popularity of on-campus gambling, and notwithstanding the fact that virtually all institutions have alcohol and drug rules, just 22% of US colleges and universities have formal gambling regulations (Nowak & Aloe, 2013).

University students are also categorized as emerging adults experiencing a major formative period pronounced by vast exploration of self-analysis plus growth of individual interest (Jang et al., 2019). Consequently, a significant number of emerging adults start gambling at a tender age then they commence different risky behaviors for example smoking and drinking alcohol (Marchica et al., 2018). Therefore, when they eventually mature to their college years, several young adults have already participated in gambling for a significant period, while some can just participate in gambling as a sort of rite of passage (Petry & Gonzalez-Ibanez, 2013).

Nonetheless, the group of young adults ranging between 18-25 years have become particularly susceptible to problems associated with gambling problems to a substantially higher degree than the overall adult population, because they're usually specifically aimed at advertising operations (Sassen, et al., 2011).

Furthermore, one's socioeconomic class, ethnicity, and geographic proximity to gambling establishments have an impact on the prevalence and appeal of each sort of gambling activity. (Derevensky, 2012). The lower socioeconomic group usually has greater gambling rates (Wormer et al., 2013). Black Americans, Caucasians, and Mexicans had lifetime prevalence rates of gambling disorder of roughly 0.9 percent, 0.4 percent, and 0.3 percent, respectively (American Psychological Association, 2013).

According to research from the United States, Norway, Canada, the United Kingdom, and Australia, 63–82 percent of 12- to 17-year-olds gamble per year (Monaghan et al., 2008). Stereotypically, a youngster will have their initial gambling involvement when he is 12 years old. That is at a slightly earlier average age than that at which they commence the usage of tobacco, liquor, or other drugs (Jacobs, as cited in Ashubwe & Miano, 2018).

Taking into account that 4 out of 5 university students confess to gambling and that roughly 8% gamble problematically, shows that problem gambling is particularly significant among students from institutions of higher learning, numerous of whom have the funds, closeness, free time, and longing to become involved in the innumerable options of gambling now accessible (Nowak & Aloe, 2013). It is therefore paramount that the dean of students be conversant with this data and be

ready to address, and essentially aid obscure, gambling-related problems and their accompanying issues on university campuses (McComb & Hanson, 2009).

Technological advancements such as the internet and mobile telephony are increasingly providing new distribution channels for gambling involvement by young people, who are perceived to be more 'technologically smart and astute' than their parents. In light of online gambling marketing, it is supremely aimed and prevalent in the area of sports. For the individuals who are aimed at, (e.g., sports fans), consumption of this marketing content can be unavoidable (Cassidy & Ovenden, 2017). The most famous game plan for marketing includes raising knowledge of brands, advertising complicated financial stimulus for involvement, and promoting tricky betting odds (Newall et al., 2019).

When it comes to gender variances in the association with betting activities, a national representative study in France found that the affiliation of gambling problems in females with suicidal behavior was stronger than in males (Husky et al., 2015). In the USA, states have decreased their gambling to the age of 18. Due to this change, gambling took it as an opportunity to direct their market to aim this younger generation (Wong et al., 2012). Consequently, there were generally higher chances for males than females to be problem gamblers. Male problem gambling was linked to impulsiveness, drug addiction, and alcoholism. On the other hand, the problem gambling of females was affiliated with joblessness, psychological disturbances, and childhood abuse (Merkouris et al., 2016).

Currently, it is now being argued that every gender possesses its cluster of peculiar risk factors and so they must be assessed separately. A remote consequence for gender was discovered that males commence gambling at a tender age while females usually

start gambling when they have aged but develop problems associated with gambling at a faster rate (Derevensky et al., 2011).

A current study approximates that 6% of university pupils in the United States of America have a severe gambling problem nevertheless, college students seem to grow out of these calamities in the same order they do with binge drinking and drug abuse once they graduate. In comparison to female college pupils, their male counterparts have a higher chance to have partaken gambling in the previous year, gambled using money, and reported possessing problems associated with gambling (NCRGBlogTeam, 2014).

Many of the risk factors that predispose people to other addictive behaviors are present in people with gambling issues: other mental conditions such as depression; an unstable home environment; and a lack of peer or community support (Fact Sheet, 2011).

In Victoria, Australia, youth appear to have reduced rates of problem gambling than in other nations (Bell & Boldero, 2011). projected that 18,000 Victorian 18- to 29-year-old are problem gamblers. Nonetheless, 3 percent of their teenage sample identified as disordered gamblers (Bell & Boldero, 2011)

A school-based survey done in Malaysia found that 26% of 2,265 participants of the survey admitted to having participated in gambling. The questionnaire entailed sociodemographic characteristics, substantially risky conduct, and mental health questions. Among these participants, 3.6% were problem gamblers. Antisocial students and drunkards were also likely to drink and parents who gambled influenced their children's participation in gambling (Sheela et al., 2015).

The importance of comprehending the features of youth gambling is emphasized by information showing that most adult problem gamblers suffered from problem gambling behaviors before they had reached 20 (Splevins et al., 2010). In a study about youth problem gambling, 78.5% of the interviewees had participated in gambling behaviors in the previous year, with 3.1% of interviewees satisfying the standards for problem gambling (Hanson and Rossow 2007). In addition, a rare investigation examining parental modeling, attachment, and supervision as modifiers of teenage gambling found that 26% of participants fit the criteria for problem gambling. Also, 91% of those surveyed had wagered at least once in a lifetime, with 36.2 percent gaming weekly and 19 percent gambling daily (Magoon & Ingersoll's 2006).

In sub-Saharan Africa, problem gambling is currently a public health concern among young adults. A study among young individuals dwelling in the rural district of eastern Ghana found that among 10 adolescents, three (3 in 10 females; 4 in 10 males) experienced problems affiliated with gambling in the former 12 months (Odame et al., 2020). Youthful females who suffered from problem gambling had higher chances of reporting family-related social problems while males experiencing problem gambling were affiliated with school-related circumstances (Odame et al., 2020).

Gambling has perceived a noteworthy upsurge in the African continent in the last twenty years (Aflakpui & Abayie, 2016). It is the chief gaming maneuver in Ghana especially among males and individuals of low socioeconomic status. The same nation preserves roughly ten sports betting channels that operate both digital and physical platforms to function (Kamara, 2016).

Smartphone technology has increased availability and access to gambling and betting while (Stuhldreher et al., 2007) found smartphones had revolutionized the way students communicated, have fun, or even conduct research work, making many to be keen on acquiring them as an extension of themselves. In the same vein, (Enwereuzor et al., 2016) observed that over 97% of university students in Nigeria had access to smartphones which were used for social interactions and sports betting.

According to a recent poll of 3,879 youth aged 17 to 35 in Kenya, Uganda, South Africa, Ghana, Nigeria, and Tanzania, 54 percent of youth in SSA had indulged in some type of games of chance (Ssewanyana & Bitanihirwe, 2018). In an attempt to understand why Kampala urban dwellers gamble, the majority of participants (both gambling and non-gambling) indicated that the drive to make money is the primary motivator (76.6 percent), while pleasure did not play a significant role. Focus group discussions verified this, noting that the urge to get quick easy money from gambling led the young into gambling to the point where some saw gambling as a source of income rather than performing occupations that may entail significant time, mental, and physical obligations. The survey also found that young people (18-30 years old) are more prone to gamble than their older counterparts (31 years and above) (Ahaibwe et al., 2016).

Locally, recent estimates show that somewhere between 57 and 76 percent of Kenyans have gambled in the past (Geopoll, 2019). Among them, 29% were students (Wangari, 2018). The pervasiveness of gambling among students of Kisii University Eldoret campus is high and about 60% of students have gambled at a minimum of once while in this University (Ashubwe & Miano, 2018).

The desire to gain money is the primary reason for student betting, followed by adoration for those who win. According to the same survey, around one-third of people who gamble are hooked, having attempted to quit but finding it impossible to stop despite losses. The majority of students who bet are aware of the betting regulations and laws that regulate betting in Kenya. The inadequate or full lack of enforcement of laws and laws against underage betting encourages the increase of betting participation (Okoti et al., 2019).

Research concerns have been raised about students' ability to make decisions on betting activities (Macharia, 2018). The results of a study done in Kenyatta university showed that 69.3% of the participants were disordered gamblers. The study also found that frequency of gambling predicted gambling disorder while the typical amount placed per bet did not. Findings also showed that many university students who gamble experience adverse effects as a result of disordered gambling and that there is a need to develop policies and interventions aimed at reducing the risk and harm associated with gambling disorders (Ogachi et al., 2020).

Rising awareness of and attention to the issue of problem and compulsive gambling has accompanied the rise and growth of the gaming industry. One of the most susceptible populations affected by this problem is college students. Due to the scarcity of scientific discoveries, there is a lot of uncertainty concerning the degree to which students participate in gambling plus the risk variables and protective variables associated with it. So, this study seeks to solve that problem.

Sports Betting in Kenya

Sports betting has lately acquired a lot of traction in Kenya and has emerged as the most potential gaming industry. Sports betting has gained popularity since Sports

Pesa, the first online sports betting company, was established in 2013 (Koross, 2016). Viewing soccer particularly the English premium league is common among several young males. Advertisements and incentives to gamble are widespread in football which sways several soccer fans to participate in gambling (Cassidy & Ovenden, 2017).

In a study done at Kenyatta University, a higher number of 3rd years and 4th years participated in the research because of two likely reasons. They are willing to participate in the study because they have been in university for a long period therefore, they comprehend how to do research and because they are generally older and have gambled for a longer period than their counterparts (Ogachi et al., 2020).

Due to the prevalence of gambling in Kenya during the past fifteen years, Kenya has come to be defined as a nation of gamblers which is reflected in sports betting. The necessity for this case study of the prevalence of problem gambling among young people and its associated risk factors and protective variables was prompted by the prevalence of gambling among young people as assessed by Geopoll and university students as determined by (Wangari, 2018).

Risk Factors Associated with Problem Gambling

The history of gambling in countries worldwide has been characterized by multiple cycles. In the last century alone, it has transitioned from being considered a sinful immoral pursuit and stigmatized criminal activity to its current position as a socially acceptable form of recreation (Temcheff et al., 2011).

At the same time, new and emerging technologies have led to the rapid proliferation of the opportunities and possibilities to gamble worldwide through multiple platforms (e.g., desktop computers, laptops, tablets, and smartphones) and gambling

applications have also appeared within other applications such as social networking sites and gaming sites (notably at sporting events) (Valentine, 2016).

Gambling availability and engagement have increased throughout the Sub-Saharan African region of the developing world in recent years. Angola, DRC, Gabon, and Kenya are among the nations in this area where legal casinos are known to operate. Unfortunately, gambling addiction is becoming a public health problem in this region, particularly among the youth (Ssewanyana & Bitanihirwe, 2018).

Gambling also rises throughout the passage from youth to early adulthood, a time when risk-taking is at its peak (Oksanen et al., 2019). As a result, it's crucial to look at the determinants of problem gambling in young adults throughout these vital times, and the key age for acquiring gambling issues is likely to be around the time when people attain the legal gambling age (Bell & Boldero, 2011).

It's also important to be aware of these risk factors to see potential warning signs of gambling addiction. Because risk variables tend to reflect extremes on specific bio-psycho-social dimensions, opposite ends of the same dimensions may represent major protective characteristics, this knowledge may be utilized to build preventative activities directed toward kids with gambling issues (Derevensky et al., 2011).

With the rise of gambling popularity, there is sufficient evidence to suggest that its acceptance has brought subsequent problems (Temcheff et al., 2011). In the past, research concerning gambling in Kenya were carried out amidst the overall populace and give a rough assessment of the periodicity of gambling. They do not show the extent plus the risk factors affiliated with problem gambling among university students. Despite the awareness that several university students engage in gambling, it is uncertain how many are problem gamblers and the risk factors affiliated with

problem gambling. In this context, risk factors are defined as conditions that are associated with an increase in the likelihood of problem gambling (Dowling et al., 2017). Psychosocial features linked with gambling behavior are commonly divided into risk variables and protective variables (Dowling et al., 2017). The literature in this study shall subdivide risk factors into interpersonal and intrapersonal factors controlling gambling among university students.

DAYSTAR UNIVERSITY

Intrapersonal Factors

Intrapersonal reasons are often studied in gambling studies (Bell & Boldero, 2011). These factors comprise components such as socio-demographic characteristics, arousal, delinquency, substance abuse, and gambling beliefs & cognitive distortions.

Arousal

Gambling is the method of making a verdict where the monetary prospect is undefined (Studer & Clark, 2011). Several pieces of research have confirmed that sensation seeking plays a role in gambling addiction. Sensation seeking is a personality trait characterized by a desire for unusual, complex, and powerful experiences and sensations without regard for the risks involved (Zuckerman, 2015).

Gambling and physiological arousal have a bidirectional link, according to a previous study. A physiological reaction is elicited by both the act of gambling and the consequence of gambling. A gambling choice is also influenced by emotion and the autonomic reaction it elicits. From defining how gambling is cognitively decided to elucidate why certain persons are predisposed to compulsive gambling, understanding this link has substantial practical and theoretical ramifications. Damasio and associates were among the first to discover a link between emotional arousal and gambling behavior in a gambling test. This research shows that the rise in emotional arousal before making a choice has a role in establishing a person's decision-making choices (Pagnier, 2015).

The occurrence of involvement in high-arousal, skill-based games was strongly associated with the fun/thrill component, according to research. These activities have the potential to deliver a great deal of pleasure and excitement. To achieve an ideal state of arousal, high sensation chasers require a lot of stimuli (Barrada et al., 2019).

Problem gambling is very frequent among thrill-seekers. Sensation seeking, for example, was shown to be positively connected with student problematic gambling in a study of teenage gamblers. Excessive gambling is linked to a strong need for sensation (Kam et al., 2017).

In terms of novelty seeking and impulsivity, pathological gamblers outperform healthy controls, and these features in adolescence are predictive of future gambling issues. Given the importance of psychophysiological arousal in the persistence of gambling habits, it's possible that those who have greater heights of trait novelty looking for and behavioral instigation may experience more risk-induced psychophysiological arousal and be more susceptible to developing problematic gambling (Studer & Clark, 2011).

Near-misses became interpreted as a kind of cognitive misrepresentation whose impacts can produce arousal. Through ongoing play, the bettor tries to evade that condition of frustrated arousal that can as well increase the business of hedonistic “wanting” systems in the psyche (Habib & Dixon, 2010).

Near-misses are exhilarating losses that might rekindle the desire to keep playing. Near-misses, according to our findings, are reinforcing but not hedonically gratifying. We expect that by better understanding gamblers' physiological responses while gambling, our research will aid in the development of improved intervention techniques to reduce problem gambling (Studer & Clark, 2011).

For instance, the law of polarity suggested that all things are dual and from the comprehension of the frustration arousal caused by near-misses experiences, gamblers must be psychoeducation about the mechanics of “hope” and the right situations to apply it. When the Pandora box was opened, the last demon to escape it was hope.

Friedrich Nietzsche said that hope is the worst of all evil because it prolongs the suffering which the individual has to go through but on the other side of the coin, Christians have faith that hope is a virtue worth living by because when what they hope for (return of the Messiah) comes true, their wildest dream of going to heaven will come to pass. Being emotionally intelligent about hope can then aid problem gamblers to invest in surefire goals that will surely reward them with true happiness.

Delinquency and Substance Abuse

Problem gambling among students is delinquent behavior because of the numerous associated problems linked to other delinquent activities to achieve gambling purposes (Derevensky et al., 2011).

In a study, it was stated that criminal activities have an affiliation with gambling. Moreover, the periodicity and amount of cash used on gambling events is a substantial forecaster of aberrant activities (Campbell et al., 2011). Also, there is a higher degree of problem gambling among imprisoned (21%) as compared to non-imprisoned youth but as proposed in the study, problem gambling can come before delinquent conduct. For instance, adolescents can rob to fund their gambling endeavors (Kryszajtys et al., 2018).

A study that explored the socio-economic status of young adults who gamble (Wanner et al., 2009) found that robbery and violence were further powerfully affiliated with problem gambling among low socioeconomic status as compared to the middle-class.

In a study it was discovered research accounts report affiliations between gambling and skipping school, peddling drugs, kleptomania, and stealing money. Generally, their study discovered that young adults who gamble have a higher chance to participate in delinquent acts or have a history of, particularly if they gamble at a

pathological degree (Kryszaitys et al., 2018). Substance abuse, dependence, and usage are among the most serious of the conceivable disorders. The empirical research has proven a substantial relationship between alcohol, illicit drug, and cigarette use and gambling, and problem gambling (Stinchfield et al., 2006). College years are associated with at-risk behaviors already, such as drinking and trying drugs (Hadden, 2014). Two publications were released from the Australian arm of the International Youth Training Research, which was a continuing bi-national longitudinal study of the development of healthy and problem behaviors among 2884 young people in Victoria, Australia, and Washington State, USA. Alcohol drinkers were shown to have a higher risk of problem gambling than non-drinker (Dowling et al., 2017).

In another research of Minnesota, young adults found that alcohol, tobacco, illicit drug, and marijuana use were accurate indicators of gambling frequency, as researched Washington State children that found a link between cigarette, liquor, and drug usage and both gambling frequency and gambling disorders. Findings on youth substance use and gambling show that both behaviors frequently co-occur in young people, implying that drug abuse should be considered a warning indicator for co-morbid gambling disorders and vice versa (Stinchfield et al., 2006).

Gambling regularly might be part of a pattern of aberrant conduct that includes aggression, vandalism, stealing, and substance abuse. This sort of youth gambler is part of the "anti-social impulsive" problem gambling route. Young individuals who are prone to "acting out" behaviors, aggression, deception, and a pattern of breaking norms may be at risk for gambling addiction (Derevensky et al., 2011).

Any time betting causes issues in a person's life is considered problem gambling. Missing classes or entire school days, a reduction in grades, reduced interest in

extracurricular activities, a greater interest in money and the value of belongings, winning or being correct, money being lost, or going missing are some of the challenges that young adults may face as a result of gambling. None of these various degrees of delinquent behavior are conducive to a student's college achievement. As a result, it's critical to take efforts to assist pupils in making healthy choices for themselves (Canallatos, 2019).

The causation, diagnosis, and prevention of behavioral addictions, as well as policy activities about these illnesses, might all move forward more quickly as a result of targeted research projects based on substance addiction results, potentially decreasing public health costs and human impact (Yau & Potenza, 2015).

In conclusion, gambling addiction is affiliated with aggressive and violent-free behaviors and these affiliations are strong. This outcome moves our comprehension past the elucidation that delinquency affiliated with problem gambling is just financially motivated by gambling losses (Dennison et al., 2020).

Beliefs and Cognitions Distortions

The cognitive-behavioral theory is founded on the presumption that flawed beliefs, mental falsifications, and miscomprehending of notions linked to chance, odds, and joint independence of accidents, plus making defective causative affiliations amid events give to the pathology and upkeep of problem gambling behaviors (Myrseth et al., 2010).

Pathological gamblers account for more mental distortions than non-problem gamblers. An inclination towards skill games is also linked with a higher illusion of control likened to a fondness for chance games. For wagerers favoring skill games,

there was absolutely no variance in luck or Illusion of Control among problem and non-problem gamblers (Goodie & Fortune, 2013).

Based on the present publication, gambling-connected cognitions cover various kinds of phenomena as well as the inclination to notice patterns more often in a haphazard sequence of gambling results, the inclination to notice causative relations in fortuitous coincidences of environmental signals and gambling results, and the exaggeration of the extent of personal command over gambling results (Mathieu et al., 2017).

Amid regular gamblers, coherent thinking is negatively linked to problem gambling severity (Bell & Boldero, 2011). Primary factors that result in tenacity in gambling include optimism bias joint with the choosy recall of recollections of winning, the gambler's fallacy, and misconceptions of control combine to upsurge the gambler's sureness in overrating odds of winning (Rickwood et al., 2010).

Two major cognitive distortions which happen during gambling include a mirage of control and the bettor's fallacy (Clark, 2014). These prejudices can be witnessed in sound people and are elevated in people with problem gambling. For instance, applying the think-aloud procedure, revealed that gamblers display high levels of erroneous verbalizations, which are associated with gambling severity (Goodie & Fortune, 2013).

There is wide consensus that mental distortions are a built-in part of the growth, maintenance, and curing of problem gambling (Romo et al, 2016). Problem gamblers in their youth are more prone to feel they require money, and that betting would give it. They also have higher trust in their abilities to "beat the system" by manipulating chance (Bell & Boldero, 2011).

Quick wins can cause the certainty that gambling is a cheap spring of revenue, or, in reaction to losses, inspire the gambler to continue in games of chances with the anticipation of recovering the lost money (chasing losses). Victories aid to enhance illusions of control and faith in fate, with irrational beliefs and customs coming out in retort to chance relations between external parameters being mistaken for randomly associated (Carlbring et al., 2019).

Higher levels of pathological gambling activity relate to greater levels of illusions of control and negative outcome expectancies among university students, especially among men (Anisman et al., 2009). Problem gamblers have a higher perception of luck and are more likely to see luck as a personal trait than non-problem gamblers (Chiu & Storm, 2010). In the United States of America and Canada, campus student bettors gamble for entertainment, excitement, socializing, and winning money (Derevensky et al., 2009, Volberg et al., 2008, Wickwire et al., 2010, Zhang et al., 2009).

Interpersonal Factors

Research investigative the role of interpersonal aspects in youth problem gambling behavior has focused on relationships with parents and peers, the community factors, marketing, media portrayal, and societal & cultural influence.

Parents and Peer Relationships

Early gambling experiences are frequently initiated by household members in their own homes, with older brothers playing a key role. As children develop, their gambling patterns transform, with interest, ease of availability. Peer groups play a vital part in approving or encouraging gambling. Extreme gamblers who are still

young tend to substitute their pre-existing friends who don't gamble with new friends who gamble like them (Oksanen et al., 2019).

Having an acquaintance with a gambling delinquent is to be a risk issue, with up to 40% of problemed gamblers claiming to have friends with similar gambling or substance misuse issues (Derevensky, 2015). In a Cross-Cultural Study Between Portuguese and English Youth, per the findings, higher levels of resentment against attachment figures lead to increased rates of sensation seeking, which raises the risk of participating in compulsive gambling. Also, higher levels of perception of the parents or other attachment figures as responsive to gambling activities lead to higher scores of sensations seeking which in turn increases the probability to engage in problem gambling. Finally, the researchers discovered that a low sense of empathy towards the attachment figure leads to higher levels of sensation-seeking which, in turn, increases the probability of problem gambling (Alexandr et al., 2018).

Poor caretaking may as well add to the future gambling of youth. Young adults whose caregivers are least in their child's company and don't care how they spend their free time may have higher chances to participate in sports betting and can enjoy little parental restriction for participating in gambling. As a result, these young adults have a chance of gambling more regularly and suffer from greater gambling problems (Stark et al., 2020).

It has as well been asserted that girls possess a higher chance of being swayed by parents who participate in gambling than boys. On top of that, problem gambling has been affiliated with living in a single-parent household (Griffiths, 2010).

The powerful correspondence which has been secured between adolescent gambling and parental gambling is notably disturbing because when individuals gamble as

adolescents, they have a higher chance of becoming problem gamblers as adults (King et al., 2010). Problem gamblers indicate that they dislike twice as many students as non-problem gamblers and that much more classmates dislike them (Derevensky et al., 2011).

In summary, family and peer conflict, reduced family cohesiveness, a family medical history of gambling, engaging with friends who gamble, and having more favorable family and peer views toward gambling are all connected with problem gambling. However, parental views do not always have a clear impact; rather, parental dissatisfaction is adversely associated with gambling among teens and female students but favorably associated with gambling among male students (Bell & Boldero, 2011).

Community Factors

Community elements cover the weight of the larger environment where the individual inhabits. Social Development Model (SDM), is a model applied to describe the roots and growth of delinquent behavior among kids and teenagers (Catalano & Hawkins, 1996).

This model emphasizes the significance of the social setting in the growth of healthy and unruly behaviors. The SDM has stood grounded on the idea that young people assume the beliefs and behavioral patterns of their social setting, family, peers, campus, and neighborhood. As a result, if a person's social environment has characteristics that encourage prosocial attachment (that is, involvement with prosocial entities), the individual will adopt a prosocial orientation, but if the social environment contains characteristics that encourage harmful attachment, the individual would occupy himself in problematic behaviors (Catalano & Hawkins, 1996).

In the international community, there is an increasing expansion of sport betting opportunities and locations. Betting availability and convenience are two elements that have been proposed as connections to the rise in degrees of gambling involvement. Current culture including a greater existence of betting opportunities and exposure contributes to the fame of sports betting amidst the youth, accounting for the rising number of people reporting who have gambled (Arnett et al., 2014).

The development of devices that support online gambling communities has contributed to problem gambling. People who use cyber services and undergo problems restricting their television and cellphone usage are further apt to report problem gambling (Kim et al., 2017). On the other hand, large social network sites and digital gaming companies have begun creating intrusions into the gambling enterprise. This 'digital convergence' has made possibilities for the gambling sector to enlarge its clientele foot, especially among the youth (Gainsbury et al., 2015).

