

**SEXUAL RISK ASSOCIATED WITH GAMBLING AMONG YOUTH IN KAMPALA**

**CASE STUDY: RUBAGA DIVISION**

**A POSTGRADUATE DISSERTATION**

**PRESENTED TO**

**THE FACULTY OF HEALTH SCIENCES IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS OF THE AWARD OF DEGREE OF MASTER OF PUBLIC HEALTH –  
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## **DEDICATION**

I dedicate this piece of work to my wife Lillian Namusisi Kiwujja and my mother Mrs. Christine Matsiko whose contributions to my life are inestimable.

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During the course of this research, I have received significant help from a number of people whose input was helpful in accomplishing this work.

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## OPERATIONAL DEFINITIONS OF KEY TERMS

In this study, the following definitions have been utilized

**Youth** is any person aged 15 to 24 years.

**Gambling** is often used to mean a state where one puts something of value at risk in the hope of gaining something of greater value (Williams & Potenza, 2010). Different types of gambling that youth are involved in include betting on sports or games of skill including horse and dog races, football, baseball, basketball, hockey, boxing prizefights and others (Hing, et al., 2013), card games, including poker and blackjack, which may be played at casinos or in private homes, dice games such as craps plus lotteries, “scratch-off” games, bingo and mechanized betting such as electronic slot machines and casino games (Griffiths, 2011). In this study, the researcher took on the above definition of gambling but focused on a few types of gambling especially betting, card games & dice games among others. All other standard definitions of gambling disorders (problem and pathological gambling) were maintained in this study.

**Prevalence** of gambling refers to proportion of youth who have ever gambled plus those who are newly engaged in gambling activities.

**Frequent gamblers** are gambling youth who gamble more than once a week

**Early gamblers** are gambling youth who started gambling while less than 18 years.

**Risky sexual behaviors** are practices that increase one’s risk of contracting sexually transmitted infections (STIs) and experiencing unintended pregnancies. These include having sex at an early age usually below 18 years, having multiple sexual partners, having sex while under the influence of alcohol or drugs, and unprotected sexual behaviors among others (CDC, 2010). The researcher

used the term sexual risk meaning the risk of contracting sexually transmitted infections (STIs) and experiencing unintended pregnancies.

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## **EXECUTIVE SUMMARY**

The status of sexual and reproductive health (SRH) of youth and adolescents in urban areas across the globe especially in developing countries like Uganda is alarming. Evidence from Uganda Aids Indicator survey 2011, indicates that over 31% youth who have never married are engaged in sexual intercourse and very many of these have never tested for HIV. Gambling is clearly on the increase in major towns and cities drawing in several youth. However, the risk this practice poses on the youth sexual behavior and its resultant risks have not been investigated in Uganda. This study intended to fill this gap. This study examined the sexual risk associated with gambling among youth.

The study employed a quantitative cross sectional study design and was conducted in Rubaga division in Kampala city on 397 youth aged 15-24 years comprising of youth who currently gamble and those who do not gamble. It employed a systematic sampling scheme in selecting households with youth that responded to the household survey questionnaire.

Results showed that more males than females are engaged in gambling, majority of youth start gambling at while they are still below 18 years and are majorly pulled by competition with peers and desire to earn money. Compared to non-gambling youth, gambling youth have more sexual encounters, initiate sexual activity at a young age, have unprotected sex, have sex with more than one partner whom they do not know their HIV status and have sex under influence of alcohol. On the other hand, gambling youth highly utilize SRHR services like HCT, STI screening and management, cervical cancer screening and management, modern methods of family planning, antenatal care and SRHR counseling compared to non-gambling youth.

The study recommends that the government should form and strongly enforce policies on gambling activities to minimize the involvement of children in this activity and through the ministry of health and civil society organizations create programs to reach these youth with SRHR services.

## **CHAPTER ONE: INTRODUCTION**

### **1.0 Introduction**

Gambling is clearly on the increase in major towns and cities drawing in several youth (Lorenz, 2012). However, the risk this practice poses on youth sexual behavior and its resultant risks have not been investigated in Uganda. This study intended to fill this gap. It examined the sexual risk associated with gambling among youth. This chapter discusses the background of this study, its purpose, aims and objectives, justification plus key conceptual model used.

Gambling is often used to mean a state where one puts something of value at risk in the hope of gaining something of greater value (Williams & Potenza, 2010). Gamblers always risk something of value to them, usually money, on an outcome of an event decided at least partially by chance and their skills (Nower & Blaszczynski, 2008; Lorenz, 2012). Studies have been carried out to establish the prevalence of gambling behavior in various countries. Very few have been conducted in Africa and most likely none in Uganda. Studies have shown varying prevalence of youth gambling. Generally, 77% to 88% of adolescents and youth have engaged in a certain gambling activity (Pike, et al., 2010). This is relatively higher compared to the older population whose prevalence ranges between 39.2% - 50% (King, et al., 2013). More males than females engage in gambling at all ages (Hermano, et al., 2010).

Gambling is a lucrative business that has for long fetched billions of dollars in taxation for various countries. The industry has seen extreme growth in the recent decades, for example the legalized gambling industry in United States of America (USA) grew from \$400 billion in 1997 to a \$775

billion industry in 2003 (Horton, 2013). In Uganda, gambling was expected to contribute over 8 billion shillings as revenue in financial year 2014/2015 (MoFPED, 2014). In 2011, gambling activities contributed about 1.3% to employment in Uganda (UBOS, 2011). This has prompted the government to introduce a 15% withholding tax on winnings from sports, pool betting, and designate gambling houses (MoFPED, 2014).

Various types of gambling opportunities available globally that youth engage in include betting on sports or games of skill including horse and dog races, football, baseball, basketball, hockey, boxing prizefights and others (Hing, et al., 2013). The second type is card games, including poker and blackjack, which may be played at casinos or in private homes. The third is dice games such as craps. The fourth type is lotteries and “scratch-off” games. The fifth type is bingo. The sixth type of gambling is mechanized betting such as electronic slot machines and lastly casino games (Griffiths, 2011).

The recent emergence of gambling and its problems among youth around the world and specifically in Africa is alarming (Pike, et al., 2010). A review of gambling literature revealed that youth gambling is one of the under researched field especially in Africa (Pike, et al., 2010), despite gambling and its problems being a growing burden and public health concern which is socially invisible since it is masked by popular misconceptions (Hing, et al., 2013). Given that this field of study has been ignored especially in Africa (Pike, et al., 2010), there is no single peer reviewed article of any study about the prevalence, determinants and sexual risks of gambling and its related disorders in Uganda.

Risky sexual behaviors are practices that increase one's risk of contracting sexually transmitted infections (STIs) and experiencing unintended pregnancies. These include having sex at an early age usually below 18 years, having multiple sexual partners, having sex while under the influence of alcohol or drugs, and unprotected sexual behaviors among others (CDC, 2010). Youth in Uganda typically become sexually active, marry, and bear children early in life. The Uganda Demography and Health survey (UDHS) revealed that youth in Uganda start having sex when they are young. By the age of 18, at least 44.4% of men and 33.6% of women who have never married have had sex (UDHS, 2011).

A number of governments perceive gambling as a recreational and a personal service (UBOS, 2011). Promoters of gambling have put up a perception and comprehension that is misguided, depicting gambling as a harmless form of entertainment and as an enjoyable activity (Griffiths, 2010). Legalization of gambling in number of countries including Uganda has allowed all forms of gambling to be advertised in the mass media. This has led to a large number adverts for gambling activities through televisions, newspaper, radio, and social networks. A picture of gambling as glamorous entertainment and as a means of achieving financial freedom has been fronted (Hing, et al., 2014). Youth are particularly fascinated by the excitement and the prestige often associated with gambling and its popularization. Furthermore, most youth and policy makers remain unaware of the sexual risks associated with excessive gambling participation (Griffiths, 2010).

Gambling involves risk taking and in some cases requires particular knowledge or skills (Mishra, et al., 2010). The majority of gambling is social or recreational, although some people do make a living as professional gamblers (Lorenz, 2012; UK, 2005). This increases the appetite of a

gambler until he or she is driven by a hedonic or pleasurable feeling to continue gambling which may develop into an addiction. Gambling addiction like any other addictive behavior results into a state whereby the individual's life is taken over by gambling coupled with abandonment of other activities in someone's life (Griffiths, 2011). Gambling becomes the single most important activity in that person's life. The gambler at this stage continues to build up tolerance over time, uses the activity as a mood modification behavior that results into a gambling disorder (Feder & Rosenberg, 2014).

Gambling disorders include pathological (compulsive) gambling and problem gambling. These two have received and still continue to receive increased interest from clinicians and researchers over the past three decades (Hodgins, et al., 2011). A minority of people who gamble do so in ways which disrupt their personal, family and community lives. These individuals fall into two closely related categories: Problem gamblers and pathological gamblers.

Problem gambling is often referred to as an involvement in risky gambling behaviors that adversely affects the individual's well-being: this may include issues of relationships, family, financial matters, social standing and vocational pursuits. Griffiths, (2011), describes problem gambling as gambling that compromises, disrupts, or damages family, personal, or recreational pursuits. It is the inability to resist the urge to gamble markedly despite harmful consequences to the gambler or others (MacLaren, et al., 2013). A problem gambler therefore behaves in a way that causes him/her to have negative effects on his/her life (Lorenz, 2012). He or she may realize that their involvement has become problematic and therefore may resolve to maintain control and focus on social gambling. However, he/she may conversely lose control and develop a gambling addiction termed as pathological gambling.

Problem gambling precedes pathological gambling (Christine & Nathan, 2013). Pathological gambling, often referred to as compulsive gambling, is a mental health disorder that is diagnosable and treatable (Williams & Potenza, 2010). It is considered by medical professionals to be a mental disease, like kleptomania, rather than a traditional addiction. Pathological gambling as a disorder is usually persistent and disrupts one's life.

The American Psychiatric Association (APA) came up with ways of diagnosing pathological gambling. Cases of this disorder are identified by the diagnostic criteria that identifies five symptoms that include: preoccupation with gambling; needing to gamble with larger amounts of money in order to achieve the same level of excitement; repeated unsuccessful attempts to cut down or stop gambling; feelings of restlessness or irritability when trying to cut back or stop gambling; gambling to escape problems or unpleasant emotions; chasing losses; lying to family members or hiding evidence of one's gambling; committing illegal acts to support one's gambling; jeopardizing significant relationships; and relying on others to relieve a desperate financial situation (Do & Lee, 2014; Winters, et al., 2012). These five symptoms cause significant distress or impairment in social, family or occupational areas of a gambler's life (MacLaren, et al., 2013).

The numbers of gambling problems among adolescents, older adults, women, low income populations and those with lower education is on the rise especially in low income countries (Horton, 2013). Recent studies and national surveys conducted in European countries and some parts of Asia have stated that problem gambling prevalence ranges from 10% to 15% whereas pathological gambling ranges between 4% - 8% among youth (Hermano, et al., 2010; Pike, et al., 2010).



A number of negative health outcomes are associated with gambling and its disorders among youth. These include back and neck pain, headaches, lack of sleep, digestive problems like irritable bowel syndrome, hypertension and more cardiac problem (New Brunswick Department of Health, 2012). Although the relationship between sexual behavior and gambling has not been addressed to the extent of many other behaviors typically associated with gambling such as drinking alcohol and drug use, significant evidence exists and suggests that gamblers are more likely to engage in risky sexual behaviors as compared to non-gamblers (Petry 2000; Huang et al. 2007; Grant & Steinberg, 2005). This is due to the fact that gambling is a risk taking behavior just like having unprotected sex. Gambling points are often places where youth meet opposite sex friends due to absence of parental and societal controls. Peers might negatively influence each other. It should also be noted that a number of gambling points are located within points where alcohol and drugs are sold, and prostitution is carried out (Griffiths, 2011).

### **1.1 Background of study area**

Rubaga division is one of the five divisions that make up Kampala City, Uganda's largest and capital city. The division has a population of over 384,000 representing more than a quarter of the population of Kampala city (UBOS, 2014). About 54% of residents in Rubaga are females and less than 11% are considered to be poor compared to 19.5% of Ugandans (MoFPED, 2014; UBOS, 2014). Health challenges within the division are numerous since over 78% of its population is young yet over 83% are unemployed (AfDB, 2013). In addition, the division has been considered by most of youth who often leave rural areas to reside in urban areas as a good platform for residence and acquiring employment which has substantially created slum areas within the division. Furthermore, due to its high population, the gambling industry has strongly established its roots with in this division.

## **1.2 Problem statement**

The status of sexual and reproductive health (SRH) of youth in urban areas across the globe especially in developing countries like Uganda is alarming. UAIS 2011 indicates that over 31% of youth who have never married are engaged in sexual intercourse and many of these have never tested for HIV and a worrying 54% never use a condom at sexual intercourse. Efforts to bridge this gap through streamlined policies and programs have registered a notable progress. However, such efforts have not met the SRH need among youth for example; over 45% of youth in Uganda do not have comprehensive knowledge about sexually transmitted diseases (STDs) including HIV/AIDS (UAIS, 2011).

The recent emergence of gambling and its problems among youth around the world is frightening since it occupies over 77% to 88% of adolescents and youth (Pike, et al., 2010). Youth usually start gambling socially with friends and family and then end up using it to make money. In the long run, youth develop gambling problems at the rate of two to four times that of adults (King, et al., 2013). Although the relationship between sexual behavior and gambling has not been addressed to the extent of many other behaviors typically associated with gambling such as drinking alcohol and drug use, significant evidence exists and suggests that gamblers are more likely to engage in risky sexual behaviors as compared to non-gamblers (Petry 2000; Huang et al. 2007; Grant & Steinberg, 2005). This is due to the fact that gambling is a risk taking behavior just like having unprotected sex. This makes gamblers vulnerable to having unprotected sex, initiate sex early, having multiple sexual partners, engaging in transactional sex & cross generational sex, being addicted to sex and often becoming lesbians and gays which exposes them to HIV and unwanted pregnancies.

Although many youth in Uganda engage in gambling, there is no information about related sexual risk. With Uganda being one of the youngest population (78% below 30 years), the SRH challenge may be worsened by gambling and Uganda may not win its fight against diseases like HIV and other health conditions that require participation of youth. This research therefore sought to find out the sexual risk associated with gambling among youth in urban areas.

### **1.3 Research question**

What sexual risks are associated with gambling among youth in urban areas?

### **1.4 Research questions**

- What is the extent of gambling among youth?
- What factors are associated with gambling among youth?
- What are the patterns of sexual behavior among youth involved in gambling activities?

### **1.5 Goal**

The goal of this study was to investigate the sexual risk associated with gambling among youth with a view of contributing to the body of knowledge to inform the improvement of the sexual and reproductive health of youth and adolescents in urban areas across the globe especially in developing countries like Uganda.

### **1.6 Specific objectives**

This study aimed to achieve four objectives:

- To find out the extent of gambling, and to describe the factors associated with gambling among youth in Rubaga division, Kampala.

- To establish the patterns of sexual behavior among youth involved in gambling activities in Rubaga division, Kampala.
- To establish the relationship between gambling and sexual risk behavior among youth in Rubaga division, Kampala.
- To establish the utilization of SRH services among gambling and non-gambling youth in Rubaga division, Kampala.

### **1.7 Hypotheses**

- Gambling does not have a significant association with risky sexual behaviors
- Gambling youth and non-gambling youth are likely to utilize SRH services at the same rate.

