DETERMINANTS OF HIV TESTING PROGRAMME UPTAKE AMONG MARRIED COUPLES IN BOSAMARO CHACHE WARD, NYAMIRA COUNTY

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DECLARATION

This research project is my original work and has not been presented for examination or any award in any other university or learning institution.

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This project has been submitted for examination with my approval as the university supervisor.

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DEDICATION

This work is dedicated to my lovely wife Milkah Omweri Kebaso, my son Immanuel Lester Kebaso, my sisters Pamella K. Daniel who really supported me throughout my academic studies, Hellen Kebaso, Jackline Kebaso, my brothers Thomas Mong'are, Fredrick Mbogo, Joseph Osongo and in memory of my late father Daniel Kebaso Mbogo and my late Mother Elmelda Bwari Kebaso.

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ABBREVIATIONS AND ACRONYMS

AIDs	-	Acquired Immune Deficiency Syndrome
ANC	-	Antenatal Care
ARRM	-	Aids Risk Reduction Model
CBO	-	Community Based Organization
CDC	-	Center for Diseases Control
CHTC	-	Couple HIV Testing and Counseling
DHIS	-	District Health Information System
ELISA	-	Enzyme-Linked Immunosorbent Assay
HBHCT	-	Home Based HIV Counseling and Testing
HIV	-	Human Immunodeficiency Virus
HTC	-	HIV Testing and Counseling
IDU	-	Infecting Drug Users
IEBC	-	Independent Electoral and Boundaries Commission
KAIS	-	Kenya Aids Indicator Survey
KNASA	-	Kenya National Aids Spending Assessment
MSM	-	Men Having Sex with Men
NASCOP	-	National Aids & STI Control Programme
NGO	-	Non-Governmental Organization
PLHIV	-	People Living with HIV/Aids
UNAIDS	-	United Nations Programme
VCT	-	Voluntary Counseling and Testing
WHO	-	World Health Organization

ABSTRACT

It has been reported that self and partner's HIV status knowledge is low among heterosexual couples around the world. The study's key objective was establishing the HIV testing on uptake of pretesting among married couples in Nyamira county Bosamaro Chache Ward. This study collected the views of couples and the local leaders and therefore it helped in establishment of determinants of HIV prevention strategies among married couples. In that regard, this would help in policy formulation to enhance the testing. The research incorporated a descriptive survey research design. The targeted population included 39,758 residents of Bosamaro Chache Ward from where a sample size of 400 was selected. Further, the study targeted the community leaders and personnel working in health centers in the ward drawn from each of the sub-locations of Ikobe, Bigege, Enchoro and Kegogi. The research picked a sample through the technique of stratified random sampling. The study used primary data collected using a questionnaire. The researcher conducted a pre-test to ensure reliability and validity of the questionnaire. The researcher administered the questionnaire individually to the selected sample. The research checked the completed questionnaires for completeness and consistency. Analysis of the data was done through the use of inferential and descriptive statistics. Correlation and regression model were employed to study the relationship between the independent variables (pretest counseling, awareness of HIV/AIDS, models of testing and accessibility to testing site) and the dependent variable (uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County). From the study, pre-test counseling, awareness of HIV/AIDS, models of testing, and accessibility to testing site were all established to be determinants of uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County. It was established that pretest counseling enhanced the testing uptake for HIV amongst married couples to a great extent. Awareness of HIV/AIDS was also established to enhance the uptake of HIV testing among married couples in Bosamaro Chache Ward to a great extent. Results revealed that the models of testing determined the testing uptake for HIV amongst married couples in Bosamaro Chache Ward to a great extent. On accessibility of the test sites, the results revealed that married couples who lived near VCT center preferred to go to a VCT center far away from the sight of their neighbors so that they are not suspected to be infected. The study concludes that pre-test counseling, awareness of HIV/AIDS, models of testing, and accessibility to testing were determinants for testing uptake for HIV amongst married couples in Bosamaro Chache Ward. To encourage the testing uptake for HIV amongst married couples counselors should be provided with testing checklist or algorithm to guide them through the counseling process. Further, they should be given effective support and training, to enhance their capacity for consistently conveying to customers the right advice. The county government is supposed to hold awareness campaign to disseminate information on HIV treatment and prevention. Efforts should be put promote public alertness about risk of HIV and HIV testing benefits. The doctors should be trained to be proactive in giving HIV testing. Regular monitoring as well as evaluation of the tests is supposed to be carried out in the clinics as well as other sites of doing the rapid-tests towards ensuring specificity and sensitivity, Bosamaro Chache Ward should be equipped with more VCT centers as the available few plus distance challenges many couples from attending counseling and test sessions.

CHAPTER ONE
INTRODUCTION

1.1Background of the study

Worldwide Human Immunodeficiency Virus (HIV) infections that are heterosexually acquired are highest in prevalence in Sub-Saharan Africa. In the East Africa region, most incidents of infections of HIV have been occurring among couples who are cohabitating/ married heterosexual where about one in every two couples who are HIV-infected are in discordant partnership that is stable (Kaiser, 2011). Couples who are married as well as the ones in steady sexual relationships count for the largest percentage of Kenyan new infections of HIV (44%). Among couples who are heterosexual, knowledge of partner's and self-status of HIV is low according to reports. Referring to Kenya Acquired Immune Deficiency Syndrome (AIDS) Indicator Survey (KAIS) of 2012, 53% of people infected with HIV were not aware that they had been infected; and of couples who were cohabiting/ married, 40% knew not of their partners HIV status *(*National Aids & STI Control Programme (NASCOP), 2014).

HIV Voluntary Counseling and Testing (VCT) are widely accepted now as the HIV prevention programs cornerstone for of its numerous benefits in many nations (Baiden et al., 2007). Additionally, VCT is doorway to comprehensive care of HIV and support together with antiretroviral therapy access. Innovative VCT delivery approaches including routine testing and counseling for HIV, VCT that is home-based, use of lay counselors who are community-based, testing and counseling of couples, and mobile VCT, are incorporated to the free standing traditional delivery systems of VCT, outreach services of VCT and health unit based (Arthur et al., 2005).

Counseling and testing of HIV (HTC) enables knowledge of ones' HIV-status and connection to services meant for prevention, treatment and care. HTC for couples happens where 2 individuals are planning to have a carnal relationship or already are in a sexual relationship that is ongoing are tested, counseled and get their HIV status results together (Helleringer & Kohler, 2007). This gives a way of mutual HIV status disclosure in settings where health worker or counselor can provide support; messages of risk-reduction are tailored according to test results outcome of persons and prevention decisions, treatment accessing, support and care, and options of family planning together could be made reduced stigma; and HIV normalization (Baiden et al., 2007).

