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FACTORS INFLUENCING THE UPTAKE OF SELECTED HIV PREVENTION METHODS AMONG BODA-BODA RIDERS IN FORT PORTAL MUNICIPALITY KABAROLE DISTRICT UGANDA

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A DISSERTATION REPORT SUBMITTED TO THE DIRECTORATE OF POSTGRADUATE STUDIES AND RESEARCH IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF THE AWARD OF A MASTERS OF PUBLIC HEALTH OF MOUNTAINS OF THE MOON UNIVERSITY

JULY, 2018

DECLARATION

I MANDELA DISAN, declare that this dissertation report is original and all the work process involved is from my own ideas and creativity. All contents of this have never been submitted to any institution for any award.

MANDELA DISAN

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APPROVAL FORM

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This is to certify that this dissertation report have never been under my supervision and it is now ready for submission to Directorate of Postgraduate Studies and Research in partial fulfilment of the requirement for the award of a Master's Degree in Public Health

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Signature..... Date…….

Address……..

DEDICATION

I dedicate this dissertation report to my lovely daughter Mandela Repatrix and My son Mandela Good Luck. My family that is my brothers and sisters, my mother

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I believe that if it is not for the assistance from a number of people, I wouldn't have successfully come to the end of this study. I am greatly indebted to all who consistently helped me come to the end of this study report.

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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ARRM	AIDS Risk Reduction Model
ART	Anti-retroviral Therapy
ARVs	Anti-retroviral drugs
ARVS	Antiretroviral Drugs
BOD	Boda-Boda Riders
CI	Confidence Interval
FSWs	Female Sex Workers
HCT	HIV Counselling and Testing
HIV	Human Immuno-deficiency Virus
HMIS	Health Information Management Office
MARPI	Most at Risk Populations Initiative
MARPs	Most at Risk Populations
MOH	Ministry of Health
MSM	Men who have Sex with Men
NSP	National Strategic plan
OR	Odds Ratio
PLWA	People Living with AIDS
PWIDS	people who inject with drugs
RCT	Randomized clinical trials
SMC	Safe male circumcision
SSA	Sub-Saharan Africa
STIs	Sexual Transmitted Infections
UAC	Uganda Aids Commission
UAIS	Uganda AIDs Indicator Survey
UBOS	Uganda Bureau of Statistics
UDHS	Uganda Demographic and Health Surveys
UNAIDS	Joint United Nations Program on HIV and AIDS
VMMC	Voluntary medical male circumcision
WHO	World Health Organization

DEFINITION OF KEY TERMS

Most at Risk Populations (MARPs): Refers to those populations most likely to be exposed to HIV or to transmit it and this is country specific based on the epidemiological and social context. It also states that there is a strong link between various kinds of mobility and heightened risk of HIV exposure, depending on the reason for mobility or simply these are sub-populations who are at more than average risk of HIV infection.

Boda-Boda riders (BOD): These are groups of risky groups which transport people using motorcycles from one place to another for commercial purposes.

HIV: Refers to the virus that causes acquired immune deficiency syndrome (AIDS); it replicates in and kills the helper T cells

Uptake: This has been used to mean the acceptability of HIV Prevention methods after creation of awareness.

Voluntary Medical Male Circumcision (VMMC): This refers to male circumcision by consent of the client without any coercion after receiving.

A condom is a contraceptive device consisting of a sheath of thin rubber or latex that is worn over the penis during intercourse Macaluso, Lawson, Hortin, Duerr, Hammond, and Blackwell & Bloom (2008). In this study, condom will be taken to mean the „male condom".

Condom use refers to the correct enclosure of the penis in a male condom before and during sexual intercourse.

Antiretroviral Therapy (ART) refers to the treatment of infection caused by retroviruses; primarily the Human Immunodeficiency Virus using drugs referred to as antiretroviral drugs (ARVs) The AIDS Education & Training Centers (2006).

Sexual risk behaviour involves practices that do not protect the individual against unwanted pregnancy and sexually transmitted organisms such as.

ABSTRACT

Back Ground: Despite a significant decline in the new HIV infections in the general population, the risk of new HIV infections among the risky groups such as sex workers, MSM, PWID, young people, adolescents and Boda-Boda riders has remained disproportionately very high globally. In sub Saharan Africa, these key populations accounted for more than 20% of new HIV infections, and HIV prevalence among these populations is often extremely high.

Objective of the study: was to investigate factors influencing the uptake of selected HIV prevention methods among Boda-Boda riders in fort portal municipality Kabarole district Uganda.

Methods: A descriptive cross-sectional study was employed because the data was collected once at the point in time. An interviewer pretested administered questionnaire was used to collect data from 296 randomly selected boda-boda riders of Fort portal Municipality Kabarole district. Data was analyzed using STATA, version 12). The predictors of the each of three selected HIV prevention methods (condom use, HTC and Safe male circumcision) were presented separately. Binary logistic regression was used to assess the predictors of the uptake of HIV prevention methods. Both unadjusted and adjusted Odds ratios were presented.

Results: About 119(40.20%) of the participants were in the age range of 26-35years. More than half 185(62.50%) of the respondents were not knowledgeable on HIV prevention. 248(83.78%) were HIV negative while only 22(7.43%) were HIV positive. More than half 192(64.86%) of them discovered were circumcised. Current HIV status of Boda-Boda riders (AOR = 93.79; 95% CI =25.02-351.57), was significantly associated with the uptake of HIV testing and counselling. Religion was strongly associated with the adequate uptake of male circumcision (AOR=0.15; 95%CI=0.055-0.418). Boda-Boda riders who were unmarried (single) (AOR=4.47; 95%CI=1.24-16.15) were 4.47times were like to have adequate uptake of male circumcision compared to the married and separated. Those who were aged >35years (AOR=0.34; 95%CI=0.142-0.803), had adequate uptake of condom use. 293(98.99%) of the boda riders noted that they were heterosexuals. 178(59.46%) of the respondents agreed that male circumcision increases sexual pleasure. Majority of them had negative attitude towards condom use.

Conclusion: The motorcycle taxi drivers in this study only had high HIV/AIDS awareness level but lacked sufficient knowledge to curtail the spread of this killer disease. They had negative attitude towards condom use but had positive attitudes towards safe medical male circumcision and HIV testing. Long waiting time, services unavailability, lack of confidentiality and privacy, greatly inconvenienced the uptake of HIV prevention methods.

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CHAPTER ONE: INTRODUCTION

1.0 Historical perspective of HIV/AIDS

AIDS, informally called the gay plague or GRIDS (Gay-related immune deficiency syndrome) was first reported 1981 in U.S. CDC (centers for disease control) and Prevention recorded a clusters of KS (Kaposi's sarcoma) and PCP (Pneumocystis pneumonia) among gay males in California and New York City (Gottlieb 2006)

In 1984, it was discovered that the causative agent of AIDS was a retrovirus called HIV in 1986. The virus had previously been discovered by researchers at the Pasteur Institute in France, who called it lymphodenopathy-associated virus and was subsequently called HIV. The earliest instances of HIV infections were a plasma sample taken in 1959 from an adult male living in Kinshasa, HIV found in tissue samples from a 15 year old African-American teenager who died in St. Louis in 1969, and HIV found in tissue samples from a Norwegian sailor who died around 1976 (Hahn, et al., 2006*).*

1.1 Back Ground of the study

According UNAIDS Global report, (2017) in 2016; an estimated 36.7 million people were living with HIV (including 1.8 million children) with a global HIV prevalence of 0.8% among adults of which (69 percent) 25.5 million living in sub-Saharan Africa. Among this group 19.4 millions are living in East and Southern Africa which saw 44% of new HIV infections globally in 2016. About 30% of these same people do not know that they have the virus. Since the start of the epidemic, an estimated 78 million people have become infected with HIV and 35 million people have died of AIDS-related illnesses and about 1 million people died of AIDS-related illnesses in 2016 (End AIDS Progress Report UNAIDS, 2017).

In 2016, there were roughly 1.8 million new HIV infections a decline from 2.1 million new infections in 2015. However, a slightly more positive trend is emerging as new infections among adults are now estimated to have declined by 11% and 16% for the general population between 2010 and 2016, whereas there was only an 8% decline between 2010 and 2015 While new HIV infections among children globally have halved, from 300,000 in 2010 to 160,000 in 2016 (47%). Despite a significant decline in the new HIV infections in the general population, the risk of new HIV infections among the risky groups such as sex workers, MSM, PWID, young people, adolescents and Boda-Boda riders has remained

disproportionately very high globally (UNAIDS 2017). In sub Saharan Africa, these key populations accounted for more than 20% of new HIV infections, and HIV prevalence among these populations is often extremely high(Muldoon, et al. 2017; End AIDS Progress Report UNAIDS 2017).

According to Uganda ministry of health (2017) currently, there are about 1.2 million Ugandans living with HIV. HIV remains a significant challenge to Uganda. Its effects on the economy and society remains unacceptably high with up to 83,000 having contracted the HIV in 2016 (227 infections per day and 9 infections per hour), while 28,000 died of HIV related illness in the same year (77 deaths per day). However, the HIV/AIDS prevalence rate in Kabarole district stands at 14%, doubling the national average of 7% (Kasiisi project, 2016).

According to Ministry of Health Epidemiological Surveillance Report, (2017), it's believed that since late 1980s, the national response under the leadership of the Uganda AIDS Commission has been implementing HIV interventions such as condom use, safe male circumcision, HTC among other strategies for prevention and control of the epidemic. Despite these interventions, commercial motorcycle riders are still at high risk of contracting HIV/AIDS due to the following pre-disposing factors; complex social and cultural norms, having multiple sexual partners, long stay away from their homes, drug and substance abuse, mobility, and lack of consistent use of condoms and all these factors are responsible in different ways for the contraction and spread of HIV among the *Boda-Boda* riders.

According to Intervention-Modals-Report (2016), the national response recognized *Boda-Boda riders* among the Most at Risk Populations (MARPs) as one of the key priority target group for HIV prevention and control. Most At Risk Populations have been taken as a target group because they continue to be vulnerable to HIV/AIDS. According to Uganda AIDS Commission (2016), HIV prevalence has remained high among MARPs (For Example; 44% among sex workers, 13 % among MSM, 16.7% among PWID, 22% among fisher folk, 7.4% among Boda-Boda riders (BOD) all compared with the 7% national level prevalence rates). However, according to the Kasiisi project report, (2016), approximately 30% of the Boda-Boda riders are thought to have HIV/AIDS in Kabarole district.

According to the Uganda ministry of health report (2017), the commercial motorcycle industry has attracted largely the youth and with the hard economic circumstances, these young people spend much time in the business transporting their customers day and

night. This practice has exposed the motorcycle riders commonly referred to as boda-boda riders locally to a host of life threatening situations ranging from noise pollution, HIV/AIDS, accidents, and cold nights, to name the few.

Findings of Apostolopoulos et al., (2010) asserted that the motorcycle riding is very much vulnerable to HIV/AIDS owing to the fact that; Boda-Boda riders most of their time in transporting of customers that makes them in engage in risky sexual behaviours which makes them vulnerable to HIV contraction. Due to the high mobility levels in the sector, especially among the motorcycle riders can be considered to be extra-mobile, this trend makes it difficult for the riders to access health information, observe and adhere to the treatment plan. The high level of mobility witnessed among the motorcycle riders exposes them both to high and low HIV/AIDS prevalence areas for example from rural areas to peri-urban to urban areas hence serving as a vector in the transmission process.

Sexual behaviour still remains to be the most dominant practice that accounts for the highest HIV/AIDS transmission cases in Uganda among Boda-Boda Riders. The transport industry is considered to be highly vulnerable to this scourge owing to the nature and the working environment in the sector. The transport sector *Boda-Boda* included mostly place a lot of demand on its workers to spend long hours and away from home and family as well a situation which puts them at risk of indulging in risky sexual behaviours that might lead to contraction of HIV/AIDS (UNAIDS, 2017). Also according to Madraa et al. (2008:621) in a parallel research conducted in the Uganda HIV/AIDS sero behavioural survey which aimed at evaluating the HIV sexual transmission risk behaviour among people living with HIV/AIDS (PLWA) which revealed that among those who engaged in sexual acts in the previous year, 84% were unprotected at their last sexual encounters but didn't discover any information on Boda-Boda riders.

1.2 Statement of the problem

The scourge of HIV/AIDS among the most at risk groups including Boda-Boda riders has remained persistently very high despite the promotion of current prevention strategies such as HIV testing services, use of condoms, safe male circumcision and antiretroviral therapy in Uganda as whole (MOH, 2017), and the critical factors for the increased risk of HIV infection are not adequately known (Muldoon, et al. 2017).

As HIV epidemic persists and poses challenges to public health goals, Uganda need dedicated policies and actions to further strengthen the current HIV prevention strategies among the communities. Therefore identifying and promoting interventions that can effectively prevent new HIV infections should remain the primary focus to all the researchers including the government. This is because having youths dropping out of school finding refugee in the transport sector (Boda-Boda); the group without doubt is at a higher risk with minimal knowledge on how to fight HIV (Lubwama, et al. 2010).

Boda-Boda riders in Kabarole district forms one of the high risk groups in the spread of HIV/AIDS and the uptake of selected HIV prevention methods in this group are still unknown. In addition, no study of this kind has ever been conducted in Kabarole particularly in Fort Portal Municipality. Therefore it was against this back ground that the study intended to investigate the factors influencing the uptake of selected HIV prevention methods among boda-boda riders in fort portal municipality Kabarole district Uganda.

1.3 Objectives of the study

1.3.1 Broad objective of study

The main aim of this study was to investigate factors influencing the uptake of selected HIV prevention methods among boda-boda riders in fort portal municipality Kabarole district Uganda so as to device means to combat the scourge of the disease burden as well as combat the unacceptable levels of HIV/AIDS scourge in the region among the Boda-Boda riders.

1.3.2 Specific objectives

The objectives for this research were;

1. To assess the sexual behaviours of Boda-Boda riders in Fort Portal Municipality-Kabarole District
2. To ascertain the level of knowledge of Boda-Boda Riders on risk of HIV infections transmission in Fort Portal Municipality-Kabarole District
3. To investigate the attitude of Boda-Boda Riders towards the uptake of selected HIV prevention methods in Fort Portal Municipality-Kabarole District
4. To establish the predictors of the uptake of HIV prevention methods among Boda-Boda riders in Fort Portal Municipality-Kabarole District

1.4 Research questions/hypothesis

1. What are the Sexual behaviours of Boda-Boda Riders in Fort Portal Municipality-Kabarole District?
2. What is the level of knowledge of Boda-Boda Riders on r HIV infections prevention in Fort Portal Municipality-Kabarole District?
3. What are the attitudes of Boda-Boda Riders towards the uptake of selected HIV prevention methods in Fort Portal Municipality-Kabarole District?
4. What are the predictors of the uptake of HIV prevention methods among Boda-Boda riders in Fort Portal Municipality-Kabarole District?

1.5 Significance of the study and/or justification

1.5 .1 Justification of the study

Boda-Boda riders forms one of the high risk group in the spread of HIV/AIDS and yet it's one which behaviour change and communication programmes, skills training and HIV/AIDS prevention information has given little attention (UAC, 2016). Having youths dropping out of school and finding refugee in the sector, the group without doubt is at a higher risk with minimal knowledge on how to fight HIV. Uganda has made substantial progress towards epidemic control through the provision of ART including PrEP, nationwide coverage of HIV testing services, EMTCT and rapid scale up of VMMC. However, there remain major gaps, especially data to understand the epidemic below the sub-national unit level, for example size estimation for Key populations including the Boda-Boda riders. These data gaps inhibit improving programming for these groups. Linkage and retention into care also requires more research and improvement to achieve epidemic control (Ministry of Health 2017).

5.1.2 Significance of the study

This study will provide the information that is of help to stakeholders and District health team at large to have a better understanding of the seriousness of the problem regarding the HIV preventions practices among the Boda-Boda riders in a time of highly active antiretroviral therapy in the area of the study. The results obtained may be of help in the re-evaluation of the initial preventive and health Promotive strategies against HIV infection among the Boda-Boda riders in the context of availability of antiretroviral drugs. The research-based findings that this study provides, will not only contribute to the existing body of knowledge and provoke further research on the subject but will also be useful to organizations, the Government of Uganda, and other advocates of condom use in their quest to come up with effective policies, programmes, interventions and strategies that will effectively stem the current unacceptable levels of HIV epidemic among the Boda-Boda riders in the district. This study will also motivate other scholars particularly Epidemiologists and researchers to carry out research on the factors influencing the uptake of selected HIV prevention methods among boda-boda riders in fort portal municipality Kabarole district Uganda in a time of highly active therapy in other areas.

1.6 Limitations of the study and assumptions

Although, this study was the first of its kind to be conducted among the Boda-Boda riders in Fort portal municipality and revealed many interesting facts, this study had its limitations. First of all, the questionnaire was a researcher made, although with due consideration and consultation, still could be improved with different factors clearly distinguished. Secondly, since the questionnaire was a "self-report measure" the possibility of bias cannot be ruled out, perhaps a personal interview with the Boda-Boda riders might give much more in-depth information. Thirdly, there is a possibility of selection bias as the study focused on those in out of schools.

1.7 Scope of the Study

The study was carried out in Fort portal Municipality Kabarole District, western Uganda. There are three Divisions in the Municipality all of them were sampled. This was because they had a good representation of Boda-Boda riders hence made it possible for the principal investigator to acquire relevant first hand information from respondents. The study investigated the factors influencing the uptake of selected HIV prevention methods among boda-boda riders in fort portal municipality Kabarole district Uganda. The study was limited to the Boda-Boda riders and therefore all the Boda-Boda riders were included. The study provided an exploratory finding in the Ugandan context, and presents opportunities for further research. A sample of 296 Boda-Boda Riders was interviewed in this study.

CHAPTER TWO: LITERATURE REVIEW

2.1Introduction

This chapter highlighted the literature supporting the study. It gave a detailed account of the socio-demographic factors, sexual behaviour and health system related factors associated with the increased risk of HIV infection among Boda-Boda Riders.

2.2 Sexual behaviours among motorcycle taxi drivers

There is proven evidence of the increase in the risky sexual behaviours such as having multiple sexual partners coupled with non-use of condoms among boda-boda drivers in many Sub Saharan African countries. Number of reasons haven cited for the increase of engaging in risky sexual behaviours including reduced focus on primary HIV prevention in the era of antiretroviral therapy scale up. Boda-Boda Riders are especially vulnerable in this respect as they have limited or no historical knowledge or experience with HIV (UNAIDS; 2017).