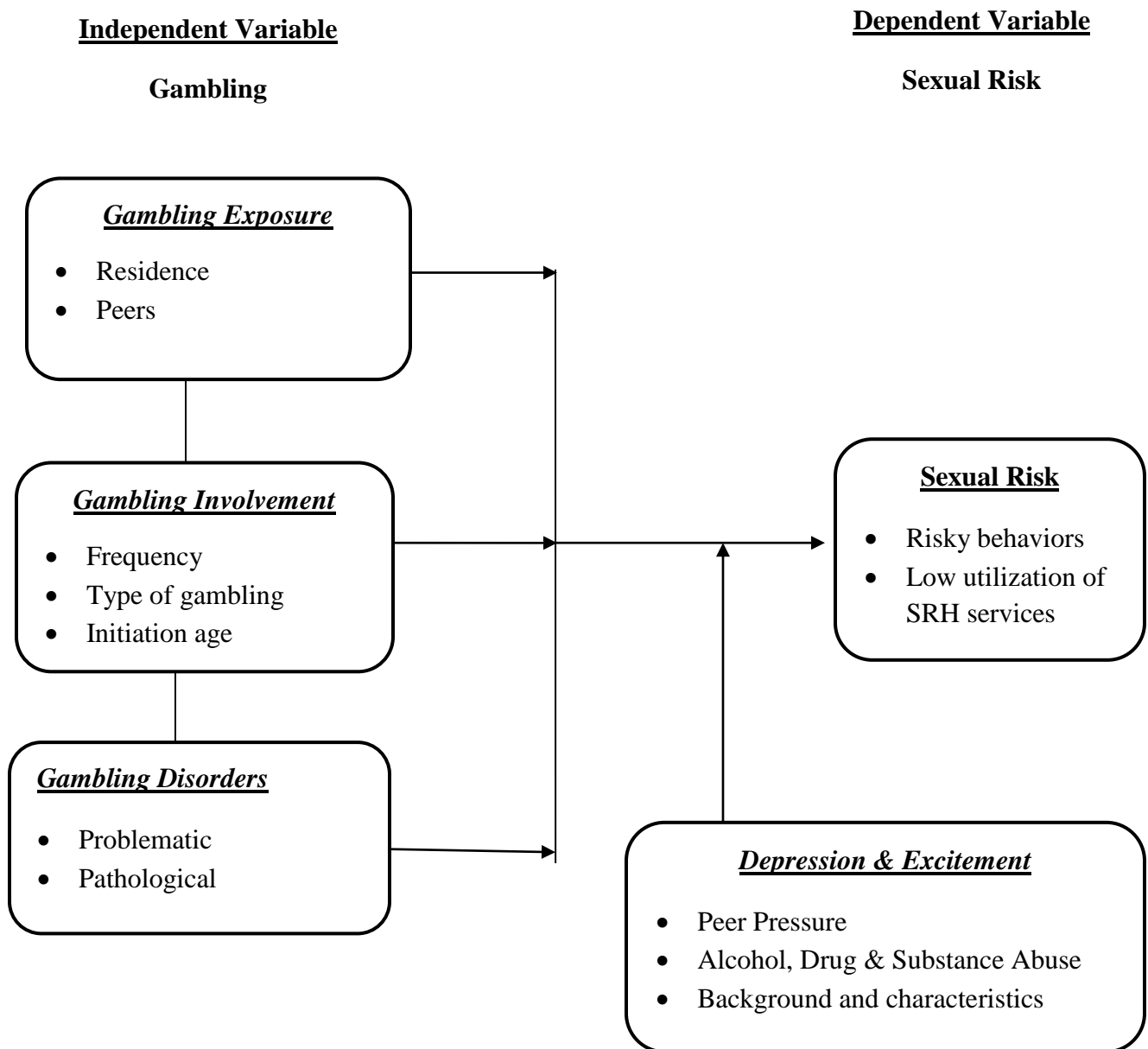
### **1.8 Justification**

With prevalence of gambling participation increasing every day in Uganda and the general trend of creation of five satellite cities in Uganda, this research is critically positioned to solve one of the major challenges resulting from frequent growth of urbanization. A critical look at the sexual risk increases synergies for Uganda in its fight against health challenges like HIV/AIDs, STIs and teenage pregnancies. Government policies on urbanization and its management plus youth engagement policies may find the study results useful due to the evidence it has generated. The government may also use this study to guide the policy formulation about the gambling activity and its taxation measures. Civil society organizations (CSOs) will base on evidence generated from this study to enhance their planning, coordination and evaluation of projects and programs reaching youth. Comprehensive knowledge for future researchers and academicians is another vital use for this study. Lastly, the study was a key measure to fulfillment of requirements of the university.

## 1.9 Conceptual Model

The conceptual framework below illustrates the relationship between **gambling** and **the sexual risk** as the outcome.

Figure 1: The conceptual framework of gambling and sexual risk



Source: developed by researcher using various studies

## **1.10 Conclusion**

In conclusion, the following key messages should be noted clearly. This study sought to find out the sexual risk associated with gambling among youth in urban areas. It was conducted in Rubaga division in Kampala city and It's an interesting document that the government, civil society organizations in Uganda and in Africa may use in improving youth programming.

The next chapter presents a review of existing literature on the sexual risks associated with gambling.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.0 Introduction**

This piece of work contains a review of existing literature on the sexual risk associated with gambling all over the world with a purpose of critically analyzing, identifying gaps, identifying variables and thereby focusing the study. The document discusses the theoretical framework used in the study, the extent of gambling, associated factors of gambling, sexual risk behavior among youth, and their association with gambling.

### **2.1 Theoretical framework**

The association of sexual behavior and gambling among youth is based on the theory of planned behavior. The Theory of Planned Behavior evolved from the Theory of Reasoned Action. Fishbein and Ajzen joined forces to explore ways to predict behaviors and outcomes. They assumed that individuals are usually quite rational and make systematic use of information available to them. People consider the implications of their actions before they decide to engage or not engage in a given behavior (Ajzen & Fishbein, 1980, p. 5).

According to the theory of Reasoned Action, the most important determinant of a person's behavior is behavior intent. The individual's intention to perform a behavior is a combination of attitude toward performing the behavior and the subjective norms. The individual's attitude toward the behavior includes; behavioral belief, evaluations of behavioral outcome, subjective norm, normative beliefs, and the motivation to comply. According to the theory of Planned Behavior, a third determinant of behavioral intention called perceived behavioral control is added. Perceived behavioral control is determined by two factors; control beliefs and perceived power. Perceived behavioral control indicates that a person's motivation is influenced by how difficult the behaviors

are perceived to be, as well as the perception of how successfully the individual can, or cannot, perform the activity. If a person holds strong control beliefs about the existence of factors that will facilitate a behavior, then the individual will have high perceived control over a behavior. Conversely, the person will have a low perception of control if she holds strong control beliefs that impede the behavior. This perception can reflect past experiences, anticipation of upcoming circumstances, and the attitudes of the influential norms that surround the individual (Mackenzie & Jurs, 1993).

The theory of planned behavior will therefore form the theoretical framework of this study.

## **2.2 Extent of gambling and factors associated**

Studies have been carried out to establish the prevalence of gambling behavior in various countries. Very few have been conducted in Africa and most likely none in Uganda. Studies have shown varying prevalence of youth gambling. Generally, 77% to 88% of adolescents and youth have engaged in a certain gambling activity (Pike, et al., 2010). This is relatively higher compared to the older population whose prevalence ranges between 39.2% - 50% (King, et al., 2013). More males than females engage in gambling at all ages (Hermano, et al., 2010).

A number of factors are responsible for the general involvement of youth in gambling plus its related problems. The drivers to gambling and its problems are multifaceted and multidimensional. They include social-cultural factors, personal characteristics and traits, environmental factors (structural and situational factors), and psychological factors among others (Lloyd, et al., 2010). When these factors interact and interplay, the behavior may result into gambling addiction and problems (Griffiths, 2011).



Available research has suggested that children habitually start gambling young, usually around 9 or 10 years of age. A longitudinal study that tracked 578 youth for four years (15 years into adulthood) showed that youth with severe gambling-related addiction and difficulties began gambling at a much earlier age than people without gambling problems (Delfabbro, et al., 2009). Early gambling involvement is a predictive factor for the maintenance of the behavior and progress of gambling problems. The perception of individuals towards each gambling activity plays a big role in their involvement in gambling

The activities of today's youth are very much dictated by societal trends and social influences. With regard to gambling, these factors cut across the board with their great focus on why individuals get attracted to gambling and their continued behavior. Social cultural factors include parents' role in child's life, stigmatization of gamblers, attitude of peers and their involvement in gambling.

Studies have indicated that parents characteristics, their perception of gambling and their relation with their children plays a big role in nurturing the child and therefore responsible for their adolescent and young adulthood behaviors (Campbell, et al., 2011). Another study conducted showed that parental gambling, strained parental trust and communication, monitoring, and supervision increased the levels of gambling amongst adolescents and as well the probability that their children became problem gamblers whereas higher levels of parent-child attachment were associated with lower levels of adolescent gambling and its problems (Magoon & Ingersoll, 2006).

Stigma has been recognized as a major hurdle to help-seeking, treatment and recovery of mental illness and other addictive behaviors (Hing, et al., 2014). Gamblers like in any other addictive behavior are often stigmatized in regard to personal responsibility, dangerousness and rarity

(Feldman & Crandall, 2007). In a study conducted among 249 university students in which participants rated stigmatization using an attitudinal social distance scale, 'Disordered' gambling was more stigmatized than the cancer and control conditions (Horch & Hodgins, 2008). This has been shown to prevent or hinder youth with gambling problems from seeking support because of embarrassment and shame which has contributed to the continuity of gambling behavior and in worst cases resulting into pathological gambling (Hing, et al., 2014).

### **2.3 Gambling and sexual risk behaviors**

A number of negative health outcomes are associated with gambling and its disorders among youth. These include back and neck pain, headaches, lack of sleep, digestive problems like irritable bowel syndrome, hypertension and more cardiac problem (New Brunswick Department of Health, 2012). Although the relationship between sexual behavior and gambling has not been addressed to the extent of many other behaviors typically associated with gambling such as drinking alcohol and drug use, significant evidence exists and suggests that gamblers are more likely to engage in risky sexual behaviors as compared to non-gamblers (Petry 2000; Huang et al. 2007; Grant & Steinberg, 2005).

Young people commonly regard themselves as invulnerable or immune from problem behavior; they believe their risky behavior is only a temporary phase during their youth that will be curtailed as they move into adulthood and that as a consequence their contemporary risky behavior will have no long term consequences for them (Valentine, 2008; Rawlins, 2008). This is due to the fact that young people often ignore public health messages especially messages about alcohol, obesity, sex among others (Valentine, 2008; Rawlins, 2008). In contrast, within the gambling studies literature,

there is some evidence that majority of young people are aware of the potential dangers that gambling poses in terms of addiction and debt.

The Centers for Disease Control and Prevention (CDC) in USA stated that

*“Risky sexual behavior is a behavior that increases one’s risk of contracting sexually transmitted infections and experiencing unintended pregnancies. They include having sex at an early age, having multiple sexual partners, having sex while under the influence of alcohol or drugs, and unprotected sexual behaviors”* (CDC, 2010; pp 20).

Youth represent a developmental group which is faced with various sexual behaviors that are risky including early sexual initiation, unprotected sex, sex with same gender, early and unwanted pregnancies homosexuality and sexually transmitted diseases among others that culminate from gambling (Lee, et al., 2011). Youth in Uganda typically become sexually active, marry, and bear children early in life. The Uganda Demography and Health survey (UDHS) revealed that youth in Uganda start having sex when they are young. By the age of 18, at least 44.4% of men and 33.6% of women who have never married have had sex (UDHS, 2011).

There are indications in recent years that youth sexual behavior in Uganda is becoming more risky. National statistics indicate increasing trends of multiple sexual partners among young men and an increased proportion of young men who are sexually active (UDHS, 2011; UAIS, 2011). According to the 2011 Uganda AIDs Indicator Survey, among never-married youth who reported having sex in the past 12 months, only, 74% of young women and 43% of young men have ever been tested for HIV and received their results. In addition, 42% of women and 46% of men aged 15-24 years used a condom at last sexual intercourse (UAIS, 2011). There is a steady increase in the proportion of young, unmarried men aged 15-24 who have two or more sexual partners.

Statistics show that 2% of women and 9% of men age 15-24 had sexual intercourse with more than one partner in the previous 12 months yet a few of them (27% females, 47% males) use condoms (UDHS, 2011).

### **2.3.1 Gambling and sexual initiation**

There is comorbidity of problem gambling and early onset of sexual intercourse among gambling youth. Several studies have been carried out in America showing the comorbidity of problem gambling and early onset of sexual intercourse among white students in both private and public schools and among African American adolescents (Martins, et al., 2014). The study showed that problem gambling was positively associated with earlier age of onset of sexual intercourse. In a study conducted among 427 African American participants, gamblers were 1.46 times more likely to engage in sex by the age of 13 and 2.29 times by age of 18 (Martins, et al., 2014). Approximately one third (35 percent) had intercourse by age 13 and 89 percent had engaged in sexual intercourse by age 18 (Medical Xpress, 2014).

Kausch, 2003 also revealed that problem gamblers who also used substances were more likely to report sexual compulsivity and early sexual debut. This seemed to match with findings from another study that showed that problem gambling among persons with substance use disorders was further associated with risky sexual conduct (Petry, 2000). The risk of early sex initiation increases with the frequency of gambling involvement by youth and is higher among problem and pathological gamblers (Martins, et al., 2014). This risk was common among gamblers as compared to non-gamblers with higher impulsivity. It has been assumed that comorbidity of gambling problems and early sexual initiation may be an indicative sign of a common personality

characteristic such as impulsivity. Impulsivity includes slight preventative apprehension, sense of satisfaction, and lack of resistance in thrill seeking predispositions for example in pathological gambling, the patient does not oppose his urge of gambling because of the excitement it provides. Impulsivity has been associated with the severity of gambling problems and early onset of sexual intercourse (Lee, et al., 2011; Petry, 2000).

### **2.3.2 Gambling and sexual partners**

Gambling youth are at a higher risk of having multiple sexual partners (Martins, et al., 2014; Huang, et al., 2010). Multiple sexual relationships are a major driver of HIV and high risk sexual behavior (UDHS, 2011; UAC, 2014). In Uganda, youth tend to have many sexual partners compared to the general population. Statistics show that 2% of women and 9% of men age 15-24 had sexual intercourse with more than one partner in the past 12 months yet a few of them (27% females, 47% males) used condoms (UDHS, 2011).

Researchers have recognized that youth who gamble and have gambling problems have uncontrolled sexual behavior and are often called people with sexual compulsivity, since they are unable to contain their impulses, they end up having many sexual partners (Petry & Tawfik, 2001). In contrast, another study conducted among college students found out that even though female gamblers were at a risk of having multiple partners, male social and problem gamblers were 18% and 30% less likely than male non-gamblers to have multiple sex partners (Huang, et al., 2010).

However this seemed to not match with another study done among African American adolescents that revealed that both male and female gamblers were 19% more likely to have multiple partners compared to non-gamblers (Martins, et al., 2014). The sexual risk was more in youth with problem gambling (63%) (Martins, et al., 2014). It is therefore evidenced that gambling participation and gambling problems increase the risk of having multiple sexual partners especially among women

(Huang, et al., 2010). It is also hypothesized that stress, depression, and financial crisis related to gambling problems may manifest within people and result in having many sexual partners (Steinberg, et al., 2011). Stress and depression may develop due to gambling problem since youth who gamble become vulnerable as they do not know if they are going to win or lose so they use it as means to establish social networks and to escape unhappy feelings or drama in their lives.

### **2.3.3 Gambling and condom use**

Consistent and correct condom use was proved to reduce the risk of acquiring HIV and other related STIs and prevent unwanted pregnancies (UDHS, 2011; UAC, 2014). According to the National College Health Risk Behavior Survey that was conducted among college students in USA, youth in colleges had a high past-month prevalence of unprotected sex of 45.0%. In a recent study by the National College Health Assessment, only 52.1% of students reported condom use during their last vaginal intercourse and only 27.7% reported using condoms during their last anal intercourse (American College Health Association, 2007).

In Uganda, The 2011 AIDs Indicator survey revealed that among never-married youth who reported having sex in the past 12 months, 58% of women and 54% of men aged 15-24 did not use a condom at last sexual intercourse (UAIS, 2011). These results are particularly alarming in light of the high rates of new cases of STI/HIV infections and increased prevalence each year among youth.

Studies conducted on college students have shown that gambling puts individuals at a risk of engaging in unprotected sex. A study conducted by the National Collegiate Athletic Association on

a sample of 20,739 student-athletes in USA revealed that individuals with problem and pathological gambling disorders were 1.7 times more likely to engage in unprotected sex in the past year (Huang, et al., 2007). Another study conducted with the same population also revealed related results. The study indicated that Problem and pathological gambling athletes had much higher past-year prevalence of unprotected sex than non-gambling athletes (34.2%) (Huang, et al., 2010). The risk of engaging in unprotected sex was more among female problem gamblers as compared to their male counterparts (Huang, et al., 2010).

#### **2.3.4 Gambling and sex orientation**

Canadian Paediatric Society (2008), explains that “Sexual orientation refers to whether a person’s physical and emotional arousal is to people of the same or opposite sex. One does not have to be sexually active to have a sexual orientation. Those who are attracted primarily to the opposite sex are heterosexual, those attracted primarily to the same sex are homosexual (gay or lesbian) and those who are attracted to both sexes are bisexual.” Although sexual orientation is a complex construct, the National Health and Social Life Survey in USA found that approximately 3% of men in a community sample identified as gay or bisexual.