HIV counseling and testing (HTC) is an important element of strategies of HIV prevention. Using arithmetic models, studies have exposed that approximately 50% of fresh infections of HIV are from infected individuals who are not aware of their status, making prevention of spread of infections more difficult. Whereas early treatment and diagnosis are linked with good outcomes of treatment (Von Wyl et al., 2011), late treatment and diagnosis increase the burden of disease and represent unexploited prevention opportunities (Miro et al., 2011).

According to UNAIDS (2018), the rates of adult HIV gets up to 20 percent in sub-Saharan Africa. Coital occurrences and consequently potential HIV exposures, among the married are higher than among the unmarried (Johnson et al., 2009). In addition, couples desire to have kids requires vaginal sex that is unprotected. Within relationships that are a long-term commitment, it might be harder to assume behaviors that are preventative. For instance, suggesting condom use or abstinence to a partner could be interpreted easily as an in0dication of mistrust or one's own unfaithfulness

(Chimbiri, 2007). Depending on a partner's fidelity might as well be risky; persons in relationships that are committed in Africa regularly engage in extra sexual partnerships (Helleringer & Kohler, 2007).

Couples who are married and ones in steady relationships accounts for the largest proportion of new infections of HIV/Aids in Kenya. (UNAIDS United Nations Programme on HIV/AIDS) 2010 Information on the AIDS epidemic globally confirms that new HIV infections of HIV decline in the last decade is linked clearly with behavioral changes and social customs as well as with improved HIV knowledge (Arthur et al., 2005). A statement by Population Action International regarding HIV in marital, in its commendations, states that, "Numerous measures could be put in place to lessen the married men and women vulnerability to infections of HIV, including stronger guidelines, better strategies of prevention as well as changes in social norms that are destructive. It goes forward to specifically propose. Educating women and men on social behaviors and how they impact their health negatively, as a first stage to reducing infections of HIV in matrimony (Helleringer & Kohler, 2007). This shows that perceptions which are wrong (spread by social norms that are harmful in Kenya) as well as information on HIV/AIDS as a factor contributing to infections spreading. Rendering to Kenya Aids Indicator Survey (2012) statement says that even with the levels of HIV testing increasing, 53% of study participants found infected did not know that they had HIV infection. This study paper aims at showing how new infections of HIV can be lessened among couples who are married.

Bosamaro County assembly ward is a Kenyan electoral ward. It is amongst wards of West Mugirango constituency in Nyamira County. According to the IEBC (2017), it is ward number 1354. Bosamaro Chache ward has a total population of 39,758

covering around 46.9 square kilometers. The ward is made of Ikobe, Bigege, Enchoro and Kegogi sub–Location.

Being part of Nyamira County that has a high HIV prevalence rate at 6.4%, the prevalence rate for Bosamaro County assembly ward is thus relatively high. HIV rate prevalence in women is higher at 6.8% than that of men whose HIV rate of prevalence is 5.8%. In general, the rate of new infection in the entire county is relatively high at 2507. Further, in the entire county, only 40% of the population have been counseled and tested (DHIS, 2014).

1.2 Statement of the Problem

World Health Organization (WHO) (2018) indicated that between 32.7–44.0 million people in the world were having HIV. At the close of the year 2018, HIV prevalence rate was 0.8% for grownups aged 15–49 ages globally. African region is the most affected, with almost 1 in each 25 adults (3.9%) having HIV and representing over two-thirds of individuals with HIV globally (WHO, 2018). Globally Sub-Saharan Africa got the largest incidence and prevalence of infection of HIV, attributable mostly to heterosexual spreading. In Africa, evidence is increasing that a big percentage of new infections of HIV occur in couples who are cohabitating, most of whom do not know of sero-status of their partners (Dunkle, 2013). Within East Africa, 40–50% of cohabitating or married HIV-infected individuals are in HIV-discordant partnership. In Kenya, Malawi and Uganda more than 80% of all sex that is unprotected by persons who are HIV-infected happens with cohabitating partners or spouses (Bunnell, 2008). Therefore, a high percentage of incident infections of HIV occur within cohabitating or married heterosexual couples. Married couples stand for 44% of HIV infections that are new in Kenya as there's low alertness of partner and

self-status of HIV. Diverse approaches have been used to promote HIV counseling and testing amongst couples (CHTC). In spite of this, incidence of HIV among couples remains on the rise.

In County of Nyamira, the general HIV prevalence in children and adults stood at 6.4 per cent interpreting to 26,738 persons infected with HIV from which 23,500 were grownups and 3,238 were kids (County HIV profile, 2018). This rate is bigger than the countrywide overall prevalence of HIV which was 1.98% in 2017. The prevalence of HIV in Nyamira County among women is higher (6.8 per cent) than men's (5.8 per cent). Year in year out, women in this county are more susceptible to infection of HIV than men. Yearly fresh infections is at 2507 (Children 455, adult: 2052) (DHIS; Kenya HIV County Profile 2018). It should be noted that, in 2017 there were approximately 52,800 new infections across all ages a fact which depicts that, Nyamira County contributes about 5% of new infection in Kenya. The Kenya National AIDS Spending Assessment (KNASA, 2017) shows that in 2018/2019, Nyamira County allocated 1.8 million and an additional Supplementary budget allocation of 125.43 million. In spite of this allocation, the HIV/AIDS - related mortality stood at 318 in the year 2018. Until now, of Nyamira County residents only 40% have been pre-tested and counseled, henceforth the necessity to increase HT services (DHIS, 2014).

In approximately one in ten Kenyan couples who are married, one partner at least is infected with HIV. Amongst married persons that are HIV infected, 45 percent got a spouse who is not infected. This isn't exceptional to Kenya, although transmission risk in couples who are discordant can be reduced drastically, this can happen only when partners get tested, reveal their outcomes, and practice use of condoms.

Nevertheless, the quantity of persons who do this in various countries that are affected is low, leading to infection in marriage.

Referring to the KAIS (2012) study 5.6% of grownups of the age between 15 and 64 years were HIV positive. This is approximately 1,192,000 individuals living with infections of HIV in year 2012. Prevalence of HIV increased with age increase, with the biggest prevalence among grownups of age 45-54 years. However, the 2007 KAIS study statistics indicated that frequency in the 25-34 category of age was highest. The change of prevalence of HIV rate among the two groups of age, i.e. 2007 large prevalence among age 25-34 and among 45-54 in 2012, can be credited to the improved HIV testing and awareness campaigns conducted from 2007 to 2012 to those in ages between 25-34. By knowing what is HIV/AIDS and being aware of their status, their perception has changed on the epidemic and now they can devise measures to shield from new infections of HIV. Adults, particularly those of ages between 25 and 54 years are married. The KAIS information hence proposes high HIV infections prevalence among couples. This could be attributed majorly to ignorance and lack of alertness about infection of HIV among these grownups. Most partners have not tested and are unconscious of HIV status of their partners. This points out a gap in prevention among married individuals usually because the individuals fail to know their HIV status. In that regard, there is a dire need to stop the spread of HIV among married couples by enhancing their uptake of HIV testing. This study therefore sought to determinant of HIV testing programmes uptake among married couples in Bosamaro Chache Ward, Nyamira County. The study thus aimed at establishing the effectiveness of pre-test counseling, HIV/AIDS awareness, HIV testing models and accessibility to testing site

1.3 Purpose of the study

The purpose of research project was to establish the determinant of HIV testing programmes uptake among married couples in Bosamaro Chache Ward, Nyamira County.