Previous studies have focused more in measuring and classifying Boda-Boda Riding as risk taking (UNAIDS 2015) for instance, it was observed that in communities with high servo prevalence rates, like Botswana, most new HIV/AIDS infections occurred among motorcycle taxi drivers. These studies articulate the increasing vulnerabilities of motorcycle taxi drivers to HIV infection as a consequence of increased non-use of condom, multiple concurrent partnerships and related exposing behaviours such as early sexual initiation, alcohol and substance use and poor access to information and services (Garber G, et al. 2012).

According to the Ministry of Works and Transport, (2011), behavioural factors are those related to individual behaviour over which an individual has a great amount of control. The role of behavioural factors in the transport sector is of critical importance given that most of the workers in the sector and in sector-relevant populations are in the sexually active age range.

A study conducted by Adeoye, (2011) in Benin, Nigeria revealed that the interaction between the motorcyclists and a wide range of people in the society predisposed them to having multiple sexual partners and it was discovered that about two-thirds (66%) of the motorcyclists admitted to having multiple sexual partners.

In East Africa, motorcycle taxi drivers who were HIV positive and had STIs were found very early on in the epidemic. The relatively large number of unprotected sexual acts and limited availability of condoms indicates inadequate prevention and low perceptions of risk among this high- risk group (International Organization for Migration, 2013). A study of sexual risk behaviours, condom use patterns and STI treatment-seeking behaviours among Boda-Boda Drivers operating along major transport corridors in Uganda found a high proportion of Motorcycle taxi drivers, who had multiple sexual partnerships did not use condoms consistently and delayed seeking treatment for STIs (Matovu & Ssebadduka, 2012).

Motorcycle taxi drivers and sex workers, both considered MARPs, have long been associated with risky sexual behaviour and the spread of HIV in East Africa, in Africa and in other parts of the world. Transport workers spend prolonged periods of time away from home and, due to a combination of loneliness, peer pressure, alcohol use and to satisfy their sexual needs, may resort to casual sex or develop regular non-marital sexual relationships while in transit (Ntozi et al. 2013). Some studies (Ntozi et al. 2013) have also reported that Motorcycle taxi drivers often comprise approximately 28-30% of the clientele of sex workers.

Great numbers of sex workers, many of them lack other livelihood options, frequent stopping points along transport corridors. This situation creates an environment where individuals engage in sexual acts with multiple concurrent partners, thereby increasing their chance of contracting HIV and other STIs. Through sexual networks, people with multiple concurrent partners have the potential to spread HIV infection from high-risk groups to the general population. Because Motorcycle taxi drivers normally spend long time away from home they may engage in sex with many casual and semi- regular partners along their transport routes, sometimes without using condoms (Morris & Ferguson, 2016), exposing themselves to the risk of acquiring or transmitting HIV.

Mediation in casual sexual relationships through middlemen is common at Boda-boda stages throughout the region. They also provide advice to Motorcycle taxi drivers who are unfamiliar with a town, translate for those unable to speak the local language and put Motorcycle taxi drivers in contact with local women who sell sex. It is also reported that Motorcycle taxi drivers often rely on middlemen to identify unmarried and ‘safe’ (HIV-negative) women with whom they can have casual sex. Sex workers use middlemen because they assure discretion and guarantee that Motorcycle taxi drivers will pay well

(Gysels et al. 2011).

The literature indicates that Motorcycle taxi drivers spend most of their time travelling along dangerous and remote highways. They face exhaustion, boredom, health problems, road accidents, attacks and mechanical failure of their Motorcycles. Driving requires long working hours with little rest, and poor living conditions that offer little or no privacy and are highly insecure. Stressful conditions such as these may play an important role in Motorcycle taxi drivers' sexual risk-taking behaviours, and on their perceptions of HIV/AIDS (Uganda AIDS commission, 2015).

In a study conducted in the 12 hot spots by Matovu & Ssebadduka, (2012) in Uganda, found that condom use in the past 30 days was at 93.7% among sex workers and 86.8% among motorcycle taxi drivers. Despite these rates of condom use, consistent condom use was low with only 44.9% of sex workers and 21.1% of motorcycle taxi drivers reporting consistent condom use. In the 30 days preceding the survey, of 261 motorcycle taxi drivers, 54% reported using condoms with casual partners, 56% with regular partners and 26% with spouses.

According to Matovu, et al. (2013) it was reported that alcohol consumption, particularly before sex, impairs a person's judgment with regard to protected sex, resulting in many instances in failure or inconsistency in use of condoms. Motorcycle taxi drivers reason that the sexual stimulation that alcohol arouses and the presence of female bar tenders who dress provocatively, probably to lure motorcycle taxi drivers into having sex, leads to unprotected sex following alcohol consumption.

Recently a study conducted by Plummer et al. (2016) found that the males in nine rural villages in Uganda reported that condoms and male circumcision reduced sexual pleasure and that they would not take any of them because they were unfamiliar with them, unable to have a say in decision-making regarding condom use, trusted their partners, did not want to prevent conception, and believed that they had little risk of acquiring a sexually transmitted infection (STI) or HIV.

2.2.1Underlying Factors to Risky Sexual Behaviours among Boda-Boda Riders

Commercial motorcycle riders are at high risk of contracting HIV/AIDS due to the following pre-disposing factors; complex social and cultural norms, having multiple sexual partners, long stay away from their homes, drug and substance abuse, mobility, and lack

of consistent use of condoms. All these factors are responsible in different ways for the contraction and spread of HIV among the boda-boda riders.

According to UNESCO/UNAIDS Research Report (2016), Complex social and cultural norms held and followed by the Boda-Boda Riders as well the health activists pose challenges to effective fight against the pandemic. Some of the practices observed in both ends tend to reinforce risk and bar behaviour change. For instance the health activists have made it a culture to encourage and focus on individual behaviour change and not group a practice that seems to undermine the fight against HIV. Besides stand-alone behaviour change interventions have proofed to be in-effective and a combination of two or more is recommended. Wife inheritance as a cultural practice accounts for a good fraction of the HIV/AIDS infections within the community.

Mobility accounts for some percentage in the HIV transmission. According to Mwanga (2011) in his study "Half plate of rice to a male casual sexual partner, full plate belongs to the husband", mobility and migration are also linked with the risk of HIV transmission and contraction. For example fishermen, business men/women, motorcycle taxi drivers, and all those whose income generating activities involves travelling from one point to another are at a high risk of HIV infection since travelling means more interaction and possibly having unprotected sex (Wambura, 2012).

The commercial motorcycle riders often spend long periods away from their homes a situation that puts them to be at a higher risk of HIV infection. Long spells away from home has been found to have a significant bearing on the risky sexual behaviours. As noted by El-Bassel in his study in Kazakhstan, market men and women who spend longer trips are reported to have more sexual partners. Among the Latino migrant men in New Orleans, intra and inter State travel was linked with inconsistent condom use, poor HIV testing and counselling practices with casual sex partners. In Cameroon, men who stay away from their homes relatively for a long period of time tend to exhibit high infection prevalence rates than those who are always at their homes. Also, within the group multi-partnering and non-spousal sexual relationships were evident (El-Bassel, 2011).

According to Thomas, (2010), it was discovered that the low socio-economic status of the Boda -Boda riders equally exposes them to risky sexual behaviours. There is empirical evidence pointing to the relationship between low socio-economic statuses to high HIV risk. Majority of the Boda-Boda riders' work for long hours for little pay this leaves them to occupy the lower economic status in society and thereby pushing some of them to

indulge in other risky behaviours such as drug abuse and sex exchange for money. In some instances where the commercial riders occupation attracts some cash, still the group remains at risk for more cash flow to them attracts the attention of women to them.

According to Hladik, et al. (2017), Boda-Boda riding is assumed to belong to losers in life; this coupled with the nature of harsh working conditions of their occupation renders the Boda-Boda riders powerless. This shape their identity and risky sexual practices. For example in South Africa, mine workers explained how the hard and less desired mine work makes the workers to attach any sense to the risk and dangers posed by HIV/AIDS compared to the hard and dangerous mine works. The hard work and the dangers associated with Boda-Boda riding more often than expected tend to negate the risk of acquiring HIV/AIDS thus promoting the risky sexual behaviours among its operators.

2.3 Knowledge of Commercial Motorcycle Riders on Safe Sex and HIV infections

Knowledge of the basic facts about HIV&AIDS is generally high among the MARPs. For instance, nearly 90% acknowledge that using a condom reduces the risk of HIV infection. Over sixty percent (66.5%) shares the view that "putting an expectant mother on anti-retrovirals can reduce the risk of transmitting HIV to the baby". However, some misconceptions still prevail. For instance, over a quarter of the MARPs still believe that HIV can be transmitted by blood sucking insects such as mosquitoes, fleas and bed bugs. An equally big proportion-almost a third considers it risky, sharing a bed with someone known to be infected with HIV. The proportion of those that trusts the condom as an effective means in prevention of infection with HIV is fewer than of those that does not trust it. Similarly, the proportion of the sample which agrees that one can "can have sexual intercourse with someone known to be infected with HIV so long as a condom is used" is only 38.5% compared to 54.9% who say they would not trust the condom to protect them (Baseline Survey report, 2011).

According to Baseline Survey report, (2011), there is nearly universal acknowledgement of the benefits of knowing HIV status. Ninety-four percent (94.3%) of the sampled MARPs believes as true that there are advantages in knowing HIV status. The commonly cited advantages of knowing HIV status include opportunity to start treatment and care early. The other advantages include ability to live positively and plan for the future, opportunity to avoid re-infection and avoiding strenuous work. However, the nearly universal awareness of the benefits of knowing HIV status is not well matched with the level of

willingness to disclose HIV status. Results show that only slightly over half (54.2%) the sampled MARPs within the 11 urban authorities, support disclosure of HIV status.

According to Uganda Population Secretariat (2008), a Uganda's National AIDS Control Program (NACP) was set up in 1986 with the support of the World Health Organization (WHO), to respond to the HIV/AIDS threat. The nation addressed HIV/AIDS as a multi-sectoral challenge, thus, apart from tackling the natural dynamics of the epidemic, other aspects such as HIV/AIDS awareness education and campaigns to encourage positive sexual behaviour change were also engaged. Policies were developed to employ a concerted effort from individuals and various institutions across the nation to address the HIV/AIDS problem which resulted in a significant decline in HIV prevalence rates.

According to Abiodun, (2013), Knowledge and attitude towards HIV/AIDS and the practice of safe sex contribute significantly to the promotion or reduction of the spread of the disease. The practice of safer sex with the use of condoms can prevent HIV transmission especially among those with multiple sexual partners, a practice that is quite common among commercial motorcyclists. Motorcycle taxi drivers, long distance drivers, and alcohol and substance abusers happen to be at a high risk of contracting HIV/AIDS (Hope, 2011; Beyrer, 2009 cited by Adeoye 2011). Even though, a good percentage of these groups knew about the correct risk reduction behaviour in the transmission and contraction of HIV, only a small percentage minded to use condoms despite having multiple partners (Bwayo et. al 2009).

According to UNAIDS (2016), only, 21% of Boda-Boda Riders correctly understood ways of preventing HIV contraction. Lack of accurate and correct information about sex has led to increase in HIV transmission and stigma. Although there is no much literature on the role of motorcyclists in the spread of HIV/AIDS, this group is almost similar to the long distance truck drivers in terms of behaviour and the nature of their work. Just like truck drivers, motorcyclists are exposed to close interactions with different segments of the population a factor which equally puts them at a risk state (Pison, et al. 2013).

Previous studies have indicated that the mobile population lack adequate knowledge about HIV/AIDS despite the public health campaigns. In Mexico, the knowledge levels among motorcycle taxi drivers, truck drivers and migrants on modes of HIV/AIDS transmission is higher but there are misconceptions surrounding how one contracts the disease; some believe mosquitoes can transmit the virus, HIV is the disease for the homosexuals,

drug addicts and one's physical appearance can tell his/her HIV status (Mongkuo, et al. 2010).

According crane survey report, (2009) Motorcycle taxi drivers were aware that the risk of acquiring HIV increased with multiple sexual partners (98.5%) and unprotected sex (98%) with an infected partner, suggesting that they had enough knowledge of HIV/AIDS to prevent infection. However, isolated pockets of misconceptions abound. Some findings showed that misconceptions about HIV transmission, and awareness of STIs and how they are transmitted, are not always consistent. Although Motorcycle taxi drivers are generally aware of HIV/AIDS, some were unsure that HIV is transmitted by mosquitoes and by sharing food (14.2% and 11.1% respectively). This slightly concurred with what found out by Ministry of Health, (2012) that the percentage of Boda-Boda Drivers with these misconceptions was much lower than the national average.

An investigation of knowledge of preventive strategies against HIV/AIDS was undertaken by Ntozi et al. (2013) using focus groups of Motorcycle taxi drivers. The respondents knew that the only remedy was prevention through protected sex using condoms. Despite their awareness of ways to protecting themselves against HIV, participants reported that not much had been done on this front. In their responses, Motorcycle taxi drivers said, "those with multiple sexual partners are at a high risk of getting AIDS because even condoms may fail and some women may even convince you not to use condoms pretending they are safe" (Ntozi et al., 2013). Also found that although HIV awareness was high among the groups involved in the study, non condom use among motorcycle taxi drivers prevailed because of trust, especially on the part of female partners, notwithstanding the fact that it was common knowledge that the men were often unfaithful. However, in rural south west Uganda also was found high awareness of HIV/AIDS but with non sporadic use of the condoms due to "dislike or partners refusing them".

According to Matovu and Ssebadduka (2013), knowledge of condom use as an HIV-prevention strategy is generally high. Attitudes towards condom use were generally favourable as well, with 91% of sex workers and 82% of Motorcycle taxi drivers agreeing with the statement, "Condom use is the best method for HIV prevention". However, one-third of motorcycle taxi drivers and 28% of sex workers agreed with the statement that "Condoms kill the mood for sex". In addition, 18.4% of Motorcycle taxi drivers agreed with the statement, "I don't like to use condoms myself". Motorcycle taxi drivers cited the need to "please the lower part of the body" as one of the reasons why they normally do not

like to use condoms (Adeoye, 2011; Matovu & Ssebadduka, 2013). Although many programs for the prevention of HIV/AIDS and on other sexually transmitted diseases are being carried out in Nigeria, the commercial motorcyclists, a group similar to long distance drivers, have been virtually overlooked in the dynamics of urban HIV and their role as potential carriers of HIV/STDs (Aitalegbe, et al. 2011).

It has been demonstrated that increased knowledge about AIDS is not a predictor for behavioural change (Taheri et al. 2009) although knowledge about the disease is a prerequisite for change. In Botswana, motorcycle taxi drivers continue to engage in risky sexual behaviour despite widespread information and knowledge about HIV/AIDS. A more recent study by (Assadian et al. 2014) found that among motorcycle taxi drivers questions related to HIV/AIDS knowledge yielded 96% correct responses. Despite this knowledge the study found that perceived use of testing services and condoms remain lower than might be predicted based on knowledge scores (Assadian et al. 2014). By 2008, in Botswana, only 43% of motorcycle taxi drivers had comprehensive knowledge of HIV and almost half of adolescents could not correctly identify the common misconceptions about HIV and AIDS transmission (Askarian et al .2014).

Lollis et al. (2012) observed the correlation between HIV/AIDS knowledge and place of childhood upbringing and the relationship between HIV/AIDS knowledge and education. Many motorcycle taxi drivers are not aware of the risks and vulnerabilities associated with HIV infection. Although not sufficient to change behaviour, lack of knowledge is therefore one of the major factors making motorcycle taxi drivers vulnerable to HIV infection

Lack of preventive knowledge increases the risk of acquiring the disease and transmitting it to others. In order to realize greater success of programs in Fort portal-Kabarole District , it is necessary to address the reason for the observed reluctance. Proper and functioning HIV prevention for youth require good knowledge about the disease and also access to health care. Good knowledge, attitudes and practices (KAP) of HIV prevention are essential in order to acquisition of HIV infection. Therefore proper and well-functioning prevention of HIV requires clear and relevant information and instructions from health care givers.

2.4 Attitude of Boda-Boda Riders towards the uptake of selected HIV prevention methods

According to Millstein et al. (2012), individual perception, notion or constraint is likely to influence condom use. In Zambia, having a sexual partner from the same community was associated with non-use of a condom. In sub Saharan Africa, perceived lack of efficacy and condom related problems were barriers to condom use. In South Africa, the negative attitude towards condoms and other contraceptives was consistently associated with the probability of decreased free condom procurement from public health facilities. In Nigeria, the major barriers to condom use experienced by motorcycle taxi drivers, truck drivers were that the condom reduced their sexual satisfaction and hindered their sexual interest. In Sao Paulo, Brazil, most motorcycle taxi drivers, heterosexual men used no condom when having sex because they were unaware of their HIV positive status until they were tested due to illness. In Kenya, motorcycle taxi drivers who had coitus with sex workers refused to use a condom under the pretence that the condom was unpleasant, defective, harmful, unnecessary, and too hard to use.

The findings of Bunnell et al (2009:90) discovered that the majority of the motorcycle taxi drivers engaged in risky sexual behaviours in the eastern part of Uganda. They believed that condom use was associated with a lot of problems including causing rashes in their private parts hence negative attitudes towards condom use. Men also indicated that condom were as important only for extra marital sex while, for women, condoms served a contraceptive purpose. This is almost similar to findings of Kusanthan et al. (2012:2-3) in their study which indicated motorcycle taxi drivers had a negative attitude towards condom use within a marriage quoting some reasons non condom use in sub Saharan African countries as they increase emotional distance between married partners.

According to Pappas- DeLuca et al., (2009), generally, people's attitudes may change with education. Individuals' decision to circumcise is more influenced by culture or health, and the key persons involved are parents (when Male Circumcision (MC) was done in childhood), doctors, individuals and sexual partners. Pappas DeLuca et al. (2009), also narrated that in Uganda, a qualitative research study that assessed the attitudes towards male circumcision indicated negative attitudes and perceptions in non-circumcising areas such as northern and central region. Older men felt they were too old for circumcision and they did not see any need to uptake while some uncircumcised men

in non-circumcision tribes were not willing to be circumcised because they thought they were “okay” the way they were. Some perceived circumcision as an old and outdated practice, while some perceived the removal of the foreskin to be a health risk as the foreskin acts as a protective shield to the penis.

A study conducted in Nyanza Province Kenya by Lukobo & Bailey, 2007 cited by Mugenyi, (2018), discovered that motorcycle taxi drivers who were not practicing traditional male circumcision expressed limited interest in the practice although some expressed considering Male Circumcision because of beliefs that women preferred circumcised men. In addition, non-circumcised motorcycle taxi drivers revealed that they would adopt MC for themselves or their sons if it was proven to reduce the risk for HIV and STIs and on condition that it is to be offered free of charge or at a nominal cost. The following were cited as reason not to circumcise: cultural tradition, pain, and safety, as well as other barriers, such as cost and the concern that men would engage in more sex if they perceived themselves to be fully protected by circumcisions (Mugenyi, 2018).