This massive development in online gambling has been escorted by developing concern for its possible harms (McCormack, et al., 2012). Therefore, considering this literature is crucial and timely (Baggio et al., 2016). The youth who log into the online-related gambling communities mainly chatted about gambling tips and experiences. Very few cared to discuss recovery from problem gambling. The affiliation of touring such sites is powerful amidst likely pathological gamblers as compared to among at-risk gamblers (Schneider, 2012).

Amid the youth who gamble, the Internet gambling industry poses the largest risk to the growth of gambling addiction. Electronic gambling has also experienced large-scale expansion that may lead to an increase in gambling and its affiliated problems among young adults. Though the existence of additional gambling spots shows a

feasible risk element at a communal grade, the birth of electronic-based betting bypasses the availability problem and gives room to betting to anybody interested to gamble any time at any place in the world where there is internet penetration (Phillips et al., 2011).

Expansion of digital gambling has as well been involved in the overall growth in gambling, more widely; for instance, in the rise of sports betting amidst young adults who formally didn't gamble (Baggio et al., 2016). In the local community, the youth who've suffered from mental health issues remember viewing gambling advertised in land-based gambling venues, shops & supermarkets, billboards & supermarkets, and other marketing sites and modes (Macgregor & Biggs, 2020). For some youth, indulging in betting and gambling-like operations can result in the over-involvement of betting. Young adults who've been motivated to gamble online stated that they were attracted to online gambling by bonuses provided by gambling stakeholders (Frahn et al., 2014).

Technological insurrections in modern years have concentrated mainly on methods of alluring and controlling human feelings (Reith, 2013). The gambling sector is among the first to use this technology. By ingeniously sailing audio-visual technology the gambling sector has created gambling events to stir the human senses (Gainsbury et al., 2013). College students in Rongai, Kajiado County, have flocked to cybercafés to participate in the football betting frenzy that has perplexed many locals (Kahura, 2018).

“All of them are male and between the ages of 19 and 35 years,” said a cybercafé owner, “students were now spending all their energies dreaming every single day about betting and winning big-time money. It has become a full-time occupation for

them. Studies have become secondary.” At Chiromo, there are gambling groups that supersede the tutorial sets and are typically composed of male students because they are keen football fanatics. They have a “talent” for better and greater analysis, which they have done for a long time, and they are not afraid of taking risks (Kahura, 2018).

Due to the obsessive-compulsive problem (OCD) behavior displayed by the student gamblers, most of these students tend to neglect their studies and suffer from pendulum-like mood swings that are unpredictable (Kahura, 2018).

In a recent study, young people said that they noticed gambling enterprises had a vigorous online appearance and because young people, in particular, are online most of the time, they are unavoidably open to gambling marketing (Macgregor & Biggs, 2020).

With the growth of the digital betting industry, there is likewise a possible expansion in recent population sets suffering from problem gambling. Consequently, this quickly progressing sector has as well come with new difficulties worldwide for regulators and policymakers. Hence communities and addiction counselors need potentially new methods to comprehend and tackle gambling detriment developing from these new modern technologies affiliated with gambling (Lawn et al., 2020).

Marketing

Alterations in the broadcasting scenery in modern ages have essentially changed gambling advertising customs. Consumers are now able to bet in actual time and from any geographical point (Arnett et al., 2014).

Current gambling marketing is a multidimensional blend of media advertising (e.g., television), customer marketing (e.g., price promotions), and enigmatic marketing (e.g., sponsorship). Marketing is an important component of gambling marketing, and

the recent relaxation of restrictions has resulted in an increase in gambling advertising in various countries. However, betting advertising was shown as a good, usual recreational activity but news in these advertisements encouraging ‘responsible gambling’ would most probably be ignored (Newall et al., 2019).

Young folks from 11 to 24 years old witness gambling advertisements from a broad scope of gambling enterprises. They are also able to recite a great number of brands that are akin throughout the young folks and cognitive health groups. Young adults who have suffered from mental health issues can automatically state eight gambling enterprises while young adults who’ve suffered from problem gambling predictably, can cite a higher number of gambling companies. These gambling advertisements serve as psycho-triggers (Macgregor & Biggs, 2020).

How gambling is promoted to community members is linked to the availability of gambling within communities. To advertise gambling options to the public, a variety of marketing tactics are commonly utilized (Derevensky et al., 2011). Youth are often exposed to gambling advertisements, frequently on television (accounted seen by 96% of youth), at close range succeeded by the Internet (93%), with adverts on display boards and in papers and magazines also ordinarily seen (Hanss et al., 2015).

Marketing mix factors are the factors orchestrated by marketers that influence people’s consumption choices. Our five senses are manipulated by marketing elements, which push and pull us towards specific items or brands. The factors include price, product, promotion, and place. When a product is introduced to the market the 4p’s are considered. The creation you mean to market, the area it will be vended, how to instrument the promotion, and lastly what is the price the creation will be vended at (Kotler & Keller, 2016).

Products advertised in these commercials tend to emphasize the fun, entertainment, and likelihood of “winning big” with no remark of the possible costs of gambling. When considering youth gambling behavior, advertising of gambling inside a community is chiefly relevant because young adults are unprotected to the same messages from betting marketing opportunities as adults (Derevensky et al., 2011). Social learning theory (Bandura, 1977) maintains that as youth grow, they are influenced by role models whom they live vicariously through making them notably vulnerable to celebrity approvals in advertisements (Nyemcsok et al., 2018). Consequently, the use of elite soccer players to market sports betting through (e.g., the teaming of Citizen TV presenter Joey Muthengi and Kenya international midfielder McDonald Mariga as brand ambassador for betting firm Betin) may inspire youth to involve themselves in risky gambling conduct. Individuals who are likely to appeal to youth and enhance the risk of youth gambling engagement should minimize their endorsements of gambling and gambling services.

Media Portrayal of Gambling

Recently, there has been a noteworthy increase in the range of gambling events supported by digital technology. The intersection of gambling and electronic media is of special interest regarding the enormous potential for the previous age of gambling participation, and the growth of positive attitudes toward gambling. A substantial ratio of young adults takes part in a scope of online gambling operations through social media. Adolescents who have a record of engaging in online gambling activities seem to be at a higher risk of showing signs of problem gambling (King et al., 2014).

Concerning marketing and its frequency, Briton sports fanatics were exposed to roughly 90 minutes of betting advertisement throughout the world cup game.

However, these advertisements were during the breaks and the teams never put on shirts with gambling advertisements printed on them. In antithesis, some teams in English Premier League put on shirts with gambling advertisements printed on them. From four teams in 2008 to one-half of all teams in 2017, the number has more than doubled (Lopez-Gonzalez & Griffiths, 2017).

The inflated depiction of gambling on TV normalizes betting. This can promote young adults to take part in pathological gambling due to the airing of scarce responsible. This normalization programs viewers to believe that sports betting is harmless as compared to other kinds of gambling since playing sports is a 'healthy' activity (Gassmann et al., 2015).

By the same token, marketing has a hand in the normalization of gambling in sports plus promoting participation in gambling intentions and behaviors amidst the youth. In this case, the emotional stake in sports plus the method in which they partake sports, predominantly, when football matches incorporate betting advertisements in the event of a game (Deans et al., 2017). Consistent with those findings, gambling commercials directly correlate with pleasure, excitement, high success, riches, alleviation from financial issues, and retreat from reality, and they have a higher influence on older teenagers, particularly male problem gamblers (Bell & Boldero, 2011).

The average income of the players in the Kenyan market differs significantly from that of other marketplaces throughout the world. Operators rely on big volumes and high frequency of low-value bets since 54 percent of Kenya's population falls within the lowest socio-economic groups of LSM (Living Standard Measurement) (*Overview of the Gambling Market in Kenya, 2019*).

"By late 2015, other sports betting firms, including SportPesa, had entered the market and were marketing "vigorously" across Kenya," Bwire said. "They were active in and around the university, distributing pamphlets on campus and in nearby student houses." (Faull, 2019). When young adults are confronted by and have agreed to enter further betting options, they have a higher likelihood to prefer types of gambling, which can amplify the danger of cultivating a pathology. This conclusion, along with the investigation proposing that the tender age of starting gambling can be problematic, continues to be worrisome (Rahman et al, 2012).

DAYSTAR UNIVERSITY

Social and Cultural Influence

Culture is the central determinant of a person's desires and behavior. Cultural factors consist of lesser subcultures that offer more precise identification and socialization for members of society. Subcultures comprise nationality, religion, and geographical regions (Kotler & Keller, 2016). Reference groups, family, social roles, and status are all examples of social influences. All of the groups that have a direct or indirect impact on a person's views or conduct are referred to as a person's reference groups (Perreault et al., 2010). Personal aspects are also included when socio-cultural elements are considered. Personal elements are the elements that are unique to each customer and have a significant impact on their purchasing decisions. They include lifestyle, occupation, age, and income (Solomon, 2009).

Across antiquity, cultural criteria have determined the legitimacy and accessibility of gambling opportunities. On multiple occasions, the prevalent belief that gambling was ungodly caused it to be abolished in several parts of the globe. To date, gambling is outlawed in the majority of Muslim nations and opposed by religious organizations which have caused gambling equipment to be cleared in certain regions (Kumar et al., 2011).

However, by harmonizing sports betting with culturally treasured entities, and thrashing several stimulus schemes through widespread marketing lines, the gambling sector is swaying youth's gambling risk perception and their desire to engage in gambling activities. This is an issue because there is a lack of prevailing cultural and organizational edifice to curb sports betting campaigns. Consequently, the gambling sector has established its existence in communities that don't participate in gambling (Downs & Woolrych, 2010).

As a result, marketers must explore cultural influences and advance marketing tactics tailored to each sort of culture to upsurge sales of their goods. Culture, on the other hand, is not static and changes through time, with such fluctuations eventually incorporated into the social order (Maloba, 2018).

Social and academic dialogue about sports betting has been marked by several contradictions. Up to date discussions on if gambling is a social issue, a personal problem, a socially valuable recreation, or maybe only another kind of consumption have been on fire (Marionneau, 2015).

Gaming possibilities have grown as a result of the profitable nature of gambling earnings for governments, charities, and companies. Conservative attitudes regarding gambling have often changed in tandem with this development, and gambling continues to acquire recognition as a socially acceptable, even charitable, source of entertainment. As a result, this prevalent mentality puts young adults in danger (Derevensky et al., 2011).

Advertisers can choose to dwell on cultural signs, context, and conduct to root their goods within this conduct as shown by marketing studies. The goal of companies is to make original trademarks and subcultures affiliations with the goods to make it the favorite pick in the business. This procedure is also applied in sports betting advertisements. Marketers in the gambling sector shall get a means to harmonize sports betting with the cultural values of being a sports fanatic. Features include loyalty to the team and promoting the team (Pitt et al., 2017).

On the matter of reference groups, they possess a large potential of swaying client behavior. A reference group refers to a team of people that sway a person's attitude or conduct. Betting alongside friends and other fanatics nurtures the desire to take more

risks in placing bets and amplifies the time and rate of visiting online gambling platforms (Perreault et al., 2020).

At the individual level, elements that sway the individual to bet include career, age, salary, and lifestyle (Jobber, 2010). In their research about gambling in UK, Spain, and Canada, (Humphreys & Perez, 2020) discovered that as compared to the overall populace, the characteristics of sports bettors were youthful males with a considerably huge salary, permanently employed, in possession of higher education and with frequent chances to browse and cellphones. Additionally, countrywide research of the gambling model in Australia discovered that social young males mostly participated in gambling. They were highly educated and employed, and could browse with ease (Gainsbury et al., 2013).

Studies suggest that regardless of the technique or the nation the study is done, young men in the age range of 20-30 years are frequent and problem gamblers than young women and gravitate towards sports betting than females (Howe et al., 2019).

According to a study, campus scholars in US have a greater rate of gambling addiction and are more prone than the public to believe in the gambler's fallacy. In a poll of 10,765 American college students, 42 percent admitted to gambling in the previous year, with 2.6 percent playing weekly or more. In 2006–2007, 70.7 percent of Canadians admitted to gambling, with 61.35 percent of teenagers (ages 18–24) saying they had gambled in the previous year. Gambling's great prevalence reflects the fact that it is a popular recreational activity among North Americans (Ji et al., 2015).

Furthermore, a study on gambling throughout the lifetime showed that the share of participants who had gambled in the previous year rose in the age bracket of 22 to 30,

mostly gambling heightens during the 30s to 50s, and pathological gambling heightens in the age range of 31 and 40. The researcher suggested that the decline of gambling due to age is due to maturity, and constitutes an overall drop in problem behaviors which is predominant in the adolescent stage in which emerging adults engage in risky behaviors (Welte et al., 2011).

According to The South Oaks Gambling Screen, observed descriptive and declaratory norms of other students were determinants of gambling frequency, expenditure, and repercussions in research that looked at the role of perceived social norms as predictors of gambling behavior among college students. Positive attitudes toward gambling, as well as perceived approbation from family and friends, were found to be positively connected to problem gambling (Bell & Boldero, 2011).

The gambler's fallacy (GF; the presumption that an individual is due for a win after a string of losses) and the hot-hand fallacy (HHF; the assumption that an individual winning streak is likely to persist) are two related gambling fallacies that have been studied. It was discovered that different cultural groups have different reactions to gambling misconceptions. Asians are more liable to the gambler's fallacy and less susceptible to the hot-hand fallacy than Euro-Canadians, and these variations are probably affected by culturally specific cognitive biases. These findings are crucial in determining why some cultures are more vulnerable to gambling (Ji et al., 2015).

In conclusion, policy formulators should start thinking about the delay between advancing gambling landscapes and attractive marketing tactics applied by the gambling sector to foster gambling goods and strong damage control measures to guard people against gambling harm (Abbott et al., 2018). After we've gone through

all of this, other issues thought to affect the prevalence of gambling problems are impulsivity, frequency of gambling, attitudes towards gambling, and psychological problems.

Protective Factors for Problem Gambling

Protective variables have a beneficial impact and operate as a cushion against the undesirable effects of risk, lowering the incidence of health and social issues in children and youths. Strong ties to family, school, community, and peers, as well as good values and defined behavioral norms, have all been found as protective variables via research. Attachment must happen through participation with peers and grown-ups who convey healthy morals and set pure behavioral norms for it to have a protective impact. For young people to have strong links with their communities, neighborhoods, schools, families, and peer groups, these factors must be present. They feature chances for active participation in the elements mentioned, skills to be effective in meeting prospects, and frequent acknowledgment or affirmation for their endeavors and successes (Catalano & Hawkins, 1996). Robust ties to community, household, university, and friends that have constructive principles and establish strong ideals for behavior are indispensable for well growth (Toumbourou, 2010). Having said that, youth abandon a couple of things that aid them to live wonderful healthy lives when they depart home for university. These protective factors include good role models such as parents, affiliation with a productive group such as sports teams or religious communities, appropriate coping mechanisms, and living in a secure neighborhood (Canallatos, 2019).

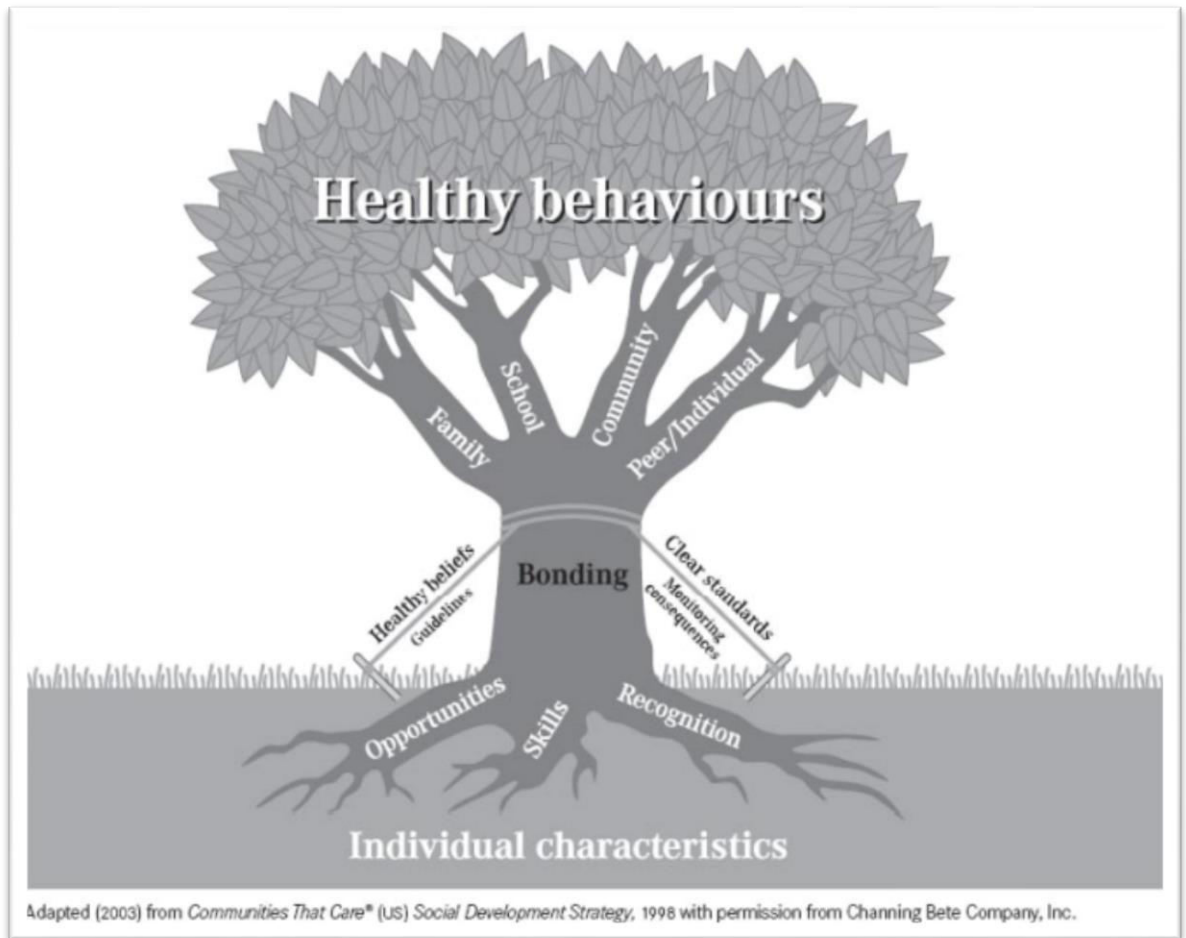


Figure 2.2: Social Development Strategy
 Source: *Community That Care*, (2003)

By assessing young people's perceptions of risk and protective variables in their society, particular elements that are heightened and prevalent can be determined and focused by policies, programs, and activities aimed at reducing risk features and promoting shielding ones. Deterrence efforts are most likely to succeed when they are implemented in a coordinated manner over a long period to enhance the environment for healthy youth development. Similar risk and protective variables are useful in supporting other preventative goals, such as sexual risk-taking and psychological health (Toumbourou, 2010).

In a study that examined the psychological resilience in problem gambling, it was suggested that mindfulness and self-efficacy can function as 'buffers' against the

development of problem gambling issues and can be favorable objectives when formulating a treatment plan (Beshai et al., 2018). Social sustenance and social tie are amongst the protective features concerning gambling addiction. A lack of perceived social care from close ones is also an acknowledged risk variable for developing and upholding gambling-related difficulties and disordered gamblers frequently report lower apparent social care (Oksanen et al., 2019).

Social sustenance has been theorized as an accessible social network that offers psychological and material assistance. So, social support provides a collection of networks to peers that can apply constructive peer pressure and social regulation over behavior. For example, social restraint against problem behaviors, such as friends' condemnation, is a substantial protective element against involving in compulsively drinking in university students. Collectively these investigations illustrate the significance of social support and its impact on the progress and upkeep of problem behaviors. Heretofore, the association between social support and problem gambling has gotten little attention (Choo et al., 2015).

Additionally, a longitudinal study determined that there is a scarcity of data on prior risk and protective elements for the progress of problem gambling. Consequently, in their study, the researchers examined one personal protective element (high socio-economic rank) and two relation protective elements (parental monitoring, social problems) (Dowling et al., 2017). Therefore, this study shall seek to fill the perceived gap on the lack of sufficient information regarding protective and risk factors about problem gambling among college students.

This knowledge can be applied to create preventive initiatives that target young adults suffering from gambling problems. For instance, public service announcements

targeting young adult gambling obstruction can integrate elements that attract endangered young adults who can easily be wrapped up in sports betting. Family training and gambling education might be included in intrusion and prevention programs for young bettors.

Discussion

Innumerable variables are involved in the development of gambling addiction among the youth. Individual, relational, community plus social variables. All these factors have a hand in the cause and sustenance of problem gambling among the youth. Nevertheless, parameters at every level can't be examined solely. Instead, they ought to be considered in the framework of supplementary risk variables that might result in over participation in gambling. At the personal level, arousal, delinquency, and substance abuse, beliefs, and cognitive distortions, and demographic factors sway youth predisposition to suffer from problem gambling. Relationship level, parents and peer relationships, and community level elements include marketing and advertisement. At the society level, social and cultural variables, and global tendencies (i.e., digital gambling) are well-thought-out crucial macro-level forces that can influence the degree of gambling. Even though these risk elements cover a large scope of parameters, it's distant from being a thorough review of variables that are relevant to young people's gambling prevention.

This review is meant for gambling inhibition and addiction counselors to steer their endeavor to offset risk factors or assert the protective factors. The risk elements are akin to those set up for other problematic conduct for instance drug use. Thus, prevention campaigns must aim at several problem behaviors.

Empirical Literature Review

A report which presented yearly approximations of gambling behavior in Great Britain in 2018 showed that among the online gambling community, laptops and cellphones were the most prevalent method of participating in online gambling. The usage of cellphones for gambling has hiked dramatically (44 percent, up 5 percentage points from 2017), while laptop use has decreased dramatically (45 percent, a 5-percentage point decrease from 2017) (Barnfield-Tubb & Francis, 2019). Younger generations are more prone to gambling away from home, whether on their way to work at a sporting event, or in a tavern or club. In-play betting was used by 23% of online gamblers (a 4-percentage-point reduction from 2017), with the rate being greatest among 15-24-year-olds. Online gamblers generally have three accounts with different online gaming sites. In the last 12 months, 5% of internet gamblers have gambled on eSports, with participation rates highest among 18-24 and 25-34-year-olds (Barnfield-Tubb & Francis, 2019).

The craze of sports betting among African youngsters has swept the continent. Recent polls and anecdotal accounts, particularly in Sub-Saharan Africa, paint a bleak picture. According to a 2017 GeoPoll poll, up to 54% of Sub-Saharan African youth aged 17 to 35 years had gambled on sports. Kenya had by far the highest percentage of youth participating in sports betting, at 74 percent (Odwour, 2020).

Recent facts reveal that 72.4% of young people in the age group of 21-30 years dominated sport betting in Nairobi. A central driver of this tendency has been the mounting ubiquity of mobile telephony everywhere on the continent joint with the obtainability of smartphones (Odwour, 2020).

Mobile apps are the most common way for individuals who have gambled to do so; 88 percent of gamblers have used their phone to place bets, and 55 percent of those do so once a week or more. This makes mobile betting the most famous and widely utilized form of gambling, highlighting how mobile betting's accessibility has transformed the betting business (Elliott, 2019).

This has been supplemented by increased connectivity, including satellite coverage to sporting events. According to studies, sports betting has caused a slew of problems for young people in Sub-Saharan Africa. Serious gambling addiction, black money, mobile phone addiction, and a strongly linked phenomenon: internet addiction are examples of these. As a result of these problems, the impacted population experiences increased amounts of social anxiety and isolation (Odwour, 2020).

According to a study done by (Mwadime, 2017), the unified incorporation of cellphone money wallets and sports betting podiums enabled easy admittance to mobile money and served as a chief reinforcer of sports betting. (Koross, 2016) found that gambling influences university students' behavior has established that 78% of university students participate in gambling. In Nairobi, social media also had a favorable impact on sports betting, with the majority of people seeking information and deciding how to wager based on information accessible on social networking sites (Mwadime, 2017).

According to a school poll, half of the male students and one-third of female students bet more than once a week, and nearly half of those surveyed acknowledged one or more symptoms of gambling addiction behavior (Faull, 2019).

To comprehend how the gambling mania has picked on among Kenyan youth (Kahura, 2018), went to interview the Chiromo campus of Nairobi University. Victor

Rago, a participant in the oral interview, admitted to the researcher that the betting mania has plagued his campus and is driving several pupils crazy. “Today students spend more time betting than they do in their academics. If only they spent half the time, they did in analyzing football matches to place the correct bets, we would have very many first-class honors.” Rago spoke about his roomie who placed his bet with KSh200 and as luck would have it, he won KSh250,000.

In a study that examined the procedure through which advertisements affected youth gambling behavior, youth with strong family support, exposure to gambling advertising did not make them value gambling and the rate at which they gambled had less effect on problem gambling (Parrado-González & León-Jariego, 2020). Besides, there are social factors that influence betting behavior among online bettors of Nairobi. The online gamblers discussed betting strategies with friends before placing, peers introduced other respondents to betting, and lastly, other players’ winnings influence respondents to bet within the online betting groups (Mwadime, 2017).