1.4 Objectives of the Study

i. To establish the extent to which pre-test counseling influences uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County.
ii. To assess how HIV/AIDS awareness influence the uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County.
iii. To establish how HIV testing models determines the uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County.
iv. To assess the how accessibility to testing site determines uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County.

1.5 Research questions

i. To what extent does pretest counseling as a procedure in testing of HIV influences the HIV testing uptake among the married couples in Bosamaro Chache Ward, Nyamira County?
ii. How does awareness of HIV/AIDS determine the uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County?
iii. How does testing models determine HIV testing uptake among married couples in Bosamaro Chache Ward, Nyamira County?
iv. How does accessibility to testing site determine HIV testing uptake amongst married couples in Bosamaro Chache Ward, Nyamira County?

1.6 Research Hypothesis

The research hypotheses for the study were as follows:

i). **H_{A1}:** Pretest counseling, as a procedure in testing of HIV significantly determine the HIV testing uptake among the married couples in Bosamaro Chache Ward, Nyamira County

ii). **H_{A2}:** Awareness of HIV/AIDS significantly determine the uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County

iii). **H_{A3}:** Testing models significantly determine HIV testing uptake among married couples in Bosamaro Chache Ward, Nyamira County

iv). **H_{A4}:** Accessibility to testing site significantly determine HIV testing uptake amongst married couples in Bosamaro Chache Ward, Nyamira County

1.7 Significance of the study

The use of a couple-based model in this study is innovative as it represents the views of couples and might lead to the development of effective decision support strategies that are couple centered. The knowledge generated complements to the existing HIV literature and helps to understand how health enhancing behaviors work among married couples.

There has been registered that there's low consumption of services offered by VCTs like in other societies across Africa. Because change in behavior is amongst ways used in combating HIV/AIDS, couples in marriage require proper motivation to engage in that process through obtaining a dependable knowledge source concerning HIV/AIDS. As a result of the actualities that attempts towards influencing people to visit the VCT regularly or ANC services hasn't been quite productive, the finding from this research is expected to provide a chance for learning more on what influence the uptake of VCT services among married couples. Also the study findings can help the government and non-governmental organization (NGOs) in identifying the necessary changes in making VCT/ANC more attractive, accessible, appropriate and acceptable to married couples. The changes to be made should be geared to

explore various ways that would promote the Increase use of VCTs among the married couples. Aiming to raise awareness on the susceptibility of being HIV infected the severity of AIDS, efficacy of counseling centers, self-efficacy and protective motivation as means towards protective sexual behavior. As an end outcome, the married couples' quality of life will dramatically be improved and prolonged. The research findings could also acts as a reference base for other researchers who would like to carry further research on the same topic.

The result findings could also be beneficial to government ministries, like Ministry of Health and other policy makers in drawing policies that would help to enhance the testing uptake for HIV married couples and other key populations. Similarly, the study findings could also help health institution in coming up with strategies that could also help to boost the testing uptake for HIV amongst married couples as well as other individuals.

1.8 Basic assumptions of the Study

The research assumed that all interviewee shall be ready to participate and they would avail truthful and accurate information for the research that would be helpful in establishing the determinants of HIV prevention enablers among married couples in Bosamaro Chache Ward, Nyamira County.

It was also assumed that the sampling of households would be a representation of the whole population residing in Bosamaro Chache Ward and that the chosen sample was a fair illustration of the entire target population.

1.9 Delimitation of the Study

The study was delimited in Bosamaro Chache Ward in Nyamira County. The study was conducted between the month of October and December 2019. A determinant of

HIV testing uptake among married couples, the study only focused on four specific ones, pre-test counseling, awareness of HIV/AIDS, models of testing and accessibility to testing sites. To accomplish the set objectives, the research applied descriptive research design. The study targeted married couples in the ward, community leaders and health workers who were deemed knowledgeable on the issue at hand.

1.10 Limitation of the study

The research encountered some hindrances. These included low findings generalizability, where the outcomes may not present an overall picture of the factors that enhance routine HIV testing among married couples. However, to mitigate the challenge of generalization, the study selected adequate scientific sample, whereby a 30 cases sample is considered generally distributed. Thus, the selection of sample with 361 respondents was deemed adequate for generalization.

A further limitation, the researcher, while undertaking this study encountered respondents who failed to disclose certain information that they deemed very sensitive. The reason is, HIV/AIDS is associated with a lot of stigma and thus respondent may fail to respond for fear of victimization and being isolated. To mitig ate against these, the researcher assured respondents that all the information that they will disclose will be kept confidential during and even after the study and there is nowhere the name of anything likely to disclose the identity of the respondent will appear. In addition, the researcher described to the participants that the information they provided was only utilized for purposes of academics and not for any other purpose.

1.11 Definition of Significant Terms used in the Study

Accessibility of testing sites: This refers to the ease or otherwise reaching the facility where one can be tested for HIV.

Awareness: refer to knowledge or perception of a situation or fact. It therefore refers to the concern on and well-versed interest on a certain situation.

Informed Consent - an arrangement the counselee and the service giver or scholar makes after having understood and received the aim of the process or the information exchange.

Model of Testing and Counselling- refers to the approaches and modalities used in counselling and testing of HIV (HTC). Therefore, these are range of viable and valid approaches used HIV testing and counselling. HIV counselling and testing presently happens in community-based stand-alone and centres based in hospitals giving standard, personalized voluntary testing and counselling using ELISA skills. The main approaches include giver-initiated counselling and testing and testing and counselling which is voluntary.

Post-test Counseling- a discussion between a client and the provider aimed at informing client about their results on HIV test and helping them to deal with outcomes. The discussion involves of providing the results, evaluating the customer's mental and emotional result understanding and making strategies for care.

Pre-test Counseling- a discussion done between clients and provider with the aim of preparing them for the test of HIV. It involves expounding their HIV/AIDS knowledge, enlightening the them on the procedures of test and how to manage results of HIV test, making them prepares for the tests outcomes,

helping them in making decision on testing , getting informed permission of the married couples and counseling on safer sex.

Stigma – Stigma refers to the negative thoughts about a person or group based on prejudiced.