It is important to acknowledge sexual orientation and related sexual risks when considering problematic behaviors. In 2013, the prevalence of HIV/AIDS among men having sex with men in Uganda was 13.2% compared to the general population with 7.3% (UAC, 2014). In October 2009, the government of Uganda introduced the then Anti – homosexuality bill which sought to further combat any homosexuality activity in Uganda. In February 2014, President Yoweri Museveni signed the bill into law, defying heavy international pressure not to do so. A diverse coalition of individuals, international entities, and nongovernmental organizations (NGOs) challenged the

constitutionality of the Act for violating the human rights. The Constitutional Court of Uganda nullified the law on a technicality basis on August 1, 2014 (Saurav, 2015). The relationship between sex orientation and gambling has received less attention by researchers and policy makers. There is no study conducted that focuses on the co-existence of general gambling involvement and homosexuality. A few studies focused on gambling disorders. In a study conducted in USA, 105 men with pathological gambling were examined to assess their sexual orientation. The study revealed that among people with pathological gambling, 14.3% were gay and 6.7% were bisexual (Grant & Potenza, 2006).

Policy makers, pediatricians and other health care providers must be aware of the significant psychological, social and medical issues that face young people who are gay, lesbian or bisexual. Gay youth are more likely to start using tobacco, alcohol and other substances at an earlier age which are all associated with sexual risks including unprotected sex (Camchong, et al., 2014; Grant & Potenza, 2006; Jones-Webb, et al., 2013).

The World Health Organization (WHO) in its Africa Region Working Paper Series 2005 noted that;

*“Sex between people of the same gender occurs in all societies. They are at a high risk of engaging in transactional sex. Since anal sex is one of the most efficient ways of transmitting HIV, men having sex with men are heavily affected by the epidemic. There are virtually no programs in Africa focusing on prevention among men having sex with men, and most of them have unprotected sex with both their male and female partners” (WHO, 2005, pp 25).*

In 2013, the prevalence of HIV/AIDs among men having sex with men in Uganda was 13.2% compared to the general population with 7.3% (UAC, 2014). In a recent study conducted on



college students in USA by the National College Health Assessment, at least 72.3 % of students reported failing to use condoms during their last anal intercourse (American College Health Association, 2007). This sexual risk attached to this is even worse than it has been studied since men having sex with men usually have sex with women as well, get married, and have children (WHO, 2005). In addition, over 70% of homosexuals withhold information about their orientation until they are satisfied they will not meet homophobic or uninformed attitudes; and 42% of homeless youth identify as lesbian/gay (Grossman, 2013).

### **2.3.5 Gambling and sexual addiction**

Sex addiction often referred to as compulsive sexual behavior or hyper sexuality or sexual compulsivity is a major sexual risk behavior among gambling youth. Sex addiction as an addictive disorder represents a state in which an individual has an “excessive” sexual appetite that endangers him/her up to violating the laws of the state and of morality, of losing his/her honor, freedom and even life. This disorder has been classified as a psychiatric illness that creates a recurring obsession with urge to engage in sexual acts with multiple partners over a short period of time (Burki & Masood, 2010).

Carnes (2000) attests that sex addiction is a feeling of arousal before the action of compulsive nature interfering with daily life, and ultimately becoming unmanageable. It affects more men than women a variation which might possibly be cultural based. The few women who suffer with sexual addiction disorder are usually ashamed to reveal it out (Czerny, et al., 2008). Researchers have acknowledged that some proportion of people have uncontrolled sexual behavior. Compulsive sexual behavior (CSB) is estimated to affect 3% to 6% of young adults (Odlaug, et al., 2013). People with sexual compulsivity are similar to compulsive gamblers, compulsive overeaters, or

alcoholics in that they are not able to control their impulses, which lead to destructive results (Carnes, 2000)

A study carried out by Skegg, et al., 2010, showed that majority of sexual addicts do not admit that they are having a problem but only a few of them (0.8% of men and 0.6% of women) believe that sexual fantasies interfere with their lives. Growing evidence indicates that gambling and sexual addiction can develop into behaviours that are difficult to control. According to the study carried out by Davis, et al., 2013, enhanced dopamine signaling (for example gambling) is related to a higher risk of engaging in addictive behaviour like sex addiction.

In a study carried out by MacLaren & Best (2010) using multidimensional self-report to measure addictive behaviours showed that men scored higher than women in exercising gambling and having sex. The findings above were in line with those found by Grant and Steinberg (2005) which showed that compulsive sexual behavior occurred in 19.6% of 225 patients with problem gambling. The study also showed that at least 29.5% of patients developed sexual addiction after acquiring the problem of pathological gambling. Bostwick, et al., 2009 also showed that patients treated with dopaminergic agents for idiopathic Parkinsonism commonly developed new onset pathological gambling and sexual compulsivity

### **2.3.6 Gambling and pregnancy**

Gambling Youth are at a high risk of impregnating or being impregnated since they initiate unprotected sex at an early age and do not use contraceptives, which creates a high risk for unintended pregnancies (Huang, et al., 2010; Huang et al., 2007). After legalizing gambling in

America, problem and pathological gambling increased among the youth which increased the risk of unwanted pregnancy and STI following the early initiation of sex by gamblers (Martins, et al., 2014). In another study that looked at drug use among gamblers, it was found out that youth who gamble and use drugs are associated with sexual risk-taking which usually results into pregnancy or impregnation (Cavazos-Rehg et al., 2011).

It should be noted that gambling youth display anxiety, depressive feelings and impulsivity usually in form of enthusiasm of taking risk to large wins (Wong et al., 2013). This creates high levels of testosterone in male adolescents and increases the chances of becoming fathers at an early age, (Stanton et al., 2011). Studies carried out in US showed that adolescent males who gambled were more likely than their non-gambling peers to become fathers by the age of 20 (Lee et al., 2013). It should also be noted that the risk for gambling men impregnating are higher than gambling women being impregnated. This is because men are both more likely than women to report gambling as a means to deal with preoccupations and to consume alcohol while gambling (Barnes et al., 2009).

#### 2.4 Summary of literature on gambling and sexual behaviors

The table below summarizes key literature on the sexual risk associated with gambling and its limitations

Table 1: Summary of literature on gambling and sexual behaviors

| Gambling and sexual risks | Literature notes  | Summary of gaps   |
|---------------------------|---|---|
| Sex initiation            | Two studies among whites and African Americans indicate comorbidity of problem gambling and early onset of sexual intercourse among students (Martins, et al., 2014). Approximately one third (35 percent) of gamblers had intercourse by age 13 and 89 percent had engaged in sexual intercourse by age 18 (Medical Xpress, 2014). | Two groups of adolescents were studied and results indicated similar findings. Enough sample sizes were utilized.<br><br>However they focused on students and conducted in a developed world which may not necessarily apply to the developing world. |

| <b>Gambling and sexual risks</b> | <b>Literature notes</b>  | <b>Summary of gaps</b>   |
|----------------------------------|--|--|
| Sexual partners                  | <p>Gambling youth are at a higher risk of having multiple sexual partners (Martins, et al., 2014; Huang, et al., 2010).</p> <p>The sexual risk was more in youth with problem gambling (63%) (Martins, et al., 2014).</p>  | <p>Another study conducted among college students found out that male social and problem gamblers were 18% and 30% less likely than male non-gamblers to have multiple sex partners (Huang, et al., 2010).</p> <p>All studies focused on students, ignored out of school population and were conducted in a developed world which may not necessarily apply to the developing world.</p> |
| Condom use                       | <p>Studies conducted on college students and athletes have shown that gambling puts individuals at a risk of engaging in unprotected sex.</p> <p>Risk was more among individuals with problem and pathological gambling disorders (Huang, et al., 2007).</p>   | <p>Study involved another population of athletes which was ignored by others. Reliable samples were utilized.</p> <p>All studies were conducted in a developed world which may not necessarily apply to the developing world.</p>  |
| Sex orientation                  | <p>A good proportion of youth with pathological gambling are gay or bisexual.</p>  | <p>Sex orientation and gambling has received less attention by researchers and policy makers.</p> <p>There is no study conducted that focuses on the co-existence of general gambling involvement and homosexuality.</p>   |
| Sexual addiction                 | <p>Studies showed that compulsive sexual behavior occurred in patients with problem gambling. Patients developed sexual addiction after acquiring the problem of pathological gambling.</p> <p>The risk was more in men compared to women (MacLaren &amp; Best ,2010; Grant and Steinberg, 2005; Bostwick, et al., 2009)</p> | <p>All studies were conducted in a developed world which may not necessarily apply to the developing world and among white patients</p>  |
| Pregnancy                        | <p>Gambling youth are at a high risk of impregnating or being impregnated since they initiate unprotected sex at an early age and do not use contraceptive which creates a high risk for unintended pregnancies (Huang, et al., 2010; Huang et al., 2007).</p>   | <p>Use of alcohol and drugs was investigated as a covariate. All studies were conducted in a developed world which may not necessarily apply to the developing world.</p>  |

## **2.5 Conclusion**

Basing on evidence from the existing literature about sexual risk behaviors and gambling, there is a significant risk among gambling youth that can vary with background characteristics of population studied. As with most studies on youth gambling behaviors presented above, the participants in these samples were predominantly white. To my knowledge, only one study examining both adolescent gambling and sexual behaviors included a substantial sample (53%) of African American individuals. In addition, studies have shown that problem gamblers were more likely to be African American, to have more sex partners, and to have unprotected sex.

Looking at the growth of the gambling industry in Africa and specifically in Uganda, the question remains whether governments have the necessary evidence and information to address sexual risks that are associated with this activity. To address the above questions and bridge the gap in the literature, African gambling and risk behaviors need to be assessed across a broader spectrum of youth at any level. This study therefore investigated the sexual risk among gambling youth in Rubaga division.

The next chapter presents the “how” for this study. It highlights the design, methods and tools that were used to conduct this research study.

## CHAPTER THREE: STUDY METHODOLOGY

### 3.0 Introduction

This chapter brings forth the design, methods and tools that were used to conduct this research study. It specifies the research design; sampling procedures, research instruments and data collection, sources and analysis techniques that were utilized in this study.

### 3.1 Study type

The study employed a mixed descriptive cross sectional study design. Both qualitative and quantitative study methods helped to complement the findings from each other to develop a comprehensive understanding of the sexual risks associated with gambling.

### 3.2 Study population and study unit

The study was conducted in Rubaga division in Kampala city comprising of youth who currently gamble and those who do not gamble. The population of study included youth aged 15-24 years involved in gambling or not. The researcher saw it necessary to conduct the study in these areas and with the above population in order to provide rich information to the research.

### 3.3 Sample size

The sample size for this study was determined by use of Fischer's sample size formula (Isreal, 1992)

$$n = \frac{z^2 * p (1-p)}{d^2}$$

Where

n: Required sample size

z: alpha risk (z-score corresponding to 5% level of significance = 1.96)

p: expected prevalence (proportion of youth involved in gambling), in this study, 50% is assumed\*

d: Desired precision e.g. 0.05 or 5%

Using the above assumptions,

$$n = \frac{1.96^2 * (0.5) * (1-0.5)}{(0.05)^2} = \underline{384}$$

A sample size of 384 youth aged 15-24 years was used in this study. One should note that 397 youth were surveyed since 384 was the required minimum. This was done to provide a buffer for any missing responses.

### **3.4 Sampling scheme**

The researcher employed a systematic sampling scheme in selecting households with youth. This method was employed in absence of a sampling frame. In each parish of the division, the researcher selected households with youth at regular intervals by skipping an interval of 10 households within the same parish. When a selected household did not have a youth aged 15-24 years, the researcher considered the next household. In each selected household with a youth, the researcher interviewed all youth aged 15-24 years whether male or female in the household. It should be noted that the researcher randomly selected which direction within the parish to take for selecting households. Use of this sampling technique provided a representative sample of youth in Rubaga division and therefore minimized sampling errors.

### **3.5 Study variables**

To enhance the rigor of this study, the following variables were measured.

Table 2: Research study variables for objective one and two

| Objective 1                                  | Study variables   |
|--|---|
| Factors associated with gambling among youth | <ul style="list-style-type: none"> <li>• Analyzed by use of cross tabulations for gamblers and non-gamblers               <ul style="list-style-type: none"> <li>○ Age</li> <li>○ Sex</li> <li>○ Education level (highest level and currently in school or not)</li> <li>○ Religion</li> <li>○ Marital status</li> <li>○ Employment status</li> <li>○ Family background (income status, household head)</li> <li>○ Push and pull factors                   <ul style="list-style-type: none"> <li>▪ Personal factors (self-confidence, stress and depression)</li> <li>▪ Social factors (peer influence, acquire friends (desire for new friends), competition)</li> <li>▪ Monetary factors (make money easily, win back losses)</li> <li>▪ Environmental (presence of gambling venues, advertisement of gambling)</li> </ul> </li> </ul> </li> </ul> |
| Patterns of sexual behavior                  | <ul style="list-style-type: none"> <li>• Sexual behavior among gamblers and non-gamblers               <ul style="list-style-type: none"> <li>○ Sexual Initiation / sexual debut</li> <li>○ Frequency of sexual encounters</li> <li>○ Condom use (lifetime, use at last sexual encounter)</li> <li>○ Number of sexual partners (lifetime, last 3 months)</li> <li>○ Cross-generational sex</li> <li>○ Transactional sex</li> <li>○ Sex with same gender (sexual orientation)</li> <li>○ Knowledge of HIV status of partner</li> <li>○ Lifetime presence of STIs</li> <li>○ Forced sex (sex under influence of alcohol)</li> <li>○ Sex with relatives</li> </ul> </li> </ul>   |



Table 3: Research study variables for objective three and four

| Objectives                                    | Study variables   |
|---|---|
| Relationship between sexual risk and gambling | <ul style="list-style-type: none"> <li>• The above sexual risk behaviors were analyzed by use of Pearson’s correlation analysis, odds ratio and Chi square tests of significance for the following gambling variables               <ul style="list-style-type: none"> <li>○ Participation in gambling                   <ul style="list-style-type: none"> <li>▪ Gamblers</li> <li>▪ Non-gamblers</li> </ul> </li> <li>○ Frequency of gambling                   <ul style="list-style-type: none"> <li>▪ frequent gamblers (gambled more than once a week)</li> <li>▪ non-frequent gamblers (gamble less or equal to once a week)</li> </ul> </li> <li>○ Age at first gambling                   <ul style="list-style-type: none"> <li>▪ Early gamblers (age at first gambling is less than 18)</li> <li>▪ Late gamblers (age at first gambling is 18 or above)</li> </ul> </li> <li>○ Gambling problems and disorders                   <ul style="list-style-type: none"> <li>▪ Social gamblers (no problems due to gambling)</li> <li>▪ Problem gamblers</li> </ul> </li> </ul> </li> </ul>   |
| Utilization of SRH services                   | <ul style="list-style-type: none"> <li>• Utilization of services like               <ul style="list-style-type: none"> <li>○ HCT,</li> <li>○ Family planning commodities</li> <li>○ Safe male circumcision</li> <li>○ STI screening</li> <li>○ Sexual counseling</li> <li>○ Cervical cancer screening</li> <li>○ Antenatal care</li> <li>○ Delivery at hospital</li> <li>○ Number of times visited hospital for SRHR</li> </ul> </li> <li>• The above were analyzed by use of Pearson’s correlation analysis, and Chi square tests of significance for the following gambling variables               <ul style="list-style-type: none"> <li>○ Participation in gambling                   <ul style="list-style-type: none"> <li>▪ Gamblers</li> <li>▪ Non-gamblers</li> </ul> </li> <li>○ Frequency of gambling                   <ul style="list-style-type: none"> <li>▪ frequent gamblers</li> <li>▪ non-frequent gamblers</li> </ul> </li> <li>○ Age at first gambling                   <ul style="list-style-type: none"> <li>▪ Early gamblers (age at first gambling is less than 18)</li> <li>▪ Late gamblers (age at first gambling is 18 or above)</li> </ul> </li> <li>○ Gambling problems and disorders                   <ul style="list-style-type: none"> <li>▪ Social gamblers (no problems due to gambling)</li> <li>▪ Problem gamblers</li> </ul> </li> </ul> </li> </ul> |

### **3.6 Data sources and techniques of data collection**

The researcher utilized majorly quantitative methods of data collection. Primary and secondary data were utilized. Data collection techniques involved;

Firstly, primary data was collected directly from youth through interviewer administered survey questionnaires method. The structured questionnaire was made up of open ended and closed ended questions which provided a quick analysis of study variables. Interviewer administered survey questionnaires were used to enable interviewers to clearly explain the purpose of survey, obtain consent from parents and respondents, translate some questions and provide a platform for probing to ensure questions are understood. This combined with good rapport, enabled collection of useful open-ended comments, including evidence to support response. On contrast, this method has a confidentiality issue however the researcher fully trained interviewers.