Aside from peer pressure and strong marketing by the gaming industry, gambling disorders and related issues may often be traced back to a home context where young people are introduced to gambling at an early age. According to research done in South Africa, 13 percent of gamblers had grown up with gambling issues in their family. Indeed, in a variety of contexts, young people perceive gambling as an acceptable activity, to the point that some consider it a potential form of revenue in which they'll rather devote significant time and effort (Ssewanyana & Bitanihirwe, 2018).

An examination of the patterns and prevalence of gambling behavior among young adults in Oyo and Ekiti States, Nigeria, showed that there is a substantial variation in

gambling behavior by sex and age of youths. Furthermore, sadness, neuroticism, character traits, and driving elements; excitement, and financial gain were powerful independent factors impacting youth gambling habits (Temitope, 2019).

Protective Factors

The goal of protective elements is to protect young people from dangers while also encouraging positive youth development. Young people must be immersed in situations that regularly express good values and clear behavioral norms; support the formation of close ties with members of their family, school, and community; and respect the unique features of each young person to develop these healthy positive behaviors (“Communities That Care Report for Grades 6 to 12,” 2014).

Perceived social support has proven to be an important protective factor in the digital context; prior studies have revealed that robust offline ties buffer the problems met on the Internet (Minkkinen et al, 2016). This is also a crucial consideration in studies involving youth and gambling. Excessive gamblers, particularly young adults, have a proclivity to substitute pre-existing strong social bonds with gambling-related social attachments (Blinn-Pike et al., 2010), which may at least partly explain the lower levels of perceived social support (Oksanen et al., 2019).

Secondly, research has established that the majority of university students find themselves away from the prying eyes of parents and guardians for the first time in their campus years. Away from the caregivers’ protective factors, the peer becomes the yardstick and a very critical socializing agent. This transition brings new demands and expectations on university students (Macharia, 2018).

For instance, James et al. (2016) pointed out that, this has increased the vulnerability of university students to engage in gambling and betting in an endeavor to meet their

ever-increasing needs for acceptance in their peer group. More so, this developmental phase is characterized by the students' continuous need for independence, partying behavior, and the motivation to remain on top of the fashion ladder (Susan, 2013). The number of risk and protective variables that predicted later gambling decreased significantly in research. Only the female gender was found to be a barrier to gambling addiction. There was no relation between youth alcohol consumption and subsequent problem gambling in households that promoted pro-social conduct. Higher teenage alcohol consumption was connected to increased problem gambling in early adulthood in homes that did not encourage pro-social conduct (Scholes-Balog et al., 2014).

Understanding the protective factors that make the youth less likely to display a pattern of problem gambling would permit health care workers to make ideal treatment plans to help uphold and steady positive transformation, and prevent reversion (LaPlante et al., 2008). It has been proposed that the protective variables linked to the decrease of a variety of problem behaviors (e.g., drug and alcohol misuse, reckless driving, hazardous sexual activity, etc.) may also be implicated in indirectly altering or moderating/mediating gambling addiction among the youth (Dickson et al., 2002). A summary of possible protective variables for youth gambling addiction proposed by the wide body of study on youth risky behaviors proposes that household cohesion, mentorship, university connectedness, success motivation, participation in conventional activities, and coping mechanisms are probable to cushion youths from the growth of gambling addiction (Dickson et al., 2008).

Religion is shown to have a limited influence on betting behavior since people participate in gambling despite its moral teachings against it. Female students have also not been spared from the craze but aren't at the forefront of the betting menace

(Kahura, 2018) because their participation in betting is frowned upon (Mwadime, 2017) and are inept analysts unlike males so they depend on 'seasoned analysts' to envisage for them (Kahura, 2018).

Gambling venues and new kinds of gambling continue to increase as gambling becomes a more socially acceptable form of entertainment and the business grows. There is a lot of evidence that there isn't enough public awareness of youth gambling. Unlike many other teenage dangerous behaviors (tobacco smoking, drinking and driving, drug misuse, bullying, and so on), problem gambling has yet to be fully addressed by the educational and mental health systems. The changing environment of gambling poses new issues, with a focus on the use of technological instruments such as the internet and mobile gambling, as well as the normalcy and social permissiveness of gambling.

Today's youngsters shall devote their whole existence in an atmosphere where gambling is prevalent, controlled by the state, culturally acceptable, and easily available. The gambling industry and government authorities have begun to recognize the harmful consequences of too much gambling and have teamed up with researchers and doctors to produce "responsible gambling/harm mitigation measures" (Derevensky, 2015).

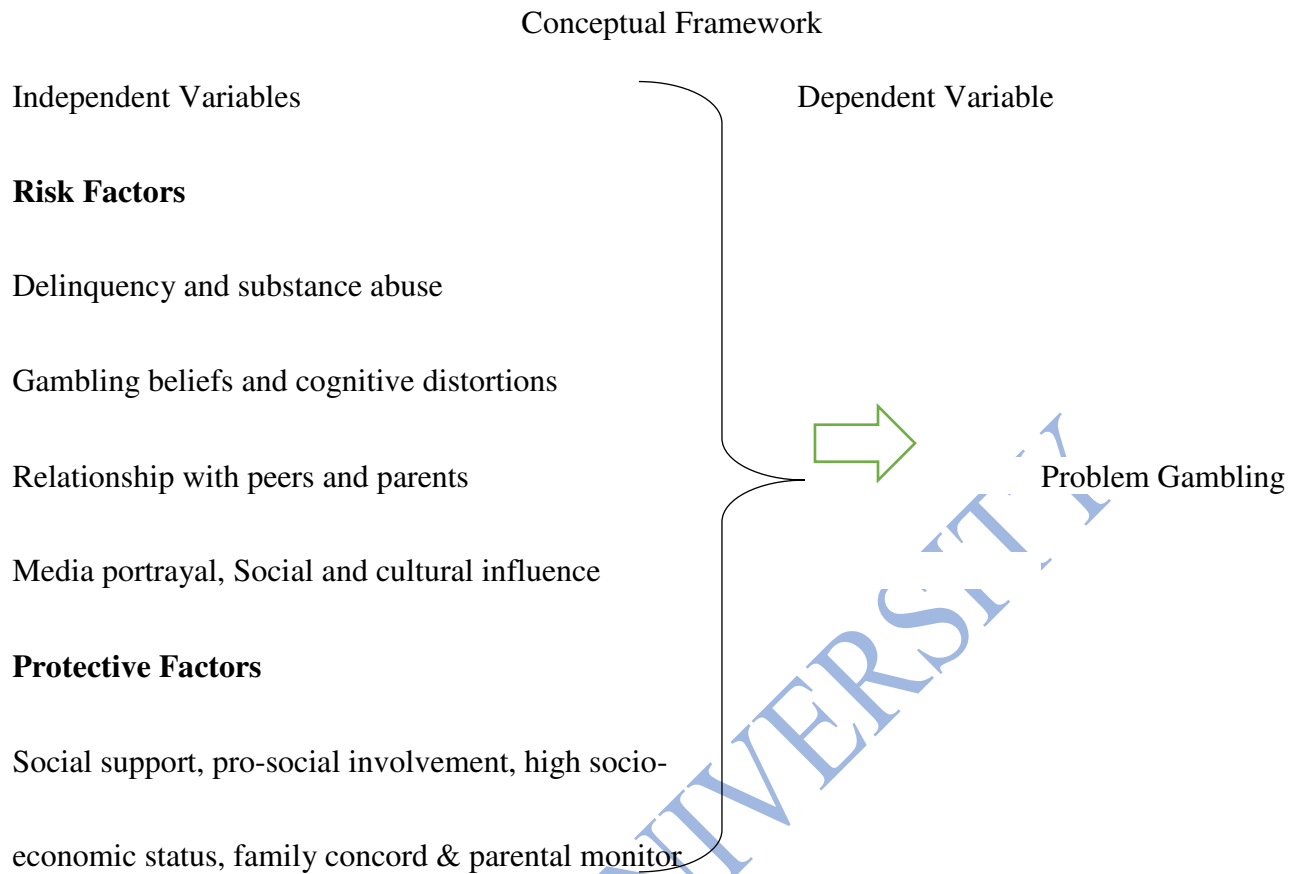


Figure 2.3: Conceptual Framework.
Source: Author, 2020

Discussion

Based on the theoretical and empirical literature reviewed, erroneous cognitive beliefs and schemas, social learning experiences, and participatory exposure to familial and peer-related gambling, media representations, religiosity, and cultural influences, and personal experiences have all been hypothesized to play significant roles. These factors serve to modify an individual's attitudes toward, and acceptance of, gambling as recreational activities that offer opportunities to supplement one's income through winning. Positively talking to oneself to overcome the impulse to gamble or to interrupt the dependency of gambling can serve as an effective method to stop the compulsion to place a bet, and it helps make gambling behavior less automatic.

Unfortunately, most people who have a problem with gambling understand at a certain grade that there is no way they will secure all the money they have lost but they maintain to “pursue their losses”. Other mental factors that fortify tenacity in gambling to the detriment of the problem gambler’s health include the gambler’s fallacy and cognitive regret.

There is a public misapprehension that problem gambling is consigned only to adults but in fact, young people may be at a bigger risk provided their credence that they can halt at any time, their alleged invulnerability, and their amplified risk-taking inclinations. Throughout antiquity, gambling has remained a male-dominated bustle however, young females are increasingly getting involved especially in “closet” forms of gambling. New and developing technology have resulted in a rapid multiplication of options and possibilities to wager on different platforms throughout the world. The ecological model is ideal to use when investigating youth gambling behavior. It offers a suitable framework for comprehending the host of risk variables and possible protective variables that underwrite youth gambling disorder and the multifaceted relations that exist between variables nested within diverse ecological systems.

The independent variables that were put into consideration in this study were divided into interpersonal and intrapersonal factors. Featured interpersonal factors include delinquency & substance abuse, and gambling beliefs & cognitive distortions. On the other hand, presented intrapersonal factors include relationships with parents and peers, community factors, marketing, media portrayal, and social & cultural influence. The independent variables under protective factors which are applicable in obscuring problem gambling and other addictive behaviors include parental monitoring, high socio-economic status, and family concord. Gambling was the dependent variable.

Summary

This chapter has investigated the available literature relevant to this study. It encompasses the introduction, the general literature, and the empirical literature review as well as the conceptual framework.

DAYSTAR UNIVERSITY

CHAPTER THREE

RESEARCH METHODOLOGY

Introduction

This chapter shows how the study was conducted. It includes the research design, the target population, sample size, sampling technique, data collection instruments and procedures, the pilot study, the data analysis plan, the data analysis, the ethical considerations for the study, and the summary of the chapter.

Research Designs

A research design is the arranging of settings for data collection and analysis in such a way that it tries to combine relevance to the study objective with procedural economy. It acts as the intellectual framework structure under which research is carried out; forming the template for collection of data, evaluation, and analysis (Kothari, 2019).

This research used a descriptive research design. It is research that seeks to describe the features of a person or a group (Kothari, 2019) aiding to provide answers to the questions of who, where, when, and what is associated with a particular research problem. Descriptive research design is used to obtain information concerning the status of the phenomena for variables (Abahumn, 2017). Through this research design, the study sought to find out the prevalence of problem gambling and its associated risk factors among students in the general population of Strathmore University.

Target Population

The target population is the group of individuals that the researcher intends to conduct research upon and draw conclusions from (Gregory et al., 2018). The researcher targeted students in the general population of Strathmore University between the ages

of 17-35 years. According to the Human resource manager in Strathmore University, the current population of the mentioned category is 5,088 students which comprise students enrolled as part-time and full-time. The choice of this target population is based on the current data which indicates that 29% of gamblers are students (Wangari, 2018). It would also be economical and convenient for the researcher since he lives near Strathmore University. Additionally, Strathmore University is distinguished from the other institutions of higher learning in its environs because it is a Christian University. There has been relatively little study on the probable protective effects of religion on compulsive gambling among a given population (Mutti-Packer et al., 2017).

Sample Size

The technique of gathering information about an entire population by investigating only a portion of it is known as sampling. Sample size is the optimum number of students to be selected from the university to constitute the sample (Kothari, 2019). The sample frame of the target population shall be the general population of Strathmore university students. The major factors that influence sample size calculation are three. The margin of error, for example, quantifies how closely an estimate from a single sample approximates the population value. In social science research, the margin of error usually runs between 3% and 7%. The confidence level, on the other hand, is the chance that a population estimate falls inside a particular margin of error. As the degree of confidence rises, so does the sample size.

The researchers chose a higher confidence level to limit the possibility of drawing incorrect conclusions about the population based on the sample estimate. Finally, there is the proportion, which indicates that the percentage of a sample that will pick a certain answer to a survey question is unknown, but this figure must be estimated

because it is needed to calculate the sample size. A proportion (or percentage) is regarded the most cautious estimate - that is, that 50% of the sample supplied a certain response to the survey question. This is considered the most cautious estimate because it is connected with the biggest sample size (Gupta, 2012).

Epidemiological Calculator

The basic sample-size calculation formula is given by: $n' = \{t^2 \times p(1-p)\} / m^2$ (Lwanga, S. K., Lemeshow, S., & World Health Organization, 1991).

Where:

- n = required sample size
- t = confidence level at 95% (standard value of 1.96)
- p = estimated prevalence in the project area. The estimated prevalence of gambling in Kenya's university population is 78% (Koross, 2016). So, p = 0.78
- m = margin error of 5%

$$n = \{1.96^2 \times 0.78 (1 - 0.78)\} / 0.05$$

$$n = (3.84160 \times 0.1716) / 0.0025 = 263.6874 \text{ (round off to 264)}$$

Therefore 264 students will be samples. The researcher chose this formula because it is meant for researchers who are conducting organized surveys to estimate disease prevalence (Sergeant, ESG, 2018).

Sampling Techniques

A sampling strategy is the name or other designation given to the exact method by which the students in the sample were chosen (OECD Statistics Directorate, 2019).

Purposive sampling was used in this investigation. A purposive sample is a non-

probability sample that is chosen based on a population's characteristics and the study's goal (Crossman, 2020). To accomplish this, the questionnaire will be distributed among the general population of youthful Strathmore university students between 17-35 years old. The goal of this type of sample design is to offer as much information as possible on the phenomena being studied (Crossman, 2020).

Data Collection Instruments

Questionnaires were utilized to collect data in this investigation. The questionnaires were given to respondents who were expected to answer the questions independently (Kothari, 2019). The inclusion criteria related to demographic characteristics of respondents include both male and female students between 17 and 35 years. The advantages of using questionnaires are that it is less expensive and offers great anonymity. The validity of a questionnaire is its ability to measure what it is designed to measure (Shahril, 2015).

Brief Biosocial Gambling Screen (BBGS)

This tool relates to the first objective which aims to determine the prevalence of problem gambling among the students in Strathmore University. The Division on Addiction at Cambridge Health Alliance created BBGS to meet the demand for a fast, evidence-based screening for gambling disorders (Gebauer et al., 2010). Also, BBGS was produced from DSM-IV diagnostic criteria and has been added to standardized diagnostic instruments (Stinchfield, McCreedy, Turner, 2012). As a result, clinicians can utilize this with their clients to see if a more extensive screening is required (Gebauer et al., 2010).

To establish the psychometric validity of BBGS, a secondary data collection of evidence gleaned from 2,750 callers to a gambling addiction crisis hotline was

completed by the researchers. The sensitivity, precision, true positive rate, and negative predictive value of approving one, two, or three BBGS items were measured by the investigators. The BBGS showed heightened sensitivity accompanied by positive and negative prognostic values hence it's still a psychometrically supported tool for measuring problem gambling (Brett, Weinstock, Burton, Wenzel, Weber, Moran, 2014).

The Brief Biosocial Gambling Screen was used regionally. In that study, the researcher had the goal of identifying the smallest set of items from a larger set that included all of the most widely used problem gambling screens that would capture at-risk, problem and pathological gamblers in population surveys (Volberg et al., 2011).

"The three items in the BBGS include: (1) Have you become restless, impatient, or agitated while attempting to deter or scale back on gambling in the last 12 months? (2) Have you attempted to keep your family or friends from finding out how often you gambled in the last 12 months? (3) Did you have to rely on family, friends, or charity for help with living costs within the previous 12 months due to gambling? Any "yes" answer to any single item suggests the possibility of gambling-related issues and the need for further assessment." (Stinchfield et al., 2012).

The Instrument for Measuring Risk Factors and Protective Factors

An adapted version of the Communities That Care (CTC) surveying tool was used to assess risk factors and protective factors associated with problem gambling. The tool was designed to evaluate the risk and protective factors that research says are essential for understanding and preventing substance abuse (Glaser, Horn, Arthur, Hawkins, Catalano, 2005). This tool consists of items deduced from pre-existing instruments that have been used regionally and globally.

In this study, the researcher adopted the CTC youth survey tool to determine the risk and protective factors associated with problem gambling among the students of Strathmore University. This tool and its explanation have been presented and explained in the appendix section. Higher scores of the particular items show higher heights of risk or protection (Dowling & Scholes-Balog, 2017).

Data Collection Procedures

The data was collected from 12th to 17th August 2021. The researcher applied the purposive sampling method to collect data using questionnaires among the sample population who are between 17-35 years old. The questionnaire contained bio-data information, a screening tool to measure problem gambling, and structured closed-ended questions to determine the risk and protective variables linked to problem gambling. The first order of business was to train and prepare the research assistant who would assist in the physical distribution of the questionnaires to the target population. The researcher also used WhatsApp as a medium to debrief the assistant, monitor the data collection operation, and to answer FAQ. From the bio data information, all participants happened to be eighteen years and above since they're university students hence the researcher didn't need to obtain a parental conceit from them.

Pretesting

A field pretest is a survey dress rehearsal. These pilot tests are highly important tools for researchers because they allow them to discover possible issues with survey items and/or data collecting techniques before launching a study (Lewis-Beck et al., 2004). A small sample of (5–15 participants) is common in pre-tests of questionnaires (Courvoisier et al., 2014). The pre-test was carried out on 8th August 2021. The researcher used a sample size of 8 participants from the general population of Daystar

University students. I chose Daystar University because it is a Christian university like Strathmore hence the target population is exposed to a similar protective factor that is associated with problem gambling. No problem was exposed in the questionnaire when conducting the pretest therefore the researcher didn't need to make corrections.

Data Analysis Plan

Quantitative approaches place an emphasis on objective measurements and statistical, mathematical, or numerical analysis of data gathered through surveys. Quantitative research is concerned with acquiring numerical data and understanding a certain phenomenon (Babbie, 2010).

The researcher used a descriptive statistical technique to analyze the data. They offer concise summaries about the sample and the measurements. For descriptive statistics, the researcher was able to describe what the data revealed about the prevalence of problem gambling and present it in a manageable form (Trochim, 2020).

Ethical Considerations

To consider the ethical domains, the researcher sought approvals from the Daystar University Ethics Review Board then applied for a license letter from The National Commission for Science, Technology, and Innovation (NACOSTI). The aforementioned documents were used to request permission to research Strathmore University. All respondents were given the informed consent before being issued the inquiry form to verify if they were willingness to participate. To enforce confidentiality, participants' names and other sensitive personal data were not requested. All the data recorded through the survey was strictly used for research and none of the data was shown to any other second person as indicated on the consent

form. The results of the study will be used in reports, papers, presentations, and publications. According to Daystar University's catalog, plagiarism i.e., taking someone else's words or ideas and presenting them as your own, is recognized as academic dishonesty. Consequently, the researcher demonstrated ingenuity in this study.

The researcher enhanced the participants' understanding of the study during the debriefing, highlighting the essence and framework of the supervisory relationship before mentorship begins, and making it clear to them that the participation is voluntary. The willing participants were instructed to fill in the questionnaire and be informed of the confines of confidentiality, like coding the data, disposal, sharing, and data storage, and when confidentiality must be compromised. Unwilling students and those who have never gambled and have no interest in it shall be free to turn down the opportunity to participate in this research. Additionally, the researcher shall be able to compensate the research assistant using available funding. The risk of harm can happen both physically and/or psychologically. The study did not cause in any way harm (unintended or otherwise) to participants.

Summary

This chapter has given a breakdown of the methodology that shall be used in this study. It comprised of the research design, the target people, sample size, sampling technique, data collection instruments, methods of data assembly, methods of the data analysis strategy, as well as study ethics.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

Introduction

This chapter offers quantitative data examination obtained from questionnaires administered to youth at Strathmore University. The questionnaire was split into four segments. Segment A described demographic characteristics of the participants, Segment B, screened the respondents briefly for potential gambling-related problems, section C was about protective factors that protect the respondent from engaging in gambling activities while Section D was about the risk factors which expose the respondent to engage in gambling activities.

Analysis and Presentation

Response Rate

Questionnaires were administered to 264 respondents who are students at Strathmore University ranging from first year to Post Graduate students. A sum of 254 questionnaires were duly answered and given back resulting in a response rate of 96% as shown in Table 4.1.

Table 4.1: Response Rate

Category	No. of questionnaires administered	Number of questionnaires returned	Response rate %
Respondents	264	254	96

As stated by Mugenda and Mugenda (2008), a response rate of 60% is good and that of 70% is excellent implying that this study's response was excellent.

Demographics

Gender of the Respondents

The study sought to find out the gender of participants to find out the prevalence of gambling among the genders. To achieve this the respondents were asked to indicate their gender and the results are as shown in figure 4.1

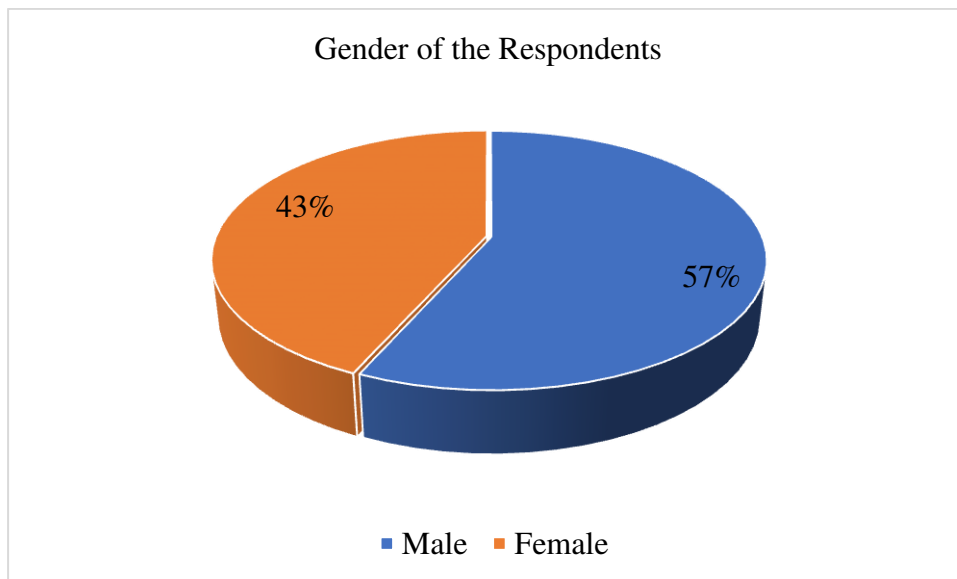


Figure 4.1: Gender of the Respondents

The findings showed that the majority (145)57% were male and (109)43% were female. The findings were considered representative of both genders.

Age Distribution of the Respondents

The inclusion criteria related to demographic characteristics of respondents include both male and female students between 17 and 35 years. In this regard, the respondents were asked to indicate their age bracket and the findings are as shown in

Table 4.2

Table 4.2: Age Distribution of the Respondents

Age bracket	Frequency	Percent
17 – 21	174	69
22 – 26	77	30
27 – 31	1	0
32 – 35	2	1

Total	254	100
-------	-----	-----

At an interval of 5 years, the respondents were asked to indicate their age bracket and it was evident that the greatest number of the respondents were at the age bracket of 17-21 at (174)69% followed by 22-26 years at (77)30%, at (2)1% was age bracket of 32-35 years and only one of the participants fell at the age bracket of 27-31. This indicated that the majority of the respondents were in the age bracket of 17-21 years. Nevertheless, the researcher never encountered a respondent below 18 years.

Prevalence of Problem Gambling

The first objective of the study was to identify the prevalence of problem gambling among students of Strathmore University in Nairobi County, Kenya. To find out if problem gambling is common among the respondents, the researcher administered the BBGS screening tool that asked three questions. The findings are as shown in figure

4.2.