Uptake of HIV testing: This refers to the voluntary action of accepting to take up HIV testing. This process involves awareness creation and facilitated by accessibility of accessibility to testing sites. In the context of this study, it refers to the voluntary action by couples to take up HIV testing together.

Voluntary Counseling and Testing – Procedure in which a person receives counseling in order to make informed choice on taking a HIV test. The decision must entirely be the individual's choice and confidentiality of the process must be guaranteed.

1.12 Organization of the Study

The study has five segments each comprising of different subtitles as outlined;

Chapter One: contains, study background, problem statement, study purpose, study objectives, study questions, study significance, delimitations and limitations, assumptions and definition of terms of operation.

Chapter Two: It entails empirical review where review of literature is done on the variables that the study is focusing on. Further, the chapter contains a theoretical review where the theories underpinning the study are discussed. Also a conceptual framework, knowledge gap and summary of literature are presented as well.

Chapter Three: contains the study's research design, population target, size of sample and procedures of sampling, study instruments, the instruments' validity and their reliability, ethical considerations, procedure of data collection and analysis of data.

Chapter four discusses the data analysis techniques, the study findings and presentation of the same findings.

Chapter five entails the summary of obtained findings, conclusions, recommendations and areas for additional future research.

CHAPER TWO
LITERATURE REVIEW

2.1 Introduction

In this section, an in-depth summary of the available works related to previous studies on the issues manipulating the acceptance of routine unpaid counseling and testing of HIV was undertaken. Therefore, this chapter includes empirical review, overview of the related theories, conceptual framework, research gap and chapter summary.

2.2 Uptake of HIV Testing Among Married Couples

A number of empirical studies conducted (for instance Kaiser, Bunnell, Hightower, Kim, Cherutich, Mwangi& Mermin, 2017) indicates that above 80 per cent of couples in marriage do not know their own or their partner's HIV status. In line with that, there is a dire need for interventions to increase awareness of HIV status and to promote couples' HIV counseling and testing (WHO, 2012). Once this is done, it will in turn reduce HIV transmission risk among married couples. Counseling of couples or testing tends to be a successful tactic in changing sexual risk actions, particularly in HIV-discordant couples (Biraro, Ruzagira, Kamali, Whitworth, Grosskurth & Weiss, 2013).

Nannozi, Wobudeya, Matsiko, and Gahagan (2017) did a study on motivators of couple HIV counseling and testing (CHCT) uptake in a rural setting in Uganda. The study was conducted from June 2013 to July 2013. It conducted 4 focus group discussions, 10 key informant interviews and interviewed 53 persons in couple relationships. The study established that, in Uganda, HIV prevalence among married/living together is 7.2% among women and 7.6% among men. The study also

established that uptake of CHCT among attendees of health facilities in rural Uganda is as high as 34%.

According to KNBS (2016), the fast increase of treatment for HIV is a key response towards the epidemic of HIV/AIDS in the sub-Saharan regions. Regardless, admission of individuals who are infected in the programs of treatment continues being disadvantaged by the small uptake of testing for HIV and counseling (HTC). Among the married couples in most African countries, the uptake of the testing services is hampered by poor access to health amenities, HIV-related stigma, confidentiality and fatalism (Obermeyer & Osborn, 2013). Various approaches have been suggested to enhance the uptake of HTC amongst married couples in sub-Saharan Africa, their efficacy are limited in the poor countries (Matovu & Makumbi, 2015). Bassett, Giddy, Wang, Lu, Losina, Freedberg and Walensky (2017) notes that routine testing in health care facilities significantly increases uptake and case-finding among the married couples, however cost and convenience issues are a deterrent.

Further, Kiene, Gbenro, Sileo, Lule and Wanyenze (2017) did a study on how to get partners to test for HIV. The study was to predict the uptake of partner HIV testing following individual outpatient provider initiated HIV testing in rural Uganda. The study took a sample of outpatients (152 females, 152 males) receiving individual provider-initiated HIV testing and counseling (PITC) aiming at identifying factors associated with subsequent uptake of partner HIV testing. Purposively sampled outpatients receiving PITC at a Ugandan hospital completed a questionnaire immediately prior to testing for HIV, and then at 3 and 6 months post-test. By 6-month follow-up 96% of participants reported disclosing their HIV test results to their partner and 96.4% reported asking their partner to test. 38.8% of women and 78.9%

of men reported that their partner tested and they knew their results. Among women, perceiving greater social support from their partner, which perhaps reflects better relationship quality, was predictive of their male partner testing for HIV (AOR 2.37, 95% CI 1.22–4.58). Notably intimate partner violence showed no negative association with partner testing.

According to Corbett, Dauya, Matambo, Cheung, Makamure, Bassett and Godfrey-Faussett (2016), the uptake of HTC among the married couples may also be enhanced by employing a workplace-based initiatives, however, this approach suffers a limitation since this cannot reach the unemployed poor in the society. In that regard, Bunnell and Cherutich (2018) highlighted that home-based provision of HTC services would the strategy of choice to achieve universal HIV testing and counseling. They further indicated that community-centered strategies that may include the mobile HTC units or home-based HTC provision increases the uptake of testing services among the married couples.

Stephenson, Elfstrom and Winter (2013) conducted a study to establish community influences on married men's uptake of HIV testing in eight African countries. The study investigated community influences on HIV testing among men aged 15–54, using Demographic and Health Survey (DHS) data from Chad, Ghana, Malawi, Nigeria, Tanzania, Uganda, Zambia, and Zimbabwe. Multilevel models were fitted in each country for the outcome of ever receiving an HIV test. After controlling for individual and household level factors, community level factors of demographics, economics, and behavior and knowledge remain significantly associated with HIV testing among men. The results of this analysis highlight the need to recognize the impact of community influences on men's HIV test seeking behavior, and to harness

these community factors in the design of programs aimed at encouraging the uptake of HIV testing among men in Africa.

There is overwhelming evidence regarding couples' HCT effectiveness, nonetheless, the actual uptake of HCT remains dismal (between 5-47%) (Farquhar, Kiarie, Richardson, Kabura, John, Nduati & John-Stewart, 2014), indicating an opportunity that has been missed to connect couples to programmes for appropriate HIV prevention, care and treatment. A myriad of factors are blamed for the low couple's uptake of HCT (Koenig, Lutalo, Zhao, Nalugoda, Wabwire-Mangen, Kiwanuka & Gray, 2017). The factors have been listed as attached with perceptions in testing of HIV by proxy, low participation by men, and the overall belief that being in a monogamous relationship is safe among other factors.