A study conducted by Gadegbeku & Saka (2013) in Accra, regarding attitude of the motorcycle taxi drivers towards HTC of HIV/AIDS revaelde that despite the fact that HTC services have numerous advantages, acceptance of this service in many countries especially where HIV is highly stigmatized and access to this services and support for motorcycle taxi drivers who test serous positive or HIV infected motorcycle taxi drivers are limited. The study further revealed that although 95% of respondents knew their sero-status could be checked, only 37% had actually heard about availability of HTC services. Out of the 37% who were aware of this service few (6%) had actually been to the HTC centre either to visit a friend (2%) or to check their status (4%).

To gauge attitudes towards safer sex, there is need to know if people think a female partner is justified in refusing to have sex with her spouse when she knows he has a disease that can be transmitted through sexual contact. However, many people erroneously believe that some HIV prevention strategies especially condom use promotes promiscuous behaviours among communities therefore most of the religious denominations are at the forefront towards discouraging the uptake of HIV preventive measures among motorcycle taxi drivers In Fort Portal-Kabarole district. Finally no strategies have been taken by the government on church to combat the perceived barriers. Studies in other regions have suggested that antiretroviral drugs have changed the perception of AIDS from a death

ondents got tested for HIV because they wanted to begin new sex
ut of curiosity.

sentence to a treatable, manageable disease; this factor might have reduced the fear surrounding HIV, and in turn has led to an increase in risky behaviours. This could be the same story here in Fort Portal as the prevalence of HIV among the motorcycle taxi drivers is on increase and yet the uptake of the HIV prevention strategies literally known among this risky group in Kabarole district.

2.5 Predictors of the uptake of HIV prevention methods among Boda-Boda riders

High mobility also affects access to and use of health services. Specifically, mobility is associated with delays in seeking treatment, especially during transit. Consequently, there is potential for minor health problems to turn into life-threatening illnesses. For example, motorcycle taxi drivers and long distance truck drivers interviewed reported that, on several occasions, they had failed to seek healthcare services in a timely manner due to a perception that this would delay their business schedules. It was also reported that motorcycle taxi drivers, truck drivers and other migrants delay in seeking healthcare and in most cases miss opportunities for health education and BCC campaigns. They also face challenges in adhering to treatment regimens (Wabwire-Mangen, et al. 2013).

Management Sciences for Health report (2016) on the distribution of health facilities; the majority of motorcyclists indicated a preference for private healthcare facilities, as they perceived that these provided faster and better quality services than public health facilities. Common explanations for not seeking health services at government health facilities included: long distances, busy business schedules, high transport costs, long queues, corruption attitude of health staff, long waiting and the absence of the required services and stock outs.

Kaai et al. (2012) Mapping of hot spots along the Kampala-Juba highway found that at over half of the health facilities in key stop points the most senior member of staff was a nurse. Out of the 64 health facilities identified, only six were health centres; the rest were private clinics and shops selling drugs. The high proportion of shops selling drugs (almost one-third of all existing facilities) could indicate a high level of self-medication among long distance truck drivers, commercial sex workers and motorcycle taxi drivers along the highway. Although treatment for STIs was found to be available in most facilities, only 44% had testing services. The mobility of transport sector workers makes it difficult for them to access health information and services. It is common, for instance, for motorcycle taxi drivers and long distance truck drivers to treat themselves with traditional medicinal herbs or pills bought in markets en route. They have trouble with more formal medical

facilities as their mobility makes it difficult to keep appointments at clinics and make regular follow-up visits. Those being treated may also find it difficult to adhere to a treatment regime offered to the hence increasing the risk of HIV infections among these key groups.

According to the Crane Survey Report, (2008/2009), it was found out that HCT services were available for MARPs at static sites as well as through mobile outreach. Service providers had devised means of reaching MARPs by mobilising their peers and by moonlight VCT carried out at night. These services were, however, available in less than half of the hot spots visited. The survey also found scattered efforts by NGOs operating in the various hot spots to offer home-based care (HBC) to MARPs.

A study conducted in Nigeria by Shaghaghi et al (2014) found that distance was associated factor to the low uptake of HIV prevention methods. Also in a similar study carried out to understand practices in rural communities found that motorcycle riders engaged in risky sexual behaviours because the health facilities were inaccessible.

According to Hussein, et al. (2008), length of waiting time for medical consultation has been identified as one of the predictive factors for low uptake of HIV prevention methods. The public may prefer the medical services as their in order in safe sex practices but waiting time may affect their working time and finally leave without accessing the services. According to study done by the World Bank in Uganda, it was reported that the services are of such low quality that even the poor do not find that the services warrant the time and money costs involved in accessing them"(World Bank 2009).

Gabrysch and Campbell (2009) in their work stated that perceived quality of care, which only partly overlaps with medical quality of care, is thought to be an important influence on health care-seeking. Assessment of quality of services "largely depends on [people's] own experiences with the health system and those of people they know". Although some elements such as waiting times can be measured objectively, the perception of whether these are a problem and affect quality is more subjective. Elements of satisfaction cover satisfaction with the outcome, the interventions and with the service received – including staff friendliness, availability of supplies and waiting times.

Concerns regarding confidentiality were also linked to stigmatization. Direct trust relating to health workers providing HIV services was significant determinant of uptake of HIV prevention methods among boda-boda cyclists. Also, the challenge of travel hours, long

queues and limited opening hours of health facilities especially affects boda-boda cyclists' ability to access services because boda-boda cyclists may have to miss work in order to undergo the test. The cost of HTS was found to be significant determinant of HIV testing especially among boda-boda cyclists. The study revealed that offering HIV services free of charge as well as conducting mobile HIV services significantly facilitates young people's demand for HIV testing (Strauss, et al. 2015).

A few studies in rural Uganda and urban Zambia have shown that there was relatively low uptake of HIV prevention services among young people, boda-boda riders and married people with a high HIV prevalence (Kazooba, et al. 2012). Lower levels of socioeconomic conditions, occupation, education, and income were factors strongly associated with reduced access to health care services . In addition, people have masked their desire for HIV testing because of the associated stigma, leading to suboptimal health services (Bendavid et al. 2010)

2.6 THEORETICAL FRAMEWORK

This study is guided by AIDS risk reduction model (ARRM).

2.6.1 AIDS Risk Reduction Model (ARRM)

The AIDS Risk reduction Model (ARRM) provides a framework for explaining and predicting the behaviour change effects of an individual specifically in relationship to the sexual transmission of HIV/AIDS. A three stage model, the ARRM incorporates several variables from other behaviour change theories including the, Health Belief Model theory, emotional influences and interpersonal processes (Catania et al, 1990). The stages as well as factors that influence the successful completion of each stage are as follows

Stage1. *Recognition and labelling of one's behaviour as high risk;* this is based on knowledge of sexual activities associated with HIV transmission, belief that one is personally susceptible to contracting HIV and belief that HIV/AIDS is undesirable.

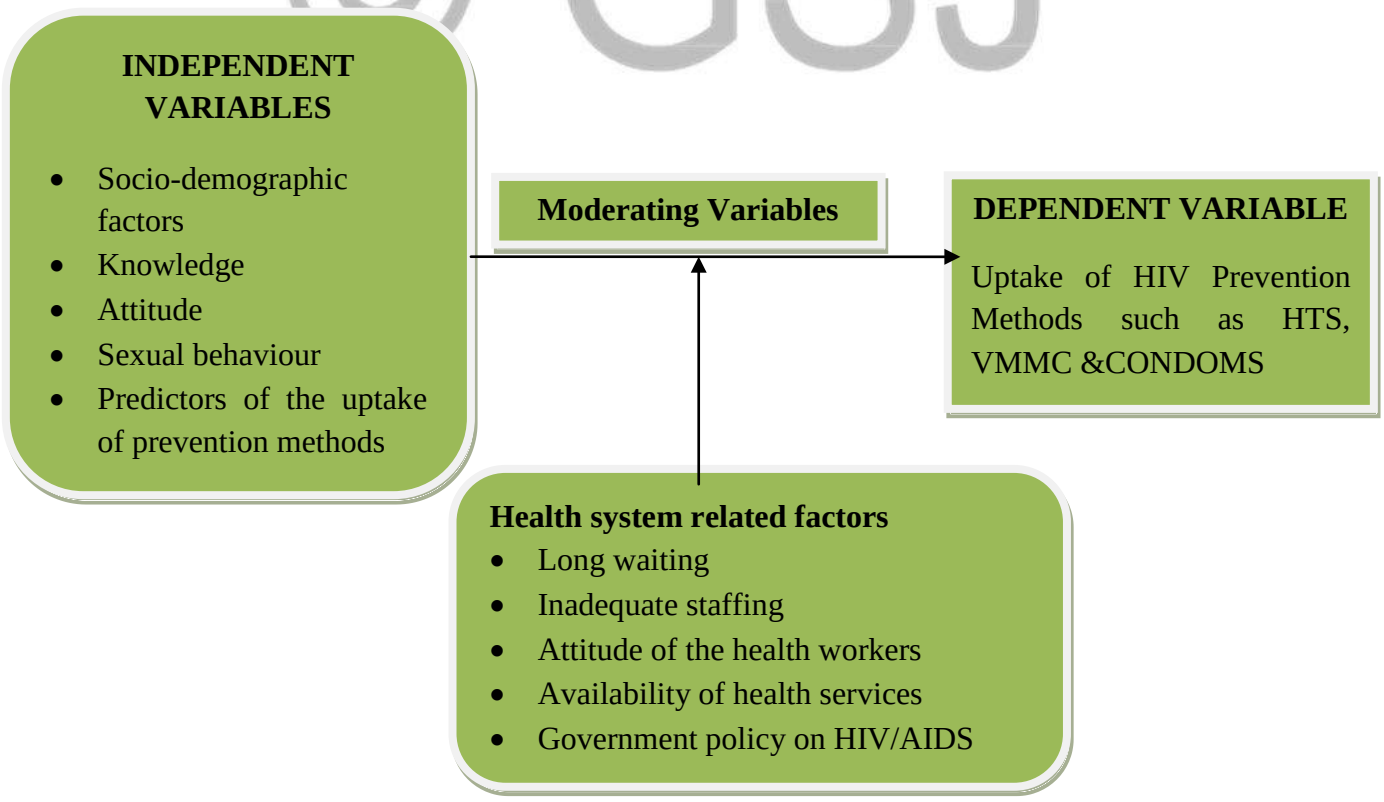
Stage2. *Making a commitment to reduce high-risk sexual contacts and to increase low risk activities;* the main assumptions in this stage include cost and benefit analysis of the risk, importance of sexual practice as seen by the individual and its potential risk, and knowledge of the healthy utility as well as social factors (group norms and social support), are believed to influence an individual's cost and benefit and self –efficacy beliefs.

Stage3. *Taking action;* this stage is divided into three phases: a) Information seeking: b) Obtaining remedies and c) enacting solutions. Depending on the individual, phases may occur concurrently or phases may be skipped. The main areas that are of importance in this stage are the place of social networks and problem solving choices; prior experiences with problems and solutions; level of self-esteem; resource requirements of acquiring help; ability to communicate verbally with sexual partner; and sexual partner's beliefs and behaviours.

In addition to the stages and influences listed above, the author of ARRM (Catania et al 1990) identified other internal and external factors that may motivate individual movement across stages. For instance, aversive states (example, high levels of distress over HIV/AIDS or alcohol and drug use that and blunt emotional states) may facilitate or hinder the labelling of one's behaviour. External motivators such as public education campaigns, people to examine and potentially change their sexual activities.

2.5.2 Conceptual framework

The variables involved in the study were conceptualized using the model delineated in Figure1.



Source: Modified from Catania et al. 1990

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter began with a description of the chosen research design, followed by an outline of the research setting and sample size, data collection techniques and procedures, ethical considerations, data management, data analysis as well as, how rigor was achieved.

3.2 Research Design

A descriptive cross-sectional study was employed because the data was collected once at the point in time. It was employed because it involved the distribution of questionnaires, or would be conducted by interview or observation. This design allowed for standardization in the asking of questions and the categorization of the answers provide. According to Watson, (2015), Quantitative research, involves a range of methods concerned with the systematic investigation of social phenomena, using statistical or numerical data. It is essentially deductive: measurements are made, analysis was applied, and conclusions are drawn.

The decision to choose a quantitative research design was primarily guided by the philosophical assumptions and research questions of the study, as well as an examination of the available literature on the study topic. Looking at the nature of the three research questions of this study, choosing a quantitative design provided the tools to answer these questions. The unavailability of such studies in Kabarole district on this topic was also considered; hence a quantitative research design that provided baseline information on this topic is required. It was very difficult to understand as well as, interpret factors associated with HIV prevention methods without acquiring data that measured these concepts (Mugenda 2006).

4.3 Study area

This study was carried out in fort portal municipality in Kabarole District based on information on high prevalence of HIV among the Boda-Boda riders in the district which stands at approximately 30% (The Kasiisi project, 2016). The municipality is made up of three Divisions which include; East, West and South Divisions. Fort Portal is located about

180 kilometres (110 mi), north-west of Mbarara, and the largest city in the Western Region. This is approximately 297 kilometres (185 mi) by road, west of Kampala, Uganda's capital and largest city, on an all-tarmac two-lane highway. The coordinates of the town are 0°39'16.0"N, 30°16'28.0"E (Latitude: 0.654444; Longitude: 30.274444). In 2010, the Uganda Bureau of Statistics (UBOS) estimated the population at 46,300. In 2011, UBOS estimated the population at 47,100. According to the chair man of boda-boda riders, the district has about 18332 boda-boda riders with about 3845 boda-boda riders in the municipality. Fort Portal is home to three hospitals. Fort Portal Regional Referral Hospital, a 300-bed public hospital administered by the Uganda Ministry of Health is the largest The next-largest is Holy Family Virika Hospital, a private hospital with a bed capacity of 155, owned by the Roman Catholic Diocese of Fort Portal. The smallest of the hospitals is the 100-bed Kabarole Missionary Hospital, community hospital administered by the Church of Uganda, originally founded by John Edward Church of the Church Mission Society (Atuhaire, 10 August 2016).

3.4 Study population

Target population consisted of Boda-Boda riders in Fort portal municipality. The study population was drawn from three divisions in the municipality for example; East, West and South Divisions. All Boda-Boda riders who were found during the study period were subjected to the questionnaire, regardless of their level of education and the age.

3.5 Sampling and sampling techniques

3.5.1 Sample size determination

Sample size was calculated using Kish Lesley's formula that applies to prevalent studies and populations above 10,000

$$n = \frac{Z^2 P(1-p)}{d^2}$$

Where; n – Minimum sample size required, Z- Standard deviation set at 95%, which corresponds with 1.96, P- Expected HIV prevalence (7.4%) among the Boda-Boda riders in Uganda (source: Crane Survey report, 2013) and d- Desired precision e.g. 5%

Therefore; $\frac{1.96^2 \text{ X}0.74 (1-0.74)}{0.05^2}$

=296 respondents

Therefore a sample size of 296 boda-boda riders was interviewed in this study.

3.5.2 Inclusion criteria: The study included all Boda-Boda riders regardless of the age, and level of education and those who were willing to participate in the study. However, the study were excluded all those with unsound mind to maintain an interview and also understand the questions and those who were not willing to participate in the study

3.5.3 Sampling Procedures

Purposive sampling procedure was used to select the study area because a total population of 3845 Boda-Boda riders are found in Fort portal Municipality with expected prevalence 30% of Boda-Boda riders thought to have HIV/AIDS (Kasiisi project report)

Stratified proportionate sampling was conducted in the study area to obtain the sample of 296 respondents as shown in the table below.

Stratum	**Population**	**Sample**
West Division	$\frac{923}{3845}$x296	71
South Division	$\frac{1243}{3845}$x296	96
East Division	$\frac{1679}{3845}$x296	129
Total		**296**

In each stratum only the Boda-Boda Riders who met the inclusion criteria were selected randomly and then subjected to questionnaire. However before interviewing respondents, each respondent was given an explanation on the objectives of the study and then requested to make an informed consent before any information is sought.

3.6 Data collection

3.6.1 Data collection instrument

The anonymous study was carried out by the principal investigator himself to ensure the efficiency and effectiveness of the data collected. The original validated questionnaire (in Runyoro/Rutooro for those who do not understand English consisted of both open and close-ended (multiple-choice) questions. The questionnaire was developed by researcher basing on a previously conducted literature review and specific cultural and religious considerations and a number of questions included in the final instrument. Questions about demographic factors included age, gender, ethnicity, education and marital status. These factors were chosen because existing research has shown that these factors are

critically associated with uptake of HIV prevention methods among boda-boda riders. Respondents were asked questions about HIV prevention using a standard scale. The Scale (Cronbach's alpha of 0.80) contained questions that measured knowledge about HIV prevention practices among Boda-Boda riders. Participants responded to these statements from the following 3 options: ***Yes, No, or Do not know***. The questionnaire also had questions that (Cronbach's alpha of 0.64) measured attitude towards HIV prevention practices. Participants responded to the statements which best captured their attitude: ***strongly agree, Agree, neutral Disagree and strongly disagree***

1.6.2 Data collection procedure

The principal investigator obtained an introductory letter from the Dean School of Health Sciences introducing the principal investigator to the hospital director to seek permission and assistance in carrying out the research. Before interviewing respondents, each respective respondent gave an explanation on the purpose of the study and requested to make an informed consent those who consented went through sampling process and then subjected to the interviews.

3.7 Validity and reliability of research instruments

In quantitative research, the criteria of reliability, measurement validity, and objectivity are used to ensure the quality of the research (Oyindamola, et al. 2017).

3.7.1 Validity of instrument

As described by Amin (2005), validity is the degree to which a test measures what it is supposed to measure. To ensure validity of research instruments; pilot testing of copies of questionnaire was carried out in Karambi sub county. This helped to assess the language clarity, ability to tap information from respondents, acceptability in terms of length and ethical consideration for clients. Supervisors were requested to rate the instruments in order to discover their validity.

Data collected was checked while still in the field to ensure that all questions are answered. Contradictory information was removed if found useless. The scale was validated by an expert, such as my research supervisor and the knowledge scale had a Cronbach's alpha of 0.80 while the attitude scale had a Cronbach's alpha of 0.64. By coding, answers to each item on the questionnaire were classified into meaning full categories. Tabulation was used to obtain frequencies and percentages of each item.