Secondly, the researcher also used already collected data from institutions like Ministry of Health, Uganda Bureau of Statistics, reports at health facilities and other research studies conducted. Documents review involved studying of documents like publications, annual reports, periodicals, and journals, magazines of the Ministry of Health and relevant institutions, and other literature written by different knowledgeable scholars.

### **3.7 Research conduct**

The researcher used the following process to collect data. The researcher developed a proposal which was approved by the supervisor and piloted developed tools to determine their reliability and validity.

The researcher then acquired an introduction letter from the University which was presented by the researcher to the authorities and respondents and recruited and conducted a 1 day effective training of data collectors to equip them with necessary skills for data collection. In villages where local leaders were available, the researcher shared the introductory letter from the university.

The researcher (and data collectors) also employed a systematic sampling scheme and selected households with youth at regular intervals by skipping an interval of 10 household within the study area and interviewing all youth present. When a youth was below 18 years, the researcher acquired verbal consent from parent and the youth and for youth above 18 years his/her consent was utilized. All data collection tools were assigned unique identifiers to eliminate duplicates and ensure anonymity. Data was collected from each data collector and stored in a safe place for further cleaning, entry and analysis.

### **3.8 Data entry and analysis**

The collected data were checked for completeness and consistency, then coded, entered and analyzed using a combination of online Google forms and spreadsheets, Microsoft Excel, and STATA software. Data were analyzed at two levels; univariate through generation of summary (frequency) tables and bivariate through use of cross tabulations (for factors associated with gambling) and use of odds ratio, and chi square significance tests for determining the association of sexual behavior among gambling and non-gambling youth.

### **3.9 Quality control measures**

To ensure validity and reliability of the instruments, the researcher developed instruments in consultation with existing research studies focusing on gambling or sexual risks like the Uganda AIDs Indicator survey, the Gambling Behavior Scale for Adolescents (GBSA) and the South Oaks

Gambling Screen - Revised for Adolescents (Winters et.al, 1993 ; UAIS, 2011). Developed tools were pre-tested on youth in Rubaga division and a content validity index (CVI) was calculated. A CVI of 0.81 ensured that questionnaire items were reliable and valid. The above was done to ensure that instruments collect uniform data and produce consistent scores when the same groups of individuals are repeatedly measured under the same conditions.

In addition to the above, the following steps were taken by the researcher during data collection process to enhance quality of results. All tools were interviewer administered to enable probing of responses and recording nonverbal responses. Effective training of data collectors was done to equip them with necessary skills for data collection. Use of a probability sampling method (systematic sampling) eliminated sampling bias. Consent was acquired from respondents. In addition, verbal consent was acquired from parents and guardians of youth below 18 years and all respondents were assured of the anonymity and confidentiality of their responses.

All data collection tools were given unique identifiers to eliminate duplicates, ensure anonymity and had mostly closed ended questions. Immediate data cleaning in the field was done by enumerators at the end of the day, necessary call backs to respondents were done and rigorous data cleaning through use of statistical software (STATA and Excel) was done. Use of easier online tools for data entry like Google forms and spreadsheets ensured routine data entry and therefore enabled quick call backs.

### **3.10 Ethical considerations**

The entire research process was conducted with due respect to ethical considerations under the Faculty of Health Sciences. The researcher acquired an introduction letter from the University which was presented to the authorities and respondents in several institutions and area.

While conducting the survey, care was taken to respect human dignity and secure informed consent from the respondents. Also, information acquired was kept confidential and used for study purposes only. Another ethical issue that was adhered to in this study is the principle of academic integrity which involved acknowledgment of sources of both primary and secondary information used in the survey.

### **3.11 Limitations of the study**

Being an urban based research on sexual activity, the researcher experienced difficulties in approvals and openness of respondents. However the researcher used clear communication of purpose, using anonymous questionnaire identifiers and ensuring full confidentiality which mitigated the above challenge. Some selected respondents declined to respond to the survey due to the sensitivity of topics discussed. During such instances, the researcher re-explained the purpose of the survey and how confidentiality would be maintained. When the respondent continued to decline, the researcher moved on to select the next respondent. This study did not manage to acquire enough data from gambling and non-gambling youth who are homosexuals, who have had sex with a relative and those that have had transactional sex.

## CHAPTER FOUR: ANALYSIS AND RESULTS

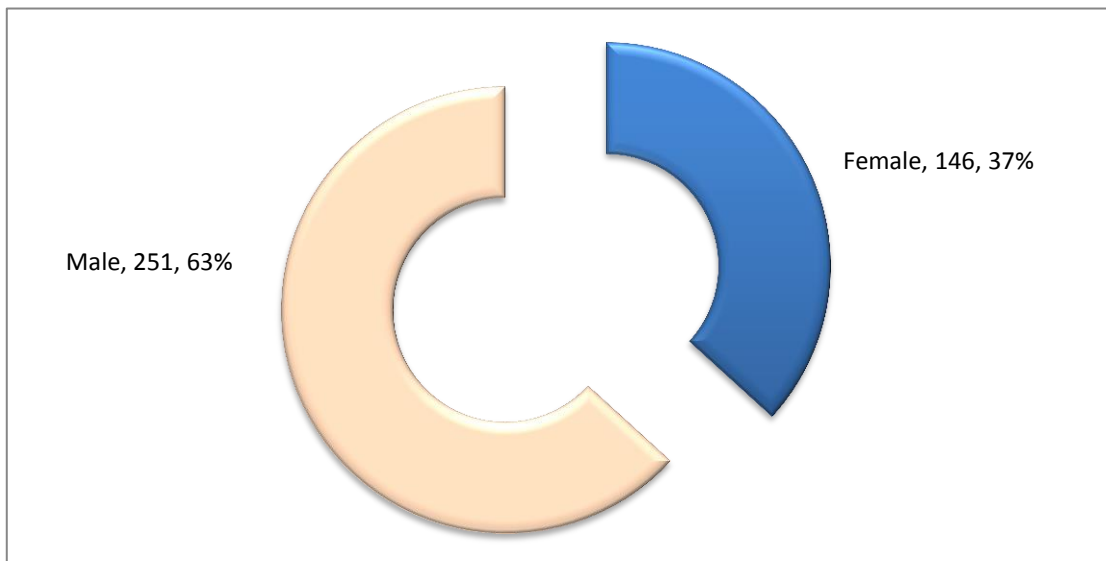
### 4.0 Introduction

This chapter presents findings from this study plus respective interpretation. It starts by presenting background characteristics of respondents, then the extent of gambling and its associated factors, followed by sexual behaviors among youth, sexual risk and its association with gambling and ends with utilization of SRHR services and its association with gambling.

### 4.1 Background characteristics of respondents

Basing on the inclusion criteria under methodology and operational definitions, the final number of respondents in this study were 397 youth among which 251 (63%) were males while 146 (37%) were females as shown in the graph below.

Figure 2: Gender of respondents



It should be noted that more males than females were surveyed due to the fact that males were willing to openly discuss or even note down information about their sexual practices and behaviors.

Demographic characteristics of respondents were analyzed in three categories i.e overall (all respondents), males and females. Tests of significance (chi square & t-test) were then conducted to determine the significant difference of the distribution of each characteristic in males as compared to females indicated in a p-value. A p-value of less than 5% means that the difference is statistically significant. The table below represents some of the key demographic characteristics of respondents by gender of youth.

Table 4 : Key demographic characteristics of respondents by gender

| Variable                     | Overall,<br>n=397 | Male, n=251 | Female,<br>n=146 | p value |
|------------------------------|-------------------|-------------|------------------|---------|
| Age of respondents           | n (%)             | n (%)       | n (%)            |         |
| Average Age                  | 19.7              | 19.7        | 19.7             | 0.962   |
| 15-19 years                  | 137 (55%)         | 93 (50%)    | 44 (68%)         | 0.014** |
| 20-24 years                  | 114 (45%)         | 93 (50%)    | 21 (32%)         |         |
| Marital Status               | n (%)             | n (%)       | n (%)            |         |
| Never Married                | 316 (80%)         | 201 (80%)   | 115 (79%)        | 0.075*  |
| Married                      | 29 (7%)           | 14 (6%)     | 15 (10%)         |         |
| Cohabiting                   | 45 (11%)          | 29 (12%)    | 16 (11%)         |         |
| Separated                    | 7 (2%)            | 7 (3%)      | 0 (0%)           |         |
| Age at First Marriage        | n (%)             | n (%)       | n (%)            |         |
| Average Age                  | 19.3              | 19.3        | 19.5             | 0.711   |
| Education Level              | n (%)             | n (%)       | n (%)            |         |
| No formal education          | 23 (6%)           | 15 (6%)     | 8 (6%)           | 0.006** |
| Primary                      | 23 (6%)           | 7 (3%)      | 16 (12%)         |         |
| Ordinary Level (S1-S4)       | 21 (5%)           | 14 (6%)     | 7 (5%)           |         |
| Advanced level (S5-S6)       | 273 (71%)         | 180 (74%)   | 93 (67%)         |         |
| Higher (university/Tertiary) | 36 (9%)           | 21 (9%)     | 15 (11%)         |         |
| Others                       | 7 (2%)            | 7 (3%)      | 0 (0%)           |         |

| Variable            | Overall,<br>n=397 | Male, n=251 | Female,<br>n=146 | p value |
|---------------------|-------------------|-------------|------------------|---------|
| School Status       | n (%)             | n (%)       | n (%)            |         |
| In school youth     | 279 (79%)         | 186 (81%)   | 93 (76%)         | 0.247   |
| Out of school youth | 74 (21%)          | 44 (19%)    | 30 (24%)         |         |

NB: \*\* means association is statistically significant at 5% level of significance, \* means

association is statistically significant at 10% level of significance

From the above table, we noted that the average age of youth surveyed was about 19.7 years. There were more adolescents (aged 15-19 years, (55%)) compared to the youth (aged 20-24 years, (45%)), and significantly more females than males among these adolescents. Most youth (80%) were single (have never married) while 18% were married or cohabiting and the remaining 2% were separated. The age at first marriage of those who have ever married was 19.3years. This was not statistically different for males or females. The majority of respondents (71%) reported A-level as their highest level of education, while only 6% had never gone to school. It should also be noted that majority (79%) of the youth surveyed were currently attending school while 21% were already out of school. Results on other characteristics of respondents are indicated in the table below

Table 5 : Demographic characteristics of respondents by gender

| Variable          | Overall,<br>n=397 | Male,<br>n=251 | Female,<br>n=146 | p value |
|-------------------|-------------------|----------------|------------------|---------|
| Religion          | n (%)             | n (%)          | n (%)            |         |
| Catholic          | 127 (33%)         | 78 (32%)       | 49 (34%)         | 0.435   |
| Anglican          | 51 (13%)          | 36 (15%)       | 15 (10%)         |         |
| Muslim            | 124 (32%)         | 80 (33%)       | 44 (30%)         |         |
| Born Again        | 65 (17%)          | 35 (14%)       | 30 (21%)         |         |
| Others            | 22 (6%)           | 14 (6%)        | 8 (5%)           |         |
| Employment Status | n (%)             | n (%)          | n (%)            |         |
| Employed          | 150 (45%)         | 114 (51%)      | 36 (33%)         | 0.002** |
| Unemployed        | 182 (55%)         | 109 (49%)      | 73 (67%)         |         |



| Variable             | Overall,<br>n=397 | Male,<br>n=251 | Female,<br>n=146 | p value |
|----------------------|-------------------|----------------|------------------|---------|
| Family Income Status | n (%)             | n (%)          | n (%)            |         |
| Very low             | 30 (9%)           | 22 (10%)       | 8 (6%)           | 0.083*  |
| Low                  | 65 (19%)          | 36 (17%)       | 29 (23%)         |         |
| Average              | 174 (51%)         | 107 (50%)      | 67 (54%)         |         |
| High                 | 63 (19%)          | 42 (20%)       | 21 (17%)         |         |
| Very High            | 8 (2%)            | 8 (4%)         | 0 (0%)           |         |
| Orphan Status        | n (%)             | n (%)          | n (%)            |         |
| Has no parent alive  | 61 (15%)          | 37 (15%)       | 24 (16%)         | 0.849   |
| Single parent        | 79 (20%)          | 49 (20%)       | 30 (21%)         |         |
| Both parents alive   | 257 (65%)         | 165 (66%)      | 92 (63%)         |         |
| Household head       | n (%)             | n (%)          | n (%)            |         |
| Father               | 213 (54%)         | 136 (54%)      | 77 (53%)         | 0.668   |
| Mother               | 87 (22%)          | 57 (23%)       | 30 (21%)         |         |
| Brother/Sister       | 15 (4%)           | 7 (3%)         | 8 (5%)           |         |
| Guardian             | 43 (11%)          | 28 (11%)       | 15 (10%)         |         |
| Others               | 39 (10%)          | 23 (9%)        | 16 (11%)         |         |

*NB: \*\* means association is statistically significant at 5% level of significance, \* means association is statistically significant at 10% level of significance*

From the above table, majority of respondents were Christians (Catholics=33%, Anglican=13%, Born again=17%). Majority of youth surveyed reported their family income as average or below average (79%). 55% of respondents were currently unemployed while 45% were employed by someone or were self employed by the time the survey was done In addition, ambling was associated with parenting; respondents were asked to report if their mother or father was alive. Results indicated that a notable number of the respondents (35%) surveyed had lost one or both of the parents. It should be noted that youth's households were mostly headed by a father.

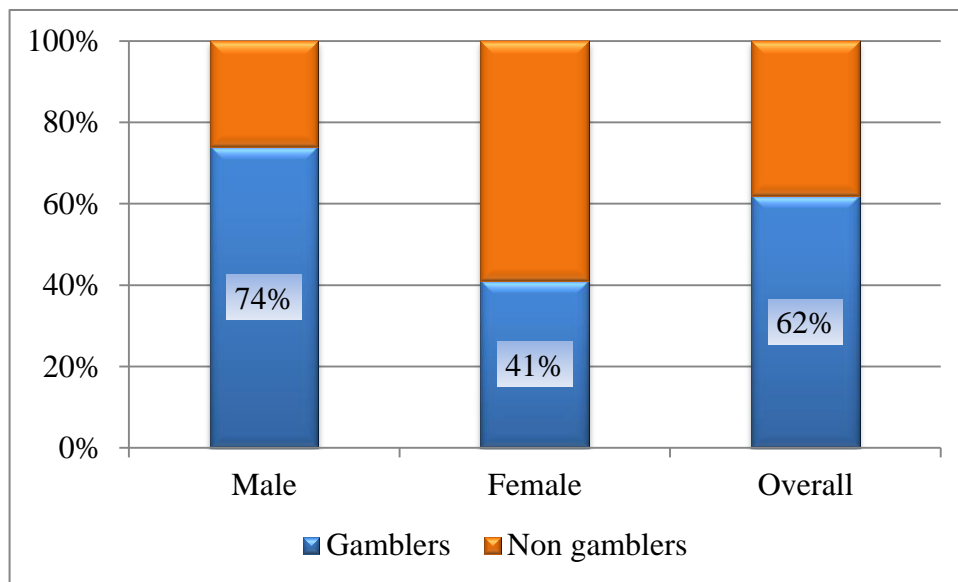
## 4.2 The extent of gambling and its associated factors

Analysis for this objective looked at three main categories; i.e the prevalence of gambling (the proportion of youth who have ever gambled plus those who are newly engaged in gambling activities (lifetime gambling), associated factors plus push and pull factors for gambling.