2.3 Pretest Counseling and Uptake of HIV Testing among Married Couples

Matovu, Todd, Wanyenze, Wabwire-Mangen, and Serwadda (2015) did a correlation of previous couples' HIV counseling and testing uptake among married individuals in three HIV prevalence strata in Rakai, Uganda. The study enrolled 2,135 married individuals. This was a cross-sectional study. Data were collected on socio demographic and behavioral characteristics, including previous receipt of couples' HCT. HIV testing data were obtained from the Rakai Community Cohort Study. The study conducted multivariable logistic regression analysis to identify correlates that are independently associated with previous receipt of couples' HCT. The results indicated that there was no significant difference in previous receipt of couples' HCT between low (n=309, 43.9%), middle (n=295, 41.7%), and high (n=242, 39.7%) HIV prevalence settings (p=0.61). Marital order was not significantly associated with previous receipt of couples' HCT. However, marital duration [five or more years vis-

à-vis 1–2 years: adjusted odds ratio (aOR): 1.06; 95% confidence interval (95% CI): 1.04–1.08] and awareness about the existence of couples' HCT services within the Rakai community cohort (aOR: 7.58; 95% CI: 5.63–10.20) were significantly associated with previous receipt of couples' HCT.

Pretest counseling is an opportunity to facilitate a patient's informed decision-making about undergoing HIV testing. During pretesting, a clinician is required to make sure that even if he/she is planning to refer the patient to a specialist for testing, it can be helpful to discuss the general benefits, risks, and limitations of testing, as clear communication at this stage can ease adaptation to results later (Krakowiak et al, 2016). Pretest counseling is considered to be very beneficial given the fact that HIV testing is a disturbing event. Moreover, this trauma becomes extreme when the result of the test (negative or positive) is revealed. Therefore, it is important that the HIV testing process be escorted by counseling. According to Krakowiak et al, (2016) pre-test counseling is normally provided to a person before testing for HIV, to ensure that individual has enough information to take a knowledgeable decision on testing for HIV. During the meeting the individual should be allowed to decide whether he wishes to test for HIV. Pre-test counseling normally includes deliberations on: awareness and assessment of individual risk, and HIV infection transmission; what is HIV test and the test purpose; a chance for making decision about testing for HIV; meaning of a negative and positive result, together with the practical consequences for instance care and medical treatment, carnal relations, psycho-social consequences; strategies to lessen risk and sex that is safe; and subsequent handling positive result, counting whom to inform and recognizing requirements and support amenities (Krakowiak et al, 2016).

Markwick et al, (2014) did a study that examined readiness to get involved in voluntary testing and counseling amongst individuals who get jabs of drugs in a Canada. Cross-sectional information from a potential IDU cohort in Vancouver, Canada, was gathered from December 2011 to May 2012. Bivariate statistics and multivariate logistic regression were employed to recognize the factors associated with readiness to get VCT that are peer-delivered. The study outcomes established that majority of respondents were ready and willing to be given therapy before HIV test. Multivariate analyses recognized important helpful relations between readiness for counseling before testing having employed Vancouver's controlled injection facility. In addition, daily crack smoking and use of in site were associated completely with readiness to get peer-delivered trying of HIV. On the other hand, readiness to get peer-delivered after test therapy was positively associated with male, daily of crack smoking, using Insite and being a VANDU member.

Desgrées-du-Loû and Orne-Gliemann (2018) did a study on couple-centered testing and counseling for HIV serodiscordant heterosexual couples in sub-Saharan Africa. This study was conducted through desktop research. The results indicated that, in five African countries at least two-thirds of couples with at least one HIV-positive partner were HIV serodiscordant; in half of them, the woman was the HIV-positive partner. Hence, there is an urgent need to define strategies to prevent HIV transmission within couple relationships. HIV counseling and testing have largely been organized on an individual and sex-specific basis, for pregnant women in programmes for prevention of mother-to-child transmission of HIV and in STI consultations and recently male circumcision for men. A couple-centred approach to HIV counseling and testing would facilitate communication about HIV status and adoption of preventive behaviors within couples.

While examining results of interventions that are led by peer and based in community giving quick testing of HIV and management for cases and care for homosexuals and are untested (MSM) in China, Yan et al, (2014), quick testing of HIV was done by peer helpers who are trained from an organization that is based on community (CBO) in towns of Jiangsu province at MSM-oriented locations. MSM that were infected were accompanied and referred to homegrown agencies of administration health for a HIV test to confirm and given 1month community support. Program data and sentinel observation study of MSM done by the provincial and national CDC during that year in the region were equated to measure variances in the reached populations, in positivity of HIV, and connection to care of HIV. The study outcomes established that 512 MSM who were untested previously got tested by 6 months CBO program. Equated with ones in the investigation studies, MSM that the CBO tested were expressively more probable younger, province non-resident, single, educated more and less frequently used condoms. Higher percentage of MSM who were HIV-positive tested by CBO got their test results confirmation (98.1% vs 72.6%, $p<0.001$) and connected to care (90.4% vs 42.0%, $p<0.001$).

Lolekha, Kullerk, Wolfe, Klumthanom, Singhagowin, Pattanasin, and Voramongkol, (2014) conducted an assessment of a couples HIV counseling and testing program for pregnant women and their partners in antenatal care (ANC) in 7 provinces in Thailand. Cross-sectional data were collected using standard data collection forms from all pregnant women and accompanying partners who presented at first ANC visit at 16 hospitals. CHTC data for women and partners were analyzed to determine service uptake and HIV test results among couples. In-depth interviews were conducted among hospital staff of participating hospitals during field supervision visits to assess feasibility and acceptability of CHTC services. Of these, 2,435 (54%)

women came for ANC alone; 2,089 (46%) came with partners. Among men presenting with partners, 2,003 (96%) received couples counseling. Of these, 1,723 (86%) men and all pregnant women accepted HIV testing. Among 1,723 couples testing for HIV, 1,604 (93%) returned for test results. Of these, 1,567 (98%) were concordant negative, 6 (0.4%) were concordant positive and 17 (1%) were HIV discordant (7 male+/female- and 10 male-/female+). Nine of ten (90%) executive hospital staff reported high acceptability of CHTC services.

Deblonde et al., (2014) did a study that examined testing practices of HIV as informed by patients who were HIV-infected from four European nations. Multivariate and Univariate analyses were done. From 1460 participants that were eligible, 629 (43%) were counted in. 41% were identified late and 55% previously had never undertaken a test for HIV with seeming low risk as the main reason for having not been tested before. In practices of HIV testing heterogeneity was experienced across nations. General, tests were conducted most frequently during primary care (38%) and expert clinics (21%), mainly on the health care giver initiative (65%). 61% got tested with informed agreement, 31% got counseling before testing, 78% were counseled after testing, 71% were tangled in notification of partner and 92% were under care after diagnosis for three months. The results disclosed that testing of HIV is conducted in a diversity of settings signifying that several pathways to testing of HIV are given. The practice of testing for HIV is being regularized, with little focus on counselling before testing, yet with importance on follow-up after test. Major testing barriers are placed on the risk of denial. Efforts are concurrently needed to promote public alertness about risk of HIV and HIV testing benefits and train doctors to be extra proactive in giving testing for HIV.