3.7.2 Reliability of instruments

The reliability of the instruments was established using Cronbach's alpha because according to Amin (2005). The researcher used the Cronbach's Alpha coefficient to ensure that the questionnaire is appropriate, comprehensive, consistent and understandable among prospective respondents. The pilot testing allowed quality improvement of several questions by wording modification and achieve a high internal consistency and reliability (Cronbach's $\alpha = 0.8$).

3.7.3 Objectivity

To ensure objectivity during the data entry process, the principal investigator double-checked the data before entry into STATA statistical package version 12 to ensure that they matched the responses on each of the questionnaire. However during the data analysis process, the principal investigator confirmed his procedures and results with my expert supervisor who is Epidemiologist by profession with interest in the application of statistics in Education, and Health Sciences.

3.8 Ethical Consideration

The principal investigator obtained an introductory letter from the dean school of health sciences which introduced him to the to the respective study area seeking of permission and assistance to carrying out research in Fort Portal Municipality

Informed consent was obtained. In conducting the study, therefore, explanations about its aims were made to the respondents, so as to obtain their informed consent. Anonymity of the respondents was assured and the data provided was treated with utmost confidentiality. As such, the respondents participated in the study voluntarily and mention of their names was avoided.

Benefits: The most immediate benefit of the study will be to promote the uptake of HIV prevention strategies among the motorcycle taxi drivers in a manner that will be culturally sensitive to minimize stigma as well as demystify myths that may be associated with some of the HIV prevention strategies.

Confidentiality: No names were entered in the computerized database/questionnaire to ensure confidentiality. Participants were identified primarily by a unique study number. No individual identities were used in any presentations or publications resulting from this study. All records were kept as confidential as possible and only authorized personnel

had access. The respondents were also assured that their participation in the study had no any legal implication or any form of legal prosecution.

3.9 Data Management/Data Analysis

After data collection the questionnaires were checked for completeness. No additional information was added to the questionnaires after data collection. The questionnaires were put in an envelope and secured under lock and key. The electronic version of the data was stored on a password protected computer and hard drive. All data pertaining to this study was retained for five years following the completion of the research. This retention period was approved by the ethical committee of Mountains of the Moon University. The research based findings collected using the questionnaire was coded and entered into Microsoft excel 2007 and imported to computer soft-wares for data analysis (STATA, version 12). Descriptive statistics was used to describe the percentages and frequencies of factors influencing the uptake of selected HIV prevention methods obtained. The use of inferential statistics provided an opportunity to assess differences between groups based on certain demographic variables as well as, determined the factors that predict the Uptake of HIV prevention methods. The predictors of the each of three selected prevention methods (condom use, HTC and Safe male circumcision) were presented separately. For assessment of the differences based on demographic variables, a chi-square test was utilized. Binary logistic regression was used to assess the predictors of the uptake of HIV prevention methods. The regression analysis had uptake of HIV prevention methods as dependent variable while socio-demographic factors, knowledge, attitudes and sexual were independent variables. Both unadjusted and adjusted Odds ratios were presented. The statistical significance for all the analysis was assessed using the p-value. A p-value <0.05 was considered significant.

CHAPTER FOUR: RESULTS/FINDINGS

4.0 INTRODUCTION

This chapter shows the results of two hundred and ninety six (296) Boda-Boda riders interviewed in Fort portal municipality on Knowledge on risk of HIV infections transmission, Sexual Behaviours, Attitude towards the uptake of selected methods and predictors of the uptake of HIV prevention methods among Boda-Boda riders

4.1 Demographic characteristics of the respondents (n=296)

Boda-Boda riders who met the inclusion criteria were included in this study and the following demographic characteristics such as age group, educational level, marital status, religion and ethnicity were presented in the below

Table 1: Demographic characteristics of the respondents

Demographic characteristics	Freq (n).	Percent (%)
Agegrp		
18-25yrs	79	26.69
26-35	119	40.20
>35yrs	98	33.11
Total	**296**	**100.00**
Education level		
Never attended	69	23.31
Primary	110	37.16
Secondary	90	30.41
Tertiary	27	9.12
Total	**296**	**100.00**
Marital status		
Separated	16	5.41
Single	61	20.61
Married	219	73.99
Total	**296**	**100.00**
Religion		
Christian	251	84.80
Muslim	45	15.20
Total	**296**	**100.00**
Ethnicity		
Mutooro/munyoro	222	75.00
Mukiga/Munyankole	53	17.91
Other specify(Muganda, mwamba Mukonjo, Musoga, mugishu)		
Total	**296**	**100.00**
Current HIV status		
Negative	248	83.78
Positive	22	7.43
Don’t know	26	8.78
Total	**296**	**100.00**

About 119(40.20%) of the participants were in the age range of 26-35years. 110(37.16%) of them had at least attained primary level of education. Majority 219(73.99%) of them noted that they were married and most 251(84.80%) of them were Christians. About

222(75.00%) of them were predominantly Batooro. About 248(83.78%) were HIV negative while only 22(7.43%) were HIV positive.

4.2 Knowledge of Boda-Boda Riders on HIV prevention (n=296)

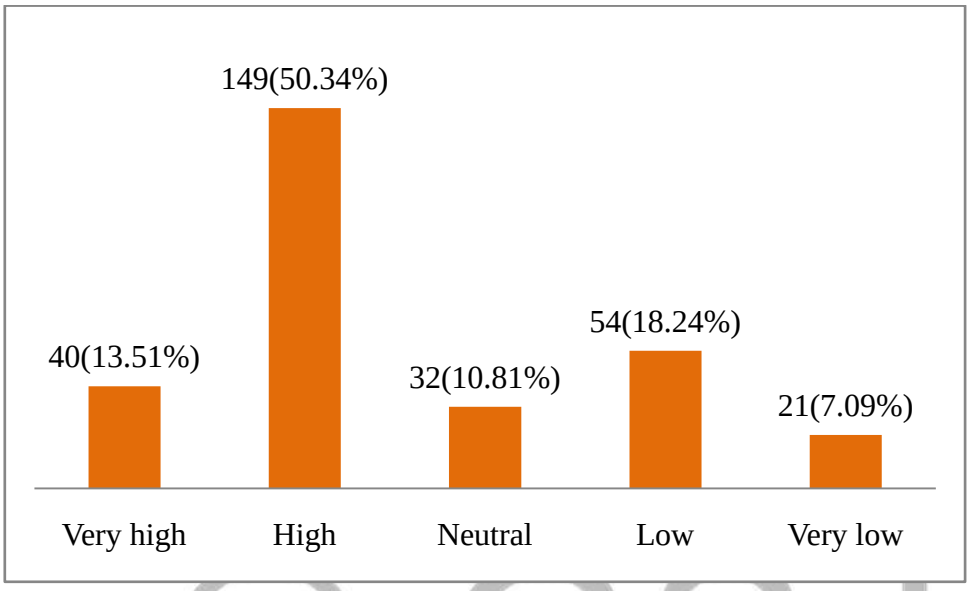
Boda-Boda riders were asked HIV infection prevention to determine their level of knowledge and their responses were recorded in the table below as follows

Table 2: Knowledge of Boda-Boda Riders on HIV prevention

Knowledge on HIV prevention	Freq (n).	Percent (%)
Source of information		
Health-workers	148	50.00
Sexual-partner	47	15.88
Radio	35	11.82
Peers	23	7.77
Family member	17	5.74
School health	13	4.39
Television	13	4.39
Total	**296**	**100.00**
Ways of through which HIV infection is transmitted		
Blood transfusion	10	3.38
Having unprotected sex	265	89.53
Mother to child transmission	18	6.08
Bad luck	3	1.02
Total	**296**	**100.00**
At risk group		
Parents	1	0.34
Boda-boda riders	156	52.70
Youth	96	32.43
Prostitutes	10	3.38
Anyone	33	11.15
Total	**296**	**100.00**

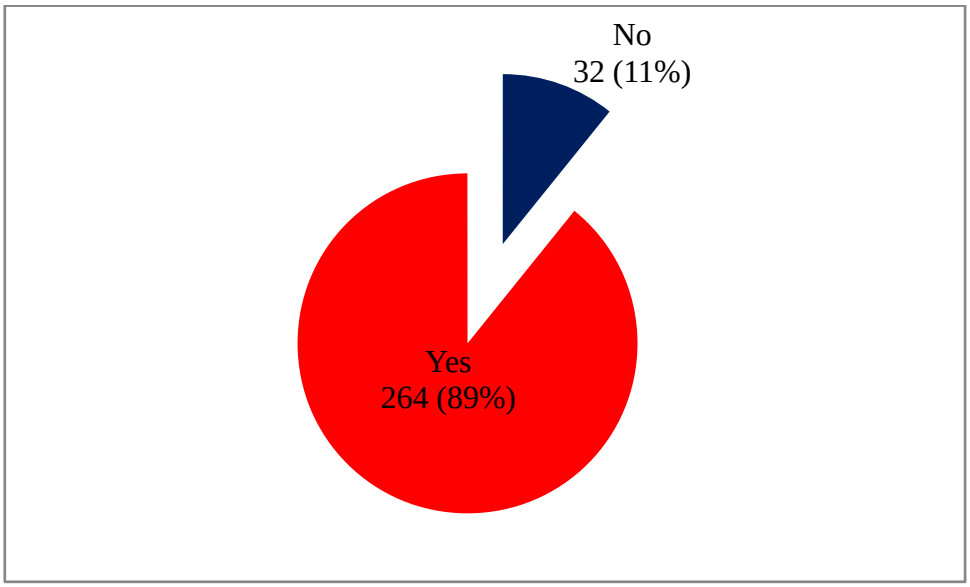
Half 148(50.00%) of the respondents revealed that they received information about HIV prevention from health care providers. Majority 265(89.50%) of them revealed that having unprotected sex with HIV positive partner was one of the ways of through which HIV infection is transmitted. More than half 156(52.70%) of them noted that Boda-Boda riders were the most at risk group of people in Fort portal Municipality due to their high mobility.

Figure 1: Perceived risk of acquiring HIV (296)



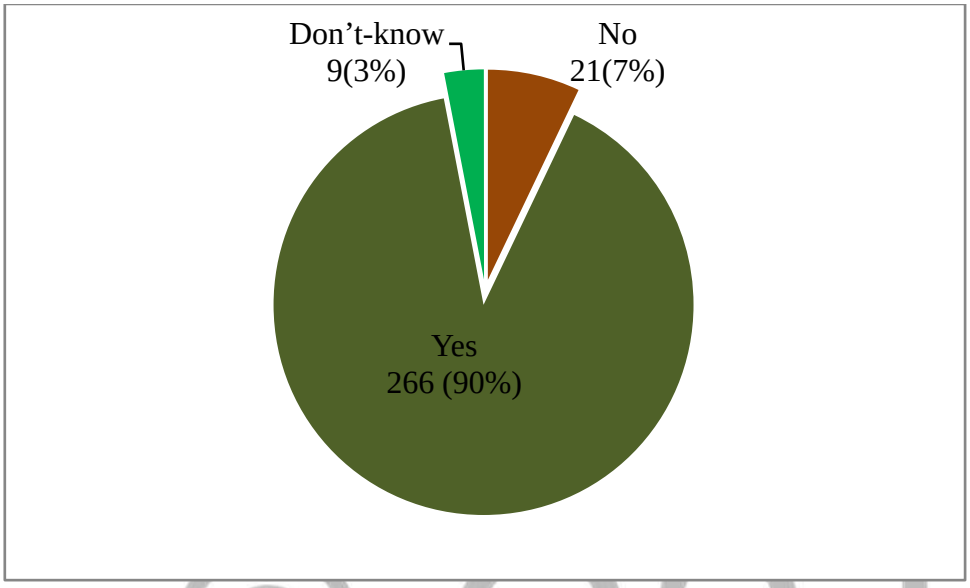
More than half 149 (50.34%) of the respondents noted that the risk of acquiring HIV infection was high.

Figure 2: Knowledge on HIV testing (n=296)



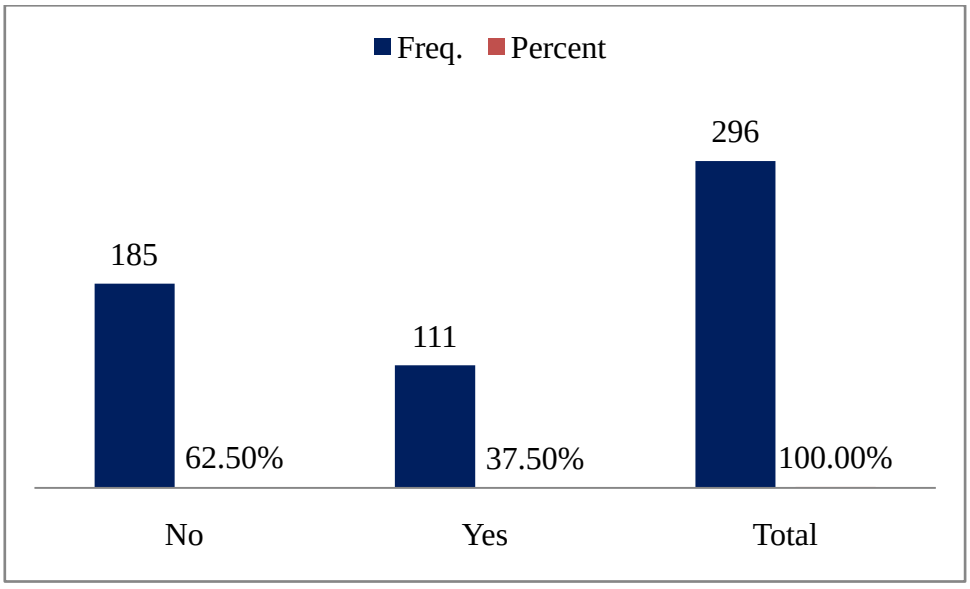
Most 264(89%) of the respondents were knowledgeable about HIV testing services

Figure 3: HIV growing problem in fort portal municipality (n=296)



Majority 266(90%) of the respondents discovered that HIV infection was a growing problem in Municipality

Figure 4: Knowledge on HIV prevention methods among Boda-Boda riders (n=296)



More than half 185(62.50%) of the respondents were not knowledgeable on HIV prevention.

4.2 6 Uptake of Selected HIV/AIDS Prevention Methods among Boda-Boda Riders (n=296)

Questions regarding the HIV prevention methods were asked to determine the uptake of selected HIV prevention methods among Boda-Boda riders

Table 3: Uptake of Selected HIV/AIDS Prevention Methods among Boda-Boda Riders

Uptake of Selected HIV/AIDS Prevention Methods	Freq (n).	Percent (%)
Uptake of HIV testing		
No	21	7.09
Yes	275	92.91
Total	**296**	**100.00**
Uptake of safe male circumcision		
No	104	35.14
Yes	192	64.86
Total	**296**	**100.00**
Uptake of condoms		
No	219	73.99
Yes	77	26.01
Total	**296**	**100.00**

Majority 275(92.91%) of the participants reported having tested in the last three months. More than half 192(64.86%) of them discovered were circumcised. Most of the boda-boda riders 219(73.99%) noted that they never used condoms in the last twelve months.

4.2.11 Factors Influencing the adequate Uptake of HIV Testing and Counselling among Boda-Boda Riders (n=296)

The factors that were found to significantly influence the adequate uptake of HIV Testing and Counselling among the Boda-Boda Riders in the univariate analysis at a p-value<0.05, were included in a multivariate logistic regression analysis to identify the predictors for the adequate uptake of HIV Testing and Counselling among the Boda-Boda Riders in the table below.

Table 4: Factors influencing the adequate Uptake of HIV testing and counselling among Boda-Boda Riders

Factors	Sub-Category		Bivariate analysis		Multivariate analysis	
	No [n (%)]	Yes [n (%)]	cOR(95% CI)	P-Value	aOR(95%CI)	P-Value
HIV growing problem						
No	7(33.33)	14(66.67)	1		1	
Yes	14(5.26)	252(94.74)	8.93(3.10-25.72)	0.001*	4.80(0.87- 26.46)	0.072
Don't know			1		1	
Risk of HIV infection transmission						
Very high	5(12.50)	35(87.50)	2.90(0.87- 9.70)	0.084		
High	7(4.70)	142(95.30)	4.45(0.49- 40.24)	0.184		
Neutral	1(3.13)	31(96.88)	1.43 (0.38- 5.32)	0.597		
Low	5(9.26)	49(90.74)	0.84(0.18- 3.92)	0.821		
Very low	3(14.29)	18(85.71)	1			
Ethnicity						
Mutooro/Munyoro	15(6.76)	207(93.24)	1			
Mukiga/Munyankole	6(11.32)	47(88.68)	1.764(0 .648- 4.797)	0.266		
Others(Mukonjo Muganda, mwamba, mugishu, Musoga	0(0.00)	21(100.00)	1			
Current HIV status						
Positive	0(0.00)	22(100.00)	1		1	

Negative	4 (1.61)	244(98.39)	114.06(31.76- 409.59)	0.001*	93.79(25.02-351.57)	0.001*
Don't know	17(65.38)	9(34.62)	1			
Level of education						
Never attended	7(10.14)	62(89.86)	1			
Primary	6(5.45)	104(94.55)	1.98(0.63-6.17)	0.239		
Secondary	6(6.67)	84(93.33)	1.55(0.496-4.861)	0.450		
Tertiary	2(7.41)	25(92.59)	1.46(0.282-7.548)	0.651		
Religion						
Muslim	2(4.44)	43(95.56)	1			
Christian	19(7.57)	232(92.43)	0.52(0.12- 2.35)	0.398		
Marital status						
Separated	1(6.25)	15(93.75)	1			
Single	6(9.84)	55(90.16)	0.6 (0.07- 5.39)	0.648		
Married	14(6.39)	205(93.61)	1.0 (0.12- 8.33)	0.985		
Age group						
18-25yrs	7(8.86)	72(91.14)	1			
26-35yrs	7(5.88)	112(94.12)	1.64(0.55-4.90)	0.376		
>35yrs	7(7.14)	91(92.86)	1.26(0.42-3.76)	0.680		
Outreach For HIV Services						
No	4(18.18)	18(81.82)	1		1	
Yes	17(6.20)	257(93.80)	3.43(1.04-11.34)	0.043	2.47 (0.385-15.774)	0.341
Multiple sexual partners						
Yes	4(11.11)	32(88.89)	1			
No	17(6.54)	243(93.46)	1.697(0.534- 5.398)	0.370		

-evidence of association p-value<0.05, cOR-crude odds ratio, CI confidence intervals set at 95% and aOR adjusted Odds ratio

OR, odds ratio; CI, confidence interval; numbers in brackets near the variable names indicate the hierarchical level assigned to each factor in multivariate analysis. AOR adjusted for factors assigned to the same hierarchical level and those influencing the uptake of HIV Testing and Counselling at a P-value <0.05

According to the results of the multivariate analysis on factors influencing the uptake of HIV testing and counselling among Boda-Boda riders in the table above, the current HIV status of Boda-Boda riders (AOR = 93.79; 95% CI =25.02-351.57), was significantly associated with the uptake of HIV testing and counselling. When testing for interactions, significant differences in the uptake of HIV testing was found in relation to current HIV sero-status (likelihood ratio test, P-value<0.001)

4.2.12 Factors influencing adequate Uptake of Safe Male Circumcision among the Boda-Boda Riders (296)

The factors that were found to significantly influence the adequate uptake of safe male circumcision in the univariate analysis at a p-value<0.05; these were included in a multivariate logistic regression model to identify the predictors for the adequate uptake of male circumcision in the table below.