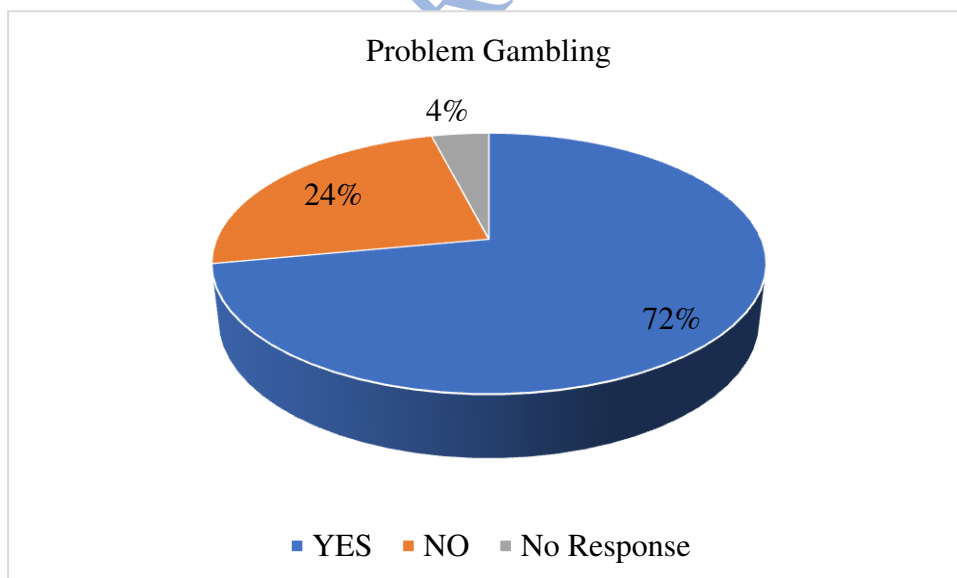
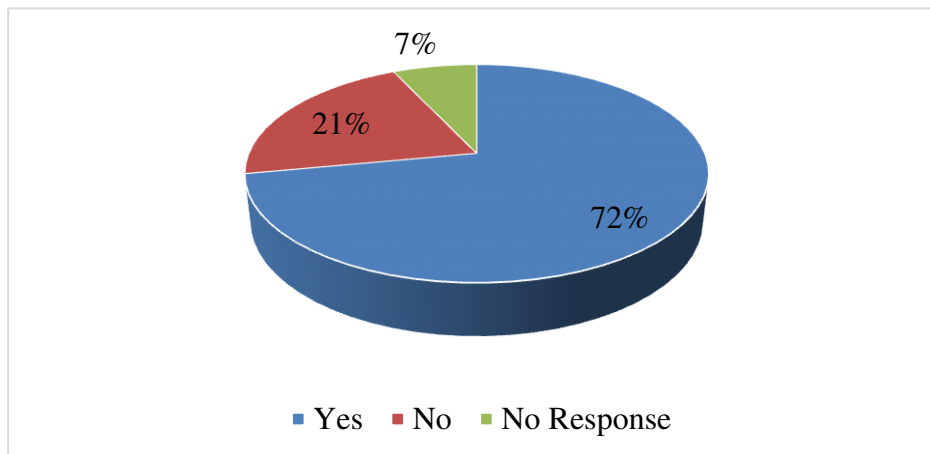


Figure 4.2: Problem Gambling

According to the findings, the majority i.e., 72% of the respondents answered “yes” to one of the three questions that sought to determine the prevalence of problem

gambling. 24% answered “no” to all the three questions and 4% of the respondents never attempted to answer any of three screening questions.

The first question in the screening tool asked the respondents if they are restless, irritable, or anxious when trying to stop/cut down on gambling. The findings are as



shown in figure 4.3

Figure 4.3: State of the Respondents

The findings showed that the majority 72% of the respondents became restless, irritable, or anxious when trying to stop/cut down on gambling. Secondly, the researcher also sought to understand if the respondents have tried to keep their family or friends from knowing how much they gambled. The findings are indicated in Figure 4.4

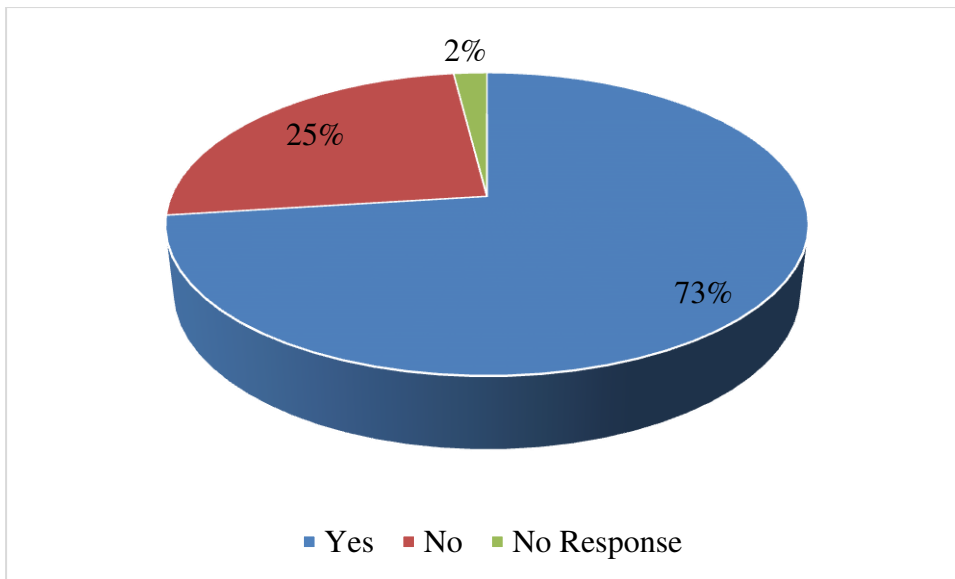


Figure 4.4: Keep their Family or Friends from Knowing how much they Gambled

Figure 4.4 indicated that 73% of the respondents have tried to keep their family or friends from knowing how much they gambled and 25% of the respondents responded 'No' to the statement. To identify further the prevalence of problem gambling, the study finally sought to know if the respondents have had to ask people for money to help deal with financial problems that had been caused by gambling. The findings are as indicated in figure 4.5

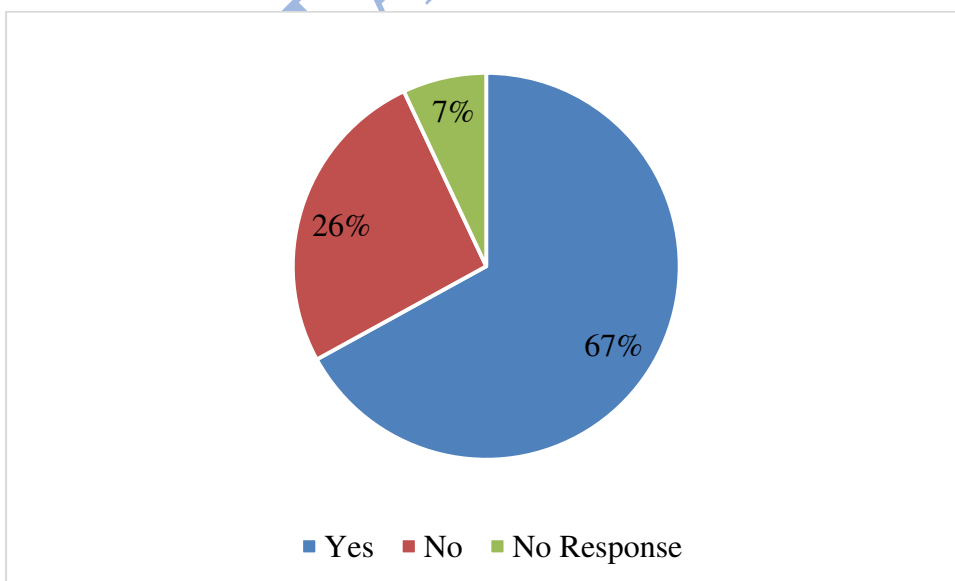


Figure 4.5: Respondents asking for Money to help in Problem Gambling

The findings show that majority 67% of the respondents have had to ask people for money to help deal with financial problems that had been caused by gambling and 26% of the respondents indicated that they have not asked people for money to help deal with financial problems caused by gambling.

Risk Factors Associated with Problem Gambling

The second objective of the study sought to identify the risk factors linked with problem gambling among the students at Strathmore University in Nairobi County, Kenya. The researcher used a Likert scale which contained statements in which the respondents were asked to indicate whether they Strongly Disagree, Disagree, were Neutral, Agree, or Strongly Agree. Higher scores of the individual risk factor, indicated higher heights of risk to develop problem gambling. Therefore, in the descriptive analysis, these risk factors shall be presented from the ones which scored highest to the ones which scored the least. The findings are as shown in Table 4.3.

Table 4.3: Risk Factors Linked with Problem Gambling

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
In the past 12 months, my best friends have participated in gambling	(40)16%	(20)8%	(20)8%	(66)26%	(106)42%
In the past 12 months, members of my family have stolen cash amounting to Ksh. 100 or things worth more than ksh.100 and used those funds to gamble	(30)12%	(37)15%	(63)25%	(44)17%	(80)31%
In the past year, my best friends have stolen cash amounting to Ksh. 100 or something worth more than Ksh. 100 and used those funds to gamble	(65)26%	(20)8%	(99)39%	(9)4%	(59)23%
In the past year my best friends have bought cannabis or alcohol when they gambled or used the money, they won in sports betting to buy drugs or alcohol	(40)16%	(7)3%	(62)24%	(67)26%	(80)31%
My father/male guardian gambles regularly	(3)8%	(49)19%	(85)33%	(64)25%	(40)15%
The media portrayal of sports betting in advertisements and billboards or sports betting wins arouse my desire to participate in sports betting	(25)10%	(30)12%	(31)13%	(85)33%	(82)32%
I have carried a lucky charm when I gambled	(30)12%	(30)12%	(41)16%	(13)32%	(72)28%
If I lose, it is important to continue gambling until I get even	(35)14%	(7)3%	(20)12%	(64)25%	(116)46%
If I have not won any of my bets for a long while, I am probably due for a big win	(71)28%	(17)7%	(49)19%	(36)14%	(82)32%

The finding of the study reveals that a majority of 71% of the respondents agreed when asked if when they lose, it is important to continue gambling until they get even. That proved that cognitive distortion in form of chasing losses was the highest risk factor. The study findings also showed that the majority of the respondents (68%) agreed that in the past 12 months, their best friends have participated in gambling. So, peer influence was the second highest risk factor. On whether the media portrayal of sports betting in advertisements and billboards or sports betting wins arose the respondent's desire to participate in sports betting, 65% agreed. Hence the third highest risk factor was media portrayal. Majority of the respondents (48%) also agreed that in the past 12 months, members of their family have stolen cash amounting to Ksh. 100 or things worth more than ksh.100 and used the funds to gamble. This fourth factor in the rank measured influence of gambling addiction from familial reference group.

A majority of 46% of respondents agreed when asked whether they are probably due for a big win if they have not won any of their bets for a long while. This fifth risk factor in the rank measured gambler's fallacy. When the respondents were asked if their father, mother, or guardian gambles regularly, 40% agreed. This sixth risk factor in the rank measured parental influence on gambling behavior.

The third objective of the study was to identify the protective factors associated with problem gambling among the students of Strathmore University in Nairobi County, Kenya. The researcher also used a Likert scale where the respondents indicated whether they Strongly Disagreed, Disagreed, were Neutral, Agreed, or Strongly Agreed to the statements that sought to find out the protective factors associated with problem gambling. Higher scores of the individual protective factor, indicated higher

heights of protection from developing problem gambling (Scholes-Balog & Dowling, 2017). The findings are as shown in Table 4.4

DAYSTAR UNIVERSITY

Table 4.4: Protective Factors Associated with Problem Gambling

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
In my community (hostel/school/neighborhood) there is a lot of opportunities to participate in social activities such as sports teams or clubs	(32)13%	(24)9%	(38)15%	(56)22%	(104)41%
People in my family have severe arguments	(87)34%	(61)24%	(65)25%	(24)9%	(21)8%
I often socialize with members of my family	(10)4%	(89)35%	(24)9%	(95)37%	(38)15%
I feel very close to my mother/father/guardians	(21)8%	(15)6%	(36)14%	(54)21%	(148)51%
My parents/guardian would feel it would be wrong for me to have gambled regularly	(28)11%	(26)10%	(21)8%	(32)13%	(130)58%
In the past 12 months, I have shared my thoughts and feelings with my best friends	(36)14%	(21)8%	(54)21%	(61)24%	(84)33%
In the past 12 months, my best friends have volunteered or performed some community service	(43)17%	(38)15%	(46)18%	(46)18%	(82)32%
During the past 12 months, I have actively supported organizations that help disadvantaged people	(48)19%	(48)19%	(68)27%	(40)16%	(48)19%
In the past 12 months, members of my family have often volunteered or performed some community service	(38)15%	(40)16%	(68)27%	(59)23%	(48)19%
I often attend religious services or activities (such as going to church, temple, or mosque, or taking part in religious youth groups)	(32)13%	(24)9%	(56)22%	(48)19%	(95)37%

According to the finding, a majority of 72% respondents agreed that they feel very close to their mother/father/guardians. This proves that family attachment is the highest buffer against problem gambling. Next, 71% of the respondents said that

parents/guardians would feel it would be wrong for them to have gambled regularly to show that parental supervision served as the second highest protective element against problem gambling. The study findings indicate that 63% of the respondents agreed that in their community (hostel/school/neighborhood) there is a lot of opportunities to participate in social activities such as sports teams or clubs. To show that engagement in prosocial activities in the community is a high protective factor against problem gambling.

The majority of the respondents 58% disagreed with the statement 'People in my family have severe arguments.' That revealed family cohesion is a key protective factor against problem gambling. The findings further showed that 57% of the respondents agreed to the statement "In the past 12 months, my best friends have volunteered or performed some community service". Hence affiliation with peers who engage in prosocial activities can serve as a significant protective factor against problem gambling. Upon being asked whether they often attend religious services or activities (such as going to church, temple, or mosque, or taking part in religious youth groups) 56% of the respondents agreed. That revealed that religiosity can serve as a potentially high protective factor against problem gambling.

Summary of Key Findings

In the first objective, 72% of the respondents responded Yes to either of the three statements seeking to know the prevalence of problem gambling during the past 12 months prior to the study. A "yes" response to any single item indicated the presence of potential gambling-related problems and a need for additional evaluation.

In the second objective, the following risk factors played a key role. Higher scores of the particular risk factors show higher heights of risk to develop problem gambling. 71% of the respondents agreed when asked if when they lose a bet, it is important to continue gambling until they get even. Hence cognitive distortion was the highest risk factor. On whether in the past 12 months, the respondent's best friends have participated in gambling, 68% agreed. So, peer influence was a key risk factor. On whether the media portrayal of sports betting in advertisements and billboards or sports betting wins arouse the respondent's desire to participate in sports betting, 65% agreed that they are influenced by the media. 48% of the respondents admitted to having addicted family members who have stolen some money in order to facilitate their gambling activities and 27% admitted to having friends who have stolen money for gambling. Hence family members and peers who were addicted to gambling were key risk factors as well. Gambler's fallacy was also a significant risk factor because 46% of respondents believed that if they have not won any bet for a long while, they're probably due for a big win.

In the third objective, the following protective factors were found to be noteworthy. Higher scores of the individual protective factor, indicated higher heights of protection from developing problem gambling. When the respondents were asked if they feel very close to their mother, father, or guardians, 72% agreed that they do. Therefore, parental attachment was found to be the highest protective factor. When the respondents were asked whether their parents/guardians would feel it would be wrong for them to have gambled regularly, 71% agreed. Hence parental supervision was found to be a noteworthy protective factor. When the respondents were asked whether in their community (hostel/school/neighborhood) there a lot of opportunities

to participate in social activities such as sports teams or clubs, 63% agreed. So prosocial participation was found to be an important protective factor against problem gambling in the hierarchy.

DAYSTAR UNIVERSITY

Summary

This chapter has given the presentation, analysis, and interpretation of data as well a summary of key findings.

DAYSTAR UNIVERSITY

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATION

Introduction

This chapter presents the discussions on the prevalence of problem gambling on university student behavior. The key findings from the research are explained with regard to the three main objectives. The researcher has also compared the findings with other studies and related literature. From the study, conclusions were drawn, recommendations were made, and suggestions were finally made for further research.

Discussion of Key Findings

Prevalence of Problem Gambling among University Students

The CBT Model provides the knowledge base of how the gambling problem develops and brings to light its associated risks and protective factors. The ABC Technique of Irrational Beliefs states that it is not the activation event (A) that creates negative emotional and behavioral consequences (C), but rather that a person perceives these events inaccurately and so has an irrational belief system (B) that contributes to the consequences (C) (McLeod, 2019). According to this model, the youth will be able to think that financial problems will all be solved when they successfully placed and won a bet. Problem gamblers in their youth have a higher perception of luck and a higher likelihood to see luck as a personal trait as compared to non-problem gamblers who have more rational beliefs.

According to the findings, the majority i.e., 72% of the respondents answered “yes” to one of the three questions that sought to determine the prevalence of problem gambling. 24% answered “no” to all the three questions and 4% of the respondents

never attempted to answer any of three screening questions. Based on the interpretation of the Brief Biosocial Gambling Screen (BBGS), a "yes" response to any particular item highlighted the potential of gambling-related issues and the need for further examination.

The importance of comprehending the features of youth gambling is emphasized by information showing that most adult problem gamblers suffered from problem gambling behaviors before they had reached 20 (Splevins et al., 2010). In reference to the literature review, it is evident that the youth are the predominant users of the Internet and social network sites and therefore are at a distinct risk of developing problems associated with online gambling (Bitanirwe & Ssewanyana, 2021). In particular, the group of young adults ranging between 18-25 years have become particularly susceptible to problems associated with gambling to a substantially higher degree than the overall adult population because they're usually specifically aimed at by advertising operations (Sassen et al., 2011).

Research concerns have been raised about students' ability to make decisions on betting activities (Macharia, 2018). The results of a study done in Kenyatta university showed that 69.3% of the participants were disordered gamblers. The study also found that frequency of gambling predicted gambling disorder while the typical amount placed per bet did not. Findings also showed that many university students who gamble experience adverse effects as a result of disordered gambling and that there is a need to develop policies and interventions aimed at reducing the risk and harm associated with gambling disorders (Ogachi et al., 2020).

The first question on the BBGS screening tool asked whether the respondent has experienced restlessness, irritability, or anxiety when attempting to stop/reduce gambling. The findings showed that the majority 72% of the respondents become restless, irritable, or anxious when trying to stop/cut down on gambling. Any time gambling causes problems in the life of a gambler, he or she is by definition experiencing problem gambling. Gambling addicts are much more probable than most to suffer from stress-related disorders, anxiety, and depression (Dowling et al., 2017; Koross, 2016; Ogachi et al., 2020; Mwadime, 2017).

A counseling psychologist using the CBT model helps a client to recognize their style of thinking and to modify it using evidence and logical beliefs (Cognitive Behavioral Therapy Part 1 -An Overview, 2010). The critical questions are: “are my C’s (the way I feel because of cutting down on gambling and the way I am behaving or intending to behave), helpful or hindering to me?” and “how are my “Bs” (beliefs about gambling) influencing my C’s?” (Scott et al., 2016).

According to this model, youth will be able to think that financial problems will all be solved when he/she has successfully placed and won a bet. Problem gamblers in their youth have a higher perception of luck and a higher likelihood to see luck as a personal trait as compared to non-problem gamblers who have more rational beliefs.

The CBT has assumptions that ideas, attitudes, beliefs, and thinking rather than the incidences are the primary drivers of human emotions and conduct. As a result, altering one’s mindset with the hopes of winning causes emotional and behavioral changes that drive the individual to participate in gambling activity (Edelstein, 2017).

When developing a treatment plan, it is important to realize that by elaborating the activating event that drives the youth to gamble when practicing to rationally build self-control, such "discerning" ways of examining can aid him/her learn techniques of how to manage his/her thoughts and behavior. He will be maneuvering the occurrences the moment he begins to think differently. Eventually, he shall accomplish being adept in responding to his behavior and ability to change it positively (Rizeanu, 2018). Secondly, the question sought to know if the respondents have tried to keep their family or friends from knowing how much they gambled. The findings indicated that 73% of the respondents have tried to keep their family or friends from knowing how much they gambled and 25% of the respondents responded 'No' to the statement. The dangers of betting are often overlooked by parents when they lecture their teenagers about the consequences of drug abuse. That is because gambling addiction is classified as a hidden addiction; its visible manifestations aren't as plausible as other addictions. Thus, the youth may not recognize or willingly admit they possess a problem (Gainsbury et al., 2014). They may lie to family members and others to cover up their behavior (Wangari, 2019).

The third question on the BBGS screening tool sought to know if the respondents have had to request for cash to help deal with the economic problems brought on by gambling. The findings show that the majority (67%) of the respondents have had to ask people for money to help deal with financial problems that had been caused by gambling and 26% of the respondents indicated that they have not asked people for money to help deal with financial problems caused by gambling. Problem gambling is described as out-of-control gambling behavior and one of the core items it disrupts in

a problem gambler's life is their finance. It is linked to debt and bankruptcy, and crime (such as theft and fraud) (Reith, 2006).

A study of internet gamblers found that women had a higher degree of over-indebtedness and higher scores on screening items linked to financial implications (McBride & Derevensky, 2017).

Money has many different implications in the existence of a problem gambler. The basic distinction between ordinary and problem gamblers is their attitude to money: in gambling, money is allocated entirely arbitrarily rather than according to meaningful principles, which can lead to a scenario in which the essential purpose and significance of money in the real world are obliterated. The three functions of money (money for gambling, lack of money, and prospective money) show how problem gambling reconfigures and transforms the exterior values of cash in the gambler's existence (Latvala et al., 2019).

Risk Factors

The second objective addressed the risk factors associated with problem gambling. It is crucial to understand that higher scores of particular risk factors, indicated higher heights of risk to develop problem gambling. Therefore, the researcher shall present the aforementioned factors systematically i.e., from the ones which had the highest score to the ones which had the least. So, the noteworthy findings revealed that the highest risk factor was cognitive distortions. That was made evident when 71% of the respondents agreed when asked if when they lose a bet, it is important to continue gambling until they get even. Most people who have a problem with gambling understand at a certain stage that there is no way they will secure all the money they

have lost but they continue to “chase their losses” (“Cognitive Behavioral Therapy (CBT) | Gambling, Gaming & Technology Use,” 2013).

Amid usual gamblers, coherent reasoning is negatively linked to problem gambling intensity (Bell & Boldero, 2011). Gambler’s fallacy (a belief that a win will come after a string of losses) is one of the major cognitive distortions which happen during gambling (Clark, 2014) that contribute to gambling persistence (motivation to maintain a course of action because one has already invested so much to date) (Rickwood, 2010). That was evident when a significant number of respondents (46%) believed that if they have not won any bet for a long while, they’re probably due for a big win.

The secondly, we have media portrayal. Therefore, on whether the media portrayal of sports betting in advertisements or sports betting wins arouse the respondent’s desire to participate in sports betting, 65% agreed that they are influenced by the media. The advertising budget of prominent betting businesses demonstrates the increasing industry's success to the degree that many gaming firms have surpassed the usual top ten ad spenders (Wangari, 2019). Technological advancements such as the internet and mobile telephony have increasingly provided new distribution channels for gambling involvement by young people, who are perceived to be more 'technologically smart and astute' than their parents.

In light of online gambling marketing, it is supremely aimed and prevalent in the area of sports. For the individuals who are aimed at, (e.g., sports fans and young adults), consumption of this marketing content can be unavoidable (Cassidy & Ovenden, 2017). The most famous game plan for marketing includes raising knowledge of

brands, advertising complicated financial stimulus for involvement, and promoting tricky betting odds (Newall et al., 2019).

Peer influence also scored highly in the rank of risk factors. The prevalence of gambling among university students was very high among students who have friends who engage in gambling activities at 68% while it is very low among those whose friends do not engage in gambling activities at 24%. Peer groups play a vital part in approving or encouraging gambling. Extreme gamblers who are still young tend to substitute their pre-existing friends who don't gamble with new friends who gamble like them (Oksanen et al., 2019). Having an acquaintance with a gambling delinquent is to be a risk issue, with up to 40% of problem gamblers claiming to have friends with similar gambling or substance misuse issues (Derevensky, 2015).

The ecological theory gives a suitable framework for comprehending risk factors associated with gambling disorders among the youth. The second level of the socio-ecological model is the relationship level. It informs us that a person's closest social sphere – family members, peers, educators, and other close contacts, donate to their array of experience (Dowling et al., 2017). Students from families who are not opposed to youth gambling and who cannot appreciate the consequences of youth gambling are more likely to struggle with gambling problems (Canallatos, 2019).

On the risk factor about reference group, respondents admitted to having family members and friends who have gone to an extent of stealing some money to facilitate their gambling practices and this shows the high rate of dependency on the activity that makes one be addicted to it. 48% admitted to having addicted family members who have stolen some money to facilitate their gambling events and 27% admitted to

having friends who have stolen money for gambling. This is a risk factor that is a great pointer of addiction among gamblers. Reference groups and families are examples of social influences because they have a direct or indirect impact on a youth's views. Betting along addicted reference groups nurtures the desire to take more risks in placing bets and amplifies the time and rate of visiting gambling platforms (Perreault et al., 2020).

From the above risk factors which have been highlighted it is evident that the youth are surrounded by situations that predispose them to gambling activities. The youth should bond with friends who are of high moral standards and do not engage in gambling activities and also male parents and guardians should not engage in gambling activities in front of the youth or involve them in gambling activities. Rather male parents and guardians need to be good role models who frequently acknowledge or affirm the endeavors and successes of their youth. Strong ties to family, school, community, and peers, as well as good values and defined behavioral norms, have all been found as protective variables via research.