### 4.2.1 Prevalence of gambling

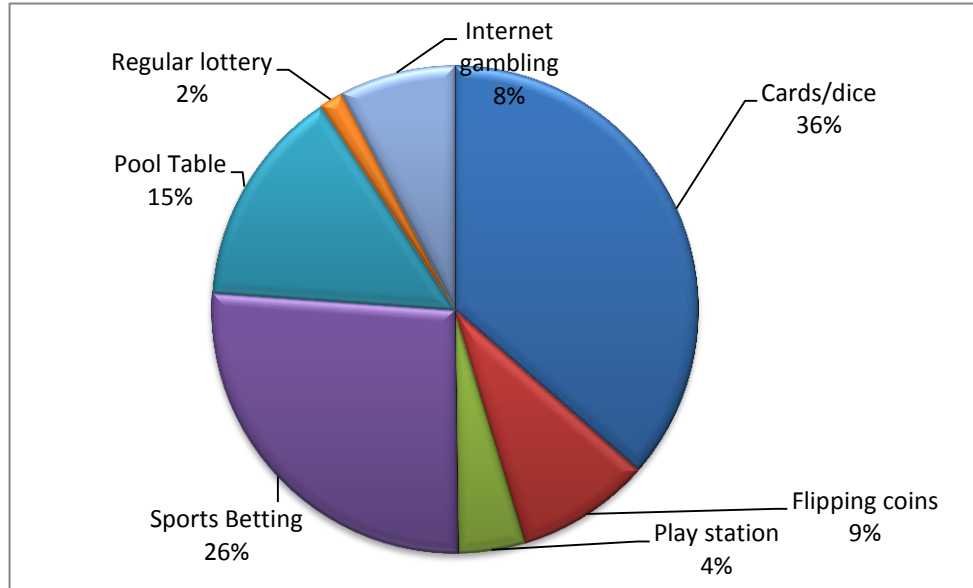
Analysis within this section looked at determining how many youth have ever gambled, what gambling activities have they participated in during the last one year and how many of the gamblers gamble frequently or not, how many started gambling early in life or not and how many have had gambling problems or not. The prevalence of gambling in this cohort of youth was at (62%) but was higher among male youth (74%) compared to female youth (41%) as shown in the figure below. This difference was statistically significant at 5% level of significance.

Figure 3: Prevalence of gambling among youth by gender



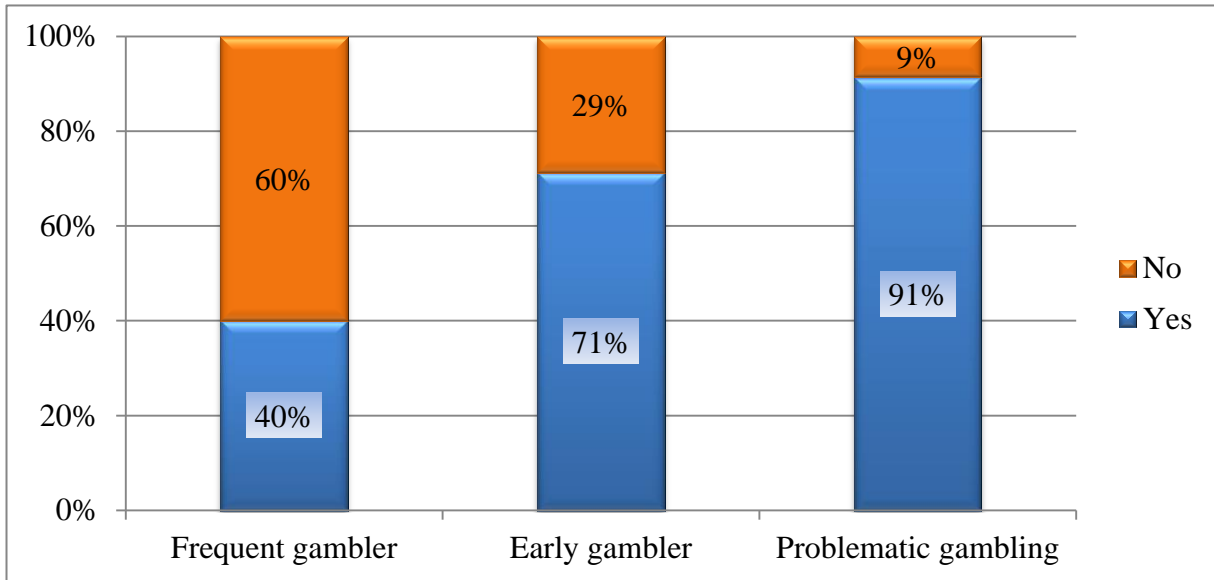
When youth were asked about what forms of gambling they had participated in during the last 1 year, most youth reported their engagement in cards and dice followed by sports betting and pool table as shown in the figure below

Figure 4: Gambling forms participated in by youth in past 1 year



Youth who were gamblers were assessed to determine if they were frequent gamblers or not, whether they engaged in gambling at an early age or not and whether they had any gambling problem. Frequent gamblers are gambling youth who gamble more than once a week. Early gamblers are gambling youth who started gambling while less than 18 years. Problem gamblers in this study are gambling youth who had at least 1 gambling problem based on the South Oaks Gambling scale – revised for adolescents (Winters et.al, 1993).

Figure 5: Gambling participation classifications



From the figure above, 40% of gamblers gambled frequently (more than once a week), 71% of gamblers started gambling aged less than 18 years while 91% of gambling youth had at least 1 gambling problem based on the South Oaks Gambling scale – revised for adolescents (Winters et.al, 1993).

#### 4.2.2 Associated factors of gambling

While analyzing factors associated with gambling, two categories of factors were formed with the first category including factors such as; gender, age, marital status, education level and school status while the second category has factors such as; religion, employment status, family income status, orphanhood status, and household head.

These factors were analyzed against gambling status of youth (ever gambled or has never gambled). A Pearson correlation coefficient ( $r$ ) was then generated to determine the association of each factor and gambling. Tests of significance (chi square & t-test) were then conducted to determine the significant difference of the distribution of each factor with gambling status

indicated in a p-value. A p-value of less than 5% means that the difference is statistically significant. Furthermore, the prevalence of gambling was determined for each factor. The table below represents associated factors in category one.

Table 6: Gambling and its associated factors – category one

| Code | Variable                     | Ever gambled, n=397 |            | r     | p value | Gambling prevalence |
|------|------------------------------|---------------------|------------|-------|---------|---------------------|
|      |                              | No, n=151           | Yes, n=246 |       |         |                     |
|      | Gender                       |                     |            |       |         |                     |
| 1    | Male                         | 65 (43%)            | 186 (76%)  | -0.33 | 0.000** | 74%                 |
| 2    | Female                       | 86 (57%)            | 60 (24%)   |       |         | 41%                 |
|      | Age of respondents           |                     |            |       |         |                     |
|      | Average Age                  | 19.6                | 19.8       | 0.06  | 0.321   | N/A                 |
| 1    | 15-19 years                  | 43 (50%)            | 94 (57%)   | -0.07 | 0.293   | 69%                 |
| 2    | 20-24 years                  | 43 (50%)            | 71 (43%)   |       |         | 62%                 |
|      | Marital Status               |                     |            |       |         |                     |
| 1    | Never Married                | 136 (90%)           | 180 (73%)  | 0.11  | 0.000** | 57%                 |
| 2    | Married                      | 0 (0%)              | 29 (12%)   |       |         | 100%                |
| 3    | Cohabiting                   | 8 (5%)              | 37 (15%)   |       |         | 82%                 |
| 4    | Separated                    | 7 (5%)              | 0 (0%)     |       |         | 0%                  |
|      | Education Level              |                     |            |       |         |                     |
| 1    | No formal education          | 8 (6%)              | 15 (6%)    | -0.16 | 0.000** | 65%                 |
| 2    | Primary                      | 0 (0%)              | 23 (10%)   |       |         | 100%                |
| 3    | Ordinary Level (S1-S4)       | 0 (0%)              | 21 (9%)    |       |         | 100%                |
| 4    | Advanced level (S5-S6)       | 115 (80%)           | 158 (66%)  |       |         | 58%                 |
| 5    | Higher (university/Tertiary) | 21 (15%)            | 15 (6%)    |       |         | 42%                 |
| 6    | Others                       | 0 (0%)              | 7 (3%)     |       |         | 100%                |
|      | School Status                |                     |            |       |         |                     |
| 2    | In school youth              | 114 (84%)           | 165 (76%)  | -0.09 | 0.080*  | 59%                 |
| 1    | Out of school youth          | 22 (16%)            | 52 (24%)   |       |         | 70%                 |

NB: \*\* means association is statistically significant at 5% level of significance while \* means association is statistically significant at 10% level of significance

The results showed that males were significantly more likely to have engaged in gambling than their female counterparts. There was no association between age and participation in gambling,

however, participation in gambling was associated with marital status, and level of education. The table below represents associated factors in category two such as; religion, employment status, family income status, orphanhood status, and household head.

Table 7: Gambling and its associated factors – category two

| Code | Variable             | Ever gambled, n=397 |            | r     | p value | Gambling prevalence |
|------|----------------------|---------------------|------------|-------|---------|---------------------|
|      |                      | No, n=151           | Yes, n=246 |       |         |                     |
|      | Religion             |                     |            |       |         |                     |
| 1    | Catholic             | 49 (34%)            | 78 (32%)   | -0.01 | 0.607   | 61%                 |
| 2    | Anglican             | 15 (10%)            | 36 (15%)   |       |         | 71%                 |
| 3    | Muslim               | 43 (30%)            | 81 (33%)   |       |         | 65%                 |
| 4    | Born Again           | 28 (20%)            | 37 (15%)   |       |         | 57%                 |
| 5    | Others               | 8 (6%)              | 14 (6%)    |       |         | 64%                 |
|      | Employment Status    |                     |            |       |         |                     |
| 2    | Employed             | 57 (44%)            | 93 (46%)   | 0.02  | 0.772   | 62%                 |
| 1    | Unemployed           | 72 (56%)            | 110 (54%)  |       |         | 60%                 |
|      | Family Income Status |                     |            |       |         |                     |
| 1    | Very low             | 0 (0%)              | 30 (14%)   | -0.17 | 0.000** | 100%                |
| 2    | Low                  | 36 (28%)            | 29 (14%)   |       |         | 45%                 |
| 3    | Average              | 58 (45%)            | 116 (55%)  |       |         | 67%                 |
| 4    | High                 | 28 (22%)            | 35 (17%)   |       |         | 56%                 |
| 5    | Very High            | 8 (6%)              | 0 (0%)     |       |         | 0%                  |
|      | Orphan Status        |                     |            |       |         |                     |
| 1    | Has no parent alive  | 15 (10%)            | 46 (19%)   | -0.02 | 0.001** | 75%                 |
| 2    | Single parent        | 43 (28%)            | 36 (15%)   |       |         | 46%                 |
| 3    | Both parents alive   | 93 (62%)            | 164 (67%)  |       |         | 64%                 |
|      | Household head       |                     |            |       |         |                     |
| 1    | Father               | 86 (57%)            | 127 (52%)  | 0.14  | 0.000** | 60%                 |
| 2    | Mother               | 36 (24%)            | 51 (21%)   |       |         | 59%                 |
| 3    | Brother/Sister       | 7 (5%)              | 8 (3%)     |       |         | 53%                 |
| 4    | Guardian             | 22 (15%)            | 21 (9%)    |       |         | 49%                 |
| 5    | Others               | 0 (0%)              | 39 (16%)   |       |         | 100%                |

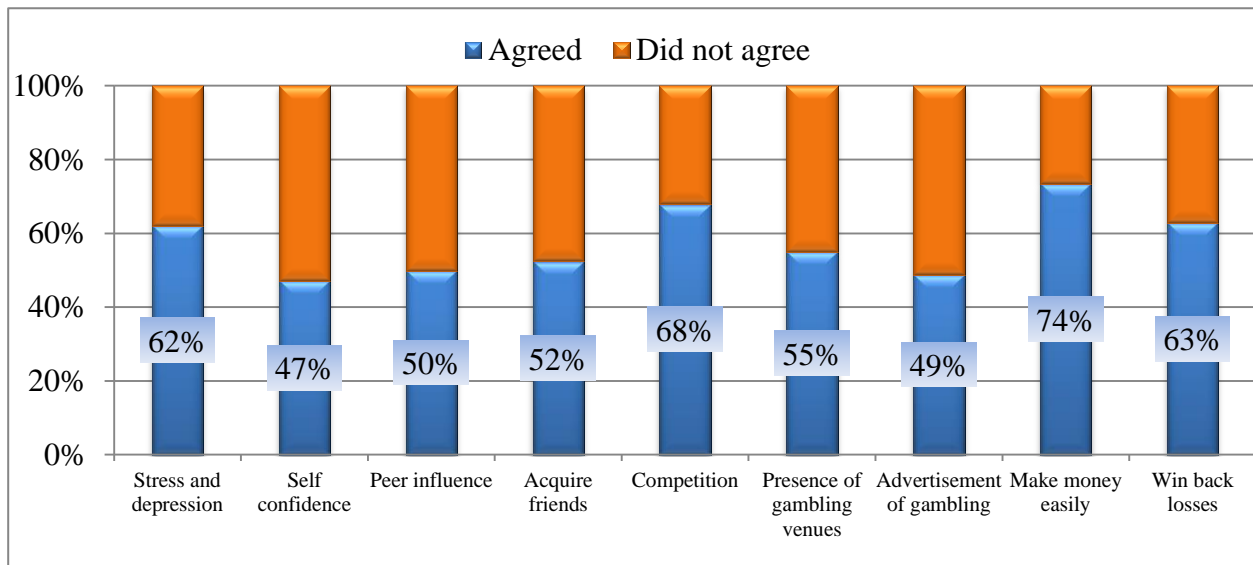
NB: \*\* means association is statistically significant at 5% level of significance while \* means association is statistically significant at 10% level of significance

From the above table it should be noted that religion and employment status of youth have no significant association with engagement in gambling activities. On the other hand, the level of income for the youth’s family is moderately but significantly associated with their engagement in gambling activities with youth with average or lower family income levels more likely to engage in gambling activities. Over 70% of youth whose family income was average or below were involved in gambling compared to only 28% of youth whose family’s income is above average. Furthermore, youth who are orphans are more likely to participate in gambling. In addition, youth who come from families that are not headed by a father are more likely to participate in gambling.

#### 4.2.3 Push and pull factors of gambling

The researcher also assessed push and pull factors associated with gambling by asking youth who were gambling to rate whether they agreed or disagreed with eight (8) statements of push and pull factors. The graph below shows key results.

Figure 6: Push and pull factors of gambling



From the graph above, youth are majorly pushed and pulled by factors such as competition, quickly earning money, the desire to redeem prior loses, stress and depression. It's surprising that peer influence and the desire to acquire friends were not mentioned as major determining factors.

#### **4.3 Patterns of sexual behavior among youth**

The researcher assessed sexual behavior among gamblers and non-gamblers by focusing on behaviors i.e sexual initiation, condom use, multiple sexual partners, cross-generational sex, transactional sex, sex with same gender (sexual orientation), knowledge of HIV status of partner, lifetime presence of STIs, forced sex, sex under influence of alcohol plus sex with relatives. Three categories of sexual behaviors were formed in this analysis; category one includes; ever had sex, sex in the past 1 year, sexual initiation and condom use (unprotected sex), category two includes; multiple sexual partners, cross-generational sex, knowledge of HIV status of partner, and sex under the influence of alcohol, Whereas category three includes; transactional sex, sex with same gender (sexual orientation), lifetime presence of STIs, forced sex plus sex with relatives.

These sexual behaviors were analyzed against gambling status of youth (ever gambled or has never gambled) and gambling problem status (yes or not) (*refer to section 3.5 for definition of these variables*). Tests of significance (chi square & t-test) were then conducted to determine the significant difference of the distribution of each sexual behavior pattern with gambling status indicated in a p-value. A p-value of less than 5% means that the difference is statistically significant. The table below shows sexual behavior patterns (category one) in relation to gambling status.