Table 5: Factors influencing adequate Uptake of Safe Male Circumcision among the Boda-Boda Riders

Factors	**Sub-Category**		**Bivariate analysis**		**Multivariate analysis**	
	No, n (%)	***Yes, n (%)***	***cOR(95% CI)***	***P-Value***	***aOR(95%CI)***	***P-Value***
Age group						
18-25yrs	27(34.18)	52(65.82)	1			
26-35yrs	46(38.66	73(61.34)	0.91(0.50- 1.68)	0.772		
>35yrs	31(31.63)	67(68.37)	1.12(0.59- 2.13)	0.738		
Level of education						
Never attended	26(37.68)	43(62.32)	1			
Primary	45(40.91)	65(59.09)	0.89(0.47- 1.67)	0.711		
Secondary	26(28.89)	64(71.11)	1.45(0.73- 2.88)	0.286		
Tertiary	7(25.93	20(74.07)	1.91(0.70- 5.25)	0.208		
Religion						
Muslim	5(11.11)	40(88.89)	1			
Christian	99(39.44)	152(60.56)	0.15(0.06- 0.40)	0.001*	0.15(0.055-0.418)	0.001*
Marital status						
Separated	9(56.25)	7(43.75)	1		1	
Single	14 (22.95)	47(77.05)	4.51(1.37- 14.81)	0.013*	4.47(1.24-16.15)	0.022*
Married	81(36.99)	138(63.01)	2.53(0.87- 7.32)	0.087	2.44(0.77- 7.74)	0.129

Ethnicity						
Mutooro/Munyoro	80(36.04)	142(63.96)	0.844(0.32-2.22)	0.732		
Mukiga/Munyankole	17(32.08)	36(67.92)	1.017(0. 34- 3.05)	0.976		
Others(Muganda, Mukonjo, Mwamba, mugishu and Musoga	0(0.00)	21(100.00)	1			
Current HIV status						
Positive	10(45.45)	12(54.55)	1			
Negative	79(31.85)	169(68.15)	1.71(0.69- 4.23)	0.242		
Don't know	15(57.69)	11(42.31)	0.60(0.19- 1.95)	0.396		
Perceived Risk of HIV infection						
Very high	9(22.50)	31(77.50)	1		1	
High	56(37.58)	93(62.42)	0.46(0.20- 1.06)	0.068	0.45(0.184- 1.082)	0.074
Neutral	11(34.38)	21(65.63)	0.54(0.19-1.56)	0.256	0.29(0.092-0.941)	0.039*
Low	18(33.33)	36(66.67)	0.59(0. 23-1.53)	0.279	0.47(0.169-1.322)	0.154
Very low	10(47.62)	11(52.38)	0.28(0.09-0.91)	0.035*	0.25(0.073-0.886)	0.032*
Outreach For HIV Services						
No	4(18.18)	18(81.82)	1			
Yes	100(36.50)	174(63.50)	0.39(0.12- 1.19)	0.098		
Multiple sexual partners						
Yes	17(47.22)	19(52.78)	1			
No	17(6.54)	243(93.46)	1.59(0. 774- 3.269)	0.206		
Drugs/alcohol abuse						
No	61(29.76)	144(70.24)	0. 45(0.27-0.76)	0.003*	0.475 (0.269-0.840)	0.011*
Yes	43(47.25)	48(52.75)	1		1	

-evidence of association p-value<0.05, cOR-crude odds ratio, CI confidence intervals set at 95% and aOR adjusted Odds ratio

OR, odds ratio; CI, confidence interval; numbers in brackets near the variable names indicate the hierarchical level assigned to each factor in multivariate analysis. AOR adjusted for factors assigned to the same hierarchical level and those influencing the uptake of Safe Male Circumcision among the Boda-Boda Riders at a P-value <0.05

According to the multivariate logistic regression analysis, the factors that were found to have a positive statistically significant association with the adequate uptake of Safe Male Circumcision among the Boda-Boda Riders are areas below. Religion denominations of Boda-Boda Riders was strongly associated with the adequate uptake of Uptake of male circumcision (AOR=0.15; 95%CI=0.055-0.418). Boda-Boda riders who were unmarried (single) (AOR=4.47; 95%CI=1.24-16.15) were 4.47times were like to have adequate uptake of male circumcision compared to the married and separated. However, participants had very low perceived risk of HIV infection (AOR=0.25; 95% CI=0.073-0.886) were less likely to take up male circumcision compared to those who perceived the risk of HIV infection as high (AOR=0.45; 95%CI=0.184-1.082). When testing for interactions, significant differences in the adequate uptake of safe male circumcision profile was found in relation to religion (likelihood ratio test, P-value<0.001), unmarried (likelihood ratio test, P-value<0.022) and drug/alcohol abuse (likelihood ratio test, P-value<0.011)

4.2.12 Factors Influencing the adequate Uptake of condom use among the Boda-Boda Riders (n=296)

The factors that were found to significantly influence the adequate uptake of condom use among the Boda-Boda Riders in the univariate analysis at a p-value<0.05; these were included in a multivariate logistic regression model to identify the predictors for the adequate uptake of condom use among the Boda-Boda Riders in the table below.

Table 6: Factors influencing the adequate Uptake of condom use among the Boda-Boda Riders

Factors	**Sub-Category**		**Bivariate analysis**		**Multivariate analysis**	
	No, n (%)	***Yes, n (%)***	***cOR(95% CI)***	***P-Value***	***aOR(95%CI)***	***P-Value***
Age group						
18-25yrs	46(58.23)	33(41.77)	1		1	
26-35yrs	92(77.31)	27(22.69)	0.44(0.23-0.87)	0.018*	0.52(0.252- 1.058)	0.071
>35yrs	81(82.65	17(17.35)	0. 23(0.11-050)	0.001*	0.34 (.142-0.803)	0.014
Level of education						
Never attended	59(85.51)	10(14.49)	1		1	
Primary	86(78.18)	24(21.82)	1.82(0.78- 4.27)	0.168	1.28 (0.513-3.178)	0.599
Secondary	56(62.22)	34(37.78)	3.93(1.69-9.16)	0.001*	2.41(0.942- 6.189)	0.066
Tertiary	18(66.67)	9(33.33)	4.03(1.31-12.41)	0.015*	1.877(0.522- 6.744)	0.335
Religion						
Muslim	35(77.78)	10(22.22)				
Christian	184(73.31)	67(26.69)	0.92(0.407- 2.070)	0.838		
Marital status						
Separated	12(75.00)	4(25.00)	1			
Single	32(52.46)	29(47.54)	2.97(0.79-11.11)	0.107		
Married	175(79.91)	44(20.09)	0.87(0.25-3.03)	0.822		

Ethnicity				
Mutooro/Munyoro	164(73.87)	58(26.13)	1.06(0.35-3.23)	0.924
Mukiga/Munyankole	39(73.58)	14(26.42)	1.08(0.307- 3.77)	0.909
Others(Muganda, Mukonjo, mwamba)	16(76.19)	5(23.81)	1	
Current HIV status				
Positive	16(72.73)	6(27.27)	1	
Negative	185(74.60)	63(25.40)	0.78(0.27-2.24)	0.648
Don't know	18(69.23)	8(30.77)	1.24(0.32-4.78)	0.752
Perceived Risk of HIV infection				
Very high	27(67.50)	13(32.50)	1	
High	115(77.18)	34(22.82)	0.56(0.25- 1.28)	0.171
Neutral	23(71.88)	9(28.13)	0.78(0.26- 2.35)	0.666
Low	39(72.22)	15(27.78)	0.84(0.32-2.18)	0.715
Very low	15(71.43)	6(28.57)	0.73(0.21- 2.52)	0.618
Multiple sexual partners				
Yes	27(75.00)	9(25.00)	1	
No	192(73.85)	68(26.15)	0.81(0.340-1.914)	0.627
Drugs/alcohol abuse				
No	149(72.68)	56(27.32)	0.78(0.42-1.43)	0.420
Yes	70(76.92)	21(23.08)	1	
Sex with female sex workers				
No	189(74.70)	64(25.30)	1.49(0.69- 3.20)	0.311
Yes	30(69.77)	13(30.23)	1	

-evidence of association p-value<0.05, cOR-crude odds ratio, CI confidence intervals set at 95% and aOR adjusted Odds ratio

OR, odds ratio; CI, confidence interval; numbers in brackets near the variable names indicate the hierarchical level assigned to each factor in multivariate analysis. AOR adjusted for factors assigned to the same hierarchical level and those influencing the uptake of condom use among the Boda-Boda Riders at a P-value <0.05

According to the multivariate logistic regression analysis, the main factor that was found to have a positive statistically significant association with the adequate uptake of condom use among the Boda-Boda Riders was the age group. Boda-Boda riders who were aged >35years (AOR=0.34; 95%CI=0.142-0.803), had adequate uptake of condom use. When testing for interactions, significant differences in the uptake of condom use was found in relation to age group >35years (likelihood ratio test, P-value<0.001) and age group 26-35years were 2.41 times than age group 18-25years more likely to have adequate uptake of condom use

4.2.7 Reasons for the uptake of selected HIV prevention methods (n=296)

Boda-boda riders were asked question regarding the uptake of selected HIV prevention methods and their responses were recorded in the table below

Table 7: Reasons for the uptake of selected HIV prevention methods

Reasons for the uptake of selected HIV prevention methods	**Freq (n).**	**Percent (%)**
Uptake of safe male circumcision		
Everyone was circumcising	17	5.74
Hygiene	32	10.81
My partner encouraged me	26	8.78
Religion	45	15.20
Tradition	18	6..08
HIV prevention	54	18. 24
Not applicable	104	35.15
Total	**296**	**100.00**
Uptake of condoms		
Protection against HIV	41	13.85
Family planning	20	6.76
Protection against other STIs	16	5.41
Not applicable	219	73.99

Total	**296**	**100.00**
Uptake of HIV testing		
To know HIV status	200	67.57
Everyone was testing	75	25.34
Not applicable	21	7.09
Total	**296**	**100.00**

Less than half 54(18.24%) of the respondents reported that were circumcised to prevent HIV infections. About 41(13.85%) of them noted that they used condoms for protection against the new HIV infections. Majority 200(67.57%) discovered that knowing their sero-status was a reason given for HIV testing.

4.2.8 Barriers to uptake of selected HIV prevention methods among Boda-Boda riders (n=296)

Respondents were asked questions regarding the barriers to the uptake of selected HIV prevention methods and their responses were presented below

Table 8: Barriers to uptake of selected HIV prevention methods among Boda-Boda riders

Barriers to uptake of selected HIV prevention methods	**Freq (n).**	**Percent (%)**
Uptake of HIV testing		
Stigma	213	71.96
service-unavailable	48	16.22
Lack of knowledge	34	11.49
Poor health worker's attitude	1	0.34
Total	**296**	**100.00**
Uptake of Safe male circumcision		
Procedure very painful	84	28.38
Circumcision reduces sexual pleasure	16	5.41
My partner may not like the procedure	20	6.76
Procedure is against my tradition/religion	19	6.42
Lack of knowledge	53	17.91
Not applicable	192	64.86

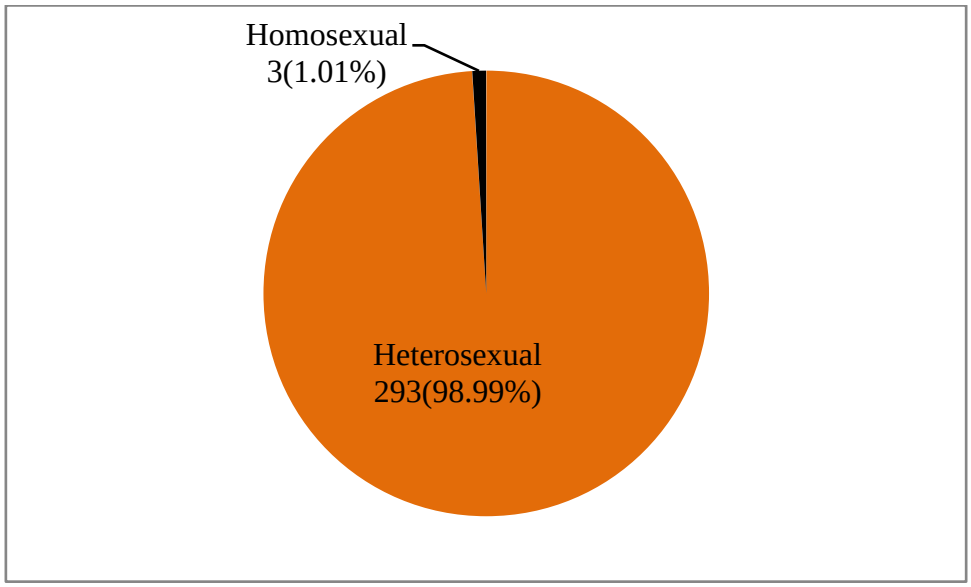
Total	**296**	**100.00**
Uptake of condoms		
Condoms promotes promiscuity	45	15.20
Condoms reduces sexual pleasure	177	59.80
Condoms causes rashes in the private parts	27	9.12
Condom use is against my religion	2	15.20
Don't-know	45	0.68
Total	**296**	**100.00**

Majority 213(71.96%) of boda-boda riders revealed that stigma was a major barrier to HIV testing. Less than half 84(28.38%) of them noted pain associated with male circumcision procedure was a main barrier its uptake. More-than half 177(59.80%) of them mentioned the reduction of sexual pleasure by condom use as the main barrier to the uptake of condoms as a method of HIV prevention.

4.3 Sexual Behaviours of Boda-Boda Riders (n=296)

Questions regarding the respondent's sexual behaviours and responses were presented below

Figure 5: Sexual orientation of Boda-Boda Riders



About 293(98.99%) of the boda riders noted that they were more attracted to heterosexuals

4.4.1 Attitude of boda-boda riders towards the uptake of selected HIV prevention methods (n=296)

Five questions assessed attitudes of boda-boda riders towards the uptake of selected HIV prevention methods in order to determine their attitudes.

Table 9: Attitude of boda-boda riders towards the uptake of condom use

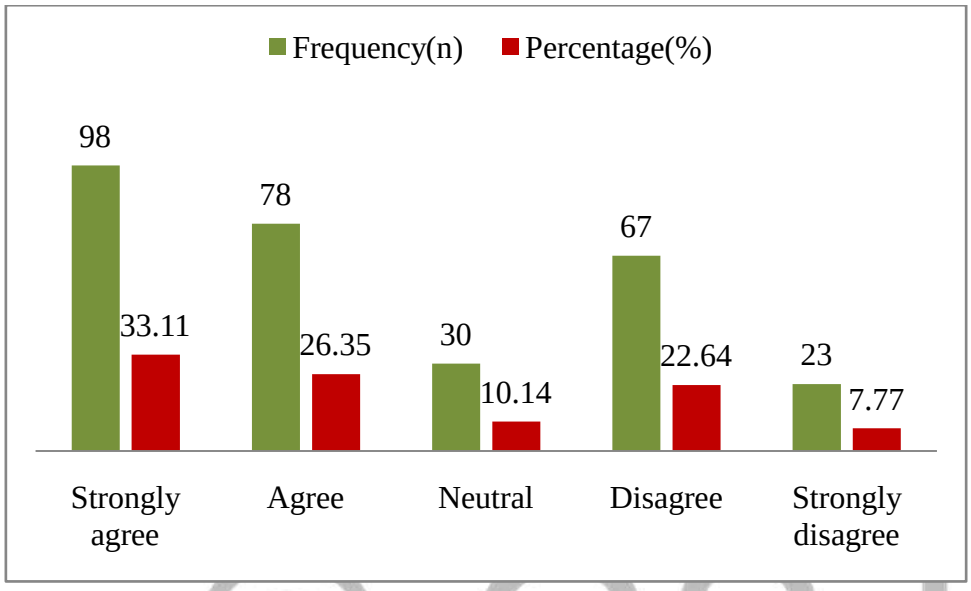
Attitude of boda-boda riders	Freq (n).	Percent (%)
Condoms causes rashes in private parts		
Strongly agree	23	7.77
Agree	78	26.35
Neutral	99	33.45
Disagree	77	26.01
Strongly disagree	19	6.42
Total	**296**	**100.00**
Condoms reduces sexual pleasure		
Strongly agree	11	3.72
Agree	55	18.58
Neutral	180	60.81
Disagree	45	15.20
Strongly disagree	5	1.69
Total	**296**	**100.00**

Less than 101(34.12%) of them agreed that condoms cause rashes in the private parts whereas 99(33.45%) of them noted that they were uncertain. About 66(22.30%) of them revealed that condoms reduces sexual pleasure.

4.4.2 Attitude of boda-boda riders towards the uptake of safe male circumcision (n=296)

Questions about male circumcision were asked to determine the attitude of boda-boda riders and their responses were reported in a figure below

Figure 6: Male circumcision increases sexual pleasure

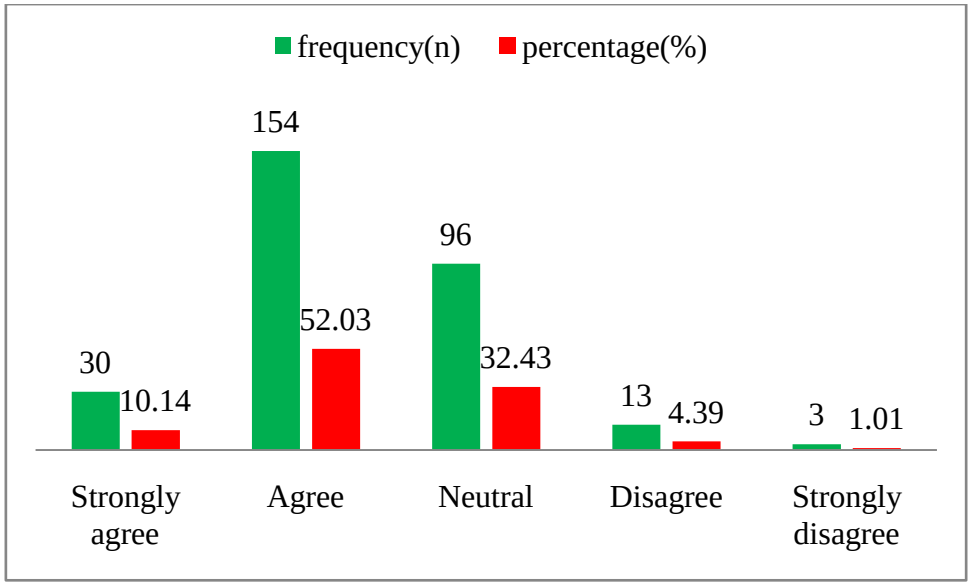


More than half 178(59.46%) of the respondents reported that male circumcision increases sexual pleasure

Attitude of boda-boda riders towards the uptake of HIV testing services (n=296)

Questions regarding HIV testing and counselling among boda-boda riders to determine their attitudes towards access to HIV services and their responses were presented below

Figure 7: Access to HIV testing services



More than half 184(60.17%) of participants agreed that the access to HIV testing services is easy in the municipality while 96(32.43%) of them were uncertain

CHAPTER FIVE
DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.0 INTRODUCTION

In this chapter, the findings of the study are discussed for clarity and chronology, it is arranged by these contents and then by the three research questions that the study sought to answer.