Protective Factors

While identifying the protective factors which protect the University students from problem gambling, it was evident that the following played a key role. First, it is important to note that protective factors for youth gambling disorders are best understood through the ecological system model that acknowledges the interwoven interaction that occurs between the individual and his or her environment (Derevensky, 2011). In the following systematic presentation of risk factors, it is important to understand that higher scores of particular protective factors, indicated higher heights of protection against problem gambling.

The highest protective factor was family attachment because when the respondents were asked if they feel very close to their mother, father, or guardians, 72% agreed that they do. The literature in this study revealed that social care and social attachment are among the protective factors regarding gambling issues (Oksanen et al., 2019). Higher degrees of rage against attachment figures lead to increased sensation seeking, which raises the likelihood of participating in compulsive gambling (Calado et al., 2018).

A study has shown that parental discontentment is negatively linked to gambling among the youth (Bell & Boldero, 2011). So, when the respondents were asked whether their parents/guardians would feel it would be wrong for them to have gambled regularly, 71% agreed. Therefore, parental supervision and involvement is a critical protective factor against problem gambling among students.

When the respondents were asked whether in their community (hostel/school/neighborhood) there is a lot of opportunities to participate in social activities such as sports teams or clubs, 63% agreed. That indicates that prosocial activities were a significant protective factor. So, if a person's social environment has characteristics that encourage involvement with prosocial entities, the individual will adopt a prosocial orientation, but if the social environment contains characteristics that encourage antisocial attachment, the individual would engage in problematic behavior (Catalano & Hawkins, 1996). In that case, the availability of ample prosocial activities in the university highly protects students from problem gambling.

Conclusion

The study revealed that gambling activities among students are very rampant with negative side effects. Early victories may lead to the assumption that betting is a simple way to get money. Many students have spare time, cash, independence, accessibility, and curiosity to play diverse gambling games. These students are a cohort of the same age group who are going through the age of risk for gambling issues while betting prospects are expanding and there is a societal acceptance of gambling throughout their lives.

They've been exposed to online gambling in a period of technological revolution where land-based gambling sites have been transferred to digital platforms. Subsequently, if they want to gamble, they just need to reach to their smartphone in their pocket and place a bet on the internet. Nonetheless, the group of young adults ranging between 18-25 years has become particularly susceptible to problems associated with gambling problems to a substantially higher degree than the overall adult population. As targets of marketing agencies, many a time, they function in a bubble, and breaking out of such a bubble is hard when marketing algorithms regularly mark the gamblers for gambling advertisements.

Recommendations

The following recommendations were put forward after the study.

1. Gambling preferences were high among first and second-year students in the university and the institution should take precautionary measures to guide the students against the negative impacts of gambling.

2. Despite the ubiquity of on-campus gambling, practically all colleges and universities only have alcohol and drug rules. Therefore, the university needs to establish official policies on gambling. Thus, it's paramount that the dean of students be conversant with this data and be ready to address, and essentially aid obscure, gambling-related problems, and their accompanying issues on university campuses.
3. Gambling has produced various side effects on the behavior of gamblers to the extent that they steal money in order to sustain their behavior. Measures should be taken to ensure that the students have a genuine and continuous source of income-generating activities.
4. The government of Kenya should take precautionary measures to ensure that the media is regulated on the portrayal of gambling advertisements. The youth admitted that they are motivated when they see lucrative adverts for gambling.
5. There is a lot of evidence that there isn't enough public awareness of youth gambling. Unlike many other teenage dangerous behaviors, problem gambling has yet to be fully addressed by the educational and mental health systems and needs also to be. In light of the protective and risk factors associated with problem gambling, teachers can apply reality therapy to assist students with making the right choices, while avoiding the wrong choices.

Recommendation for Further Research

1. In the context of these findings, it's critical to dig deeper into gender variances in gambling-related risk factors.

2. Since problem gambling is frequently categorized as a “hidden addiction,” further studies need to be conducted to establish the prevalence and long-term effects of continued participation in gambling on the general population.
3. Also, the association between social support and problem gambling has gotten little attention, consequently, more study is needed to determine the relationship between those two protective factors.

DAYSTAR UNIVERSITY

REFERENCES

- Abahumna, A. (2017). *A handbook for beginners on basic research concepts*. Educreation Publishing. New Delhi: India.
- Abarbanel, B., Gainsbury, S. M., King, D., Hing, N., & Delfabbro, P. H. (2017). Gambling games on social platforms: How do advertisements for social casino games target young adults? *Policy & Internet*, 9(2), 184-209.
- Abbott, M., Binde, Clark, L., Hodgins, D., Johnson, M., Manitowabi, D., Quilty, L., Spångberg, J., Volberg, R., Walker, D., & Williams, R. (2018). Framework of Harmful Gambling and retains responsibility for keeping it up-to-date. *Addiction Research & Theory*, 29(5), 398-412.
- Achuka, V. & Wafula, P. (2019). *27 betting pay bills, shortcodes blocked*. Retrieved from <https://www.nation.co.ke/news/State-orders-telcos-to-shut-down-27-betting-paybills-short-codes/1056-5191352-amjn80z/index.html>.
- Adenugba, A., & Umeokoro, I. (2018). Cumulative impact factor: The determinants and effects of gambling culture on youths in Nigeria: The case of the city of Ibadan. *African Journal of Social Sciences*, 8(1), 104-118
- Aflakpui, A. A., & Oteng-Abayie, E. F. (2016). The demand for sports lottery: Evidence from the city of Kumasi in Ghana. *The Journal of Gambling Business and Economics*, 10(2), 46-67. doi.org/10.5750/jgbe. v10i2.1173
- American Psychiatric Association, D. S., & American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5* (Vol. 5). Washington, DC: American psychiatric association.
- Amutabi, M. (2018). Gambling addiction and threat to development in Kenya: Assessing the risks and problems of gamblers in changing society. *Journal of African Interdisciplinary Studies*, 2(2), 121-133.
- Arnett, J. J., Žukauskienė, R., & Sugimura, K. (2014). The new life stage of emerging adulthood at ages 18-29 years: Implications for mental health. *The Lancet Psychiatry*, 1(7), 569-576.
- Ashubwe, A., & Miano, P. (2018). Gambling Disorder: An Overview with Emphasis on Psychological Treatments. *International Journal of Psychotherapy, Counselling and Psychiatry: Theory Research & Clinical Practice*, 3(1), 2-9.
- Ates, C. O., & Peare, P. (2004). Behavioural Finance & Sports Betting Markets. *Aarhus School of Business Journal*.
- Atkinson, J., Sharp, C., Schmitz, J., & Yaroslavsky, I. (2012). Behavioral activation and inhibition, negative affect, and gambling severity in a sample of young adult college students. *Journal of Gambling Studies*, 28(3), 437-449

- Babbie, E. R. (2010). *The practice of social research*. Belmont, CA: Wadsworth.
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Banks, G. (2008). Industry policy for a productive Australia. *Economic Analysis and Policy*, 38(2), 213.
- Barnfield-Tubb, J., & Francis, C. (2019). *Gambling participation in 2018: behavior, awareness, and attitudes Annual report*. Retrieved from: <https://www.gamblingcommission.gov.uk/PDF/survey-data/Gambling-participation-in-2018-behaviour-awareness-and-attitudes.pdf>
- Barrada, J. R., Navas, J. F., Ruiz de Lara, C. M., Billieux, J., Devos, G., & Perales, J. C. (2019). Reconsidering the roots, structure, and implications of gambling motives: An integrative approach. *PLOS ONE*, 14(2), e0212695.
- Barrault, S., & Varescon, I. (2013). Impulsive sensation seeking and gambling practice among a sample of online poker players: Comparison between non-pathological, problem and pathological gamblers. *Personality and Individual Differences*, 55(5), 502–507. doi.org/10.1016/j.paid.2013.04.022
- Bell, R., & Boldero, J. (2011). *Factors affecting youth gambling: A comprehensive model of the antecedents and consequences of gambling in younger people*. <https://responsiblegambling.vic.gov.au/documents/90/Research-report-factors-affecting-youth-gambling.pdf>
- Betmoran Kenya. (2018). *List of all registered sports betting companies in Kenya*. Retrieved from <https://betmoran.co.ke/list-all-registered-sports-betting-companies-kenya/>.
- Betting Sites in Kenya (2019). *Toplist of licensed Kenyan bookies*. Retrieved from <https://www.sbo.net/country/kenya/>
- Beynon, C., Pearce-Smith, N., & Clark, R. (2020). Risk factors for gambling and problem gambling: a protocol for a rapid umbrella review of systematic reviews and meta-analyses. *Systematic Reviews*, 9(1). doi.org/10.1186/s13643-020-01455-x
- Big winners, big losers: Kenya's addiction to gambling. (2018, June 26). *BBC News*. Retrieved from <https://www.bbc.com/news/world-africa-44501875>
- Bitanihirwe, B. K., & Ssewanyana, D. (2021). Gambling patterns and problem gambling among youth in sub-saharan Africa: a systematic review. *Journal of Gambling Studies*, 37(3), 723-745.
- Blaszczynski, A., & Nower, L. (2002). A pathways model of problem and pathological gambling. *Addiction*, 97(5), 487-499

- Blaszczynski, A. (2013). A critical examination of the link between gaming machines and gambling-related harm. *The Journal of Gambling Business and Economics*, 7(3), 55-76.
- Blinn-Pike, L., Worthy, S. L., & Jonkman, J. N. (2010). Adolescent gambling: A review of an emerging field of research. *Journal of Adolescent Health*, 47(3), 223-236.
- Bonnaire, C. (2012). Jeux de hasard et d'argent sur Internet : Quels risques ? *L'Encéphale*, 38(1) doi.org/10.1016/j.encep.2011.01.014
- Brett, E. I., Weinstock, J., Burton, S., Wenzel, K. R., Weber, S., & Moran, S. (2014). Do the DSM-5 diagnostic revisions affect the psychometric properties of the brief biosocial gambling screen? *International Gambling Studies*, 14(3), 447-456.
- Bronfenbrenner, U. (2005). *Making human beings human: Bioecological perspectives on human development*. Sage Publications Ltd.
- Calado, F., & Griffiths, M. D. (2016). Problem gambling worldwide: An update and systematic review of empirical research (2000–2015). *Journal of Behavioral Addictions*, 5(4), 592–613
- Calado, F., Alexandre, J., & Griffiths, M. D. (2018). Gambling among adolescents and emerging adults: A cross-cultural study between Portuguese and English youth. *International Journal of Mental Health and Addiction*, 18(3), 737–753.
- Campbell, C., Derevensky, J., Meerkamper, E., & Cutajar, J. (2011). Parents' perceptions of adolescent gambling: A Canadian national study. *Journal of Gambling Issues*, 25(2), 36-53.
- Canale, N., Vieno, A., Lenzi, M., Griffiths, M. D., Borraccino, A., Lazzari, G., ... & Santinello, M. (2017). Income inequality and adolescent gambling severity: Findings from a large-scale Italian representative survey. *Frontiers in Psychology*, 8(1), 1318.
- Canallatos, S. (2019). *College and problem gambling. Know the odds*. Retrieved from <https://knowtheodds.org/blog/college-problem-gambling/>
- Carlo, G., Crockett, L. J., Wilkinson, J. L., & Beal, S. J. (2010). The longitudinal relationships between rural adolescents' prosocial behaviors and young adult substance use. *Journal of Youth and Adolescence*, 40(9), 1192–1202.
- Cassidy, R., & Ovenden, N. (2017). *Frequency, duration, and medium of advertisements for gambling and other risky products in commercial and public service broadcasts of English Premier League football*. Retrieved from doi.org/10.31235/osf.io/f6bu8
- Catalano, L. (2019). *Problem Gambling: The Hidden Addiction | Council on Chemical Abuse*. Retrieved from

<https://www.councilonchemicalabuse.org/problem-gambling-hidden-addiction.html>

- Chagas, B. T., & Gomes, J. F. (2017). Internet gambling: A critical review of behavioural tracking research. *Journal of Gambling Issues*
<https://doi.org/10.4309/jgi.2017.36.1>
- Cheruiyot, K., & Mbugua, N. (2019). *Gambling to blame for increased loan defaults - Matiang 'i*. Retrieved from <http://www.the-star.co.ke/news/2019-05-20-gambling-to-blame-for-increased-loan-defaults-matiangi/>
- Chiu, J., & Storm, L. (2010). Personality, perceived luck, and gambling attitudes as predictors of gambling involvement. *Journal of Gambling Studies*, 26(2), 205–227.
- Cicolini, G., Della Pelle, C., Simonetti, V., Comparcini, D., Sepede, G., & Cipollone, F. (2018). Pathological gambling among Italian nursing students. *Archives of Psychiatric Nursing*, 32(2), 305-309.
- Cognitive Behavioral Therapy Part 1 -An Overview*. (2010). Retrieved from https://www.integration.samhsa.gov/clinical-practice/sbirt/cbt_overview_part_1.pdf
- Clark, L. (2014). Disordered gambling: The evolving concept of behavioral addiction. *Annals of the New York Academy of Sciences*, 1327(1), 46-61.
- Clark, L. (2014). Disordered gambling: The evolving concept of behavioral addiction. *Annals of the New York Academy of Sciences*, 1327(1), 46-61.
- Communities That Care Report for Grades 6 to 12. (2014). Retrieved from <https://www.pridesurveys.com/wp-content/uploads/2014/06/Sample-Report-CTC-Standard.pdf>.
- Comparcini, D., Simonetti, V., Galli, F., Buccoliero, D., Palombelli, E., Sepede, G., & Cicolini, G. (2018). Gioco d'azzardo patologico e dipendenza da internet tra gli studenti infermieri: uno studio pilota. *Professioni Infermieristiche*, 71(1). Retrieved from <http://www.profinf.net/pro3/index.php/IN/article/view/475>
- Conlin, M. C., & Sillence, E. (2021). Exploring british adolescents' views and experiences of problematic smartphone use and smartphone etiquette. *Journal of Gambling Issues*, <http://doi.org/10.4309/jgi.2021.46.14>
- Conrad, M. (2008). College student gambling: Examining the effects of gaming education within a college curriculum. *Masters Theses*, 197.
- Cosenza, M., Ciccarelli, M., & Nigro, G. (2019). Decision-making styles, negative affectivity, and cognitive distortions in adolescent gambling. *Journal of Gambling Studies*, 35(2), 517-531.

- Costes, JM, Pousset, M., Eroukmanoff, V., Le Nezet, O., Richard, JB, Guignard, R., ... & Arwidson, P. (2011). The levels and practices of games of chance and money in 2010. *Tendances*, (77), 1-8.
- Croson, R. & Sundali, J. (2005). The gambler's fallacy and the hot hand: Empirical data from casinos. *Journal of Risk and Uncertainty*, 30(3), 195-209.
- Crossman, A. (2020). *What you need to understand about purposive sampling*. Retrieved from: <https://www.thoughtco.com/purposive-sampling-3026727>.
- Custer, R., & Milt, H. (1985). *When luck runs out*. New York: Warner Books.
- Dahir.A. L. (2017, November 30). Betting in Kenya is making young people broke and suicidal. *Quartz Africa*. Retrieved from <https://qz.com/africa/1140842/gambling-addiction-is-on-the-rise-in-kenya-and-leaving-young-people-bankrupt-and-suicidal/>
- Davis Consulting for The British Columbia Problem Gambling Program. "Problem Gambling Training Manual: Level 1" Vancouver, BC. 2001
- Deans, E. G., Thomas, S. L., Derevensky, J., & Daube, M. (2017). The influence of marketing on the sports betting attitudes and consumption behaviors of young men: implications for harm reduction and prevention strategies. *Harm Reduction Journal*, 14(1). Retrieved from doi.org/10.1186/s12954-017-0131-8
- Delfabbro, P. (2013). Problem and pathological gambling: A conceptual review. *The Journal of Gambling Business and Economics*, 7(3),35-53.
- Dennison, C. R., Finkeldey, J. G., & Rocheleau, G. C. (2020). Confounding Bias in the Relationship Between Problem Gambling and Crime. *Journal of Gambling Studies*. [http:// doi.org/10.1007/s10899-020-09939-0](https://doi.org/10.1007/s10899-020-09939-0)
- Derevensky, J. L. (2015). Youth gambling: Some current misconceptions. *Austin Journal of Psychiatry and Behavioral Sciences*, 2(2), 1039.
- Derevensky, J. L., & Gupta, R. (2000). Youth gambling: A clinical and research perspective. *Journal of Gambling Issues*, 2(13), 179-182.
- Derevensky, J., Sklar, A., Gupta, R., & Messerlian, C. (2009). An empirical study examining the impact of gambling advertisements on adolescent gambling attitudes and behaviors. *International Journal of Mental Health and Addiction*, 8(1), 21-34.
- Devos, M. G., Clark, L., Bowden-Jones, H., Grall-Bronnec, M., Challet-Bouju, G., Khazaal, Y., ... & Billieux, J. (2020). The joint role of impulsivity and distorted cognitions in recreational and problem gambling: A cluster analytic approach. *Journal of affective disorders*, 260(1), 473-482.

- Dickson, L. M., Derevensky, J. L., & Gupta, R. (2002). The prevention of gambling problems in youth: A conceptual framework. *Journal of Gambling Studies*, 18(2), 97-159.
- Dickson, L., Derevensky, J. L., & Gupta, R. (2008). Youth gambling problems: Examining risk and protective factors. *International Gambling Studies*, 8(1), 25-47.
- Dixon, M. J., Harrigan, K. A., Jarick, M., MacLaren, V., Fugelsang, J. A., & Sheepy, E. (2011). Psychophysiological arousal signatures of near-misses in slot machine play. *International Gambling Studies*, 11(3), 393-407.
- Dobson, K. (2010). *Handbook of Cognitive-behavioral Therapies*. The Guilford Press. Retrieved from <https://ravannews.com/wp-content/uploads/HANDBOOK-of-Cognitive-Behavioral-Therapies.pdf>
- Dowling, N. A., Merkouris, S. S., Greenwood, C. J., Oldenhof, E., Toumbourou, J. W., & Youssef, G. J. (2017). Early risk and protective factors for problem gambling: A systematic review and meta-analysis of longitudinal studies. *Clinical Psychology Review*, 51(1), 109-124.
- Dowling, N., Smith, D., & Thomas, T. (2005). Electronic gaming machines: are they the 'crack-cocaine of gambling? *Addiction*, 100(1), 33-45.
- Dowling, N., Smith, D., & Thomas, T. (2009). The family functioning of female pathological gamblers. *International Journal of Mental Health and Addiction*, 7, 29-44.
- Dowling, N., Suomi, A., Jackson, A., Lavis, T., Patford, J., Cockman, S., Thomas, S., Bellringer, M., Koziol-McLain, J., Battersby, M., Harvey, P., & Abbott, M. (2014). Problem Gambling and Intimate Partner Violence. *Trauma, Violence, & Abuse*, 17(1), 43-61.
- Downs, C., & Woolrych, R. (2010). Gambling and debt: the hidden impacts on family and work life. *Community, Work & Family*, 13(3). doi.org/10.1080/13668803.2010.488096
- Edelstein, M. (2017). Five Major Differences Between REBT & CBT. *Psychology Today*. Retrieved from <https://www.psychologytoday.com/us/blog/the-three-minute-therapist/201703/5-major-differences-between-rebt-cbt>
- Elliott, R. (2019). *Gambling in Kenya: Mobile Phones and Football Boost Popularity*. GeoPoll. Retrieved from <https://www.geopoll.com/blog/gambling-kenya-mobile-phones-football/>
- Enwereuzor, I. K., Ugwu, L. I., & Ugwu, D. I. (2016). Role of smartphone addiction in gambling passion and schoolwork engagement: a Dualistic Model of Passion approach. *Asian Journal of Gambling Issues and Public Health*, 6(1). doi.org/10.1186/s40405-016-0018-8

- Esparza-Reig, J., Martí-Vilar, M., Merino-Soto, C., & García-Casique, A. (2021). Relationship between Prosocial Behaviours and Addiction Problems: A Systematic Review. *Healthcare*, 10(1), 74.
- Fabiansson, C. (2016). *Pathways to excessive gambling*. London: Routledge.
- Fact Sheet (2011). Gambling Problems* | www.collegegambling.org. (2011). Collegegambling.Org. Retrieved from <https://www.collegegambling.org/just-facts/gambling-problems>
- Faull, L. (2019). *SportPesa: It's Time for This Kleptocracy to End Kenya's Billion Dollar Sports Betting Curse*. Retrieved from <https://www.theelephant.info/features/2019/07/19/sportpesa-its-time-for-this-kleptocracy-to-end-kenyas-billion-dollar-sport-betting-curse/?print=pdf>
- Feldman, M.A. (2013). Increasing the Odds. (8). A Series Dedicated to Understanding Gambling Problems. Centers of Excellence in Gambling Research. Retrieved, from www.ncrg.org/sites/default/files/uploads/.../ncrgmonograph8_fnl.pdf
- Ferentzy, P. (2015). All bets are off: Losers, liars, and recovery from gambling addiction. *Journal of Gambling Issues*, 31, 202. Retrieved from doi.org/10.4309/jgi.2015.31.2
- Frahn, T., Delfabbro, P., & King, D. L. (2014). Exposure to Free-Play Modes in Simulated Online Gaming Increases Risk-Taking in Monetary Gambling. *Journal of Gambling Studies*, 31(4). Retrieved from doi.org/10.1007/s10899-014-9479-9
- Froggatt, W. (2005). *A Brief Introduction to Rational Emotive Behavior Therapy*. Retrieved from http://www.drwinogron.com/articles/Brief_Intro_To_REBT.pdf
- Gainsbury, S. (2012). Internet gambling: current research findings and implications. Retrieved from ePublications@SCU website: https://epubs.scu.edu.au/tourism_pubs/832/
- Gainsbury, S. (2013). *Interactive Gambling* (p. 2). Retrieved from <https://aifs.gov.au/agrc/sites/default/files/publication-documents/agrc-dp3-interactive-gambling.pdf>
- Gainsbury, S. M., Russell, A., & Hing, N. (2014). An investigation of social casino gaming among land-based and Internet gamblers: A comparison of socio-demographic characteristics, gambling, and co-morbidities. *Computers in Human Behavior*, 33, 126-135. doi.org/10.1016/j.chb.2014.01.031
- Gainsbury, S. M., Russell, A., Hing, N., Wood, R., & Blaszczynski, A. (2013). The impact of internet gambling on gambling problems: A comparison of moderate-risk and problem Internet and non-Internet gamblers. *Psychology of Addictive Behaviors*, 27(4). <http://doi.org/10.1037/a0031475>

- Gainsbury, S. M., Russell, A., Wood, R., Hing, N., & Blaszczynski, A. (2014). How risky is Internet gambling? A comparison of subgroups of Internet gamblers based on problem gambling status. *New Media & Society*, 17(6), 861-879.
- Gainsbury, S., King, D., Abarbanel, B., Delfabbro, P., & Hing, N. (2015). *Convergence of gambling and gaming in digital media*.
- Gainsbury, S., Parke, J., & Suhonen, N. (2013). Consumer attitudes towards Internet gambling: Perceptions of responsible gambling policies, consumer protection, and regulation of online gambling sites. *Computers in Human Behavior*, 29(1). <http://doi.org/10.1016/j.chb.2012.08.010>
- Gakweli, A. (2019). *KRA permits Sportpesa to renew its betting license*. Retrieved from <https://kenyanwallstreet.com/kra-clears-sportpesa-to-renew-betting-license/>
- Gambler's Fallacy Definition*. (2019). Retrieved from <https://www.investopedia.com/terms/g/gamblersfallacy.asp>
- Gambling legislation and regulations*. (2016). Victorian Commission for Gambling and Liquor Regulation. Retrieved from <https://www.vcglr.vic.gov.au/gambling/gaming-venue-operator/understand-your-gaming-licence/gambling-legislation-and-regulations>
- Gandolfo, A, & Debonis, V.(2014), "Motivations for gambling and the choice between skill and luck gambling products: an exploratory study", Discussion Papers del Dipartimento di Scienze Economiche –Università di Pisa, n. 185
- Gassmann, F., Emrich, E., & Pierdzioch, C. (2015). Who bets on sports? Some further empirical evidence using German data. *International Review for the Sociology of Sport*, 52(4). doi.org/10.1177/1012690215597650
- Gebauer, L., LaBrie, R., & Shaffer, H. J. (2010). Optimizing DSM-IV-TR classification accuracy: A brief biosocial screen for detecting current gambling disorders among gamblers in the general household population. *The Canadian Journal of Psychiatry*, 55(2), 82-90.
- Geek, B. (2019). *What color light has the highest frequency? | Socratic*. Retrieved from <https://socratic.org/questions/5348556b02bf347bedff8fed>
- Geopoll. (2019, July 24). *Gambling in Kenya: Mobile phones and football boost popularity*. Retrieved from <https://www.geopoll.com/blog/gambling-kenyamobile-phones-f>
- Gichaga, E. (2019). *17 percent of gambling losers try committing suicide – Survey*. Retrieved from <https://www.kahawatungu.com/2019/07/25/17-percent-gambling-losers-try-commit-suicide/>
- Gilovich, T. (1983). Biased evaluation and persistence in gambling. *Journal of Personality and Social Psychology*, 44(6), 1110-1126.