Further, Tiendrebeogo, Plazy, Darak, Miric, Perez-Then, Butsashvili and Orne-Gliemann (2017) did a study on Couples HIV counselling and couple relationships in India, Georgia and the Dominican Republic. The study was conducted among pregnant women ≥15 years, attending their first antenatal care (ANC) session between March and September 2009, self-reporting a stable partner, and having received couple-oriented post-test HIV counseling (trial intervention). Individuals and couple characteristics associated with the acceptability of couples HIV counseling were assessed using multivariable logistic regression for each study site. Among 711 women included (232, 240 and 239 in the Dominican Republic, Georgia and India, respectively), the uptake of couples HIV counseling was 9.1% in the Dominican Republic, 13.8% in Georgia and 36.8% in India. The uptake of couples HIV counseling was associated with women having been accompanied by their partner to ANC, and never having used a condom with their partner in the Dominican Republic; with women having been accompanied by their partner to ANC in India; with women having a higher educational level than their partner and having ever discussed HIV with their partner in Georgia.

2.4 Awareness of HIV/AIDS and Uptake of HIV Testing Among Married Couples

Chirwa, Malata and Norr (2019) did a study on HIV prevention awareness and practices among married couples in Malawi. The study was carried out in four communities, two each from Chiradzulu and Chikhwawa districts of Malawi. Face-to-face in-depth interviews with 30 couples in each district using a semi-structured interview guide were conducted. Descriptive statistics from the demographic data were analyzed using SPSS version 16.0 while qualitative data was analyzed using Atlas ti 5.0 computer software. All couples were aware of HIV prevention methods

and talked about them in their marriages. Both wives and husbands initiated the discussions. Mutual fidelity and HIV testing were appropriate for couples to follow the HIV prevention methods. For most couples (54) there was mutual trust between husbands and wives, and members of only a few couples (6) doubted their partners' ability to maintain mutual fidelity. Actual situations of marital infidelity were however detected among 25 couples and often involved the husbands. A few couples (5) had been tested for HIV. All couples did not favor the use of condoms with a marriage partner as an HIV prevention method.

Awareness sometimes referred to as knowledge regarding HIV/AIDS. This is considered to be very high among people across the globe though proper understanding among community members is still considered to be very low. This has been recognized since awareness about HIV transmission as well as its prevention is not well understood among many people (Apanga, Akparibo, and Awoonor (2015) The idea/knowledge of being diagnosed with HIV/AIDS causes many people to grow feelings of helplessness and hopelessness and a feeling that is late for change in behavior. As a result of this, having sufficient knowledge about HIV VCT amenities could strengthen the positive messages power. In all surroundings, knowing ones zero status with inhibition counseling could be powerful strategy of care and prevention. In the context of HIV, everybody is anticipated to have enough knowledge on HIV counseling and testing as a preventive strategy (Apanga, Akparibo, and Awoonor 2015). The knowledge should not only be that one can receive HIV counseling and testing, but should also be that there are benefits after the test. This goes a long way in increasing demand for the services.

Omanje, Bosire and Mwenda (2015) conducted a study to establish knowledge and perceptions of HIV/AIDS among married couples in Kenya. The research project used the KAIS 2012 data, in which a sample of adults aged between 15 to 64 years was interviewed. The data was analyzed using R-software version 3.1.0, and report presented inform of tables and graphs. This indicates that wrong perceptions (propagated by harmful social norms in Kenya) and lack of knowledge on HIV/AIDS is a contributing factor to spread of the infection.

Previous studies indicate that an individual awareness is linked with significant acceptance of testing of HIV among couples who are married who receive pre-test counseling (Gebremedhin, Wang, and Tesfamariam, 2017). From this, a demand increase for HIV counseling and testing can only arise if people know that appropriate strategies exist, and can be effective in reducing transmission of HIV. A national survey carried out in Kenya, in 2015 showed high knowledge levels of AIDS amongst reproductive age respondents. The study displayed 14% of women and 17% of men indicated to have taken a HIV test; nevertheless, two out of every three of those without prior testing reported a readiness to test. Cultural belief and norms structures, related with the disease will be confronted through an emotional and heavy information-based messaging drive that addresses unawareness and fabrication. People require being aware that VCT testing plays an essential role at many levels (Gebremedhin, Wang, & Tesfamariam, 2017).

Kline (2014) did a study in the USA exploring the impacts of HIV/AIDS information during teenage years. The research intended to build on previous conclusions by investigating youths of African American origin complicated in a greater longitudinal research happening from puberties into maturity. These variables were assessed:

knowledge of HIV/AIDS, carnal conduct, individual alleged HIV contraction risk and STI presence. Findings confirmed significant relationships amongst HIV/AIDS knowledge and improved use of condom and knowledge of HIV/AIDS and less sexual partners in current sexual action. One's individual perceived risk did not have important relationship with knowledge of HIV/AIDS. Interestingly, individual perceived hazard was related to multiple sexual partners and increased use of condom. The general model showed that outcomes of STI were forecast by one's knowledge of HIV/AIDS, quantity of sexual associates, and one's gender.

A study done in Ghana by Appiah (2013) examining the awareness and knowledge of HIV/AIDS amongst Ghanaian teenage girls in high school. The study sampled a total of 260 lady students of High School in West African. The collected data were discussed and analyzed under appropriate themes and inside the literature context. The research exposed that normally, girls in high school had knowledge on the nature, transmission modes, and HIV/AIDS prevention. However, some scholars exhibited limited information on some matters like the treatment and causes of HIV/AIDS which are spiritual, associations and contacts with persons infected, and determination of infection of HIV from looks rather than being tested. The research also raised significant concerns on girls in high school reluctance to use preventive measure like condoms and the necessity to reorient awareness of HIV/AIDS interpositions in Ghana.

In Ethiopia, a study by Gile (2013) examining knowledge related to HIV/AIDS, behaviors and attitude of ECSC public, and add to the field literature. A survey cross-section was done in 2011 between January and June using mixed means where questionnaire which was structured was issued to 250 respondents who were selected

systematically whereas purposively carefully chosen key informers were questioned. The research results revealed that the most of (staff and students) interviewee know on HIV&AIDS. The research found no association between being undergraduate and postgraduate student; being wedded or not. It was established that all interviewee never noticed they risk contracting HIV. Sex that is unsafe, multiple sexual partners were present amongst all religious assemblies, students and married staff. Nevertheless, compared to respondents who were female, males were more exposed to sex that is unsafe. This finding is supported by qualitative data. Substantial respondents' number was prepared a few really took HIV testing and counseling of HIV to identify their status.