5.1 DISCUSSIONS

The discussion was arranged according to the four objectives of the study. Therefore, the section was subdivided into the following subsections.

5.1.1 Knowledge of Boda-Boda Riders on HIV prevention

Half of the respondents revealed that they received information about HIV infections prevention from health care providers. This implied that most of the motorcycle taxi drivers were more knowledgeable about the HIV infection prevention practices. This information about HIV infection transmission among the Boda-Boda riders may significantly contribute to the promotion or prevention of the spread of new HIV infections. This finding concurs

with the findings of Abiodun, (2013), in a study conducted in Nigeria on Knowledge and attitude towards HIV/AIDS that revealed that high level of awareness on HIV infection transmission contributed significantly to the promotion or reduction of the spread of the disease. The practice of safer sex with the use of condoms can prevent HIV transmission especially among those with multiple sexual partners, a practice that is quite common among commercial motorcyclists. However this is different from what Bwayo et al, (2009), that discovered that even though, a good percentage of these groups knew about the correct risk reduction behaviour in the transmission and contraction of HIV, only a small percentage minded to use condoms despite having multiple partners. Therefore there is an immediate need to intensify health education campaigns to mitigate the growing HIV burden among the Boda-Boda riders

Majority of them revealed that having unprotected sex with HIV positive partner was one of the ways of through which HIV infection is transmitted. Although, a good percentage of the respondents knew about the correct risk reduction behaviour in the transmission and contraction of HIV, only a small percentage minded to use condoms despite having multiple partners. This is consistent with the findings of Ntozi et al. (2013) in an investigation of knowledge of preventive strategies against HIV/AIDS using focus groups of Motorcycle taxi drivers that found out that the respondents knew that the only remedy was prevention through protected sex using condoms. Despite their awareness of ways to protecting themselves against HIV, participants reported that not much had been done on this front. In their responses, Motorcycle taxi drivers said, “those with multiple sexual partners are at a high risk of getting AIDS because even condoms may fail and some women may even convince you not to use condoms pretending they are safe” (Ntozi et al., 2013). Also found that although HIV awareness was high among the groups involved in the study, non condom use among motorcycle taxi drivers prevailed because of trust, especially on the part of female partners, notwithstanding the fact that it was common knowledge that the men were often unfaithful. However, in rural south west Uganda also was found high awareness of HIV/AIDS but with non sporadic use of the condoms due to “dislike or partners refusing them”. This implies that there is a need for the government, development partners and all the key players in the prevention of HIV infection to effectively promote the educational campaigns through drama and other activities that involves the boda-boda riders in order to combat high levels of unacceptable levels of misconceptions attacked to the safe sex practices like use of condoms.

More than half of them noted that Boda-Boda riders were the most at risk group of people in Fort portal Municipality due to their high mobility. This means that most of the Boda-Boda riders are likely to engage in the safe sex practices because of the risk associated with this group. However this finding is different from the findings of Lollis et al. (2012) that discovered that many motorcycle taxi drivers are not aware of the risks and vulnerabilities associated with HIV infection. Although not sufficient to change behaviour, lack of knowledge is one of the major factors making motorcycle taxi drivers vulnerable to HIV infection. Therefore there is a need for the stakeholders to launch a campaign in a bid to raise more public awareness of HIV/AIDS. This campaign should take advantage of the recent increase in owners of mobile phones and sent text messages with information about HIV/AIDS to people particularly Boda-Boda riders, also through News papers, radio serial, "Future Dreams", broadcasted in the languages for encouraging consistent condom use thereby increasing knowledge and increasing skills for condom negotiation in both single, married men and women. Exposure to HIV/AIDS information through mass media only lead to high levels of awareness without a corresponding increase in knowledge as demonstrated by these respondents since they could not adequately identify all routes by which HIV/AIDS can be contacted and prevented respectively as listed in this study.

More than half of the respondents noted that the risk of acquiring HIV infection was high and least of them noted that the risk was very low. Despite high level of awareness about risk of HIV/AIDS infection transmission among boda-boda riders as demonstrated in the current study, lack of preventive knowledge increases the risk of acquiring the disease and transmitting it to others. This may be attributed to the little time given to the health care by this risk group in Fort Portal Municipality. This is similar to what Bwayo et al, (2009), that discovered that even though, a good percentage of these groups knew about the correct risk reduction behaviour in the transmission and contraction of HIV, only a small percentage minded to use condoms despite having multiple partners. Therefore in order to realize greater success of HIV prevention programs in Fort portal-Kabarole District , it is necessary to address the reason for the observed reluctance this because proper and functioning HIV prevention programs, require good knowledge about the disease and also access to health care. Good knowledge, attitudes and practices (KAP) towards HIV prevention are essential in order to prevent the acquisition of HIV infection. Therefore proper and well-functioning prevention of HIV requires clear and relevant information and instructions from health care givers in the district.

Most of the respondents were knowledgeable about HIV services. In assessing the level of knowledge of participants on HIV prevention services, in this current study showed that participants were knowledgeable about HIV prevention services. However different studies have demonstrated that increased knowledge about AIDS is not a predictor for behavioural change (Taheri et al. 2009) although knowledge about the disease is a prerequisite for change. Motorcycle taxi drivers continue to engage in risky sexual behaviour despite widespread information and knowledge about HIV/AIDS. This finding almost similar with the findings of Assadian et al. (2014) in their more recent study conducted in Botswana that found that among motorcycle taxi drivers questions related to HIV/AIDS knowledge yielded 96% correct responses. Despite this knowledge the study found that perceived use of circumcision, testing services and condoms remain lower than might be predicted based on knowledge scores. This also concurs with the findings of Aitalegbe, et al. (2011) that revealed that although many programs for the prevention of HIV/AIDS and on other sexually transmitted diseases are being carried out in Nigeria, the commercial motorcyclists, a group similar to long distance drivers, have been virtually overlooked in the dynamics of urban HIV and their role as potential carriers of HIV/STDs. There is an urgent need for intervention programs such as education with a focus on motorcyclists and similar high risk groups which could be delivered to them on a regular basis through popular radio stations at their stages. In addition, HIV testing, safe medical male circumcision and condom promotion should be part of every national AIDS control program because every country includes people for whom condoms are the best option to reduce HIV/AIDS risk.

More than half 64.86% of them discovered were circumcised. Many studies in West Africa and many Arab countries shows that the uptake male is very high, the current study also indicates that circumcision uptake in fort portal municipality is high. This may be attributed to the various reasons such as religion, hygiene, tradition due to various ethnic groups that find refugee in the sector. This is different from the findings of Connolly, 2009 and WHO, (2013) in a study conducted in many African countries which revealed that circumcision is less common in Southern Africa where the prevalence is around 15% in Botswana, Namibia, Swaziland, Zambia and Zimbabwe. The authors revealed a prevalence of 21% in Malawi, 35% in South Africa, 48% in Lesotho, 20% in Mozambique and more than 80% in Angola and Madagascar. They also noted that the prevalence in East and Central Africa varied from almost 15% in Burundi and Rwanda to 70% in Tanzania and 84% in Kenya, 27% in Uganda and 93% in Ethiopia. this is more than twice the global (30%) male circumcision

prevalence; UNAIDS/WHO, (2017), also higher than that reported in the Uganda AIDs Indicator Survey (2015); 40%, but comparable to the proportion of circumcised males in the East Central region of Uganda. This implies that there is a need for mass sensitization about the benefits of safe male circumcision is needed especially among people whose cultures are not in support of safe male circumcision in order to scale up the uptake of the practice in the district.

Most of the boda-boda riders noted that they never used condoms in the last twelve months. Several studies have demonstrated that even though, a good percentage of these groups knew about the correct risk reduction behaviour in the transmission and contraction of HIV, only a small percentage minded to use condoms despite having multiple partners (Bwayo et. al 2009). This may be attributed to the misconceptions such as reducing sexual pleasure, causing rashes in the private parts, religion such as the Catholic Church which is at the forefront towards condom use. This is consistent with the findings from several studies conducted in the United States by Vincent et al (2009:1022) which revealed an increase in the incidence of sexually transmitted diseases (the direct indicators of HIV and unsafe sexual practices) had been reported common among commercial motorcyclists. There is an urgent need for intervention programs such as education with a focus on motorcyclists and similar high risk groups which could be delivered to them on a regular basis through popular radio stations at their stages.

About 13.85% of them noted that they used condoms for protection against the new HIV infections. According to Bwayo et al (2009) even though, a good percentage of these groups knew about the correct risk reduction behaviour in the transmission and contraction of HIV, only a small percentage minded to use condoms despite having multiple partners. These findings indicated that the majority of boda-boda riders in Fort portal municipality engage in risky sexual behaviours which could be the major factor contributing to high prevalence of HIV and other sexually transmitted infections. This slightly concurs with the findings of crane survey report, (2009) that indicated that Motorcycle taxi drivers were aware that the risk of acquiring HIV increased with multiple sexual partners (98.5%) and unprotected sex (98%) with an infected partner, suggesting that they had enough knowledge of HIV/AIDS to prevent infection. However, isolated pockets of misconceptions abound. Some findings showed that misconceptions about HIV transmission, and awareness of STIs and how they are transmitted, are not always consistent. Although Motorcycle taxi drivers

are generally aware of HIV/AIDS, some were unsure that HIV is transmitted by mosquitoes and by sharing food (14.2% and 11.1% respectively). This slightly concurred with what found out by Ministry of Health, (2012) that the percentage of Boda-Boda Drivers with these misconceptions was much lower than the national average. This implies that there is a proactive need for mass sensitization about the benefits of condom use especially among people especially Boda-Boda riders in order to scale up the uptake of the safe sex practices in the district.

Majority of them discovered that knowing their sero-status was a reason given for HIV testing. This means that most of the boda-boda riders are likely to go for HIV testing because it allows many identified individuals to live positively and plan for the future, opportunity to avoid re-infection and avoiding strenuous work. This is consistent with the Baseline Survey report, (2011), that revealed that ninety-four percent (94.3%) of the sampled MARPs believes as true that there are advantages in knowing HIV status because the commonly cited advantages of knowing HIV status include opportunity to start treatment and care early. However, the nearly universal awareness of the benefits of knowing HIV status is not well matched with the level of willingness to disclose HIV status. Results show that only slightly over half (54.2%) the sampled MARPs within the 11 urban authorities, support disclosure of HIV status.

Majority of boda-boda riders revealed that stigma was a major barrier to HIV testing. This indicates that lack of accurate and correct information about sex has led to increase in HIV transmission and stigma. This is slightly concur with UNAIDS (2016) that discovered that only, 21% of Boda-Boda Riders correctly understood ways of preventing HIV contraction. Although there is no much literature on the role of motorcyclists in the spread of HIV/AIDS, this group is almost similar to the long distance truck drivers in terms of behaviour and the nature of their work. This almost concurs with what Pison, et al.(2013) discovered that just like truck drivers, motorcyclists are exposed to close interactions with different segments of the population a factor which equally puts them at a risk state. Therefore there is a need for the stakeholders to launch a campaign in a bid to raise more public awareness of HIV/AIDS and testing to mitigate stigma as a barrier to HIV testing.

Less than half of them noted pain associated with male circumcision procedure was a main barrier its uptake. This means that there is a need for male circumcision implementers to educate men about the benefits associated with procedure. Several studies which

highlighted pain, bleeding and possible cultural tradition as some of the barriers to Male Circumcision acceptability. This is in line with the findings of Mugenyi, (2018) that revealed that some of the barriers cited to safe medical circumcision were cultural tradition, pain, and safety, cost and the concern that men would engage in more sex if they perceived themselves to be fully protected by circumcisions. This implies that there is a proactive need for mass sensitization about the benefits of male circumcision especially among people especially Boda-Boda riders in order to scale up the uptake of the procedure in the district.

More-than half of them mentioned the reduction of sexual pleasure by condom use as the main barrier to the uptake of condoms as a method of HIV prevention. This indicated that the respondents had negative perceptions towards condom use and the majority are more likely not to take up condoms during sexual intercourse. This in similar trend with findings of Khan et al. (2009) in a study conducted in Mozambique among the male youth that discovered that the social dimensions of masculine sexuality, pleasure, eroticism and emotional aspect of men's lives influence condom use. Men's emotional fulfilment with attainment of satisfaction through direct penile-vaginal contact and ejaculation during natural intercourse is an obstacle to condom use. Some men perceive prolonged sexual intercourse without a condom as a sexual prowess in the domain of masculinity and seek to preserve this manly skill by avoiding condom use. Mutual trust and love usually form a scaffold for partners in the relationship. Also one of the major barriers was their belief that they did not have to use condom in the steady relationship built on love and trust, which provide a sense of immunity to infection. Their perception of pleasure, lack of accurate information, lack of sex education and gender disadvantage further contributed to their non-use of a condom. This implies that condom promotion should be part of every national AIDS control program because every country includes people for whom condoms are the best option to reduce HIV/AIDS risk.

5.1.2 Sexual Behaviours of Boda-Boda Riders

Most of them revealed they had only one sexual partner and about 15.88% of them said that they have ever forced women into sexual acts. This implied that the majority motorcycle taxi drivers engage in irresponsible sexual acts that could result in further transmission of the virus due to the perceived risks. This finding is similar to the findings of Thomas, (2010), which discovered that the low socio-economic status of the Boda -Boda riders equally exposes them to risky sexual behaviours. There is empirical

evidence pointing to the relationship between low socio-economic statuses to high HIV risk. Majority of the Boda-Boda riders' work for long hours for little pay this leaves them to occupy the lower economic status in society and thereby pushing some of them to indulge in other risky behaviours such as drug abuse and sex exchange for money. In some instances where the commercial riders occupation attracts some cash, still the group remains at risk for more cash flow to them attracts the attention of women to them.

About 14.53% of them were involved in the buying and selling sex from female sexual workers. This may be attributed to their nature of job which exposes them to different cultures and sex workers who negotiates transport costs in terms of casual sexual relationships common practice among Boda-boda riders throughout the region. They also provide advice to Motorcycle taxi drivers who are unfamiliar with a town, translate for those unable to speak the local language and put Motorcycle taxi drivers in contact with local women who sell sex. This concurs with the findings of Gysels et al. (2011) that reported that Motorcycle taxi drivers often rely on middlemen to identify unmarried and 'safe' (HIV-negative) women with whom they can have casual sex. Sex workers use middlemen because they assure discretion and guarantee that Motorcycle taxi drivers will pay well.

Less than half 30.74% of them who reported using drugs/alcohol and 19.59% of them were allured to have sex. This implies that use of drugs and alcohol among this group leaves them with no choice but engage in risky unsafe sexual behaviours exposing them to the new HIV infections. This finding concurs with the findings of Matovu, et al. (2013) which that alcohol consumption, particularly before sex, impairs a person's judgment with regard to protected sex, resulting in many instances in failure or inconsistency in use of condoms. Motorcycle taxi drivers reason that the sexual stimulation that alcohol arouses and the presence of female bar tenders who dress provocatively, probably to lure motorcycle taxi drivers into having sex, leads to unprotected sex following alcohol consumption.

5.1.3 Attitude of boda-boda riders towards the uptake of selected HIV prevention methods

More than half of the respondents reported that male circumcision increases sexual pleasure. This positive belief is more likely to encourage all the uncircumcised motor taxi drivers to take up the male circumcision with a hope long sexual performance and increased sexual pleasure. This finding is quite different from the findings of Lukobo & Bailey, 2007

cited by Mugenyi, (2018) in a study conducted in Nyanza Province Kenya which discovered that motorcycle taxi drivers who were not practicing traditional male circumcision expressed limited interest in the practice although some expressed considering Male Circumcision because of beliefs that women preferred circumcised men. In addition, non-circumcised motorcycle taxi drivers revealed that they would adopt MC for themselves or their sons if it was proven to reduce the risk for HIV and STIs and on condition that it is to be offered free of charge or at a nominal cost. Therefore is a proactive need for mass sensitization and education campaigns that promote the benefits of male circumcision especially among people especially Boda-Boda riders in order to scale up the uptake of the procedure in the district.

Less than of them agreed that condoms cause rashes in the private parts. This implied that the significant numbers of motorcycle taxi drivers are more likely to engage in irresponsible sexual acts that could result in further transmission of the virus due to the perceived risks attached to condoms. The belief that condom use is associated with a lot of problems including causing rashes in their private parts pose negative implication towards condom use. This finding is in line with the findings of Bunnell et al (2009:90) that discovered that the majority of the motorcycle taxi drivers engaged in risky sexual behaviours in the eastern part of Uganda. This is almost similar to findings of Kusanthan et al. (2012:2-3) in their study which indicated motorcycle taxi drivers had a negative attitude towards condom use within a marriage quoting some reasons non condom use in sub Saharan African countries as they increase emotional distance between married partners. Therefore there is a need for the stakeholders to launch a campaign in a bid to raise more public awareness of HIV/AIDS. This campaign should take advantage of the recent increase in owners of mobile phones and sent text messages with information about the use of condoms to people particularly Boda-Boda riders, also through News papers, radio serial, "Future Dreams", broadcasted in the languages for encouraging consistent condom use thereby increasing knowledge and increasing skills for condom negotiation in both single, married men and women.