- Gilovich, T., & Douglas, C. (1986). Biased evaluations of randomly determined gambling outcomes. *Journal of Experimental Social Psychology*, 22(3), 228-241.
- Gitau, V. (2018). *Strathmore Law review*. Glaser, R. R., Horn, M. L. Van., Arthur, M. W., Hawkins, J. David., & Catalano, R. F. (2005). Measurement Properties of the Communities That Care Youth Survey Across Demographic Groups. *Journal of Quantitative Criminology*, 21(1), 73–102.
- Goodie, A. S., & Fortune, E. E. (2013). Measuring cognitive distortions in pathological gambling: Review and meta-analyses. *Psychology of Addictive Behaviors*, 27(3). doi.org/10.1037/a0031892
- Gough, C. (2019). *Topic: Sports Betting*. [online] www.statista.com. Retrieved from: <https://www.statista.com/topics/1740/sports-betting/> [Accessed 17 Jul. 2019].
- Grant, J. E., Leppink, E. W., Redden, S. A., Odlaug, B. L., & Chamberlain, S. R. (2015). COMT genotype, gambling activity, and cognition. *Journal of Psychiatric Research*, 68(1), 371-376.
- Gregory, S. D., Stevens, M. C., & Fraser, J. F. (2018). *Mechanical circulatory and respiratory support*. Elsevier/Academic Press.
- Griffiths, M. (2010). The role of parents in the development of gambling behavior in adolescents. *Education and Health*, 28(3), 11-20.
- Gullotta, T. (2009). *Handbook of adolescent behavioral problems*. New York, NY: Springer.
- Güngör, B., Budak, E., Taymur, I., Zorlu, N., Uçgun, B., Akgül, A., & Demirci, H. (2018). The comparison of risky and ambiguous decision-making and cool executive functions between patients with obsessive-compulsive disorder and healthy controls. *Archives of Clinical Psychiatry (São Paulo)*, 45(5). doi.org/10.1590/0101-60830000000170
- Gupta, R. (2012). *Factors Affecting Sample Size | Margin of Error | Confidence Interval*. Scribd. Retrieved from <https://www.scribd.com/doc/98854480/Factors-Affecting-Sample-Size>.
- Habib, R., & Dixon, M. R. (2010). Neurobehavioral Evidence for the “Near-Miss” Effect in Pathological Gamblers. *Journal of the Experimental Analysis of Behavior*, 93(3). doi.org/10.1901/jeab.2010.93-313
- Hadden, M. (2014). *Problem gambling among college students*. Retrieved from <https://knowtheodds.org/blog/problem-gambling-among-college-students/>
- Hahn, U. (2019). *Gambler's Fallacy - Psychology*. Retrieved from <https://www.oxfordbibliographies.com/view/document/obo-9780199828340/obo-9780199828340-0027.xml>

- Halgreen, C. (2012). *Exploring Behavioural Addiction: A phenomenological study of the Lived Experiences of Pathological Gamblers*.
- Halgreen, C. (2012). *Exploring Behavioural Addiction: A Phenomenological Study of the Lived Experiences of Pathological Gamblers* (Doctoral dissertation, Nelson Mandela Metropolitan University).
<http://vital.seals.ac.za:8080/vital/access/manager/PdfViewer/vital:9940/SOURCEPDF?viewPdfInternal=1>
- Hansen, M., & Rossow, I. (2007). Adolescent Gambling and Problem Gambling: Does the Total Consumption Model Apply? *Journal of Gambling Studies*, 24(2), 135-149. doi.org/10.1007/s10899-007-9082-4
- Hanss, D., Mentzoni, R. A., Griffiths, M. D., & Pallesen, S. (2015). The impact of gambling advertising: Problem gamblers report stronger impacts on involvement, knowledge, and awareness than recreational gamblers. *Psychology of Addictive Behaviors*, 29(2). doi.org/10.1037/adb0000062
- Harris, N., Newby, J., & Klein, R. G. (2013). Competitiveness Facets and Sensation Seeking as Predictors of Problem Gambling Among a Sample of University Student Gamblers. *Journal of Gambling Studies*, 31(2), 385–396.
- Harvanko, A. M., Schreiber, L. R. N., & Grant, J. E. (2013). Prediction of Alcohol and Gambling Problems in Young Adults by Using a Measure of Decision Making. *Journal of Addiction Medicine*, 7(5). doi.org/10.1097/adm.0b013e31829a2f32
- Hawkins, J.D. (1996). *Delinquency and crime: current theories*. Cambridge University Press.
- Heiskanen, M. (2017). Is it all about money? A qualitative analysis of problem gamblers' conceptualizations of money. *Nordic Studies on Alcohol and Drugs*, 34(5), 362-374. doi.org/10.1177/1455072517718455
- Heiskanen, M., & Egerer, M. (2018). The conceptualization of problem gambling in social services: email interviews with Finnish social services directors. *Nordic Social Work Research*, 9(1). doi.org/10.1080/2156857x.2018.1426625
- Higgins, S., Mahon, M., & McDonagh, J. (2012). Interdisciplinary interpretations and applications of the concept of scale in landscape research. *Journal of Environmental Management*, 113, doi.org/10.1016/j.jenvman.2012.08.027
- High Rollers: A History of Gambling (Documentary) [YouTube Video]. (2017). Retrieved from <https://www.youtube.com/watch?v=YHkKNCKqczQ&t=122s>
- Hing, N., Russell, A. M. T., Vitartas, P., & Lamont, M. (2015). Demographic, Behavioural and Normative Risk Factors for Gambling Problems Amongst Sports Bettors. *Journal of Gambling Studies*, 32(2), 625-641. doi.org/10.1007/s10899-015-9571-9

- Hing, N., Russell, A., Tolchard, B., & Nower, L. (2016). Risk Factors for Gambling Problems: An Analysis by Gender. *Journal of Gambling Studies*, 32(2), 511-534. doi.org/10.1007/s10899-015-9548-8
- Holdsworth, L., Hing, N., & Breen, H. (2012). Exploring women's problem gambling: A review of the literature. *International Gambling Studies*, 12(2), 199-213. https://doi.org/10.1080/14459795.2012.656317
- Holdsworth, L., Nuske, E., & Breen, H. (2013). All Mixed Up Together: Women's Experiences of Problem Gambling, Comorbidity and Co-occurring Complex Needs. *International Journal of Mental Health and Addiction*, 11(3), 315-328. doi.org/10.1007/s11469-012-9415-0
- How can gambling affect you? | Gambling Therapy. (2019). Retrieved from Gamblingtherapy.org website: Retrieved from https://www.gamblingtherapy.org/en/how-can-gambling-affect-you
- Howe, P. D. L., Vargas-Sáenz, A., Hulbert, C. A., & Boldero, J. M. (2019). Predictors of gambling and problem gambling in Victoria, Australia. *PLOS ONE*, 14(1), e0209277. doi.org/10.1371/journal.pone.0209277
- Hraba, J., & Lee, G. (2016). Gender, gambling, and problem gambling. *Journal of Gambling Studies*, 12(1), 83–101. doi.org/10.1007/bf01533191
- Huic, A., Hundric, D., Kranzelic, V., & Ricijas, N. (2017). Problem Gambling among Adolescent Girls in Croatia—The Role of Different Psychosocial Predictors. *Frontiers in Psychology*, 8(8). doi.org/10.3389/fpsyg.00792
- Humphreys, B. R., & Perez, L. (2020). Who bets on sports? Characteristics of sports bettors and the consequences of expanding sports betting opportunities. *Studies of Applied Economics*, 30(2), 579. doi.org/10.25115/eea. v30i2.3542
- Husky, M. M., Michel, G., Richard, J.-B., Guignard, R., & Beck, F. (2015). Gender differences in the associations of gambling activities and suicidal behaviors with problem gambling in a nationally representative French sample. *Addictive Behaviors*, 45, 45-50. doi.org/10.1016/j.addbeh.2015.01.011
- Hussein, A. (2016, February 12). *Maseno student drops out of university after using HELB loan for sports betting*. Tuko.co.ke - Kenya News. https://www.tuko.co.ke/sports/94539-maseno-student-dropped-university-using-fees-sports-betting/
- Igadwah, L. (2019). Matiang'i fires warning shots as bets push over 500,000 youths. *Business Daily*. Retrieved from https://www.businessdailyafrica.com/economy/Matiang-i-warning-betting-youths-debt-financial-ruin-suicide/3946234-5052366-kb23owz/index.html
- Intermittent Reinforcement. (n.d.). In *Alleydog.com's online glossary*. Retrieved from https://www.alleydog.com/glossary/definition-cit.php?term=Intermittent+Reinforcement

- James, R. J. E., O'Malley, C., & Tunney, R. J. (2016). Understanding the psychology of mobile gambling: A behavioral synthesis. *British Journal of Psychology*, *108*(3), 608-625. doi.org/10.1111/bjop.12226
- Jang, S. M., Hong, S., Kim, S. B., & Sohn, S. (2019). Examining risk and protective factors of problem gambling among college students in South Korea. *Children and Youth Services Review*, *105*. doi.org/10.1016/j.childyouth.2019.104418
- Ji, L.-J., McGeorge, K., Li, Y., Lee, A., & Zhang, Z. (2015). Culture and gambling fallacies. *SpringerPlus*, *4*(1). doi.org/10.1186/s40064-015-1290-2
- Jobber, D. (2010). *Produktionssamling: Principles and practice of marketing*. McGraw-Hill.
- Joukhador, J., Blaszczyński, A., & Maccallum, F. (2004). Superstitious Beliefs in Gambling Among Problem and Non-Problem Gamblers: Preliminary Data. *Journal of Gambling Studies*, *20*(2), 171–180.
- Journal of Extension. (2019). *Tips for Developing and Testing Questionnaires/Instruments*. Retrieved from <https://www.joe.org/joe/2007february/tt2.php>
- Kaakinen, M., Sirola, A., Savolainen, I., & Oksanen, A. (2018). Shared identity and shared information in social media: Development and validation of the identity bubble reinforcement scale. *Media Psychology*. Retrieved from doi.org/10.1080/15213269.2018.1544910
- Kaffenberger, M., Totolo, E., & Soursourian, M. (2018). A digital credit revolution: Insights from borrowers in Kenya and Tanzania. *Consultative Group to Assist the Poor—Financial Sector Deepening Working Paper, Washington, DC*.
- Kahura, D. (2018, February 16). *Betting their lives away: How online gambling is ruining Kenyan youth* | *The Elephant*. Elephant. Retrieved from <https://www.theelephant.info/features/2018/02/16/betting-their-lives-away-how-online-gambling-is-ruining-kenyan-youth/>
- Kam, S. M., Wong, I. L. K., So, E. M. T., Un, D. K. C., & Chan, C. H. W. (2017). Gambling behavior among Macau college and university students. *Asian Journal of Gambling Issues and Public Health*, *7*(1). doi.org/10.1186/s40405-017-0022-7
- Kamara J. (2016). Africa report on sports betting. KPMG. Retrieved from: <https://home.kpmg.com/content/dam/kpmg/gi/pdf/John-Kamara.pdf>
- Kamau, M (2019). Job losses as Betin, SportPesa quit Kenya over the license, tax tiff. Retrieved from <https://www.standardmedia.co.ke/business/article/2001343699/job-losses-as-betin-sportpesa-quit-kenya-over-licence-tax-tiff>

- Kang, K., Ok, J. S., Kim, H., & Lee, K.-S. (2019). The gambling factors related to the level of adolescent problem gambler. *International Journal of Environmental Research and Public Health*, 16(12). doi.org/10.3390/ijerph16122110
- Kasami, D. (2016, July 7). *Sad! Kenyatta University student commits suicide after losing sports bet*. Tuko.co.ke - Kenya News. <https://www.tuko.co.ke/150474-sad-kenyatta-university-student-commits-suicide-after-losing-sports-betting.html>
- Kenya: *The Constitution of Kenya* [Kenya], 27 August 2010, <https://www.refworld.org/docid/4c8508822.html>
- Kim, H. S., Wohl, M. J. A., Gupta, R., & Derevensky, J. L. (2017). Why do young adults gamble online? A qualitative study of motivations to transition from social casino games to online gambling. *Asian Journal of Gambling Issues and Public Health*, 7(1). doi.org/10.1186/s40405-017-0025-4
- Kim, H. S., Wohl, M. J. A., Salmon, M. M., Gupta, R., & Derevensky, J. (2014). Do Social Casino Gamers Migrate to Online Gambling? An Assessment of Migration Rate and Potential Predictors. *Journal of Gambling Studies*, 31(4), 1819–1831. doi.org/10.1007/s10899-014-9511-0
- Kim, S.-R., Kwon, Y.-S., & Hyun, M.-H. (2015). The effects of belief in good luck and counterfactual thinking on gambling behavior. *Journal of Behavioral Addictions*, 4(4), 236-243.
- Kimanthi, K. (2019). Kenya deports 17 foreigners in betting row. Retrieved from <https://nairobi.news.nation.co.ke/news/kenya-deports-17-foreigners-betting>
- King, D. L., Delfabbro, P. H., Kaptsis, D., & Zwaans, T. (2014). Adolescent simulated gambling via digital and social media: An emerging problem. *Computers in Human Behavior*, 31(0747-5632), 305–313. doi.org/10.1016/j.chb.2013.10.048
- King, D. L., Gainsbury, S. M., Delfabbro, P. H., Hing, N., & Abarbanel, B. (2015). Distinguishing between gaming and gambling activities in addiction research. *Journal of Behavioral Addictions*, 4(4), 215-220. doi.org/10.1556/2006.4.2015.045
- King, D., Delfabbro, P., & Griffiths, M. (2009). The Convergence of Gambling and Digital Media: Implications for gambling in young people. *Journal of Gambling Studies*, 26(2), 175-187. doi.org/10.1007/s10899-009-9153-9
- King, S. M., Abrams, K., & Wilkinson, T. (2010). Personality, Gender, and Family History in the Prediction of College Gambling. *Journal of Gambling Studies*, 26(3), doi.org/10.1007/s10899-009-9163-7
- Kipkorir, J. (2019). *A study of behavioral biases presents in sports betting markets* (Bachelor). Strathmore University.

- Koross, R. (2016). The student teachers' experiences during teaching practice and its impact on their perception of the teaching profession. *IRA International Journal of Education and Multidisciplinary Studies*, 5(2), 76.
- Kothari, C. R. (2019). *Research methodology: methods and techniques*. New Age International (P) Limited, Publishers.
- Kotler, P., & Keller, K.L (2016). *Marketing management*. Pearson.
- Krawczyk, M., & Własiuk, Ł. (2021). Advertising slogans in the gambling industry: content analysis informed by the heuristics and biases literature. *Journal of Gambling Issues*, 0(47).
- Kryszajtyś, D. T., Hahmann, T. E., Schuler, A., Hamilton-Wright, S., Ziegler, C. P., & Matheson, F. I. (2018). Problem Gambling and Delinquent Behaviours Among Adolescents: A Scoping Review. *Journal of Gambling Studies*, 34(3). doi.org/10.1007/s10899-018-9754-2
- Kulundu, M., & Lee, K. (2019). Are 76 percent of young Kenyan's gamblers? A look at where that number comes from. Retrieved from <https://factcheck.afp.com/are-76-percent-young-kenyans-really-gamblers-look-where-number-comes>
- Kumar, A., Page, J. K., & Spalt, O. G. (2011). Religious beliefs, gambling attitudes, and financial market outcomes. *Journal of Financial Economics*, 102(3), 671–708. doi.org/10.1016/j.jfineco.2011.07.001
- Kumari, K., & Yadav, S. (2018). Curriculum in Cardiology. *Journal of Practice Cardiovascular Sciences*, 4(1) doi.org/10.4103/jpcs.jpcs_8_18
- Lakuma, A. G. Corti P., & Katunze., & Joseph, M (2016, February 2). *Socio-economic effects of gambling: Evidence from Kampala city, Uganda*. Economics and Finance Research | IDEAS/RePEc. Retrieved from <https://ideas.repec.org/p/ags/eprcrs/234554.html>
- Langer, E. J. (1975). The illusion of control. *Journal of Personality and Social Psychology*, 32(2), 311–328.
- LaPlante, D. A., Nelson, S. E., LaBrie, R. A., & Shaffer, H. J. (2008). Stability and Progression of Disordered Gambling: Lessons from Longitudinal Studies. *The Canadian Journal of Psychiatry*, 53(1), 52-60. doi.org/10.1177/070674370805300108
- Latvala, T., Lintonen, T., & Konu, A. (2019). Public health effects of gambling – debate on a conceptual model. *BMC Public Health*, 19(1). doi.org/10.1186/s12889-019-7391-z
- Lawn S, Oster C, Riley B, Smith D, Baigent M, Rahamathulla M. A Literature Review and Gap Analysis of Emerging Technologies and New Trends in

- Gambling. *Int J Environ Res Public Health*. 2020 Jan 23;17(3):744. doi: 10.3390/ijerph17030744. PMID: 31979364; PMCID: PMC7036923.
- Lee, B. K. (2010). Problem Gambling: Taking Chances. *Opus.uleth.ca*.
- Leung, C. (2001). The psychological adaptation of overseas and migrant students in Australia. *International Journal of Psychology*, 36(4), 251–259. doi.org/10.1080/00207590143000018
- Lewis-Beck, M. S., Bryman, A., & Futing Liao, T. (2004). *The SAGE encyclopedia of social science research methods* (Vols. 1-0). Thousand Oaks, CA: Sage Publications.
- Lloyd, J., Doll, H., Hawton, K., Dutton, W. H., Geddes, J. R., Goodwin, G. M., & Rogers, R. D. (2010). How Psychological Symptoms Relate to Different Motivations for Gambling: An Online Study of Internet Gamblers. *Biological Psychiatry*, 68(8), 733–740.
- Lock, S. (2019). *Global online gambling industry size 2009-2024* | Statista. [online] Statista. Retrieved from: <https://www.statista.com/statistics/270728/market-volume-of-online-gaming-worldwide>.
- Loos, H. (2003). *Nervous system manipulation electromagnetic fields from monitors* [Ebook] (p. 1). California: United States Patent. Retrieved from <https://patents.google.com/patent/US6506148>
- Lopez-Gonzalez, H., & Griffiths, M. D. (2017). Betting, Forex Trading, and Fantasy Gaming Sponsorships—a Responsible Marketing Inquiry into the “Gamblification” of English Football. *International Journal of Mental Health and Addiction*, 16(2). doi.org/10.1007/s11469-017-9788-1
- Lwanga, S. K., Lemeshow, S., & World Health Organization. (1991). *Sample size determination in health studies: a practical manual*. World Health Organization.
- Ly, C. (2010). *An Exploratory Investigation of Online Gambling Amongst University Students in Tasmania*. Retrieved from https://www.communities.tas.gov.au/__data/assets/pdf_file/0027/43938/Attachment_1_online_gambling_study_FullReport.pdf
- Macgregor, A., & Biggs, H. (2020). The Effect of Gambling Marketing and Advertising on Children, Young People, and Vulnerable People Qualitative Research Report. *ResearchGate*. Retrieved from doi.org/10.13140/RG.2.2.29918.79687
- Macharia, S. (2018). Hole-in-the-wallet phenomenon among university students in Kenya. *European Journal of Education Studies*, 4(2501 -1111), 246. doi.org/10.5281/zenodo.1253994

- Magoon, M. E., & Ingersoll, G. M. (2006). Parental modeling, attachment, and supervision as moderators of adolescent gambling. *Journal of Gambling Studies*, 22(1), 1-22. doi.org/10.1007/s10899-005-9000-6
- Makana, F. (2016, August 9). Man hangs self in Eldoret after losing Sh45,000 in bet. *The Standard*.
<https://www.standardmedia.co.ke/counties/article/2000211349/man-hangs-self-in-eldoret-after-losing-sh45000-in-bet>
- Maloba, B. (2018). *Factors Influencing Online Betting Behavior in Nairobi* (Doctoral dissertation, United States International University-Africa).
<http://erepo.usiu.ac.ke/>
- Maney, J. (2013). The causes of gambling addiction. Retrieved from
<https://knowtheodds.org/blog/the-causes-of-gambling-addiction/>
- Maney, J. (2014). Definition: What is a gambler's fallacy. Retrieved from
<https://knowtheodds.org/blog/what-is-gamblers-fallacy/>
- Mao, L. L., Zhang, J. J., & Connaughton, D. P. (2015). Sports gambling as consumption: Evidence from demand for sports lottery. *Sport Management Review*, 18(3), 436-447. doi.org/10.1016/j.smr.2014.11.006
- Marchica, L., Zhao, Y., Richard, J., Derevensky, J., & Shaffer, H. J. (2018). A Comparative Analysis of Canadian University Policies Toward Alcohol, Drugs, and Gambling Use. *Canadian Journal of Addiction*, 9(1), 18-25. doi.org/10.1097/cxa.0000000000000014
- Marionneau, V. (2015). Socio-cultural contexts of gambling: A comparative study of Finland and France. <https://core.ac.uk/download/pdf/33736188.pdf>
- Matheson, K., Wohl, M. J. A., & Anisman, H. (2009). The interplay of appraisals, specific coping styles, and depressive symptoms among young male and female gamblers. *Social Psychology*, 40(4), 212-221.
- Mathieu, S., Barrault, S., Brunault, P., & Varescon, I. (2017). Gambling motives: Do they explain cognitive distortions in male poker gamblers? *Journal of Gambling Studies*, 34(1), 133-145. doi.org/10.1007/s10899-017-9700-8
- Matthews, N., Farnsworth, B., & Griffiths, M. D. (2009). A Pilot Study of Problem Gambling among Student Online Gamblers: The Mood States as Predictors of Problematic Behavior. *CyberPsychology & Behavior*, 12(6), 741-745.
- Mazar, A., Volberg, R., Williams, R., Iii, E., & Zorn, M. (2019). *The ma gambling impact cohort: analyses across three waves*. Retrieved from
https://www.umass.edu/seigma/sites/default/files/MAGIC%20Wave%203%20Report_Final_2019-09-12.pdf
- Mbugua- Macharia Susan. (2013). *Fundamentals of School Guidance and Counselling for Teachers*. Lap Lambert Academic Publ.

- Mbugua, N. (2019). Betting shops make huge profits from youth addicted to gambling. Retrieved from <https://www.the-star.co.ke/news/big-read/2019-04-22-betting-shops-make-huge-profits-from-youth-addicted-to-gambling/>
- McBride, J., & Derevensky, J. (2017). Gambling and video game playing among youth. *Journal of Gambling Issues*, 34. doi.org/10.4309/jgi. v0i34.3962
- McComb, J. L., & Hanson, W. E. (2009). Problem gambling on college campuses. *Journal of Student Affairs Research and Practice*, 46(1), 1-29.
- McComb, J. L., & Sabiston, C. M. (2010). Family influences on adolescent gambling behavior: A review of the literature. *Journal of Gambling Studies*, 26(4), 503-520. doi.org/10.1007/s10899-010-9181-5
- McCormack, A., Shorter, G. W., & Griffiths, M. D. (2012). An empirical study of gender differences in online gambling. *Journal of Gambling Studies*, 30(1), 71-88.
- Mcleod, S. (2019). *Cognitive behavioral therapy | CBT | Simply Psychology*. Retrieved from <https://www.simplypsychology.org/cognitive-therapy.html>
- Mcleod, S., & Rogers, C. (2014). *Carl Rogers simplypsychology.org/carl-rogers.html*.
- Merkouris, S. S., Thomas, A. C., Shandley, K. A., Rodda, S. N., Oldenhof, E., & Dowling, N. A. (2016). An update on gender differences in the characteristics associated with problem gambling: A systematic review. *Current Addiction Reports*, 3(3), 254-267. doi.org/10.1007/s40429-016-0106-y
- Minkkinen, J., Oksanen, A., Näsi, M., Keipi, T., Kaakinen, M., & Räsänen, P. (2016). Does Social Belong to Primary Groups Protect Young People from the Effects of Pro-Suicide Sites? *Crisis*, 37(1), 31-41.
- Mishra, S., Beshai, S., Wuth, A., & Refaie, N. (2018). Risk and protective factors in problem gambling: an examination of psychological resilience. *International Gambling Studies*, 19(2), 241-264.
- Momper, S. L. (2005). *Maternal gambling, parenting in the home environment, and child outcomes in Native American families*. University of Pittsburgh.
- Monaghan, S., Derevensky, J., & Sklar, A. (2008). Impact of gambling advertisements and marketing on children and adolescents: Policy recommendations to minimize harm. *Journal of Gambling Issues*, 22, 252. doi.org/10.4309/jgi.2008.22.7
- Monson, E., Kairouz, S., Perks, M., & Arsenault, N. (2019). Are General and Activity-Specific PGSI Scores Consistent? *Journal of Gambling Issues*, 41(41). doi.org/10.4309/jgi.2019.41.3

- Moore, S. M., & Ohtsuka, K. (2017). Gambling Activities of Young Australians: Developing a Model of Behaviour. *Journal of Gambling Studies*, 13(3), 207-236. doi.org/10.1023/a:1024979232287
- Moore, S. M., Thomas, A. C., Kalé, S., Spence, M., Zlatevska, N., Staiger, P. K., Graffam, J., & Kyrios, M. (2012). Problem Gambling Among International and Domestic University Students in Australia: Who is at Risk? *Journal of Gambling Studies*, 29(2), 217-230.
- Moore, S., Thomas, A., Kale, S., Spence, M., Zlatevska, N., Staiger, P., Graffam, J., & Kyrios, M. (2013). Swinburne Research Bank. In *www.springer.com*. Springer Science+Business Media. Retrieved from <https://researchbank.swinburne.edu.au/items/290d269b-766b-408b-a22e-cdc0b4fc6c35/1/PDF%20%28Accepted%20manuscript%29.pdf?.vi=save>
- Munda, C. (2019). Online betting firms will need Sh500m to open shop. *Daily Nation*. Retrieved from <https://www.nation.co.ke/business/Online-betting-firms-need-Sh500m-open-shop/996-5183772-v7prjc/index.html>.
- Munde, C. (2019). *Tough times for betting firms as the board declines to renew 19 licenses*. Retrieved from <https://www.the-star.co.ke/news/2019-07-01-tough-times-for-betting-firms-as-board-declines-to-renew-19-licences/>
- Musungu, N. (2019). *Babu Owino threatens to mobilize demos over a ban on betting firms – VIDEO*. Retrieved from <https://nairobi.news.nation.co.ke/featured/babu-owino-threatens-to-mobilise-demos-over-ban-on-betting-firms-video>
- Mutti-Packer, S., Hodgins, D. C., Williams, R. J., & Konkoly Thege, B. (2017). The protective role of religiosity against problem gambling: Findings from a five-year perspective study. *BMC Psychiatry*, 17(1). <https://doi.org/10.1186/s12888-017-1518-5>
- Mutuku, M., & Vyas, Y. (2013). The regulatory regime governing the casino industry in Kenya: A need for reforms. [Unpublished masters' thesis] University of Nairobi. Nairobi, Kenya.
- Mwadime, A. (2017). Implications of Sports Betting in Kenya: Impact of Robust Growth of the Sports Betting Industry (Master's Thesis). United States International University Africa. Nairobi, Kenya.
- Myrseth, H., Brunborg, G. S., & Eidem, M. (2010). Differences in Cognitive Distortions Between Pathological and Non-Pathological Gamblers with Preferences for Chance or Skill Games. *Journal of Gambling Studies*, 26(4), doi.org/10.1007/s10899-010-9180-6
- N., Pam M.S., "RISK FACTOR," in *PsychologyDictionary.org*, April 28, 2013, <https://psychologydictionary.org/risk-factor/> retrieved October 19, 2021).