Table 8: Sexual behavior patterns among youth (gamblers and non-gamblers) – category one

| Variable                                | Ever gambled, n=397 |            |         | Gambling problem, n=246 |            |         |
|---|---------------------|------------|---------|-------------------------|------------|---------|
|   | No, n=151           | Yes, n=246 | p       | No, n=21                | Yes, n=225 | P       |
| Ever had sex                            | n(%)                | n(%)       | p       | n(%)                    | n(%)       | P       |
| Yes                                     | 42 (28%)            | 152 (62%)  | 0.000** | 7 (33%)                 | 145 (64%)  | 0.005** |
| No                                      | 109 (72%)           | 94 (38%)   |         | 14 (67%)                | 80 (36%)   |         |
| <b>Sexual Initiation</b>                |                     |            |         |                         |            |         |
| Average age                             | 16.3                | 14.4       | 0.017** | 20.0                    | 13.9       | 0.001** |
| <b>Sex in last year</b>                 |                     |            |         |                         |            |         |
| Yes                                     | 28 (20%)            | 115 (47%)  | 0.000** | 7 (33%)                 | 108 (48%)  | 0.198   |
| No                                      | 109 (80%)           | 131 (53%)  |         | 14 (67%)                | 117 (52%)  |         |
| <b>Unprotected sex (lifetime)</b>       |                     |            |         |                         |            |         |
| Yes                                     | 28 (67%)            | 100 (66%)  | 0.915   | 7 (100%)                | 93 (64%)   | 0.051   |
| No                                      | 14 (33%)            | 52 (34%)   |         | 0 (0%)                  | 52 (36%)   |         |
| <b>Unprotected sex (last encounter)</b> |                     |            |         |                         |            |         |
| Yes                                     | 14 (33%)            | 74 (49%)   | 0.077   | 0 (0%)                  | 74 (51%)   | 0.008** |
| No                                      | 28 (67%)            | 78 (51%)   |         | 7 (100%)                | 71 (49%)   |         |

NB: \*\* means association is statistically significant at 5% level of significance while \* means association is statistically significant at 10% level of significance

The results showed that gambling was significantly associated with sexual behavior. A higher proportion of gamblers (62%) had ever had sexual intercourse during their life time compared to non-gamblers (28%), with frequent gamblers having had more encounters compared to non-frequent gamblers. In addition, more problem gamblers had ever had sex compared to social gamblers. However, early gamblers were less likely to have had sexual encounters compared to late gamblers but this difference was not significant.

Gambling was also significantly associated with age at first sexual encounter; gamblers had early sexual debut (14.4 years) compared to non-gamblers (16.3 years). Over 66% of youth surveyed had had unprotected sexual intercourse in their life time, and 33% had had unprotected sex in the last sexual encounter. However, gambling was not associated with unprotected sex

Table 9: Sexual behavior patterns among youth (gamblers and non-gamblers) – category two

| Variable                                 | Ever gambled, n=397 |            |         | Gambling problem, n=246 |            |         |
|--|---------------------|------------|---------|-------------------------|------------|---------|
|  | No, n=151           | Yes, n=246 | P       | No, n=21                | Yes, n=225 | P       |
| Multiple sexual partners (lifetime)      |                     |            |         |                         |            |         |
| Yes                                      | 28 (80%)            | 116 (85%)  | 0.504   | 0 (0%)                  | 116 (89%)  | 0.000** |
| No                                       | 7 (20%)             | 21 (15%)   |         | 7 (100%)                | 14 (11%)   |         |
| Multiple sexual partners (last 3 months) |                     |            |         |                         |            |         |
| Yes                                      | 14 (50%)            | 57 (73%)   | 0.026** | 0 (0%)                  | 57 (80%)   | 0.000** |
| No                                       | 14 (50%)            | 21 (27%)   |         | 7 (100%)                | 14 (20%)   |         |
| Knowledge of partners HIV Status         |                     |            |         |                         |            |         |
| Yes                                      | 35 (83%)            | 79 (52%)   | 0.000** | 7 (100%)                | 72 (50%)   | 0.009** |
| No                                       | 7 (17%)             | 73 (48%)   |         | 0 (0%)                  | 73 (50%)   |         |
| Cross-generational sex                   |                     |            |         |                         |            |         |
| Yes                                      | 21 (50%)            | 22 (14%)   | 0.000** | 0 (0%)                  | 22 (15%)   | 0.265   |
| No                                       | 21 (50%)            | 130 (86%)  |         | 7 (100%)                | 123 (85%)  |         |
| Sex under influence of alcohol           |                     |            |         |                         |            |         |
| Yes                                      | 0 (0%)              | 24 (16%)   | 0.006** | 0 (0%)                  | 24 (17%)   | 0.241   |
| No                                       | 42 (100%)           | 128 (84%)  |         | 7 (100%)                | 121 (83%)  |         |
| Pregnancy or impregnation                |                     |            |         |                         |            |         |
| Yes                                      | 14 (40%)            | 45 (31%)   | 0.311   | 0 (0%)                  | 45 (33%)   | 0.069** |
| No                                       | 21 (60%)            | 100 (69%)  |         | 7 (100%)                | 93 (67%)   |         |

*NB: \*\* means association is statistically significant at 5% level of significance while \* means association is statistically significant at 10% level of significance*

From the above table, over 80% of youth surveyed had had sex with multiple partners in their life time with at least 50% of them having had sex with multiple partners during the last three months. There was no significant difference in the number of gambling youth and non-gambling youth who had sex with multiple partners in their life time but this difference was significant when looking at the last three months. Furthermore, problematic gamblers had had sex with more than 1 partner compared to social gambling youth. Only 52% of gambling youth surveyed had good knowledge of the HIV status of the partner during the last sexual encounter compared to 83% of non-gambling youth. This difference was statistically significant. In addition, the difference was significant with in problematic (49%) and social gamblers (100%).

Gambling youth had significantly had sex under the influence of alcohol. Surprisingly, fewer gamblers had practiced cross generational sex (sex with a person aged 10 years older or 10 years younger) compared to non-gamblers. This was statistically significant. Over 31% of gambling youth surveyed had become pregnant or impregnated their partner compared to 40% of non-gambling youth. This difference was not significant. It should be noted however that the difference was significant with in problematic (33%) and social gamblers (0%).

Furthermore, the table below shows sexual behavior patterns (category three) in relation to gambling status.

Table 10: Sexual behavior patterns among youth (gamblers and non-gamblers) – category three

| Variable                                  | Ever gambled, n=397 |            |         | Gambling problem, n=246 |            |       |
|---|---------------------|------------|---------|-------------------------|------------|-------|
|   | No, n=151           | Yes, n=246 | P       | No, n=21                | Yes, n=225 | P     |
| Lifetime STI prevalence                   |                     |            |         |                         |            |       |
| Yes                                       | 21 (75%)            | 21 (15%)   | 0.000** | 0 (0%)                  | 21 (15%)   | 0.262 |
| No  | 7 (25%)             | 123 (85%)  |         | 7 (100%)                | 116 (85%)  |       |
| Sex with same gender (sexual orientation) |                     |            |         |                         |            |       |
| Yes                                       | 7 (17%)             | 8 (5%)     | 0.014** | 0 (0%)                  | 8 (6%)     | 0.523 |
| No  | 35 (83%)            | 144 (95%)  |         | 7 (100%)                | 137 (94%)  |       |
| Forced sex                                |                     |            |         |                         |            |       |
| Yes                                       | 7 (20%)             | 14 (9%)    | 0.068*  | 0 (0%)                  | 14 (10%)   | 0.388 |
| No  | 28 (80%)            | 138 (91%)  |         | 7 (100%)                | 131 (90%)  |       |
| Sex with relatives                        |                     |            |         |                         |            |       |
| Yes                                       | 7 (17%)             | 14 (9%)    | 0.169   | 0 (0%)                  | 14 (10%)   | 0.388 |
| No  | 35 (83%)            | 138 (91%)  |         | 7 (100%)                | 131 (90%)  |       |

NB: \*\* means association is statistically significant at 5% level of significance while \* means

association is statistically significant at 10% level of significance

Results show that the life time STI prevalence among gamblers was at 15% compared to 75% of non-gambling youth. This difference was significant. Due to the sensitivity of topics such as having sex with same gender (sexual orientation), having had forced sex and sex with relatives, only a few respondents were willing to provide information on such that is; 15, 21 and 21 respondents respectively. Due to these low samples, statistical testing was not possible.

#### 4.4 Relationship between sexual risk and gambling

The relationship between sexual risk and gambling was assessed for each sexual behavior among gamblers and non-gamblers by focusing on behaviors i.e sexual encounters, sexual initiation, condom use, multiple sexual partners, cross-generational sex, transactional sex, sex with same gender (sexual orientation), knowledge of HIV status of partner, lifetime presence of STIs, forced sex, sex under influence of alcohol plus sex with relatives. Three categories of sexual risk behaviors were formed in this analysis. Category one includes; ever had sex, sex in last 12 months, sexual initiation and condom use, category two includes; multiple sexual partners, cross-generational sex, knowledge of HIV status of partner, and sex under the influence of alcohol and risk of impregnating or becoming pregnant whereas category three includes; transactional sex, sex with same gender (sexual orientation), lifetime presence of STIs, forced sex plus sex with relatives. These sexual risks were analyzed against gambling status of youth. The unadjusted odds ratio (OR) was constructed. The table below shows sexual behavior patterns (category one) in relation to gambling status.

Table 11: Sexual risks associated with gambling – category one

| Ever gambled, n=397              |           |            |     |           |
|----------------------------------|-----------|------------|-----|-----------|
| Variable                         | No, n=151 | Yes, n=246 | OR  | 95% CI    |
| Ever had sex                     | n(%)      | n(%)       |     |           |
| Yes                              | 42 (28%)  | 152 (62%)  | 4.2 | 2.6, 6.6  |
| No                               | 109 (72%) | 94 (38%)   |     |           |
| Sex in last year                 |           |            |     |           |
| Yes                              | 28 (20%)  | 115 (47%)  | 3.4 | 2.3, 6.5  |
| No                               | 109 (80%) | 131 (53%)  |     |           |
| Unprotected sex (lifetime)       |           |            |     |           |
| Yes                              | 28 (67%)  | 100 (66%)  | 1.0 | 0.43, 2.1 |
| No                               | 14 (33%)  | 52 (34%)   |     |           |
| Unprotected sex (last encounter) |           |            |     |           |
| Yes                              | 14 (33%)  | 74 (49%)   | 1.9 | 0.88, 4.2 |
| No                               | 28 (67%)  | 78 (51%)   |     |           |

From the above table, we can observe the following; gambling youth have had more sexual encounters compared to non-gambling youth. The odds ratio implies that youth who gamble are 4.2 times more likely to have sex and therefore gambling is associated with higher odds of having sex. This can further be confirmed by the proportion of youth who had sex in the past one year where youth who gamble were 3.4 times more likely to have had sex in the past one year compared to non-gambling youth. Life time risk of having unprotected sex was higher in both groups (gambling and non-gambling cohorts). The odds ratio of 1.0 showed that both gamblers and non-gamblers had the same risk. However, when it came to unprotected sex during the last sexual encounter, more gamblers than non-gamblers were at risk. Generally gamblers were 1.9 times more likely to have had unprotected sex hence gambling is associated with higher odds of having unprotected sex.

The table below shows sexual risks (category two) in relation to gambling status.

Table 12: Sexual risks associated with gambling – category two

| <b>Ever gambled, n=397</b>                      |                  |                   |           |               |
|---|------------------|-------------------|-----------|---------------|
| <b>Variable</b>                                 | <b>No, n=151</b> | <b>Yes, n=246</b> | <b>OR</b> | <b>95% CI</b> |
| <b>Multiple sexual partners (lifetime)</b>      |                  |                   |           |               |
| Yes   | 28 (80%)         | 116 (85%)         | 1.4       | 0.45, 3.8     |
| No  | 7 (20%)          | 21 (15%)          |           |               |
| <b>Multiple sexual partners (last 3 months)</b> |                  |                   |           |               |
| Yes   | 14 (50%)         | 57 (73%)          | 2.7       | 1.0, 7.3      |
| No  | 14 (50%)         | 21 (27%)          |           |               |
| <b>Cross-generational sex</b>                   |                  |                   |           |               |
| Yes   | 21 (50%)         | 22 (14%)          | 0.2       | 0.07, 0.39    |
| No  | 21 (50%)         | 130 (86%)         |           |               |
| <b>Knowledge of partners HIV Status</b>         |                  |                   |           |               |
| Yes   | 35 (83%)         | 79 (52%)          | 0.2       | 0.08, 0.54    |
| No  | 7 (17%)          | 73 (48%)          |           |               |
| <b>Pregnancy or impregnation</b>                |                  |                   |           |               |
| Yes   | 14 (40%)         | 45 (31%)          | 0.7       | 0.3, 1.6      |
| No  | 21 (60%)         | 100 (69%)         |           |               |

*NB: a =the Odds Ratio of having sex with sexual partner whose HIV status is unknown is 5.0,*

From the above table, gamblers were 1.4 times and 2.7 times more likely to have had more than one sexual partner in their lifetime and in the last 3 months respectively. This implies that gambling is associated with higher odds of having multiple sexual partners. Fewer gamblers had practiced cross generational sex (sex with a person aged 10 years older or 10 years younger) compared to non-gamblers. The odds ratio of 0.2 implies that youth who gamble are 0.8 times less likely to engage in cross generational sex therefore gambling is associated with lower odds of having cross generational sex.

A lower proportion of gamblers had knowledge of the HIV status of the partner during the last sexual encounter compared to non-gambling youth. The odds ratio of 0.2 implies that youth who gamble are 5.0 times more likely to engage in sex with a partner whose HIV status is unknown; therefore gambling is associated with higher odds of having sex with partners whose HIV status is unknown.

Lastly, the odds ratio of 0.7 on the risk of impregnation or becoming pregnant implies that youth who gamble are 0.3 times less likely to become pregnant or impregnate their partner therefore gambling is associated with lower odds of becoming pregnant or impregnating.

Furthermore, the table below shows sexual risks (category three) in relation to gambling status.

Table 13: Sexual risks associated with gambling – category three

| Ever gambled, n=397                       |           |            |     |            |
|---|-----------|------------|-----|------------|
| Variable                                  | No, n=151 | Yes, n=246 | OR  | 95% CI     |
| Lifetime STI prevalence                   |           |            |     |            |
| Yes                                       | 21 (75%)  | 21 (15%)   | 0.1 | 0.02, 0.16 |
| No  | 7 (25%)   | 123 (85%)  |     |            |
| Sex with same gender (sexual orientation) |           |            |     |            |
| Yes                                       | 7 (17%)   | 8 (5%)     | 0.3 | 0.08, 0.97 |
| No  | 35 (83%)  | 144 (95%)  |     |            |
| Forced sex                                |           |            |     |            |
| Yes                                       | 7 (20%)   | 14 (9%)    | 0.4 | 0.14, 1.3  |
| No  | 28 (80%)  | 138 (91%)  |     |            |
| Sex with relatives                        |           |            |     |            |
| Yes                                       | 7 (17%)   | 14 (9%)    | 0.5 | 0.18, 1.61 |
| No  | 35 (83%)  | 138 (91%)  |     |            |

Results show that the life time STI prevalence among gamblers was lower compared to non-gambling youth. The odds ratio of 0.1 implies that youth who gamble are 0.9 times less likely to contract STIs. Gambling is associated with lower odds of contracting STIs hence gambling is protective against the outcome of acquiring STIs. Gamblers were 0.7 times, 0.6 times and 0.5 times less likely to have had sex with same gender, forced sex and sex with relatives compared to their counterparts (non-gamblers) therefore gambling is protective against the outcomes of having sex with same gender, having forced sex and having sex with relatives. These are rather interesting results. One should note that only a few respondents were willing to provide information on such that is; 15, 21 and 21 respondents respectively. Due to these low samples, statistical testing was not possible.

#### **4.5 Utilization of SRH services**

The researcher assessed the utilization of SRHR services among gamblers and non-gamblers by focusing on key SRH services that youth utilized in the past 3 months i.e HCT, STI screening and management, family planning commodities, safe male circumcision, SRH counseling, cervical cancer screening, and antenatal care. In addition, each youth reported the number of times he or she visited hospital for SRHR services during the last 3 months. Two categories of SRH services were formed in this analysis. Category one includes; HCT, STI screening and management, cervical cancer screening and safe male circumcision, whereas category two includes; family planning commodities, SRH counseling, antenatal care and SRH visits to facilities in the last 3 months.

These SRHR utilization was analyzed against gambling status of youth (ever gambled or has never gambled) and gambling problem status (yes or not) (*refer to section 3.5 for definition of these variables*). Tests of significance (chi square & t-test) were then conducted to determine the significant difference of the distribution of utilization of each SRH service with gambling status indicated in a p-value. A p-value of less than 5% means that the difference is statistically significant. The table below shows utilization of SRH services (category one) in relation to gambling status.