About 22.30% of motorcycle taxi drivers revealed that condoms reduce sexual pleasure. This indicated that the motorcycle taxi drivers had negative perceptions towards condom use. Their perception of pleasure, lack of accurate information, lack of sex education and gender disadvantage further could have contributed to their non-use of a condom. And this

evidenced in several studies conducted in Africa among the motorcycle taxi drivers and other truck drivers that showed that the social dimensions of masculine sexuality, pleasure, eroticism and emotional aspect of men's lives influence condom use. Men's emotional fulfilment with attainment of satisfaction through direct penile-vaginal contact and ejaculation during natural intercourse is an obstacle to condom use. Some men perceive prolonged sexual intercourse without a condom as a sexual prowess in the domain of masculinity and seek to preserve this manly skill by avoiding condom use. Mutual trust and love usually form a scaffold for partners in the relationship. Also one of the major barriers was their belief that they did not have to use condom in the steady relationship built on love and trust, which provide a sense of immunity to infection. This finding slightly concurs with the finding to Millstein et al. (2012) in a study conducted in Zambia that revealed that the individual perception, notion or constraint is likely to influence condom use. This because having a sexual partner from the same community was associated with non-use of a condom. This was also evidenced by the study conducted in Nigeria that discovered that the major barriers to condom use experienced by motorcycle taxi drivers, truck drivers were that the condom reduced their sexual satisfaction and hindered their sexual interest. In sub Saharan Africa, perceived lack of efficacy and condom related problems were barriers to condom use. In South Africa, the negative attitude towards condoms and other contraceptives was consistently associated with the probability of decreased free condom procurement from public health facilities. In Sao Paulo, Brazil, most motorcycle taxi drivers, heterosexual men used no condom when having sex because they were unaware of their HIV positive status until they were tested due to illness. In Kenya, motorcycle taxi drivers who had coitus with sex workers refused to use a condom under the pretence that the condom was unpleasant, defective, harmful, unnecessary, and too hard to use. Therefore there is an urgent need to intensify the multi-sectoral educational campaigns on the benefits of condom use among Boda-Boda riders in the municipality and the district at large to minimize the misconceptions against condoms and promote maximal uptake of the strategy.

A significant number of the respondents noted that the access to HIV testing services is easy in the municipality. Although the majority of the participants noted that the majority of them received HIV testing services, a lot of stigma still prevail them. This finding concurs with the findings of Gadegbeku & Saka (2013) in a study conducted Accra, regarding attitude of the motorcycle taxi drivers towards HTC of HIV/AIDS that revealed that despite the fact that HTC services have numerous advantages, acceptance of this service in many

countries especially where HIV is highly stigmatized and access to this services and support for motorcycle taxi drivers who test serous positive or HIV infected motorcycle taxi drivers are limited. The study further revealed that although 95% of respondents knew their sero-status could be checked, only 37% had actually heard about availability of HTC services. Out of the 37% who were aware of this service few (6%) had actually been to the HTC centre either to visit a friend (2%) or to check their status (4%). Therefore this calls for an urgent need for the stakeholders to launch a campaign in a bid to raise more public awareness of HIV/AIDS and testing to mitigate stigma as a barrier to HIV testing.

5.1.4 Predictors of the uptake of HIV prevention methods among Boda-Boda riders

Majority of the respondents were aware of the places were HIV testing services were being provided. Due to high level of mobility among transport sector workers, makes it difficult for them to access health information and services despite their high level of awareness about the services. It is common practice, for instance, for motorcycle taxi drivers and long distance truck drivers to treat themselves with traditional medicinal herbs or pills bought in markets en route and don't utilize health care services. This finding is quite similar to the findings of Kaai et al. (2012) in Mapping of hot spots along the Kampala-Juba highway found that revealed that high mobility among boda-boda riders makes it difficult to keep appointments at clinics and make regular follow-up visits. Those being treated may also find it difficult to adhere to a treatment regime offered to the hence increasing the risk of HIV infections among these key groups. Therefore there is a need to foster the provision of services by the district health teams as well as stakeholders that primarily focus on boda-boda riders in order to ease access to the health care services.

About 89(30.07%) of them noted that unavailability of HIV services was a main reason given for area inconveniency. Several studies have revealed that the common explanations given for not seeking health services at government health facilities included, long distances, busy business schedules, high transport costs, long queues, corruption attitude of health staff, long waiting and the absence of the required services and stock outs. This does not only cause inconveniencies but completely affect the health seeking behaviours of the boda-boda riders in the municipality. This finding concurs with the findings in the Management Sciences for Health report (2016) on the distribution of health facilities; that discovered that majority of motorcyclists indicated a preference for private healthcare facilities, as they perceived that these provided faster and better quality services than public health facilities

due to the absence of the required services and stock outs. Therefore there is an urgent need for government to avail services in the public health facilities in order to combat the negative attitudes attached to the service unavailability in the public health facilities.

About 19.93% of motorcyclists noted long waiting time as a reason given for area inconveniency. Due to high level of mobility among transport sector workers, makes it difficult for them to wait for services despite their high level of awareness about the services. This factor strongly affects the uptake of HIV prevention strategies among this vulnerable group. This finding is quite similar to the findings of Hussein; et al. (2008) which discovered that length of waiting time for medical consultation has been identified as one of the predictive factors for low uptake of HIV prevention methods. The public may prefer the medical services as their in order in safe sex practices but waiting time may affect their working time and finally leave without accessing the services. Therefore is a need for district health team to recruit more health workers through the government directives to increase on the number of daily service providers to minimise the effect of time on service uptake.

Majority 93.00% of the respondents discovered that there are outreach HIV testing services in the municipality. Although outreach services are being offered in the district, the services don't target boda-boda riders but they primarily target women and children leaving out this group. This does not only affect the uptake of services but deeply compromise the service accessibility. This finding is however quite different from that of Crane Survey Report, (2008/2009) which found out that HCT services were available for MARPs at static sites as well as through mobile outreach. Service providers had devised means of reaching MARPs by mobilising their peers and by moonlight VCT carried out at night. These services were, however, available in less than half of the hot spots visited. The survey also found scattered efforts by NGOs operating in the various hot spots to offer home-based care (HBC) to MARPs. Therefore there is a need to foster the provision of services by the district health teams as well as stakeholders that primarily focus on boda-boda riders in order to ease access to the health care servic

5.2 CONCLUSIONS

The motorcycle taxi drivers in this study only had high HIV/AIDS awareness level and adequate knowledge but lacked sufficient knowledge to curtail the spread of this killer

disease and hence a high risk group for acquiring HIV infection. Their lack of sufficient HIV/AIDS related knowledge in all key areas, refusal to use condom and undisciplined sexual behaviour with a variety of women within and outside their parks meant that they play a major role in transmitting HIV infection in Fort portal Municipality.

The study discovered that majority of the Boda-Boda riders' work for long hours for little pay this leaves them to occupy the lower economic status in society and thereby pushing some of them to indulge in other risky behaviours such as drug abuse and sex exchange for money. A substantial proportion of boda-boda drivers may be bisexual. Some boda-boda drivers reported having sex with men as well as steady and casual partners, meaning they could be a bridge population between high-risk groups in Fort portal. Having male–male sex is greatly stigmatized. However, it was surprising that about 1.01% of men were willing to report that they were attracted to both women and men.

This study revealed that the motorcycle taxi drivers had negative attitude towards condom use but had positive attitudes towards safe medical male circumcision and HIV testing though pain and stigma compromised their uptake among this group.

Motorcyclists noted long waiting time, services unavailability, lack of confidentiality and privacy as well as poor health workers attitudes were the main reasons given inconveniency in the access of HIV prevention services in Fort portal Municipality.

5.3 RECOMMENDATIONS

The district health teams and corporate bodies should make information on condoms and other HIV prevention methods available to their communities so as to increase awareness on the benefits of HIV testing Male circumcision and condoms in preventing HIV acquisition and transmission. This could be achieved by inviting speakers on the subject and through sourcing literature on the subject; promotion of drama in communities focusing on the same issue can go a long way in communicating factual and relevant information to reach Boda-Boda riders and communities at large.

There is a need for the stakeholders to launch a campaign in a bid to raise more public awareness of HIV/AIDS. This campaign should take advantage of the recent increase in owners of mobile phones and sent text messages with information about HIV/AIDS to

people particularly Boda-Boda riders, also through News papers, radio serial, "Future Dreams", broadcasted in the languages for encouraging consistent condom use thereby increasing knowledge and increasing skills for condom negotiation in both single, married men and women.

An urgent need for intervention programs such as education should focus on motorcyclists and similar high risk groups which could be delivered to them on a regular basis through popular radio stations at their stages. In addition, condom promotion should be part of every national AIDS control program because every country includes people for whom condoms are the best option to reduce HIV/AIDS risk.

A multi stakeholder approach in the rolling out of HIV infection prevention programs should be adopted seeing that individuals opt to use condoms and take up male circumcision. Thus traditional and religious leaders should be consulted and concerns should address a potential conflict between conventional and traditional practice.

Health centre staffs together with community leaders and VHTs should design outreach programmes specifically on HIV testing, safe male circumcision (SMC) and condom use to improve the attitudes of men. As the study findings have demonstrated, that awareness changes negative attitudes into positive.

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APPENDIX 1: RESPONDENTS CONSENT FORM

Introduction

Good morning/afternoon sir/ madam, I am a student of mountains of the moon University undertaking a masters' degree in public health. Currently, I am carrying out a research on factors influencing the uptake of selected HIV prevention methods among boda-boda riders in fort portal municipality Kabarole district Uganda. I therefore, request that you give little of your valuable time and answer the questions I will ask.

The purpose of the study

The aim of this study is to investigate the factors influencing the uptake of selected HIV prevention methods among boda-boda riders in fort portal municipality Kabarole district Uganda. These services were introduced in order to encourage youths as a preventive measures in the spread of HIV. The information you provide will therefore be of benefit to you and also aid in providing insights into the HIV prevention practices and help form a basis for formulating informative policies.

Procedure

The purpose of this form is to obtain your consent to participate. If you choose to participate a questionnaire will be administered to you and the interview will take between 10 and 20 minutes to complete.

Participation is voluntary and you can choose not to answer any individual question or

all of the questions. However, I hope you will participate in this interview since your views are important. I, being the principal investigator, will administer the questionnaire to you individually. However, if you have difficulties in filling out the questionnaire or have problems with communicating your views and information, you may be assisted by close family members and close friends.

There are no right or wrong answers to the questions; I would just like to learn about your personal thoughts and attitudes. If you don't understand a question, please tell me, and you can add further information at any stage.

Benefits

There are no direct benefits to you by choosing to participate in this study. However, the results of this study will be communicated back to you and to the District health team who will also take action depending on the outcome. The results will also be used in writing my thesis as part of requirements by the university.

Risks of the study

Apart from the inconveniences caused by taking part of your time, the process is safe and there are no risks involved. But some questions may appear uncomfortable but it is necessary for you to answer them with honesty. However, we will try as much as we can to make sure we save on your time. Also be assured that your participation in the study will not have any legal implication or any form of legal prosecution.

Confidentiality

All the information obtained will be strictly confidential and data password protected only accessed by the Principal investigator, study subjects in the study will be kept anonymous, being identified only by specific numbers assigned by the principal investigator.

Declaration of the volunteer

Having known the purpose of the study and having been assured of the confidentiality of the information that will be obtained from me, I voluntarily accept to give information according to the questions that are being asked.

Signature…….date……

Researcher

Signature .....Date.....

APPENDIX II: AN INTERVIEWER ADMINISTERED QUESTIONNNAIRE

Date.....

Your responses will be treated with almost confidentiality and will only be used for education purposes. Kindly put a tick (/) where appropriate.

Section I: Socio-Demographic factors

1. How old are you?

a) 18-25years ( )
b) 26-35years ( )
c) >35years ( )

2. What is your level of education?

a) Never attended ( )
b) Primary school ( )
c) Secondary ( )
d) Tertiary ( )

3. What is your Religion/ denomination

a) Christian ( )
b) Muslim ( )
c) Other (specify).....

4. What is your marital status

a) Single ( )
b) Married ( )
c) Separated/divorced ( )

d) Widowed ( )

5. What is your ethnicity?

a) Mutooro/munyoro ( )

b) Mukiga/Munyankole ( )

c) Muganda ( )

d) Mukonjo/mwamba ( )

e) Other (specify).....

6. Where do you come from.....?

Section 2: Knowledge about HIV infections prevention among Boda-Boda riders

7. Are you aware of HIV/AIDS?

a) Yes ( )

b) No ( )

8. Have you ever received information on HIV/AIDS?

a) Yes ( )

b) No ( )

9. If you have received information on HIV/AIDS, how did receive information about HIV/AIDS (source)?

a) Television ( )

b) Radio ( )

c) Health care workers ( )

d) Sexual Partner ( )

e) School health ( )

f) Peers ( )

g) Family member ( )

h) Other specify.....

10. Is HIV/AIDS a growing problem in this community?

a) Yes ( )

b) No ( )

c) Don't Know ( )

11. In your opinion, how can one contract HIV infection?

a) Having unprotected Sexual intercourse with an HIV positive person ( )

b) Bad luck ( )

c) Blood transfusion ( )

d) Direct Contact with an infected blood ( )

a) Mother to child transmission ( )

b) I don't know ( )

12. In your opinion, who are the people likely to be infected with HIV/AIDS?

a) Parents ( )

b) Boda-Boda riders ( )

c) Youth ( )

d) Prostitutes ( )

e) Others (Specify).....

13. In your own opinion, what is the probability that you may get infected with HIV/AIDS?

a) Very high ( )

b) High ( )

c) Neutral ( )

d) Low ( )

e) Very low ( )

Section 3: Uptake of Selected HIV/AIDS Prevention Methods among Boda-Boda Riders

14. Knowledge on selected HIV/AIDS prevention methods?

a) Yes ( )

b) No ( )

A. Uptake of HIV testing services

15. Have ever been tested for HIV?

a) Yes ( )

b) No ( )

26(b) If yes, what is your current HIV status

a) Negative ( )

b) Positive ( )

c) I don't know ( )

26(c) If NO why.....?

24 d) do you know any importance of HIV testing?

a) Yes ( )
b) No ( )
c) If yes what is it.....?

26e) what prevents your fellow boda-boda riders from HIV testing?

a) Stigma ( )
b) Services not available ( )
c) Lack of knowledge ( )
d) Attitude of the health workers ( )
e) Other (specify).....

B. Uptake of VMMC

16. Are you aware voluntary medical male circumcision?

a) Yes ( )
b) No ( )

27b) some men are circumcised. Are you circumcised?

a) Yes ( )
b) No ( )

27c) If yes what was the reason for the uptake of the procedure

a) Everybody was circumcising ( )
b) Improve penis hygiene ( )
c) My partner, parents, friends encouraged me ( )
d) Tradition ( )
e) Religion ( )
f) For HIV prevention ( )
g) Not applicable ( )

27d) if no, what are the some of the barriers to voluntary medical male circumcision?

a) Circumcision procedure is very painful ( )
b) Circumcision reduces sexual pleasure ( )
c) My partner may not like the penis ( )
d) It is against my tradition/Religion ( )

e) Lack of knowledge ( )

C. Uptake of Condoms

17. Condoms can effectively prevent the contraction of new HIV infections if used properly?

a) Yes ( )
b) No ( )
c) Don't know ( )

28b) Have you used a condom in the last 12 months?

a) Yes ( )
b) No ( )

28c) Does your partner prefer using a condom?

a) Yes ( )
b) No ( )
c) Don't know ( )

28d) how many times did you use a condom in the last 12 months?

a) Once ( )
b) Two times ( )
c) All times ( )
d) Never used ( )

28e) why did you use a condom, the last time if you used one?

a) Protection of against other HIV strains ( )
b) Protection of other sexually transmitted infections ( )
c) Family planning ( )
d) Not applicable ( )

28f) what are some of the perceived barriers to condom use?

a) Condoms promote promiscuity ( )
b) Condoms reduces sexual pleasure ( )
c) Condoms causes rashes in the private parts( )
d) It's against my religion ( )

e) I don't know ( )

Section 4: Sexual behaviours of motorcycle taxi drivers

29a) which types of sexual partner are you attracted to?

a) Female sexual partner ( )
b) Male sexual partner ( )

29b) How many sexual partners do you have currently?

a) One ( )
b) ≥2 sexual partners ( )

29c) Have you ever forced a woman into Sexual act and abused at any time?

a) Yes ( )
b) No ( )

29d) Do you any sexual relationship sex workers?

a) Yes ( )
b) No ( )

29e) If yes are related to them

a) Buy sex( )
b) Sell sex( )
c) Middleman ( )

29f) Do you use Drugs and alcohol?

a) Yes ( )
b) No ( )

29g) if yes, do you feel allured to have sex after using any of them?

a) Yes ( )
b) No ( )

Section 5: Attitude of the boda-boda riders towards the uptake of selected HIV prevention methods

29. Male circumcision increases sexual pleasure

a. Strongly Agree ( ) b. Agree ( ) c. Neutral ( ) d. Disagree ( ) e. Strongly Disagree ( )

30. Condoms cause rashes in private parts

a. Strongly Agree ( ) b. Agree ( ) c. Neutral ( ) d. Disagree ( ) e. Strongly Disagree ( )

31. HIV testing is a good practice for boda-boda riders

a. Strongly Agree ( ) b. Agree ( ) c. Neutral ( ) d. Disagree ( ) e. Strongly Disagree ( )

32. My religion/culture promotes the use of condoms, HIV testing and male circumcision

a. Strongly Agree ( ) b. Agree ( ) c. Neutral ( ) d. Disagree ( ) e. Strongly Disagree ( )

33. Condom use and circumcision reduces Sexual pleasure

a. Strongly Agree ( ) b. Agree ( ) c. Neutral ( ) d. Disagree ( ) e. Strongly Disagree ( )

34. HIV testing services, condom and male circumcision can easily be accessed in your area and are free of charge

a. Strongly Agree ( ) b. Agree ( ) c. Neutral ( ) d. Disagree ( ) e. Strongly Disagree ( )

35. HIV testing and condom use are regularly utilized by every boda-boda rider

a. Strongly Agree ( ) b. Agree ( ) c. Neutral ( ) d. Disagree ( ) e. Strongly Disagree ( )

Section 5: Predictors of the uptake of HIV prevention methods among Boda-Boda riders

36. Are aware of the place where HIV services are provided in the municipality?

a) Yes ( )

b) No ( )

37. Do you think the place where HIV services are provided is convenient for you?

a) Yes ( )

b) No ( )

38. If NO what reason can you give that inconvenience you?

a) Lack of confidentiality ( )
b) Distance too far ( )
c) Services not always available( )
d) Lack of privacy ( )
e) Lack of trust for health systems ( )
f) Poor attitude of the service providers ( )
g) Long waiting ( )
h) Others (specify)……

39. Are outreaches for HIV services in your area?

a) Yes ( ) b) No ( )