- National Academies Press. (1999). *Pathological Gambling*. Washington.
- NCRGBlogTeam. (2014, February 20). *The facts about college gambling*.
Www.youtube.com. <https://www.youtube.com/watch?v=mgu8Ss5tCmk>
- Ndonga, S. (2019, July 15). Gamblers are given up to Friday night to withdraw funds from betting wallets. *Capital News*. Retrieved from <https://www.capitalfm.co.ke/news/2019/07/gamblers-given-up-to-friday-night-to-withdraw-funds-from-betting-wallets/>.
- Neal, P., Delfabbro, P., & O'Neil, M. (2005). *Problem gambling and harm: Towards a national definition*. The Office of Gaming and Racing Victorian Government Department of Justice.
- Newall, P. W. S., Moodie, C., Reith, G., Stead, M., Critchlow, N., Morgan, A., & Dobbie, F. (2019). Gambling marketing from 2014 to 2018: A literature review. *Current Addiction Reports*, 6(2). <http://doi.org/10.1007/s40429-019-00239-1>
- Nordqvist, C. (2012). *What's to know about gambling addiction*. Retrieved from <https://www.medicalnewstoday.com/articles/15929.php>
- Nowak, D. E. (2017). A Meta-analytical synthesis and examination of pathological and problem gambling rates and associated moderators among college students, 1987–2016. *Journal of Gambling Studies*, 34(2), 465-498.
- Nowak, D. E., & Aloe, A. M. (2013). The Prevalence of pathological gambling among college students: A meta-analytic synthesis, 2005-2013. *Journal of Gambling Studies*, 30(4). <https://doi.org/10.1007/s10899-013-9399-0>
- Nyambura, Z. (2017). *Sports betting fever grips Africa | DW*. Retrieved from <https://www.dw.com/en/sports-betting-fever-grips-africa/a-37502606>
- Nyemcsok, C., Thomas, S. L., Bestman, A., Pitt, H., Daube, M., & Cassidy, R. (2018). Young people's recall and perceptions of gambling advertising and intentions to gamble on the sport. *Journal of Behavioral Addictions*, 7(4), 1068-1078. doi.org/10.1556/2006.7.2018.128
- Ochieng, A., & Nyayieka, I. (2019). *A gambling nation: Betting dominates Kenya's online searches*. Retrieved from <https://www.businessdailyafrica.com/datahub/Betting--sports-sites-dominate-Kenyas-2018/3815418-4968000-ahb4p1z/index.html>
- Odame, S. K., Quarshie, E. N.-B., Oti-Boadi, M., Andoh-Arthur, J., & Asante, K. O. (2020). Adolescent problem gambling in rural Ghana: Prevalence and Gender Differentiation. *Journal of Gambling Studies*. doi.org/10.1007/s10899-020-09987-6.
- Odwour, V. (2020). *Smartphone gambling is popular among African millennials | censored. today*. Today. Retrieved from

<https://censored.today/2020/01/30/smartphone-gambling-is-popular-among-african-millennials/>

OECD Statistics Directorate. (2019). *OECD Glossary of Statistical Terms - Sampling technique Definition*. Oecd.Org. retrieved from <https://stats.oecd.org/glossary/detail.asp?ID=2380>

Ogachi, F. M., Karega, Dr. M., & Mvungu, Dr. E. (2020). Prevalence and factors associated with gambling disorder among Kenyan university students involved in sports betting. *International Journal of Education and Research*, 8(2411-5681), 132-132.

Ohtsuka, K., & Chan, C. C. (2014). Senior gambling in Hong Kong: through the lenses of Chinese senior gamblers – an exploratory study. *Asian Journal of Gambling Issues and Public Health*, 4(1). <https://doi.org/10.1186/s40405-014-0004-y>

Okoti, D., Ogula, P., & Munyua, J. (2019). Motivators of Students' Involvement in Sports Betting in Public Secondary Schools in Mumias East Sub-County, Kenya. *African Journal of Educational and Social Science Research*, 7(2), 2617-7315.

Oksanen, A., Aaltonen, M., Majamaa, K., & Rantala, K. (2017). Debt problems, home-leaving, and boomeranging: A register-based perspective on economic consequences of moving away from the parental home. *International Journal of Consumer Studies*, 41(3), 340-352 doi.org/10.1111/ijcs.12348

Oksanen, A., Sirola, A., Savolainen, I., & Kaakinen, M. (2019). Gambling patterns and associated risk and protective factors among Finnish young people. *Nordic Studies on Alcohol and Drugs*, 36(2), 161-176. doi.org/10.1177/1455072518779657

Oksanen, A., Sirola, A., Savolainen, I., Koivula, A., Kaakinen, M., Vuorinen, I., Zych, I., & Paek, H.-J. (2021). *Social-Ecological Model of Problem Gambling: A Cross-National Survey Study of Young People in the United States, South Korea, Spain, and Finland*. doi.org/10.20944/preprints202101.0595.v1

Okuda, M., Balán, I., Petry, N. M., Oquendo, M., & Blanco, C. (2009). Cognitive-behavioral therapy for pathological gambling: Cultural considerations. *American Journal of Psychiatry*, 166(12), 1325-1330.

Otieno, E. (2016, July 7). *Student commits suicide after losing Sh80k bet on Italy match*. Nairobi News. <https://nairobi.news.nation.co.ke/student-commits-suicide-after-losing-sh80k-bet-on-italy-match/#:~:text=A%20university%20student%20has%20committed>

- Overview of the Gambling Market in Kenya.* (2019). Slotegrator. Pro. Retrieved from https://slotegrator.pro/analytical_articles/the-gambling-market-in-kenya-analysis-and-overview
- Parke, A., Harris, A., Parke, J., Rigbye, J., & Blaszczynski, A. (2014). Responsible marketing and advertising in gambling: A critical review. *The Journal of Gambling Business and Economics*, 8(3), 21–35. doi.org/10.5750/jgbe.v8i3.972.
- Parrado-González, A., & León-Jariego, J. C. (2020). Exposure to gambling advertising and adolescent gambling behaviour. Moderating effects of perceived family support. *International gambling studies*, 20(2), 214-230.
- Perneger, T. V., Courvoisier, D. S., Hudelson, P. M., & Gayet-Ageron, A. (2014). Sample size for pre-tests of questionnaires. *Quality of Life Research*, 24(1), 147-151.
- Perreault, W. D., Cannon, J. P., & E Jerome Mccarthy. (2020). *Essentials of marketing*. McGraw-Hill Education.
- Perreault, Cannon, J. P., & McCarthy, E. J. (2019). *Essentials of Marketing: A Marketing Strategy Planning Approach*. McGraw-Hill education.
- Petry, N. M., & Gonzalez-Ibanez, A. (2013). Internet gambling in problem gambling college students. *Journal of Gambling Studies*, 31(2), 397-408.
- Phillips, J. G., Ogeil, R. P., & Blaszczynski, A. (2011). Electronic interests and behaviours associated with gambling problems. *International Journal of Mental Health and Addiction*, 10(4), 585-596. doi.org/10.1007/s11469-011-9356-z.
- Pisarska, A., & Ostaszewski, K. (2020). Factors associated with youth gambling: Longitudinal study among high school students. *Public Health*, 184, 33-40. <http://doi: 10.1016/j.puhe.2020.03.017>
- Pitt, H., Thomas, S. L., Bestman, A., Daube, M., & Derevensky, J. (2017). Factors that influence children's gambling attitudes and consumption intentions: Lessons for gambling harm prevention research, policies, and advocacy strategies. *Harm Reduction Journal*, 14(1). <http://doi.org/10.1186/s12954-017-0136-3>
- Porter, D. (2019). Gambling Problem DSM-5 - Therapedia. Retrieved from <https://www.theravive.com/therapedia/gambling-problem-dsm--5>
- Problem Gambling Latino Communities &. (2013). https://knowtheodds.org/wp-content/uploads/2013/05/NYCPG_latinoebook_english_final.pdf
- Productivity Commission. (2019). Australia's gambling industries: Report no. 10. Canberra: AusInfo

- Psychological Dependence: Definition & Risk Factors. (2016). Retrieved from <https://study.com/academy/lesson/psychological-dependence-definition-risk-factors.html>.
- Psychology Notes HQ. (2013). *What is Bronfenbrenner's Ecological Systems Theory?* Psychology notes. Retrieved from: <https://www.psychologynoteshq.com/bronfenbrenner-ecological-theory/>
- Rahman, A. S., Pilver, C. E., Desai, R. A., Steinberg, M. A., Rugle, L., Krishnan-Sarin, S., & Potenza, M. N. (2012). The relationship between age of gambling onset and adolescent problematic gambling severity. *Journal of Psychiatric Research, 46*(5) doi.org/10.1016/j.jpsychires.2012.02.007
- Ramnerö, J., Molander, O., Lindner, P., & Carlbring, P. (2019). What can be learned about gambling from a learning perspective? A narrative review. *Nordic Psychology, 71*(4). doi.org/10.1080/19012276.2019.1616320
- Räsänen, T., Lintonen, T., Tolvanen, A., & Konu, A. (2016). Social support as a mediator between problem behavior and gambling: a cross-sectional study among 14–16-year-old Finnish adolescents. *BMJ Open, 6*(12). doi.org/10.1136/bmjopen-2016-012468
- Rational Emotive Behavior Therapy (2019). Psychology Today website: Retrieved from <https://www.psychologytoday.com/us/therapy-types/rational-emotive-behavior-therapy>
- Reith, G. (2006). *Research on the social impacts of gambling: Final report*. Scottish Executive Social Research.
- Reith, G. (2013). Techno-economic systems and excessive consumption: a political economy of “pathological” gambling. *The British Journal of Sociology, 64*(4), 717–738. doi.org/10.1111/1468-4446.12050
- Report, A. (2019, July 11). *Kenya orders telecoms firm to shut down betting payments* Premium Times. <https://www.premiumtimesng.com/foreign/africa/340284-kenya-orders-telecoms-firm-to-shut-down-betting-payments.html>
- Reporter, B. T. (2018, April 30). Factors fueling Kenya's sports betting industry. *Business Today Kenya*. Retrieved from: <https://businesstoday.co.ke/factors-ofuelling-kenyan-sports-betting-industry>.
- Rickwood, D., Blaszczynski, A., Delfabbro, P., Dowling, N., & Heading, K. (2010, December). *Special report: The psychology of gambling* Retrieved from <https://www.psychology.org.au/formembers/publications/inpsych/2010/dec/01-Special-report-The-psychology-of-gambling>
- Rizeanu, S. (2018). *Cognitive-Behavioral Therapy for Gambling Addiction. Cognitive Behavioral Therapy and Clinical Applications*. Retrieved from doi.org/10.5772/intechopen.72671

- Romo, L., Legauffre, C., Guilleux, A., Valleur, M., Magalon, D., Fatséas, M., Chéreau-Boudet, I., Luquiens, A., Vénisse, J.-L., Grall-Bronnec, M., & Challet-Bouju, G. (2016). Cognitive distortions and ADHD in pathological gambling: A national longitudinal case-control cohort study. *Journal of Behavioral Addictions, 5*(4), 649-657.
- Romo, L., Legauffre, C., Guilleux, A., Valleur, M., Magalon, D., Fatséas, M., Chéreau-Boudet, I., Luquiens, A., Vénisse, J.-L., Grall-Bronnec, M., & Challet-Bouju, G. (2016). Cognitive distortions and ADHD in pathological gambling: A national longitudinal case-control cohort study. *Journal of Behavioral Addictions, 5*(4). doi.org/10.1556/2006.5.2016.070
- Russell, A. M. T., Hing, N., Li, E., & Vitartas, P. (2018). Gambling risk groups are not all the same: Risk factors amongst sports bettors. *Journal of Gambling Studies, 35*(1). doi.org/10.1007/s10899-018-9765-z.
- Russell, A. M., & Browne, M. (2017). Risk factors for gambling problems on online electronic gaming machines, race betting, and sports betting. *Frontiers in Psychology, 8*(779), 1.
- Sarracino, D., Dimaggio, G., Ibrahim, R., Popolo, R., Sassaroli, S., & Ruggiero, G. M. (2016). When REBT Goes Difficult: Applying ABC-DEF to Personality problems. *Journal of Rational-Emotive & Cognitive-Behavior Therapy, 35*(3), 278-295. doi.org/10.1007/s10942-016-0258-7
- Sassen, M., Kraus, L., & Bühringer, G. (2011). Differences in pathological gambling prevalence estimate: Facts or artifacts? *International Journal of Methods in Psychiatric Research, 20*(4), 354.
- Savolainen, I., Kaakinen, M., Sirola, A., Koivula, A., Hagfors, H., Zych, I., Paek, H.-J., & Oksanen, A. (2020). Online relationships and social media interaction in youth problem gambling: A four-country study. *International Journal of Environmental Research and Public Health, 17*(21). doi.org/10.3390/ijerph17218133
- Savolainen, I., Sirola, A., Kaakinen, M., & Oksanen, A. (2019). Peer group identification as determinant of youth behavior and the role of perceived social support in problem gambling. *Journal of Gambling Studies, 35*(1), 15-30. doi.org/10.1007/s10899-018-9813-8
- Schneider, S. (2012). Social Gaming and Online Gambling. *Gaming Law Review and Economics, 16*(12). doi.org/10.1089/gltre.2012.16123
- Scholes-Balog, K. E., Hemphill, S. A., Dowling, N. A., & Toumbourou, J. W. (2014). A prospective study of adolescent risk and protective factors for problem gambling among young adults. *Journal of Adolescence, 37*(2), 215-224. doi.org/10.1016/j.adolescence.2013.12.006

- Scholes-Balog, K., & Dowling, N. (2017). *Longitudinal protective factors for problem gambling and related harms: Building resilience among young adult gamblers*. Retrieved from <https://responsiblegambling.vic.gov.au/documents/63/Research-report-longitudinal-protective-factors-for-pg.pdf>
- Scott, J., Bell, A., & Wybron, I. (2016). *Gambling is a teaching resource to promote resilience*. <https://www.demos.co.uk/wp-content/uploads/2018/03/Gambling-Education-Teaching-Resource-Booklet-1.pdf>
- Segal, J., Smith, M., & Robinson, L. (2019). *Gambling addiction and problem gambling*. Retrieved from <https://www.helpguide.org>
- Selva, J. (2018). *Albert Ellis' ABC model in the cognitive behavioral therapy spotlight*. Retrieved from <https://positivepsychology.com/albert-ellis-abc-model-rebt-cbt/>
- Sergeant, ESG. (2018). *Epitools epidemiological calculators*. Ausvet. Retrieved from <http://epitools.ausvet.com.au>
- Shahril, R. (2015). *8. validity and reliability of research instruments*. SlideShare. Retrieved from <https://www.slideshare.net/razifshahril/8-validity-and-reliability-of-research-instruments-54665082>
- Sheela, P. S., Choo, W.-Y., Goh, L. Y., & Tan, C. P. L. (2015). Gambling risk amongst adolescents: Evidence from a school-based survey in the Malaysian Setting. *Journal of Gambling Studies*, 32(2), 643-659.
- Sincero, S. M (2012). *Ecological systems theory*. Retrieved from <https://explorable.com/ecological-systems-theory>
- Sirola, A., Kaakinen, M., & Oksanen, A. (2018). Excessive gambling and online gambling communities. *Journal of Gambling Studies*, 34(4), 1313-1325.
- Sirola, A., Savela, N., Savolainen, I., Kaakinen, M., & Oksanen, A. (2020). The role of virtual communities in gambling and gaming behaviors: A systematic review. *Journal of Gambling Studies*. doi.org/10.1007/s10899-020-09946-1
- Slutske, W. S., Caspi, A., Moffitt, T. E., & Poulton, R. (2005). Personality and problem gambling. *Archives of General Psychiatry*, 62(7), 769.
- Smith, D. (2003). Five principles for research ethics. *Monitor on Ppsychology*, 34(1), 56.
- Smith, T., & Senga, E. (2019). *The gambling habit "swallowing" Kenya's youth*. Retrieved from <https://www.bbc.com/news/av/world-africa-48231778/the-gambling-habit-swallowing-kenya-s-youth>
- Solomon, M. R. (2017). *Consumer behavior*. Hoboken Pearson.

- Splevins, K., Mireskandari, S., Clayton, K., & Blaszczynski, A. (2010). Prevalence of adolescent problem gambling, related harms, and help-seeking behaviours among an Australian population. *Journal of Gambling Studies*, 26(2), 189-204. doi.org/10.1007/s10899-009-9169-1
- Ssewanyana, D., & Bitanihirwe, B. (2018). Problem Gambling among Young People in Sub-Saharan Africa. *Frontiers in Public Health*, 6. doi.org/10.3389/fpubh.2018.00023
- Staff, N. R. C. (1999). *Pathological gambling: A critical review*. Washington, DC: National Academies Press
- Stark, S., Reynolds, J., & Wiebe, J. (2020). Gambling and gaming in an Ontario sample of youth and parents. *Journal of Gambling Issues*, 46. http://doi:10.4309/JGI.2021.46.2
- Stinchfield, R., Hanson, W. E., & Olson, D. H. (2006). Problem and pathological gambling among college students. *New Directions for Student Services*, 2006(113), 63-72.
- Stinchfield, R., McCready, J., & Turner, N. (2012). *A comprehensive review of problem gambling screens and scales for online self-assessment*. Toronto: Ontario Problem Gambling Research Centre.
- St-Pierre, R., & Derevensky, J. L. (2016). Youth gambling behavior: Novel approaches to prevention and intervention. *Current Addiction Reports*, 3(2), 157-165.
- Studer, B., & Clark, L. (2011). Place your bets: Psychophysiological correlates of decision-making under risk. *Cognitive, Affective, & Behavioral Neuroscience*, 11(2), 144-158.
- Stuhldreher, W. L., Stuhldreher, T. J., & Forrest, K. Y-Z. (2007). Gambling as an Emerging Health Problem on Campus. *Journal of American College Health*, 56(1), 75-88.
- Subramaniam, M., Chong, S. A., Satghare, P., Browning, C. J., & Thomas, S. (2017). Gambling and family: A two-way relationship. *Journal of Behavioral Addictions*, 6(4), 689-698.
- Tanner, J., & Mazmanian, D. (2016). Gambling attitudes and beliefs associated with problem gambling: the cohort effect of Baby Boomers. *International Gambling Studies*, 16(1), 98-115.
- Team, E. (2013). The history of problem gambling: Temperance, substance abuse, medicine, and metaphors. *Journal of Gambling Issues*, 2(8), 1. doi.org/10.4309/jgi.2013.28.11

- Temcheff, C. E., St. Pierre, R. A., & Deverensky, J. (2011). Youth gambling and delinquency: Legislative and social policy implications. *Gaming Law Review and Economics*, 15(9), 539-552.
- Temitope, B. (2019). Patterns and prevalence of gambling behavior among youths in southwest Nigeria: a case study of youths in Oyo and Ekiti state. *British Journal of Psychology Research*, 7(2), 22-46.
- Toumbourou, J. (2010). *The communities that care youth survey*. Retrieved from http://youthlaw.asn.au/wp-content/uploads/2016/07/Communities_That_Care_Youth_Survey-1.pdf
- Tubei, G. (2019). *Kenya leads Africa in sports betting and gambling*. Retrieved from <https://www.pulselive.co.ke/bi/politics/kenya-leads-africa-in-sports-betting-and-gambling/heqqecq>
- Turja, T., Oksanen, A., Kaakinen, M., Sirola, A., Kaltiala-Heino, R., & Räsänen, P. (2016). Protecting disorder websites and subjective well-being: A four-country study on young people. *International Journal of Eating Disorders*, 50(1), 50-57. doi.org/10.1002/eat.22589
- Van, W. K. S., & Davis, D. R. (2013). *Addiction treatment: A strengths perspective*. Belmont, CA: Brooks/Cole, Cengage Learning.
- Vegni, N., Melchiori, F. M., D'Ardua, C., Prestano, C., Canu, M., Piergiovanni, G., & Di Filippo, G. (2019). Gambling Behavior and Risk Factors in Preadolescent Students: A Cross-Sectional Study. *Frontiers in Psychology*, 10. doi.org/10.3389/fpsyg.2019.01287
- Vélez-Agosto, N. M., Soto-Crespo, J. G., Vizcarrondo-Oppenheimer, M., Vega-Molina, S., & García Coll, C. (2017). Bronfenbrenner's bioecological theory revision: Moving culture from the macro into the micro. *Perspectives on Psychological Science*, 12(5), 900-910.
- Venkitachalam R. (2015). *Validity and reliability of questionnaires*. Slideshare.Net. <https://www.slideshare.net/Venkitachalam/validity-and-reliability-of-questionnaires>
- Volberg, R. A. (2001). *When the chips are down: problem gambling in America*. Century Foundation Press.
- Volberg, R., Hedberg, E., & Moore, T. (2008). *Oregon youth and their parents: Gambling and problem gambling prevalence and attitudes Report to the Oregon Department of Human Services*.
- Volberg, R., Research, G., & Williams, R. (2011). *Developing a Brief Problem Gambling Screen Using Clinically Validated Samples of At-Risk, Problem and Pathological Gamblers Report to the Alberta Gaming Research Institute*.