Table 14: Gambling and utilization of SRHR services – category one

| Variable                  | Ever gambled, n=397 |            |         | Gambling problem, n=246 |            |         |
|---------------------------|---------------------|------------|---------|-------------------------|------------|---------|
|                           | No, n=151           | Yes, n=246 | P       | No, n=21                | Yes, n=225 | p       |
| HCT                       | n(%)                | n(%)       | P       | n(%)                    | n(%)       | p       |
| Yes                       | 71 (55%)            | 186 (80%)  | 0.000** | 21 (100%)               | 165 (78%)  | 0.017** |
| No                        | 58 (45%)            | 46 (20%)   |         | 0 (0%)                  | 46 (22%)   |         |
| STI screening & treatment |                     |            |         |                         |            |         |
| Yes                       | 36 (28%)            | 108 (47%)  | 0.001** | 7 (33%)                 | 101 (48%)  | 0.203   |
| No                        | 93 (72%)            | 124 (53%)  |         | 14 (67%)                | 110 (52%)  |         |
| Cervical cancer screening |                     |            |         |                         |            |         |
| Yes                       | 15 (12%)            | 87 (41%)   | 0.000** | 0 (0%)                  | 87 (43%)   | 0.024** |
| No                        | 107 (88%)           | 124 (59%)  |         | 7 (100%)                | 117 (57%)  |         |
| Safe male circumcision    |                     |            |         |                         |            |         |
| Yes                       | 85 (70%)            | 167 (77%)  | 0.140   | 14 (67%)                | 153 (78%)  | 0.239   |
| No                        | 37 (30%)            | 50 (23%)   |         | 7 (33%)                 | 43 (22%)   |         |

NB: \*\* means association is statistically significant at 5% level of significance while \* means association is statistically significant at 10% level of significance

From the table above, it can be noticed that a higher proportion of gamblers compared to non-gamblers took an HIV test during the past three months. This was statistically significant.

Gamblers utilized STI services more than non-gambling youth. This difference was statistically significant. On the other hand, presence of a gambling problem did not significantly influence use of STI screening services.

Furthermore, gamblers utilized cervical cancer screening services more than non-gambling youth. This difference was statistically significant. In addition, problematic gamblers utilized cervical cancer screening services more compared to their counterparts. There was no significant difference in utilization of safe male circumcision services among gamblers and non-gamblers.

The table below shows utilization of SRH services (category two) in relation to gambling status.

Table 15: Gambling and utilization of SRHR services – category two

| Variable               | Ever gambled, n=397 |            |         | Gambling problem, n=246 |            |         |
|------------------------|---------------------|------------|---------|-------------------------|------------|---------|
|                        | No, n=151           | Yes, n=246 | p       | No, n=21                | Yes, n=225 | p       |
| Modern family planning |                     |            |         |                         |            |         |
| Yes                    | 15 (15%)            | 138 (70%)  | 0.000** | 0 (0%)                  | 138 (73%)  | 0.000** |
| No                     | 85 (85%)            | 58 (30%)   |         | 7 (100%)                | 51 (27%)   |         |
| SRHR counseling        |                     |            |         |                         |            |         |
| Yes                    | 63 (55%)            | 196 (90%)  | 0.000** | 14 (100%)               | 182 (89%)  | 0.195   |
| No                     | 52 (45%)            | 22 (10%)   |         | 0 (0%)                  | 22 (11%)   |         |
| Antenatal care         |                     |            |         |                         |            |         |
| Yes                    | 0 (0%)              | 95 (52%)   | 0.000** | 7 (50%)                 | 88 (52%)   | 0.882   |
| No                     | 49 (100%)           | 88 (48%)   |         | 7 (50%)                 | 81 (48%)   |         |
| SRHR facility visits   |                     |            |         |                         |            |         |
| Average                | 3.5                 | 3.3        | 0.773   | 7.0                     | 3.0        | 0.004** |

NB: \*\* means association is statistically significant at 5% level of significance while \* means association is statistically significant at 10% level of significance

Results show that gamblers utilized modern methods of family planning (FP) more than non-gambling youth. This difference was statistically significant at 5% level of significance. In addition, problematic gamblers utilized STI screening and management services less compared to their counterparts. Gamblers utilized SRHR counseling services more than non-gambling youth. This difference was statistically significant. It should be noted that presence of a gambling problem did not significantly influence the use these services. There was a significant difference in utilization of antenatal care services with gamblers utilizing these services more than non-gamblers. Lastly, there was no significant difference in the number of visits made by gamblers and non-gamblers to health facilities for SRHR services in the past three months. However, it should be noted that problematic gamblers made significantly fewer visits compared to gamblers who had no gambling problems.

## **CHAPTER FIVE: DISCUSSION OF RESULTS, CONCLUSIONS AND RECOMMENDATIONS**

### **5.0 Introduction**

This chapter starts by discussing findings from the study, makes key conclusions, and ends with recommendations

### **5.1 Discussion of results**

This section presents discussion of findings in relation to existing literature and their implications. Its starts with a discussion of the extent of gambling and associated factors, the sexual behaviors and sexual risk among youth associated with gambling and finally, the utilization of SRHR services in relation to gambling.

#### **5.1.1 Extent of gambling and associated factors**

This study showed that over 62% of youth are engaged in gambling with more males than females participating, showing a slight difference with other studies conducted in developed countries which showed varying prevalence of youth gambling ranging from, 77% to 88% of adolescents and youth (Pike, et al., 2010). This could have been due to the fact that respondents in most of other studies have been students compared to this study where over 24% are currently out of school. On the other hand, this study is in agreement with other studies about the fact that males engage in gambling more often compared to females. It should also be noted that in an African setting, the socio cultural environment is very strict with females compared with males. A high prevalence of gambling among youth in Uganda brings both social and economic challenges for a country where over 78% of the population is below 30 years such as income loses & family

problems. Gambling will produce a great displacement effect on youth's necessities and savings and therefore hinder Uganda's potential to achieve a middle income status as highlighted in Uganda's Vision 2020.

Within the gambling cohort of respondents, over 40% of gamblers gambled frequently (more than once a week) and this concurred with other studies which reported frequent gambling to be over 45% among youth (Martins, et al., 2014). In this study, 71% of gamblers started gambling aged less than 18 years despite of the fact that this activity is illegal for children below 18 years in Uganda. Furthermore over 91% of gambling youth had at least 1 gambling problem based on the South Oaks Gambling scale – revised for adolescents which was extremely higher than what was discovered in recent studies and national surveys conducted in European countries and some parts of Asia that stated that problem gambling prevalence ranges from 10% to 15% among youth (Hermano, et al., 2010; Pike, et al., 2010). This higher level of problem gambling could be due to the fact that youth are majorly pulled and pushed into this activity by factors such as competition among peers, quickly earning money, the desire to redeem prior loses, stress and depression which are typical trends of developing economies like Uganda and therefore experience problems of managing or quitting the behavior.

According to this study, gambling is positively associated with gender, marital status, family income levels and orphanhood status. On the other hand it's negatively associated with education level. All these factors indicate presence of a need for money in youth's lives which is agreement with the fact that youth are majorly pulled and pushed into this activity by factors such as

competition among peers, quickly earning money, the desire to redeem prior losses, stress and depression which are typical trends of developing economies.

### **5.1.2 Youth sexual behavior patterns, sexual risks and association with gambling**

This study showed that a higher proportion of gamblers (62%) compared to non-gamblers (28%) had ever had sexual intercourse during their life time. Gamblers are 4.2 times more likely to have sex and gambling is associated with higher odds of having sex. This result is in agreement with most studies conducted; for example in a study conducted among African Americans showed that male gamblers were 2.47 times more likely to have sex by the age of 18 years compared to non-gamblers (Martins, et al., 2014). One should note that the risk of engaging in sexual intercourse is higher in this study compared to other studies which could be due to Uganda being among the Sub Saharan Africa where sexual activity is high. One should note that youth in Uganda typically become sexually active, marry, and bear children early in life. The Uganda Demography and Health survey revealed that youth in Uganda start having sex when they are young. By the age of 18, at least 44.4% of men and 33.6% of women who have never married have had sex (UDHS, 2011). In addition, problematic gamblers had sex more than social gamblers.

Gamblers significantly had early sexual debut (14.4 years) compared to non-gamblers (16.3 years). This is further worsened when one becomes a problematic gambler. In a study conducted among 427 African American participants, approximately one third (35 percent) had intercourse by age 13 and 89 percent had engaged in sexual intercourse by age 18 (Medical Xpress, 2014; Martins, et al., 2014) which presents a close picture.

The life time risk of having unprotected sex was higher in both groups (gambling and non-gambling cohorts). Over 66% of youth surveyed had had unprotected sexual intercourse in their life time plus a minimum of 33% having had unprotected sex in the last sexual encounter. This is particularly higher compared to results of the 2011 AIDs Indicator survey that revealed that among never-married youth who reported having sex in the past 12 months, 58% of women and 54% of men aged 15-24 did not use a condom at last sexual intercourse (UAIS, 2011). In this study, generally gamblers were 1.9 times more likely to have had unprotected sex and therefore gambling is associated with higher odds of having unprotected sex. In addition, problematic gamblers were at higher risk compared to social gamblers. These results are particularly alarming in light of the high rates of new cases of STI/HIV infections and increased prevalence each year among youth (UAIS, 2011). Studies conducted on college students have also shown that gambling puts individuals at a risk of engaging in unprotected sex for example in a study conducted on a sample of 20,739 student-athletes in USA revealed that individuals with problem gambling disorders were 1.7 times more likely to engage in unprotected sex in the past year (Huang, et al., 2007).

Multiple sexual relationships are a major driver of HIV and a high risk sexual behavior (UDHS, 2011; UAC, 2014). Over 80% of youth surveyed had had sex with multiple partners in their life time plus at least of 50% having had sex with multiple partners during the last three months. Gamblers were 1.4 times and 2.7 times more likely to have had more than one sexual partner in their lifetime and in the last 3 months respectively. These rates were strikingly higher compared to the general population of Uganda where only 2% of women and 9% of men aged 15-24 years had sexual intercourse with more than one partner in the past 12 months (UDHS, 2011). This could be due to the fact that this study entirely concentrated in the city rather than the general population as

surveyed in 2011 UDHS. Researchers have also recognized that youth who gamble and have gambling problems have uncontrolled sexual behavior and they end up having many sexual partners (Petry & Tawfik, 2001) showing a similar picture with results from this study. In contrast, another study conducted among college students found out that even though female gamblers were at a risk of having multiple partners, male social and problem gamblers were 18% and 30% less likely than male non-gamblers to have multiple sex partners (Huang, et al., 2010). However this seemed to not match with another study done among African American adolescents that revealed that both male and female gamblers were 19% more likely to have multiple partners compared to non-gamblers.

Among adults, HIV is mainly transmitted through sexual contact between an infected partner and an uninfected partner. Consequently HIV prevention programs have mainly sought to reduce further sexual transmission through programmatically important ways including HIV counseling and testing services. Results from this study showed that only 52% of gambling youth surveyed had good knowledge of the HIV status of the sexual partner during the last sexual encounter compared to 83% of non-gambling youth. Gamblers were 5.0 times more likely to engage in sex with a partner whose HIV status is unknown compared to non-gamblers. This high risk may be due to the fact that many youth who engage in sex in Uganda have never tested for HIV (UAIS, 2011).

Gambling youth had significantly had sex under the influence of alcohol. Having sex under the influence of alcohol is the highest risk youth who gamble face according to findings from this study. It should be noted that gambling youth display anxiety, depressive feelings and impulsivity usually in form of enthusiasm of taking risk to large wins and consume alcohol while gambling

(Wong et al., 2013) which could have derived from stress and depression as the major pull/push factor for youth gambling. In other studies that looked at drug use among gamblers, it was found out that youth who gamble and use drugs (such as alcohol) are associated with sexual risk-taking (Cavazos-Rehg et al., 2011).

Compared to other sexual risks surprisingly, fewer gamblers had practiced cross generational sex (sex with a person aged 10 years older or 10 years younger) compared to non-gamblers. Youth who gamble are 0.8 times less likely to engage in cross generational sex compared to their peers who do not gamble.

Over 31% of gambling youth surveyed had become pregnant or impregnated their partner compared to 40% of non-gambling youth. Youth who gamble are 0.3 times less likely to become pregnant or impregnated their partner. These results are rather striking since gamblers have already been noted to initiate sex early, have multiple sex partners and rarely used condoms in the last sexual encounter. Other studies found out that gambling youth are at a high risk of impregnating or being impregnated since they initiate unprotected sex at an early age (Huang, et al., 2010; Huang et al., 2007). In another study that looked at drug use among gamblers, it was found out that youth who gamble and use drugs are associated with sexual risk-taking which usually results into pregnancy or impregnation (Cavazos-Rehg et al., 2011). Studies carried out in US also showed that adolescent males who gambled were more likely than their non-gambling peers to become fathers by the age of 20 (Lee et al., 2013). It should also be noted that the risk for gambling men impregnating is higher than gambling women becoming pregnant. One the other hand one should note that due to the higher utilization of FP services by gamblers derived from this study, the risk of becoming pregnant or impregnating could have been lowered.



The life time STI prevalence among gamblers was at 15% compared to 75% of non-gambling youth. Youth who gamble are 0.9 times less likely to contract STIs. Gambling is associated with lower odds of contracting STIs. This is also another result that is striking. However it should be noted that due to the higher utilization of SRHR services by gamblers derived from this study, the risk of contracting STIs could have been lowered. In America, after legalizing gambling, problem and pathological gambling increased among the youth which increased the risk of acquiring STI following the early initiation of sex by gamblers, unprotected sex and frequent sexual encounters (Martins, et al., 2014).

Lastly, gamblers were 0.7 times, 0.6 times and 0.5 times less likely to have had sex with same gender, forced sex and sex with relatives compared to their counterparts (non-gamblers). Therefore, gambling is protective against the outcomes of having sex with same gender, having forced sex and having sex with relatives. These are rather interesting results. One should note that only a few respondents were willing to provide information on such that is; 15, 21 and 21 respondents respectively. Due to these low samples, statistical testing was not possible. In addition, association of sex orientation and gambling has received less attention by researchers and policy makers. There is no study accessed that focused on the co-existence of general gambling involvement and homosexuality.

### **5.1.3 SRHR service utilization and its association with gambling**

A higher proportion of gamblers compared to non-gamblers took an HIV test during the past three months. Gamblers also utilized STI services more than non-gambling youth. Furthermore, gamblers utilized cervical cancer screening services, SRHR counseling services and modern methods of family planning services, antenatal care services more than non-gambling youth.

The higher utilization rates for SRHR services could be due to the fact that youth who gamble engage in risk behaviors like having unprotected sex, having sex under influence of alcohol, having sex with multiple partners among others which compel them to seek services. For example, if I know that I had unprotected sex, I would quickly test for HIV to try to find out if I “really” escaped acquiring HIV. This also applies to the use of FP services which is in agreement with the lower risk of becoming pregnant or impregnating.

## **5.2 Conclusions**

More than six in every ten youth (15-24 years) are engaged in gambling activities ranging from cards to sports betting to internet gambling with more male youth than females participating. In addition, never married youth are easily pulled to gambling while the higher the youth is educated the lesser the likelihood of engaging in gambling activities. Youth that come from families with average or lower income levels plus youth who are orphans are more likely to participate in gambling activities.

Furthermore, 7 out of 10 gambling youth start gambling while they are adolescents (below 18 years) while 4 out 10 gamble more than once a week and 9 out 10 experience gambling problems. These could be due to high presence and easy access of gambling venues in the vicinity of these youth which was also noted as a key pull factor for gambling involvement.

Compared to non-gambling youth, gambling youth have high sexual encounters and initiate sexual activity at a young age, engage in sexual activities with more than one partner whom they do not know their HIV status and have sex under influence of alcohol. On the other hand, gambling youth

are less likely to engage in cross generational sexual relationships and had a lower lifetime prevalence of STIs (excluding HIV).

Among gambling youth, compared to social gamblers, problematic gambling youth have high sexual encounters, initiated sexual activity at a young age and engage in sexual activities with more than one partner whom they do not know their HIV status. They also impregnate their partner or become pregnant more compared to social gamblers. Generally, gambling youth have significantly utilized SRHR services like HCT, STI screening and management, cervical cancer screening and management, modern methods of family planning, antenatal care and SRHR counseling compared to non-gambling youth. Among the gambling youth, the utilization of SRHR services (HCT, cervical cancer screening, FP) was low among youth with gambling problems compared to social gamblers.

### **5.3 Recommendations**

The government needs to form and strongly enforce policies on gambling activities to minimize the involvement of children below 18 years in this activity by imposing tighter restrictions on advertising, on entry into gambling places based on age, on opening hours among others. The government needs to create strategies to minimize the negative impacts of gambling among problem gamblers by promoting responsible gambling and providing support and counseling to problem gamblers.

The government of Uganda through the Ministry of Health needs to have a critical look at the sexual risk associated with gambling and therefore strategize or create programs to reach these

youth with majorly preventive care services through behavioral change communication in its fight against health challenges like HIV/AIDs. Creation of employment opportunities needs to be done by the public and private entities to enable most youth to get employment and therefore limit their participation in gambling. Furthermore, civil society entities need to enhance education strategies to enable youth attain higher levels of education and therefore limit their participation in gambling. They should also come up with projects and programs to reach adolescents and youth that are participating in gambling activities with behavioral change communication, entrepreneurship and apprenticeship opportunities to enable them overcome the negative effects of gambling.