Dokubo et al. (2014), in a study in Mozambique conducted a study examining factors related with unawareness of status of HIV and measure knowledge of HIV prevention and use of condom among individuals infected with HIV/AIDS (PLHIV) in Mozambique. Studies focused on adults who are HIV-infected and for the sampling design that is complex were weighted. To assess issues related with unawareness of HIV status, logistic regression got used. The study concluded that HIV-positive status knowledge is connected to frequent use of condom in Mozambique.

In Kenya, Wairimu (2011) examined the attitudes, knowledge and practices regarding prevention of HIV among Eastleigh youths in Nairobi County and compare these between genders. A descriptive and comparative cross-sectional survey design was employed. A sample of fifty youth was drawn by use of simple random sampling. 50 Youth participated by answering a questionnaire on attitudes, knowledge and practices regarding prevention of HIV among Eastleigh youths. The study results established that most of the youths had perceived about HIV/AIDS, and overall male

had better knowledge than female. It was also found out that less than Fifty percent of the female reported they had ever received information on HIV/AIDS.

2.5 Models of Testing

Testing of HIV shows if an individual has HIV. Testing can notice infection of HIV, but can't say the duration that an individual has lived with HIV or if he has AIDS. Several forms of blood or body fluids are usually tested in order to identify whether a person has HIV. However, most of the HIV test models can't right away detect HIV, as it takes some duration for a man's body to create antibodies or virus to breed in the body. This means that it might take about three months for one to get a result that are positive, which means that early test might not be positive even though one is not infected.

There are a number of models of testing that are normally used to determine whether one has HIV or not. Strip Rapid Tests is one of the key test models to determine whether one has HIV or not. This model entails tests that check for a kind of protein that is produced within one's body to respond to the infection of HIV between two to eight weeks since infection. They are also known as ELISA tests or immunoassay. They are usually correct, but will not get infections. Generally, a specialist takes a blood sample and takes it to a lab for testing. Immunoassay tests use urine or mouth fluids (not saliva), but there is not a lot of antibodies in them, so there is likelihood that the technician will get a negative result even if one is sick.

Ribonucleic acid is another test model for HIV. The test model can notice HIV faster than tests of antibody screening. They look for an antigen of HIV, a protein known as p24 that is a fragment of the disease that get displayed 2 to 4 weeks after contamination. They also look for antibodies of HIV. A quick antibody/antigen exam

can give results in about 20 minutes. RNA test is the third test model for HIV that usually seeks the virus and can detect HIV approximately 10 days after exposure. This test model is very expensive but it is the most appropriate test model if one is at high risk.

Luo et al, (2018) did a research in USA that assessed an agent-based development model to examine the effect of self-testing HIV programs on homosexual men in Seattle and Atlanta. A system and agent-based stochastic model of simulation of HIV spread dynamics was assumed that was advanced and metered to study racial differences in prevalence of HIV in Atlanta among MSM. The extension encompassed several actions: adding a fresh set of typical restrictions for MSM in Seattle; adding new limits for types of tester adding limitations for easy prophylaxis pre-exposure uptake resulting from negative HIV tests results; and creating a conceptual framework through which self-tests HIV provision may change testing activities. City-specific limitations from preceding cohort and MSM cross-sectional research in Seattle and Atlanta were delivered. Each population simulated included 10,000 MSM and HIV frequency targeted is equal to 11% and 28% in Seattle and Atlanta, respectively. The study results indicated that the changes estimation in a decade incidence-based HIV on counterfactual circumstances of self-test HIV strategies of distribution and their effect on testing activities. The study resolved that the expansion of an prevailing agent-based transmission model of HIV was enough to simulate epidemics of HIV amongst MSM in Seattle and Atlanta, to house a depiction of HIV trying behaviors that is more nuanced than previous systems, and to be a stage to study how self-tests of HIV might affect patters of transmission of HIV and testing among MSM in Seattle and Atlanta.

A study done in by Australia, Wilkison et al, (2016) found out that recurrence testing trends amongst MSM demarcated as ‘top risk’ rendering to testing rules of Australia. Accounts of HIV test from MSM joining clinics in top caseload in Melbourne were categorized as high risk. Two results of examination in 3 and 6 months remained allotted to examination within persons’ records pane. Undesirable binomial regressions measured tendencies in HIV overall testing and recurring in 3 and 6 months. Annualized scopes of coming back tests were put into comparison by the use of two-sample examinations. The study outcomes established that there was an increase in number of tests of HIV yearly in Melbourne. It was also found out that the annual tests scopes between three and six months increased.

Nah et al. (2017) conducted a study to examined test-and-treat approach to HIV/AIDS: a primer for mathematical modeling. The study concluded that to openly design a control policy that is country-specific, quantitative displaying tactics to every location with diverse epidemiological background zone would need multi-disciplinary partnership amongst different disciplines specialists.

2.6 Accessibility to Testing Site

Access to HIV testing sites (VCT Centers) is a key factor that is very likely to limit people in up-taking of HIV testing. This therefore calls for a VCT Centers to be established in numerous strategic points so as to intensifying access to services of VCT in populations that is remote like those in countryside. This can be done through provision of mobile VCT services. However, there are a number of factors that tends to have significant impacts on the individual’s ability to access HIV testing sites which includes quality testing, confidentiality and adequate provision of referral systems for those diagnosed with HIV (Chamie, et al, 2014).

In addition, it is considered significant to recognize factors affecting accessibility of HIV testing sites that are responsible for creating possible barriers to use of service. Limitations to be assessed comprise how far the proposed populations travel for service and whether public transport to the center of VCT exists. Since customers must pay for health services in many countries that are developing, it is important that price does not turn out to be a barricade to persons using the facility, especially ones who may need it most (Njau, Ostermann, Brown, Mühlbacher, Reddy, & Thielman, 2014). When measuring approachability, it is important also for those planning an assessment to note that being close to a VCT does not guarantee easy service access. Actually, in places where HIV/AIDS stigma is strong, proximity could be a barricade to use the service as potential customers might prefer to visit a VCT center that is far from the neighbor's sight, who might suspect that they are infected just for the reason that they went to a center of VCT. In this setting, it is important also to evaluate who the VCT reaches.

The seeming ease or strain in accessing a facility for testing and counselling for HIV is evident also in preceding literature. Factors like, waiting time, access, confidentiality, cost, location and VCT quality largely affects uptake of VCT. Previous research have defined that South African men above 15years are heavily prejudiced by the VCT services characteristics themselves. Factors like VCT location, rapid testing availability and palliative care home visiting influences the uptake of VCT significantly (Njau et al, 2014). Ugandan men who ever visited VCT said that the chief reasons for picking a particular VCT were convenience, proximity and confidentiality.

Because the VCT center traditionally depend on the person to seek for testing and counseling for HIV actively, this approach rests on cognizance of the service availability and the individual's mindful choice to coming back to get test results to the center.