- Wang, P. (2019). *What is gambling problem?* Retrieved from <https://www.psychiatry.org/patients-families/gambling-problem/what-is-gambling-problem>
- Wangari, N. (2019). *Understanding the Kenyan gambling consumer: Insights on sports betting - GeoPoll*. [online] GeoPoll. Retrieved from: <https://www.geopoll.com/blog/understanding-the-kenyan-gambling-consumer-insights-on-sports-betting/>
- Wardle, H., Reith, G., Best, D., Mcdaid, D., Platt, S., & Platt, D. (2018). *Measuring gambling-related harms: A framework for action Report (published version) Original citation*. http://eprints.lse.ac.uk/89248/1/McDaid_Gambling-Related_harms_Published.pdf
- Welte, J. W., Barnes, G. M., Tidwell, M.-C. O., & Hoffman, J. H. (2009). Association between problem gambling and conduct disorder in a national survey of adolescents and young adults in the United States. *Journal of Adolescent Health, 45*(4). doi.org/10.1016/j.jadohealth.2009.02.002
- Welte, J. W., Barnes, G. M., Tidwell, M.-C. O., & Hoffman, J. H. (2007). The prevalence of problem gambling among USA adolescents and young adults: Results from a national survey. *Journal of Gambling Studies, 24*(2), 119-133.
- Welte, J. W., Barnes, G. M., Tidwell, M.-C. O., & Hoffman, J. H. (2010). Gambling and problem gambling across the lifespan. *Journal of Gambling Studies, 27*(1), 49–61.
- Welte, J. W., Barnes, G. M., Tidwell, M.-C. O., Hoffman, J. H., & Wieczorek, W. F. (2014). Gambling and problem gambling in the United States: Changes between 1999 and 2013. *Journal of Gambling Studies, 31*(3), 695-715.
- Welte, J. W., Barnes, G. M., Tidwell, M.-C. O., Hoffman, J. H., & Wieczorek, W. F. (2015). The relationship between distance from gambling venues and gambling participation and problem gambling among U.S. adults. *Journal of Gambling Studies, 32*(4), 1055-1063.
- Welte, J. W., Barnes, G. M., Tidwell, M.C & Hoffman J.H.(2011). Gambling and problem gambling across the lifespan. *Gamble. Stud., 27*(2011), 49-61.
- Wetei, J. (2019, July 12). *Gamblers are given up to Friday night to withdraw funds from betting wallets – Hivi punde*. Retrieved from <https://www.hivipunde.com/gamblers-given-up-to-friday-night-to-withdraw-funds-from-betting-wallets/>
- What Is Problem Gambling? (2020). *Know the Odds*. Retrieved from <https://knowtheodds.org/problem-gambling/>
- Wickwire, E. M., Whelan, J. P., & Meyers, A. W. (2010). Outcome expectancies and gambling behavior among urban adolescents. *Psychology of Addictive Behaviors, 24*(1), 75-88.

- William Trochim (2020). *The research methods knowledge base*. Conjointly.Com; Conjoint.ly. Retrieved from <https://conjointly.com/kb/descriptive-statistics/>
- Winters, K. C., & Derevensky, J. L. (2019). A review of sports wagering: Prevalence, characteristics of sports bettors, and association with problem gambling. *Journal of Gambling Issues*, 43. doi.org/10.4309/jgi.2019.43.7
- Wong, G., Zane, N., Saw, A., & Chan, A. K. K. (2012). Examining gender differences for gambling engagement and gambling problems among emerging adults. *Journal of Gambling Studies*, 29(2), 171-189. doi.org/10.1007/s10899-012-9305-1
- Worthy, S. L., Jonkman, J., & Blinn-Pike, L. (2010). Sensation-Seeking, Risk-Taking, and Problematic Financial Behaviors of College Students. *Journal of Family and Economic Issues*, 31(2),161-170: doi.org/10.1007/s10834-010-9183-6
- Wynne, H. J. (2002). *Gambling and problem gambling in Saskatchewan*. Canadian Centre on Substance Abuse..
- Xouridas, S., Jasny, J., & Becker, T. (2016). An Ecological Approach to Electronic Gambling Machines and Socioeconomic Deprivation in Germany. *Journal of Gambling Issues*, 33(33), 82.
- Yang, Y., Zhong, X., Wu, D., Li, H., & Li, M. (2016). The positive association between trait impulsivity and high gambling-related cognitive biases among college students. *Psychiatry Research*, 243, 71-74: doi.org/10.1016/j.psychres.2016.04.110
- Yau, Y. H. C., & Potenza, M. N. (2015). Gambling Problem and Other Behavioral Addictions. *Harvard Review of Psychiatry*, 23(2), 134-146.
- Yawe, B. L., & Ssengooba, K. (2014). Gambling and mobile money payments: A case study of sports betting in Uganda. Retrieved on October, 2018, 18. <https://www.imtfi.uci.edu/docs/2013>
- Zhang, L., Dong, E., & Stormann, W. (2009). An examination of gambling impacts at an upstate New York college. In Klenosky, David B.; Fisher, Cherie LeBlanc, eds. *Proceedings of the 2008 Northeastern Recreation Research Symposium; 2008 March 30-April 1; Bolton Landing, NY. Gen. Tech. Rep. NRS-P-42. Newtown Square, PA: US Department of Agriculture, Forest Service, Northern Research Station: 237-242.*
- Zuckerman, M. (2015). Sensation seeking: Behavioral expressions and biosocial bases. *International Encyclopedia of the Social & Behavioral Sciences*, 18(6), 607-614.

APPENDICES

Appendix A: Informed Consent

I am Collins Barsulai, a Daystar University master's student in counseling psychology. As part of my course requirement, I am researching the prevalence of problem gambling among the youth at Strathmore University. To complete the research, I am supposed to collect data on the same. I hereby invite you to participate in the research.

Your participation in this study is entirely voluntary from the start to the end of the process; as such you can change your decision to participate in the study, at any stage without any consequence. Information provided in this study will be treated with the utmost confidentiality and shall only be used for the study purpose. To enhance confidentiality, information regarding your identity will not be required in the study.

If you have any questions kindly ask.

Having read the above information and being allowed to ask questions about it, I consent voluntarily to participate in the study.

Participant's signature: _____ Date: _____

Researcher's signature: _____ Date: _____

Appendix B: Questionnaire

Dear Respondent,

I, Collins Barsulai, a Master of Arts and Humanities student from Daystar University is conducting research titled: Prevalence of problem gambling among the youth in universities. Therefore, I request your assistance in responding to the questions as they will help complete the research. Thank you so much for taking the time to participate in this exercise.

Section A: Bio Data

Please, answer the following questions by stating the right answer or ticking the brackets of the appropriate response to you:

1. What is your Gender?

Male Female

2. What is your age group?

17-21 22-26 27-31 32-35

3. What is your year of study? (Kindly tick appropriately)

First-year Second year Third year Fourth-year Post Grad

Section B: Brief Biosocial Gambling Screen (BBGS) Questionnaire

For the questions through 3, please indicate with a tick on either **Yes** or **No** in the box provided to describe how you feel

Table 1 The instrument for measuring problem gambling

DURING THE PAST 12 MONTHS:	Yes	No
Have you become restless irritable, or anxious when trying to stop/cut down on gambling?		
Have you tried to keep your family or friends from knowing how much you gambled?		
Have you had to ask people for money to help deal with financial problems that had been caused by gambling?		

Section C: Protective factors

For the question through 20, please write in the number that best describes how you feel

[1] STRONGLY DISAGREE [2] DISAGREE [3] NEUTRAL [4] AGREE [5] STRONGLY AGREE

Table 2 Instrument for measuring protective factors associated with gambling

Statement	1	2	3	4	5
In my community (hostel/school/neighborhood) there is a lot of opportunities to participate in social activities such as sports teams or clubs					
People in my family have severe arguments					
I often socialize with members of my family					
I feel very close to my mother/father/guardians					
My parents/guardian would feel it would be wrong for me to have gambled regularly					
In the past 12 months, I have shared my thoughts and feelings with my best friends					
In the past 12 months, my best friends have volunteered or performed some community service					

During the past 12 months, I have actively supported organizations that help disadvantaged people					
In the past 12 months, members of my family have often volunteered or performed some community service					
I often attend religious services or activities (such as going to church, temple, or mosque, or taking part in religious youth groups)					

Section D: Risk factors

[1] STRONGLY DISAGREE [2] DISAGREE [3] NEUTRAL [4] AGREE [5] STRONGLY AGREE

Table 3 Instrument for measuring risk factors associated with problem gambling

In the past 12 months, my best friends have participated in gambling					
In the past 12 months, members of my family have stolen cash amounting to Ksh. 100 or things worth more than ksh.100 and used those funds to gamble					
In the past year, my best friends have stolen cash amounting to Ksh. 100 or something worth more than Ksh. 100 and used those funds to gamble					
In the past year my best friends have bought drugs or alcohol when they gambled or used the money, they won in sports betting to buy drugs or alcohol					
My father/male guardian gamble regularly					
The media portrayal of sports betting in advertisements and billboards or sports betting wins arouse my desire to participate in sports betting					
I have carried a lucky charm when I gambled					
If I lose, it is important to continue gambling until I get even					
If I have not won any of my bets for a long while, I am probably due for a big win					

Table 4 Explanation of the instrument used to measure risk and protective factors associated with problem gambling

Factor	Item measured	Response options
--------	---------------	------------------

A. Factors of protection		
Pro-social participation opportunities in the community	There are ample social activities, such as sports teams or organizations, are available to you in your community [hostel/school/neighborhood]	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE
Family interaction	I frequently socialize with members of my family	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE
Family attachment	I feel really close to my mother/father/guardians	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE
Family prosocial behavior	In the past 12 months, members of my family have often volunteered or performed some community service	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE
Family interaction	I frequently socialize with family members	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE
Attachment to peers	In the past 12 months, I have shared my thoughts and feelings with my best friends	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE
Affiliation with prosocial peers	In the past 12 months, my best friends have volunteered or performed some community service	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE
Religiosity	I often attend religious services or activities (such as going to church, temple, or mosque, or taking part in religious youth groups)	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY

		DISAGREE
Civic participation	During the past 12 months, I have actively supported organizations that help disadvantaged people	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE
Parental supervision	My parents/guardian would feel it would be wrong for me to have gambled regularly	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE
Prosocial activity	In the past 12 months, my best friends have volunteered or performed some community service	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE
B. Risk factors		
Family antisocial behavior	In the past 12 months, members of my family have stolen cash amounting to Ksh. 100 or things worth more than ksh.100 and used those funds to gamble	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE
Affiliation with delinquent peers	In the past year, my best friends have stolen cash amounting to Ksh. 100 or something worth more than Ksh. 100 and used those funds to gamble	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE
Civic participation	During the past 12 months, I have done volunteer work to help other people, such as helping out at a hospital or raising money for charity	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE
Friend's use of drugs [delinquency]	In the past year my best friends have bought drugs or alcohol when they gambled or used the money, they won in sports betting to buy drugs or alcohol	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE
Parental influence	My father/male guardian gamble regularly	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE

		[5] STRONGLY DISAGREE
Arousal and media portrayal	Does the media portrayal of sports bets in advertisements and billboards or sport betting wins arouse your desire to participate in sports betting?	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE
peer influence	In the past 12 months, my best friends have participated in gambling	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE
Beliefs	I have carried a lucky charm when I gambled	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE
Cognitive distortion [chasing losses]	If I lose, it is important to continue gambling until I get even	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE
Family discord	People in my family have serious arguments	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE
Gambler's fallacy	If I have not won any of my bets for a long while, I am probably due for a big win	[1] STRONGLY AGREE [2] AGREE [3] NEUTRAL [4] DISAGREE [5] STRONGLY DISAGREE

Appendix C: Ethical Clearance

VERDICT: APPROVAL WITH COMMENTS

Daystar University Ethics Review Board

Our Ref: **DU-ERB/02/07/2021/000533**Date: 2nd July 2021

To: Collins Barsulai

Dear Collins,

RE: PREVALENCE OF PROBLEM GAMBLING AMONG THE STRATHMORE UNIVERSITY STUDENTS IN NAIROBI COUNTY, KENYA

Reference is made to your ERB application reference no. 150621-02 dated 15th June 2021 in which you requested for ethical approval of your proposal by Daystar University Ethics Review Board.

We are pleased to inform you that ethical review has been done and the **verdict is to revise as per the attached comments and then proceed to the next stage**. As guidance, ensure that the attached comments are addressed. Please be advised that it is an offence to proceed to collect data without addressing the concerns of Ethics Review board. Your application approval number is **DU-ERB-000533**. The approval period for the research is between **2nd July 2021 to 1st July 2022** after which the ethical approval lapses. Should you wish to continue with the research after the lapse you will be required to apply for an extension from DU-ERB at half the review charges.

This approval is subject to compliance with the following requirements.

- i. Only approved documents including (informed consents, study instruments, MTA) will be used.
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by Daystar University Ethics Review Board.
- iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to Daystar University Ethics Review Board within 72 hours of notification.
- iv. Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to Daystar University Ethics Review Board within 72 hours.
- v. Clearance for export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of a signed one page executive summary report and a closure report within 90 days upon completion of the study to Daystar University Ethics Review Board via email [duerb@daystar.ac.ke].

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) <https://oris.nacosti.go.ke> and other clearances needed.

Yours sincerely,

A handwritten signature in black ink, appearing to read "A. L. Lando", written over a horizontal line.


Sr. Prof. A. L. Lando PhD
Chair, Daystar University Ethics Review Board

A handwritten date "02 July 2021" in black ink, written in a cursive style.


Encl. Review Report



Appendix D: Research Permit




 REPUBLIC OF KENYA



 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: 397173
 Date of Issue: 19/July/2021


RESEARCH LICENSE




This is to Certify that Mr.. Collins Kipkoech Barsulai of Daystar University, has been licensed to conduct research in Nairobi on the topic: Prevalence of problem gambling among the Strathmore University students in Nairobi county, Kenya for the period ending : 19/July/2022.

License No: NACOSTI/P/21/11862

Applicant Identification Number: 397173


 Director General
 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Verification QR Code



NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix E : Plagiarism Report

Collins Barsulai Thesis

ORIGINALITY REPORT

13%

SIMILARITY INDEX

9%

INTERNET SOURCES

5%

PUBLICATIONS

6%

STUDENT PAPERS

PRIMARY SOURCES

1	ir-library.ku.ac.ke Internet Source	1%
2	documents.mx Internet Source	<1%
3	N.A. Dowling, S.S. Merkouris, C.J. Greenwood, E. Oldenhof, J.W. Toumbourou, G.J. Youssef. "Early risk and protective factors for problem gambling: A systematic review and meta-analysis of longitudinal studies", Clinical Psychology Review, 2017 Publication	<1%
4	demos.co.uk Internet Source	<1%
5	Submitted to Daystar University Student Paper	<1%
6	irep.ntu.ac.uk Internet Source	<1%
7	"The Wiley-Blackwell Handbook of Disordered Gambling", Wiley, 2013 Publication	<1%

8	erepository.uonbi.ac.ke Internet Source	<1 %
9	hdl.handle.net Internet Source	<1 %
10	about.gambleaware.org Internet Source	<1 %
11	psychology.org.au Internet Source	<1 %
12	Submitted to Southern Cross University Student Paper	<1 %
13	www.theelephant.info Internet Source	<1 %
14	Submitted to Monash University Student Paper	<1 %
15	docplayer.net Internet Source	<1 %
16	www.theestafrican.co.ke Internet Source	<1 %
17	Li-Jun Ji, Kayla McGeorge, Ye Li, Albert Lee, Zhiyong Zhang. "Culture and gambling fallacies", SpringerPlus, 2015 Publication	<1 %
18	repository.mua.ac.ke Internet Source	<1 %

19	Submitted to Institute of Rural Management Student Paper	<1 %
20	Submitted to Midlands State University Student Paper	<1 %
21	www.gamblingtherapy.org Internet Source	<1 %
22	www.frontiersin.org Internet Source	<1 %
23	Kirsty E. Scholes-Balog, Sheryl A. Hemphill, Nicki A. Dowling, John W. Toumbourou. "A prospective study of adolescent risk and protective factors for problem gambling among young adults", Journal of Adolescence, 2014 Publication	<1 %
24	www.standardmedia.co.ke Internet Source	<1 %
25	cliftondavies.com Internet Source	<1 %
26	www.ncbi.nlm.nih.gov Internet Source	<1 %
27	www.problemgambling.ca Internet Source	<1 %
28	www.psychology.org.au Internet Source	<1 %

29	www.drugsandalcohol.ie Internet Source	<1 %
30	aifs.gov.au Internet Source	<1 %
31	Kirsty E. Scholes-Balog, Sheryl A. Hemphill, John W. Toumbourou, Nicki A. Dowling. "Problem gambling and internalising symptoms: A longitudinal analysis of common and specific social environmental protective factors", <i>Addictive Behaviors</i> , 2015 Publication	<1 %
32	Submitted to Chesterfield College Student Paper	<1 %
33	Submitted to Copperbelt University Student Paper	<1 %
34	Lucia Romo, Cindy Legauffre, Alice Guilleux, Marc Valleur et al. "Cognitive distortions and ADHD in pathological gambling: A national longitudinal case-control cohort study", <i>Journal of Behavioral Addictions</i> , 2016 Publication	<1 %
35	Susan M. Moore, Anna C. Thomas, Sudhir Kalé, Mark Spence, Natalina Zlatevska, Petra K. Staiger, Joseph Graffam, Michael Kyrios. "Problem Gambling Among International and Domestic University Students in Australia:	<1 %

Who is at Risk?", Journal of Gambling Studies,
2012

Publication

36	ir.bdu.edu.et Internet Source	<1 %
37	Submitted to University of Central Lancashire Student Paper	<1 %
38	www.astuteanalytica.com Internet Source	<1 %
39	Submitted to Vaal University of Technology Student Paper	<1 %
40	Katie Splevins. "Prevalence of Adolescent Problem Gambling, Related Harms and Help-Seeking Behaviours Among an Australian Population", Journal of Gambling Studies, 01/07/2010 Publication	<1 %
41	Submitted to University of Glasgow Student Paper	<1 %
42	Submitted to Walled Lake Central School Student Paper	<1 %
43	Submitted to Kenyatta University Student Paper	<1 %
44	N.A. Dowling, S. Aarsman, S.S. Merkouris. "Risk, compensatory, and protective factors in problem gambling: The role of positive mental	<1 %

health characteristics", Addictive Behaviors, 2020

Publication

45	fiusjatekok.info Internet Source	<1 %
46	strategicjournals.com Internet Source	<1 %
47	Submitted to Mount Vernon High School Student Paper	<1 %
48	Submitted to Ghana Technology University College Student Paper	<1 %
49	ir.jkuat.ac.ke Internet Source	<1 %
50	Javier Esparza-Reig, Manuel Martí-Vilar, César Merino-Soto, Alfredo García-Casique. "Relationship between Prosocial Behaviours and Addiction Problems: A Systematic Review", Healthcare, 2021 Publication	<1 %
51	Submitted to Jose Rizal University Student Paper	<1 %
52	Submitted to Mahidol University Student Paper	<1 %
53	Submitted to Mancosa Student Paper	<1 %

54	Submitted to Segi University College Student Paper	<1 %
55	cyberleninka.org Internet Source	<1 %
56	edocs.maseno.ac.ke Internet Source	<1 %
57	www.bbc.co.uk Internet Source	<1 %
58	N.A. Dowling, S.S. Merkouris, S. Dias, S.N. Rodda, V. Manning, G. Youssef, D.I. Lubman, R.A. Volberg. "The diagnostic accuracy of brief screening instruments for problem gambling: A systematic review and meta-analysis", Clinical Psychology Review, 2019 Publication	<1 %
59	Submitted to University of Kentucky Student Paper	<1 %
60	Submitted to University of Ghana Student Paper	<1 %
61	nyproblemgambling.org Internet Source	<1 %
62	works.bepress.com Internet Source	<1 %
63	erepository.uonbi.ac.ke:8080 Internet Source	<1 %



64	www.jogoremoto.pt Internet Source	<1 %
65	www.pubmedcentral.nih.gov Internet Source	<1 %
66	Naureen Bhullar, Lori Simons, Khushbu Joshi. "The Significance of Gender and Ethnicity in Collegiate Gambling and Drinking", Addictive Disorders Their Treatment, 2012 Publication	<1 %
67	artractiveke.blogspot.com Internet Source	<1 %
68	lis.unza.zm Internet Source	<1 %
69	www.ijrdo.org Internet Source	<1 %
70	www.netjournals.org Internet Source	<1 %
71	Submitted to Saint Paul University Student Paper	<1 %
72	Scholes-Balog, Kirsty E., Sheryl A. Hemphill, John W. Toumbourou, and Nicki A. Dowling. "Problem gambling patterns among Australian young adults: Associations with prospective risk and protective factors and	<1 %

adult adjustment outcomes", Addictive Behaviors, 2016.

Publication

73	Submitted to University of College Cork Student Paper	<1 %
74	palevel.unza.zm Internet Source	<1 %
75	trulaw.com Internet Source	<1 %
76	Submitted to Broward Community College Student Paper	<1 %
77	Submitted to Grand Canyon University Student Paper	<1 %
78	Submitted to Iowa Community College Online Consortium Student Paper	<1 %
79	Submitted to LaSalle University Student Paper	<1 %
80	Submitted to Leeds Beckett University Student Paper	<1 %
81	Submitted to University of Venda Student Paper	<1 %
82	findarticles.com Internet Source	<1 %

Submitted to CSU, Long Beach

83	Student Paper	<1 %
84	Dowling, N.A., S.S. Merkouris, C.J. Greenwood, E. Oldenhof, J.W. Toumbourou, and G.J. Youssef. "Early risk and protective factors for problem gambling: A systematic review and meta-analysis of longitudinal studies", <i>Clinical Psychology Review</i> , 2017. Publication	<1 %
85	Submitted to University of Wales Swansea Student Paper	<1 %
86	Yvonne H. C. Yau, Marc N. Potenza. "Gambling Disorder and Other Behavioral Addictions", <i>Harvard Review of Psychiatry</i> , 2015 Publication	<1 %
87	pdxscholar.library.pdx.edu Internet Source	<1 %
88	Sut Mei Kam, Irene Lai Kuen Wong, Ernest Moon Tong So, David Kin Cheong Un, Chris Hon Wa Chan. "Gambling behavior among Macau college and university students", <i>Asian Journal of Gambling Issues and Public Health</i> , 2017 Publication	<1 %
89	www.catalyst.org Internet Source	<1 %

90	Howard J. Shaffer, Paige M. Shaffer. "Psychiatric Epidemiology, Nosology, and Treatment: Considering Internet Gambling", Psychiatric Annals, 2014 Publication	<1 %
91	studentsrepo.um.edu.my Internet Source	<1 %
92	Max W. Abbott, Maynard M. Williams, Rachel A. Volberg. "A Prospective Study of Problem and Regular Nonproblem Gamblers Living in the Community", Substance Use & Misuse, 2009 Publication	<1 %
93	adai.uw.edu Internet Source	<1 %
94	www.studymode.com Internet Source	<1 %
95	Antonio Pascual-Leone, Jennifer L. Campeau, Shawn J. Harrington. "Arousal and Affective Differences Between Student Gamblers and Non-gamblers during a Card Game", Journal of Gambling Studies, 2011 Publication	<1 %
96	Hing, N., L. Cherney, S. M. Gainsbury, D. I. Lubman, R. T. Wood, and A. Blaszczynski. "Maintaining and losing control during internet gambling: A qualitative study of	<1 %

gamblers' experiences", *New Media & Society*, 2014.

Publication

97 Howard J. Shaffer, Ryan Martin. "Disordered Gambling: Etiology, Trajectory, and Clinical Considerations", *Annual Review of Clinical Psychology*, 2011

Publication

<1%

98 Jennifer M. Boldero, Richard C. Bell, Susan M. Moore. "Do gambling activity patterns predict gambling problems? A latent class analysis of gambling forms among Australian youth", *International Gambling Studies*, 2010

Publication

<1%

99 Jessika Spångberg, Johan Svensson. "Gambling among 16-year-olds and associated covariates: A Nordic comparison", *Scandinavian Journal of Public Health*, 2020

Publication

<1%

100 John W. Welte. "Multiple Risk Factors for Frequent and Problem Gambling: Individual, Social, and Ecological", *Journal of Applied Social Psychology*, 6/2006

Publication

<1%

101 Submitted to Liberty University

Student Paper

<1%

102 Submitted to Loughborough University

Student Paper

<1%

103	Submitted to Wawasan Open University Student Paper	<1 %
104	Submitted to Wilfrid Laurier University Student Paper	<1 %
105	etd.uum.edu.my Internet Source	<1 %
106	gbata.org Internet Source	<1 %
107	ir.buse.ac.zw:8080 Internet Source	<1 %
108	sk.sagepub.com Internet Source	<1 %
109	Dave Clarke, Joanne Clarkson. "A Preliminary Investigation into Motivational Factors Associated with Older Adults' Problem Gambling", International Journal of Mental Health and Addiction, 2007 Publication	<1 %
110	Susan Fisher. "A Prevalence Study of Gambling and Problem Gambling in British Adolescents", Addiction Research, 2009 Publication	<1 %
111	Derrick Ssewanyana, Byron Bitanihirwe. "Problem Gambling among Young People in	<1 %



Sub-Saharan Africa", Frontiers in Public Health, 2018

Publication

112

dera.ioe.ac.uk
Internet Source

<1%

Exclude quotes On

Exclude matches Off

Exclude bibliography On

Appendix F: Authorization Letter to Collect Data



9th August 2021

Collins Kipkoech Barsulai
Master of Arts Student
Daystar University

Dear Collins,

AUTHORISATION TO COLLECT DATA AT STRATHMORE UNIVERSITY

The Research Services Office has reviewed your request and granted you the authorization to collect data at Strathmore University for the purposes of your Master of Arts Course Counselling Psychology at Daystar University. The title of the study is "*Prevalence of Gambling Problem Among Strathmore University Students in Nairobi Kenya*"

The data collection process will be conducted at Strathmore University premises using printed questionnaires. The authorization for the data collection process is effective from August 12 to 17, 2021.

Please sign the declaration form (attached) binding you to the ethical use of the data you will access from Strathmore University (meant strictly for the purposes of your study).

Yours sincerely,



Prof. Izael da Silva
Deputy Vice Chancellor, Research

DAYS