Donors and developmental partners need to fund projects that are aimed at reaching gambling youth in Uganda and all over Africa with behavioral change communication; entrepreneurship and apprenticeship opportunities to enable youth overcome the determinants of gambling and also to overcome the negative effects of gambling. Massive sensitization of adolescents and youth about the dangers and effects of their involvement in gambling needs to be done by the government through government schools and by private schools.

Further research should be undertaken by academicians in order to address areas of concern derived from this study such as; How come youth who are gambling utilize SRHR services more than non-gambling youth?, What enables gambling youth to protect themselves from STIs and HIV/AIDs? And how gambling youth manage not to engage in transactional sex compared to non-gambling youth?

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## APPENDICES

### Appendix 1: Questionnaire

### STUDY QUESTIONNAIRE ON GAMBLING AND SEXUAL BEHAVIORS AMONG YOUTH

Questionnaire Number: |\_\_|\_\_|\_\_| Interviewer ID/Name: \_\_\_\_\_

Parish: \_\_\_\_\_ Village: \_\_\_\_\_

#### INTRODUCTION:

Dear Respondent,

I am conducting a survey on youth about gambling and sexual behaviors in Uganda. This study is only for academic purposes and is being undertaken by Mr. Victor Kiwujja a student of Uganda Martyrs University undertaking a Masters of Public Health.

I would like to invite you to participate in this study. This is an opportunity to give us your views. This is your chance! Your participation in this study is voluntary and therefore we do not give any money or any gifts for participating in the study.

The information you will provide me with will be used for academic purposes and also to advise the government of Uganda on key issues resulting from this study.

ALL information you provide us **WILL BE KEPT PRIVATE AND CONFIDENTIAL**. We will not share your information with your partner, local leaders or any other person. Only researchers involved in this study will have access to the information you provide us with. Your participation in this study will not harm you in any way. This exercise is expected to take about **20-30 Minutes**. Before we continue, do you have any questions? **Are you willing to give us feedback about these issues?**     No     Yes

| SECTION 1: DEMOGRAPHIC BACKGROUND  |  |
|--|--|
| Q1) Your Name (Start with Surname) - Optional                                    |  |
| Q2) What is your age or the year you were born?                                  | Age: _____ Year of birth: _____  |
| Q3) Gender:  | 1. <input type="checkbox"/> Male    2. <input type="checkbox"/> Female   |
| Q4) Marital Status:  | 1. <input type="checkbox"/> Single/Never Married    2. <input type="checkbox"/> Married<br>3. <input type="checkbox"/> Cohabiting (living with partner)<br>4. <input type="checkbox"/> Widowed/Divorced/Separated  |
| Q5) At what age did you first get married or lived with a partner as if married? | : _____  |
| Q6) Highest Education Level:   | 1. <input type="checkbox"/> No formal education    2. <input type="checkbox"/> Primary<br>3. <input type="checkbox"/> O Level (S1-S4)    4. <input type="checkbox"/> A level (S5-S6)<br>5. <input type="checkbox"/> Higher (university/Tertiary)<br>6. <input type="checkbox"/> Others specify _____ |

|  |   |
|--|---|
| Q7) Are you currently attending School or University?              | 1. <input type="checkbox"/> No    2. <input type="checkbox"/> Yes   |
| Q8) What is your religion?   | 1. <input type="checkbox"/> Catholic    2. <input type="checkbox"/> Anglican    3. <input type="checkbox"/> Muslim<br>4. <input type="checkbox"/> Pentecostal/Born Again    5. <input type="checkbox"/> Others: _____                                     |
| Q9) Are you currently employed??                                   | 1. <input type="checkbox"/> No    2. <input type="checkbox"/> Yes   |
| Q10) Would you say that the income status of your family has been? | 1. <input type="checkbox"/> Very low    2. <input type="checkbox"/> Low    3. <input type="checkbox"/> Average<br>4. <input type="checkbox"/> High    5. <input type="checkbox"/> Very high   |
| Q11) Is your mother still alive?                                   | 1. <input type="checkbox"/> No    2. <input type="checkbox"/> Yes   |
| Q12) Is your father still alive?                                   | 1. <input type="checkbox"/> No    2. <input type="checkbox"/> Yes   |
| Q13) Currently who is taking care of your family?                  | 1. <input type="checkbox"/> my father    2. <input type="checkbox"/> my mother<br>3. <input type="checkbox"/> my elder brother/sister<br>4. <input type="checkbox"/> guardians (Aunt/uncle/grand mom or dad)<br>5. <input type="checkbox"/> others: _____ |

## SECTION 2: GAMBLING PARTICIPATION & CATEGORIZATION

|   |   |
|---|---|
| Q1) Have you ever gambled? ( <i>Gambling means a state where you put something of value at risk in the hope of gaining something of greater value</i> ) | 1. <input type="checkbox"/> No    2. <input type="checkbox"/> Yes <b>(If No, please skip to the next Section)</b>   |
| Q2) In the last 12 months what forms of gambling have you participated in?  | 1. <input type="checkbox"/> Cards/Luddo    2. <input type="checkbox"/> Flipping coins    3. <input type="checkbox"/> Play station<br>4. <input type="checkbox"/> Sports Betting e.g Football<br>5. <input type="checkbox"/> Pool Table    6. <input type="checkbox"/> Regular lottery    7. <input type="checkbox"/> Internet gambling<br>8. <input type="checkbox"/> Others: _____ |
| Q3) How often in a normal week do you gamble?   | 1. <input type="checkbox"/> Once    2. <input type="checkbox"/> 2-3 times    3. <input type="checkbox"/> More than 3 times  |
| Q4) At what age did you start gambling?   |   |
| Q5) Does anyone else in your family gamble?   | 1. <input type="checkbox"/> No    2. <input type="checkbox"/> Yes, my father    3. <input type="checkbox"/> Yes, my mother<br>4. <input type="checkbox"/> Yes, my guardian    5. <input type="checkbox"/> Yes, my elder brother/sister<br>6. <input type="checkbox"/> Yes, my young brother/sister    7. <input type="checkbox"/> Yes, others                                       |

### **Q6) FOR EACH OF THE FOLLOWING, SELECT BY TICKING WHETHER YOU AGREE/DISAGREE/NOT SURE.**

|  |   |
|--|---|
| a) I gamble to reduce tension and stress                     | 1. <input type="checkbox"/> Agree    2. <input type="checkbox"/> Disagree    3. <input type="checkbox"/> Not sure |
| b) I gamble because I need to be seen as a smart person      | 1. <input type="checkbox"/> Agree    2. <input type="checkbox"/> Disagree    3. <input type="checkbox"/> Not sure |
| c) I gamble because of my friends asked me to do so          | 1. <input type="checkbox"/> Agree    2. <input type="checkbox"/> Disagree    3. <input type="checkbox"/> Not sure |
| d) I gamble so that I can meet new people/friends            | 1. <input type="checkbox"/> Agree    2. <input type="checkbox"/> Disagree    3. <input type="checkbox"/> Not sure |
| e) I gamble because I want to compete with others            | 1. <input type="checkbox"/> Agree    2. <input type="checkbox"/> Disagree    3. <input type="checkbox"/> Not sure |
| f) I gamble because of availability of gambling venues       | 1. <input type="checkbox"/> Agree    2. <input type="checkbox"/> Disagree    3. <input type="checkbox"/> Not sure |
| g) I gamble because of gambling is being advertised everyday | 1. <input type="checkbox"/> Agree    2. <input type="checkbox"/> Disagree    3. <input type="checkbox"/> Not sure |
| h) To win big money  | 1. <input type="checkbox"/> Agree    2. <input type="checkbox"/> Disagree    3. <input type="checkbox"/> Not sure |
| i) To win back previous loses                                | 1. <input type="checkbox"/> Agree    2. <input type="checkbox"/> Disagree    3. <input type="checkbox"/> Not sure |

### **Q7) FOR EACH OF THE FOLLOWING, SELECT BY TICKING THE MOST APPROPRIATE OPTION THAT APPLIES TO YOU.**

|  |  |   |
|--|--|---|
| a) How often have you gone back another day to try and win back money you lost gambling?   | 1. <input type="checkbox"/> Every time<br>3. <input type="checkbox"/> Some of the time | 2. <input type="checkbox"/> Most of the time<br>4. <input type="checkbox"/> Never |
| b) When you were betting, have you ever told others you were winning money when you weren't?   | 1. <input type="checkbox"/> No 2. <input type="checkbox"/> Yes                         |   |
| c) Has your betting money ever caused any problems for you such as arguments with family and friends, or problems at school or work?   | 1. <input type="checkbox"/> No 2. <input type="checkbox"/> Yes                         |   |
| d) Have you ever gambled more than you had planned to?   | 1. <input type="checkbox"/> No 2. <input type="checkbox"/> Yes                         |   |
| e) Has anyone criticized your betting, or told you that you had a gambling problem whether you thought it true or not                  | 1. <input type="checkbox"/> No 2. <input type="checkbox"/> Yes                         |   |
| f) Have you ever felt bad about the amount of money you bet, or about what happens when you bet money?                                 | 1. <input type="checkbox"/> No 2. <input type="checkbox"/> Yes                         |   |
| g) Have you ever felt like you would like to stop betting, but did not think you could?  | 1. <input type="checkbox"/> No 2. <input type="checkbox"/> Yes                         |   |
| h) Have you ever hidden from family or friends any betting slips, IOUs, lottery tickets, money that you won, or any signs of gambling? | 1. <input type="checkbox"/> No 2. <input type="checkbox"/> Yes                         |   |
| i) Have you had money arguments with family or friends that centered on gambling?  | 1. <input type="checkbox"/> No 2. <input type="checkbox"/> Yes                         |   |
| j) Have you borrowed money to bet and not paid it back?  | 1. <input type="checkbox"/> No 2. <input type="checkbox"/> Yes                         |   |
| k) Have you ever skipped or been absent from school or work due to betting activities?   | 1. <input type="checkbox"/> No 2. <input type="checkbox"/> Yes                         |   |
| l) Have you borrowed money or stolen something in order to bet or to cover gambling activities?  | 1. <input type="checkbox"/> No 2. <input type="checkbox"/> Yes                         |   |

### SECTION 3: SEXUAL BEHAVIORS AND RISKS

Now I would like to ask you questions about some other important aspects of women's and men's lives. I know that some of these questions are very personal. However, your answers are crucial for helping to understand the condition of women and men in Uganda. Let me assure you that your answers are completely confidential and will not be told to anyone else. You are free to ask for clarification on any question or refuse to answer any question?.

|   |  |  |
|---|--|--|
| Q1) Have you ever had sex?  | 1. <input type="checkbox"/> No 2. <input type="checkbox"/> Yes <b>(if No skip to next section)</b>                       |  |
| Q2) <b>IF YES</b> , at what age did you <b>first</b> ever had sex?  | : _____  |  |
| Q3) In the past 12 months, have you had sex?  | 1. <input type="checkbox"/> No 2. <input type="checkbox"/> Yes   |  |
| Q4) In total, with <b>how many different people</b> have you had sexual intercourse in the last 3 (THREE) months? | : _____  |  |
| Q5) What was the nature of your sexual partners?  | 1. <input type="checkbox"/> Female 2. <input type="checkbox"/> Male 3. <input type="checkbox"/> Both                     |  |
| Q6) When you had sex, were you or your partners drunk with alcohol?   | 1. <input type="checkbox"/> No 2. <input type="checkbox"/> Yes   |  |
| Q7) Whenever you have had sex, how many times do you use a condom?  | 1. <input type="checkbox"/> Never 2. <input type="checkbox"/> Sometimes<br>3. <input type="checkbox"/> Every time/Always |  |
| Q8) In your last sexual encounter, did you know the HIV status of your partner?                                   | 1. <input type="checkbox"/> No 2. <input type="checkbox"/> Yes   |  |
| Q9) In your last sexual encounter, did your partner know your HIV   | 1. <input type="checkbox"/> No 2. <input type="checkbox"/> Yes   |  |



|   |   |  |
|---|---|--|
| status?   |   |  |
| Q10) In your last sexual encounter, did you know the HIV status of your sexual partner?                                     |   | 1. <input type="checkbox"/> No    2. <input type="checkbox"/> Yes    |
| Q11) In your last sexual encounter, did you use a condom?   |   | 1. <input type="checkbox"/> No    2. <input type="checkbox"/> Yes    |
| Q12) In last 12 months have you impregnated or have you been pregnant   |   | 1. <input type="checkbox"/> No    2. <input type="checkbox"/> Yes    |
| Q13) In your last sexual encounter, was this person older than you, younger than you, or about the same age?                | <input type="checkbox"/> 5-10 yrs younger <input type="checkbox"/> More than 10 yrs younger<br><input type="checkbox"/> 5-10 yrs older <input type="checkbox"/> More than 10 yrs Older <input type="checkbox"/><br>About the same age (5 yrs less or 5 yrs older) |  |
| Q14) Did you ever give (or ask for/receive) sex in exchange for money or goods or services?                                 |   | 1. <input type="checkbox"/> No    2. <input type="checkbox"/> Yes    |
| Q15) Have you ever had sex with any close relatives?  |   | 1. <input type="checkbox"/> No    2. <input type="checkbox"/> Yes    |
| Q16) Have you ever been forced to have sex by anyone that is involved in gambling?  |   | 1. <input type="checkbox"/> No    2. <input type="checkbox"/> Yes    |
| Q17) In total, with how many different people have you had sexual intercourse in your lifetime?                             |   | : _____  |
| Q18) In your lifetime, have you ever had a sexually transmitted infection or disease (STIs/STDs)?                           |   | 1. <input type="checkbox"/> No    2. <input type="checkbox"/> Yes    |
| <b>SECTION 4 : UTILIZATION OF SEXUAL REPRODUCTIVE HEALTH SERVICES (please recall for what you did in the past 3 months)</b> |   |  |
| Q1) Have you tested for HIV/AIDs?   |   | 1. <input type="checkbox"/> No    2. <input type="checkbox"/><br>Yes |
| Q2) Have you been screened or treated for any STI/STDs?   |   | 1. <input type="checkbox"/> No    2. <input type="checkbox"/><br>Yes |
| Q3) Have you/your partner been screened for cervical cancer?  |   | 1. <input type="checkbox"/> No    2. <input type="checkbox"/><br>Yes |
| Q4) Are you circumcised or is your current partner circumcised?   |   | 1. <input type="checkbox"/> No    2. <input type="checkbox"/><br>Yes |
| Q5) Have you/your partner used any family methods to avoid pregnancy?   |   | 1. <input type="checkbox"/> No    2. <input type="checkbox"/><br>Yes |
| Q6) Have you been counseled or received guidance on any sexual issues?  |   | 1. <input type="checkbox"/> No    2. <input type="checkbox"/><br>Yes |
| Q7) Have you/your partner attended antenatal care at a health facility or delivered from a health facility?                 |   | 1. <input type="checkbox"/> No    2. <input type="checkbox"/><br>Yes |
| Q8) Have many times have you visited a health facility for Sexual and Reproductive health services?                         |   | : _____  |

*You are done with this interview, thanks for telling me about these Issues.*

*For any inquiries, please feel free to contact me on 0773384364 or [victorkiwujja@gmail.com](mailto:victorkiwujja@gmail.com)*

### Appendix 2: Work plan & budget

| Activity   | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Budget           |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------------|
| Proposal development                                   |     |     |     |     |     |     |     |     |     |     |     | 100,000          |
| Data Collection tools development, piloting & printing |     |     |     |     |     |     |     |     |     |     |     | 384,000          |
| Recruitment & training of data collectors              |     |     |     |     |     |     |     |     |     |     |     | 100,000          |
| Data collection  |     |     |     |     |     |     |     |     |     |     |     | 750,000          |
| Data Coding, Entry and cleaning                        |     |     |     |     |     |     |     |     |     |     |     | 384,000          |
| Data analysis  |     |     |     |     |     |     |     |     |     |     |     | 200,000          |
| Report writing   |     |     |     |     |     |     |     |     |     |     |     | 300,000          |
| Defense of dissertation                                |     |     |     |     |     |     |     |     |     |     |     | 50,000           |
| <b>Total</b>   |     |     |     |     |     |     |     |     |     |     |     | <b>2,268,000</b> |

### Appendix 3: Introductory Letter