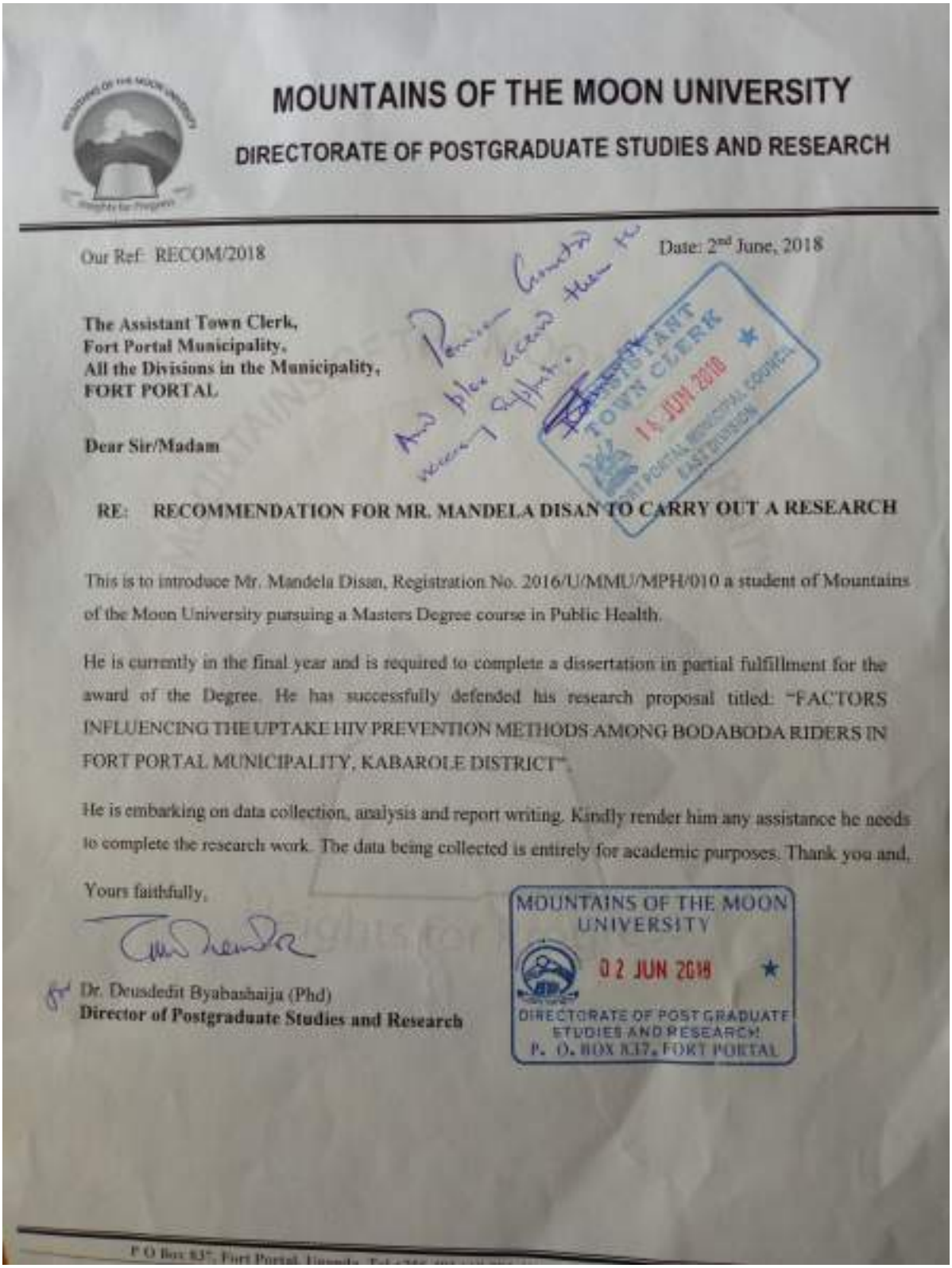
40. Do the services provided by the health workers satisfy you?

a) Yes ( )
b) No ( )

41. What do you expect the providers of HIV services to do in order to encourage you or others to voluntarily accept and take up HIV services?

a) Provide HIV prevention services in community/churches ( )
b) Be respectful, compassionate and humble ( )
c) Recommend testing for people ( )
d) Positive relationship with clients ( )

APPENDIX III: ETHICAL CLEARENCE LETTERS
LETTER ONE FROM EAST DIVISION



MOUNTAINS OF THE MOON UNIVERSITY

DIRECTORATE OF POSTGRADUATE STUDIES AND RESEARCH

Our Ref: RECOM/2018

Date: 2nd June, 2018

Please Counsel and plse accord them the necessary support.

ASSISTANT TOWN CLERK 14 JUN 2018 FORT PORTAL MUNICIPAL COUNCIL EASTDIVISION

The Assistant Town Clerk,
Fort Portal Municipality,
All the Divisions in the Municipality,
FORT PORTAL

Dear Sir/Madam

RE: RECOMMENDATION FOR MR. MANDELA DISAN TO CARRY OUT A RESEARCH

This is to introduce Mr. Mandela Disan, Registration No. 2016/U/MMU/MPH/010 a student of Mountains of the Moon University pursuing a Masters Degree course in Public Health.

He is currently in the final year and is required to complete a dissertation in partial fulfillment for the award of the Degree. He has successfully defended his research proposal titled: "FACTORS INFLUENCING THE UPTAKE HIV PREVENTION METHODS AMONG BODABODA RIDERS IN FORT PORTAL MUNICIPALITY, KABAROLE DISTRICT".

He is embarking on data collection, analysis and report writing. Kindly render him any assistance he needs to complete the research work. The data being collected is entirely for academic purposes. Thank you and,

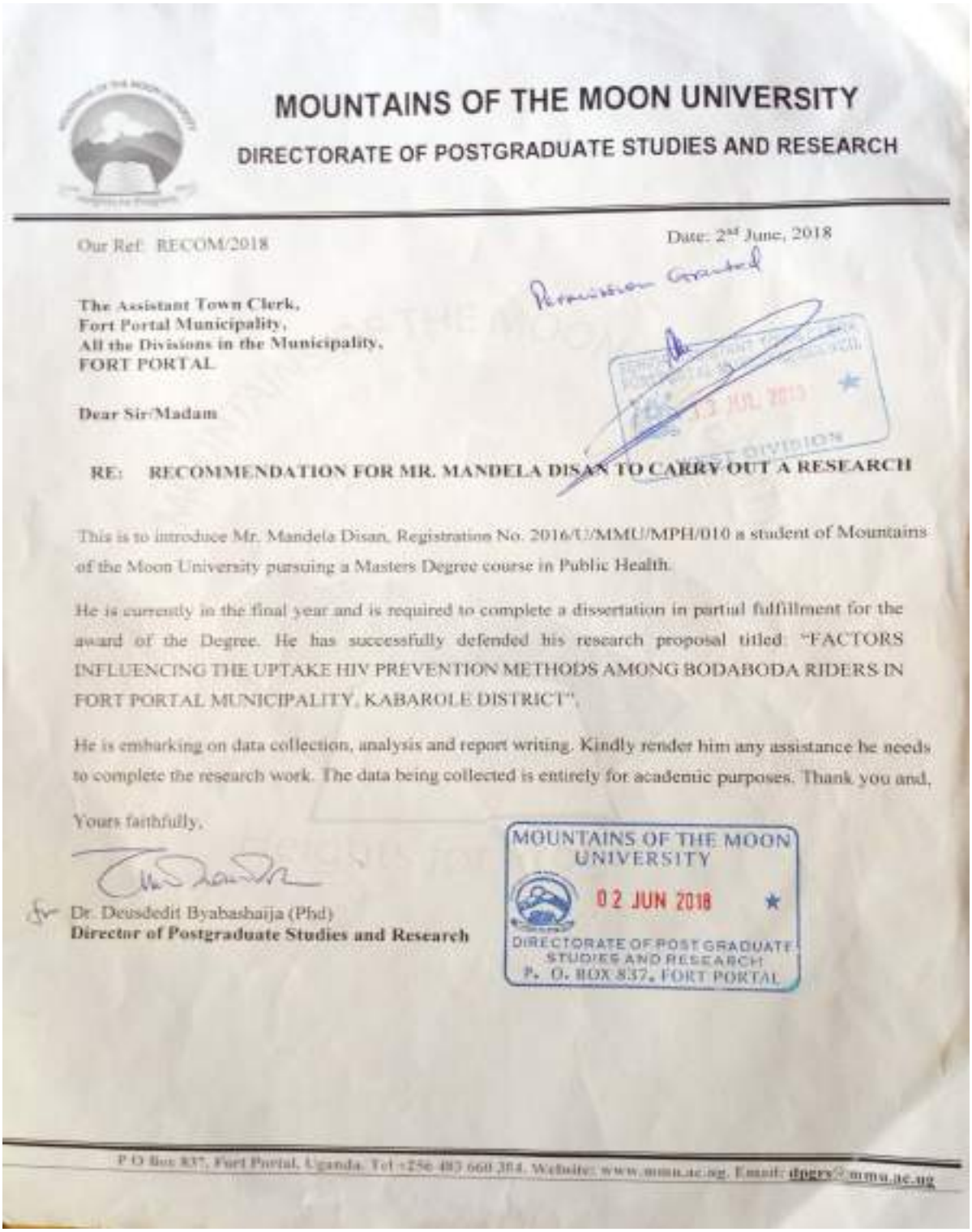
Yours faithfully,

Dr. Deusdedit Byabashaija (Phd)
Director of Postgraduate Studies and Research

MOUNTAINS OF THE MOON UNIVERSITY
02 JUN 2018
DIRECTORATE OF POST GRADUATE STUDIES AND RESEARCH
P. O. BOX 837, FORT PORTAL

P O Box 837, Fort Portal, Uganda

LETTER TWO FROM WEST DIVISION



MOUNTAINS OF THE MOON UNIVERSITY

DIRECTORATE OF POSTGRADUATE STUDIES AND RESEARCH

Our Ref: RECOM/2018

Date: 2nd June, 2018

Permission Granted

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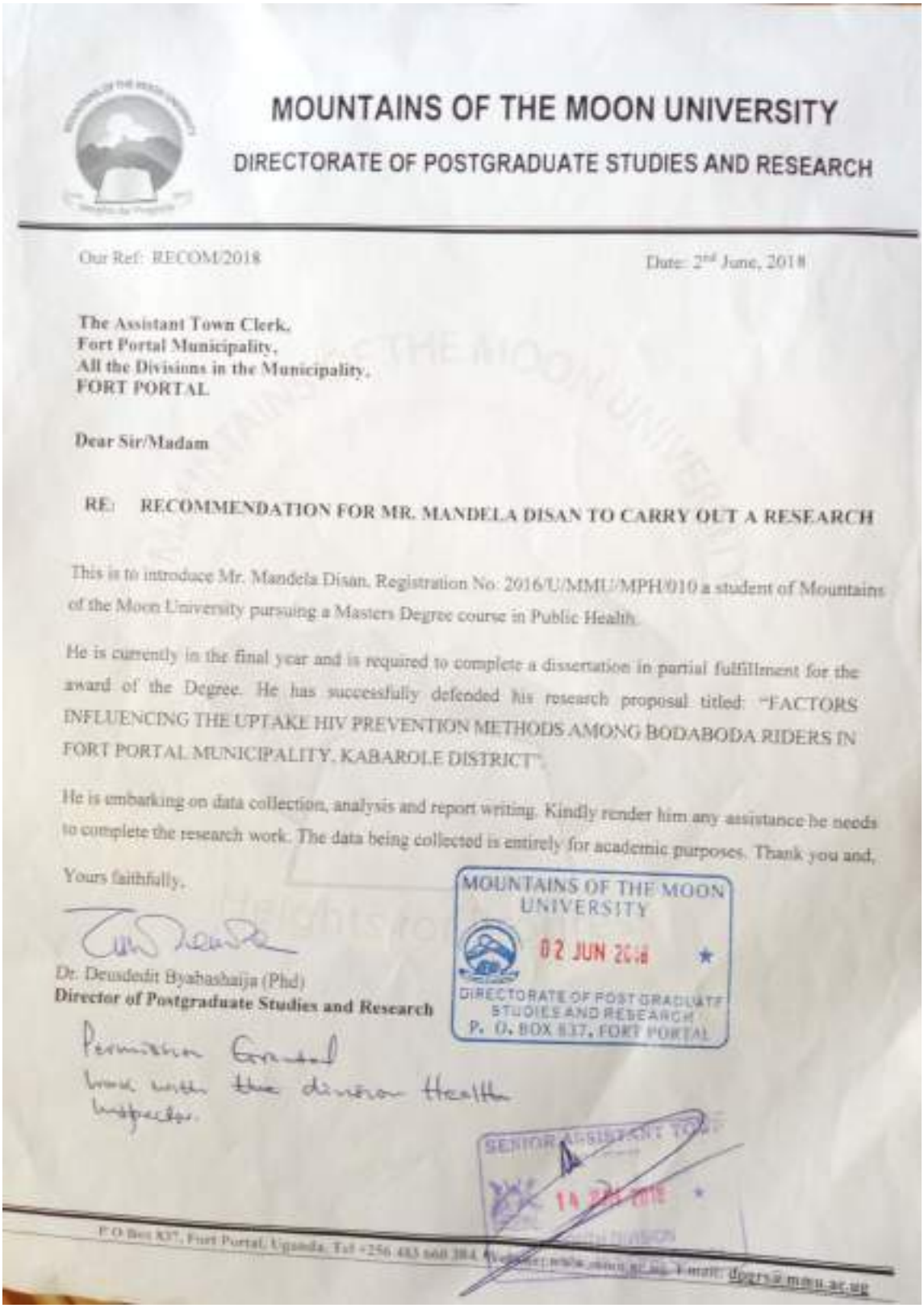
P. O. BOX 837, FORT PORTAL

P O Box 837, Fort Portal, Uganda. Tel: +256 483 660 384. Website: www.mmu.ac.ug. Email: dpgrs@mmu.ac.ug

LETTER THREE FROM SOUTH IVISION



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DIRECTORATE OF POSTGRADUATE STUDIES AND RESEARCH

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Director of Postgraduate Studies and Research

MOUNTAINS OF THE MOON UNIVERSITY
02 JUN 2018
DIRECTORATE OF POST GRADUATE STUDIES AND RESEARCH
P. O. BOX 837, FORT PORTAL

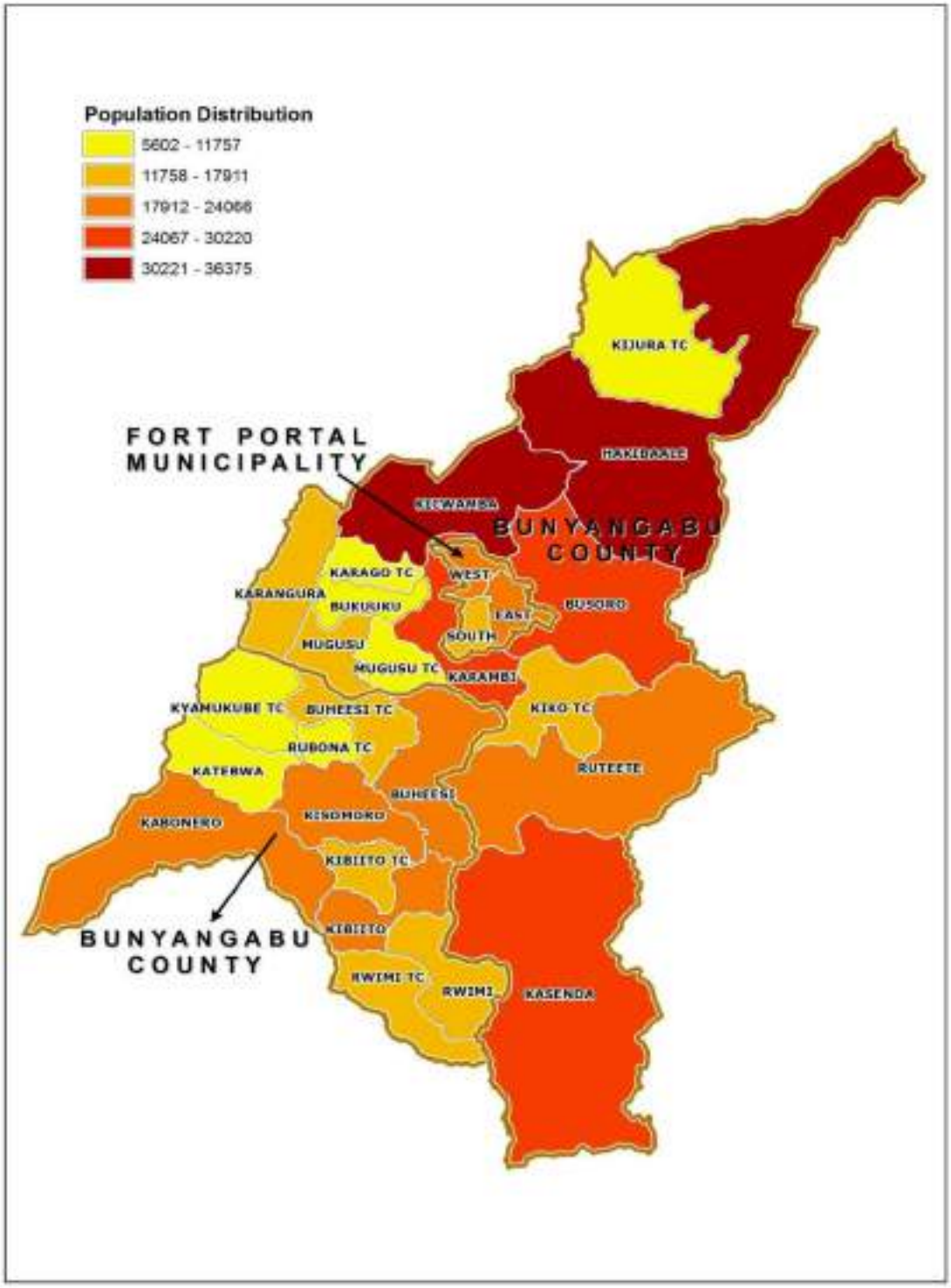
Permission Granted
Work with the district Health Inspector.

SENIOR ASSISTANT TOWN CLERK

P.O Box 837, Fort Portal, Uganda. Tel: +256 483 660 384 Email: dgsr@mmu.ac.ug

APPENDIX IV: MAP OF UGANDA SHOWING KABAROLE DISTRICT

APPENDIX V: A MAP OF KABAROLE DISTRICT SHOWING FORT PORTAL MUNICIPALITY



APPENDIX VI: PHOTOGRAPHS OF THE PRINCIPAL INVESTIGATOR DURING DATA COLLECTION