A study to examine the effect of an HBHCT involvement in the uptake for testing HIV in a community in the rural area was conducted by Tabana (2013) in South-Africa's KwaZulu-Natal province, by use of a practical cluster randomized control trial design. The main result measured during the experiment was the uptake of testing for HIV. There was conducted a baseline study before the involvement in every of the sixteen community clusters to assess the uptake of testing for HIV by use of an interviewer administered questionnaire. The uptake reported of past testing on HIV amongst 5,821 respondents in the sixteen community clusters was found 32 per cent at the baseline. Females registered higher rates of testing as compared to the males, 39 per cent contrasted with 17 per cent respectively (Paper I). The HBHCT involvement enhanced the testing rates from 32 per cent to 69 per cent in the involvement arm, whereas it was noticed that there was lesser growth in the control arm, from 31 per cent to 47 per cent.

In order to examine the HTC status in Kenya, a nationwide HIV study amongst Kenyans of the age between 18 months and 64 years was carried out (Ng'ang'a, 2014). Questionnaires were administered to respondents aged 15–64 years. Partakers were given home-based testing and counseling to know their HIV status at point-of-care and home testing of CD4 if they were HIV-positive.

This study concluded that rates of HIV testing have almost hit the countrywide HTC target for Kenya and that HTC requires to be extended to further reach couples and men, and policies are required to upsurge recurrence testing for individuals at HIV infection risk.

Further, Grabbe (2010) did another study in Kenya to examine growing contact to HIV testing and counselling through Kenyan mobile services: approaches, operation and cost efficiency. The findings from the study found out that Mobile HCT recorded a higher client's proportion without prior test of HIV than stand-alone. In addition, stand-alone HCT recorded a higher couple's percentage than HCT that was mobile. The study concluded that increased cost efficiency of addition mobile HCT compared to services of stand-alone per tested client was higher than previously recorded.

2.7 Theoretical Review

A theory can be defined as a sound explanation or model that is testable of the way of dealings several natural phenomena, proficient of predicting incidences or notes of similar kind and with ability of being verified through experimentation or else falsified using empirical observation. Therefore, this research shall be steered by these three related philosophies: Aids Risk Reduction Model, The Planned Behaviour Theory as well as Theory of Reasoned Action.

2.7.1 Aids Risk Reduction Model (ARRM)

This was developed by Bandura in 1989. The model offers a basis for predicting and explaining the effects of individual behavior change precisely in regard to spread of HIV/AIDS through sex (Montano, & Kasprzyk, 2015). A three-phase system, the ARRM combines numerous variables of other theories of conduct change together

with the, Health Belief Model theory, emotive influences and relational procedures. The phases and aspects influencing the fruitful conclusion of every phase are below:

Stage 1: Acknowledgement and classification of one's conduct as high jeopardy. This is built on the information of carnal actions related with spread of HIV, acceptance that individual is susceptible to getting HIV and acceptance that HIV/AIDS is unwanted.

Stage 2: Making a promise to lessen carnal interactions that are high-risk and to intensify activities that are low risk. The chief assumptions at this point take in the risk cost and benefit analysis, erotic practice importance as viewed by the person and its possible risk, and healthy utility information and social factors are thought to affect a person's price and advantage and self –effectiveness views.

Stage 3: Taking action. This phase is fragmented in three stages: a) Data searching: b) Procuring medications and c) ratifying answers. Relying on a person, stages may happen simultaneously or might not happen (Montano, & Kasprzyk, 2015). The chief important zones in this phase are social networks place and choices of problem-solving; past experiences with solutions and problems; level of self-esteem; supply necessities of getting aid; capability to verbally talk with carnal spouse; and carnal spouse's behaviors and beliefs.

Additionally, to phases and recorded above influences, the ARRM writes there are additional external and internal issues that may encourage person movement through the stages. For example, aversive conditions may hinder or facilitate labeling of a person's behavior. External stimuli like campaigns of public tutoring, individuals to test and possibly transform their erotic actions (Montano, & Kasprzyk, 2015).

2.7.2 The Theory of Planned Behavior

This theory was developed by Icek Ajzen in 1985 through his article "From intentions to actions. The theory concentrates on theoretical concepts concerned with specific motivational issues as factors of the possibility of executing a precise behavior. The theory central factor is the intention of individuals to do a certain behavior. Motivational factors are captured by intentions that affect behavior and indicates how much effort individuals are ready to exert so as to accomplish behavior (Han, 2015). As an overall law, the tougher the purpose to involve in a behavior, the likelihood of its performance is greater. TPB was intended to explain aim only when the conduct is under volitional control – if the individual at will can decide to do or not do the behavior. The theory forecasts that the intent to do behavior is a role of three outstanding beliefs: the individual's attitude, personal norms and alleged behavioral control (Montano, & Kasprzyk, 2015). The three forecasters influence following behavior through behavioral intent indirectly. The theory stipulates that the attitudes determinants, personal norms and alleged behavioral regulator multiplicatively combine and it's a strength of the Planned Behavior Theory and its wide applicability. The concept has accounted for a significant percentage of the discrepancy in purpose and conduct in previous works. Attitudes is the greatest researched TPB aspect and receive continuous attention from cognitive psychologists and social (Montano, & Kasprzyk, 2015).

Attitudes to performing conduct reflect unfavorable or favorable assessment of the specific behavior. Attitude to the behavior in this instance, VCT uptake is influenced by persons' beliefs on the results of carrying out the behavior assessed by extent which the results are esteemed. Subjective customs denote the alleged social compression to do the conduct (Han, 2015). They are controlled by insights of if

important others reason that one must perform the conduct and one's inspiration to obey the significant others wishes (Han, 2015). Regarding norms, persons vary in the seriousness they put on individual norms as a source of influence; these also differ across performances. Alternatively, some teenagers may give significance to their boldness about the conduct when determining to involve in conduct, other teenagers may put more significance to they should do. Alleged control of behavioral mirrors the alleged difficulty or ease associated with performance of behavior and with conduct purpose, and is posited to predict behavioral accomplishment directly. This theory construct is proposed to justification for circumstances where a person has no total control over conduct and comprises two components (Han, 2015).

The first element is “facilitating circumstances” which mirror the resources availability needed to involve in a conduct. This may include availability of money, time and other required resources. The second element is self-efficacy which denotes the self-confidence of an individual in their ability to complete behavior. Beliefs on existence of aspects that might hamper the behavioral accomplishment and alleged ability to regulate factors that may hinder the interactive achievement offer basis for alleged behavioral control. Going by the theory, a person’s intention to accomplish a specific performance determines if he will act (Mishra, Akman, & Mishra, 2014). To accurately evaluate the performance, one should consider context, time, target and performance which the intention is judged on. The validity of the theory is achieved therefore through empirical care for the associations amongst attitudes, subjective customs, perceived social control and relative path weightiness that drive to intention.

2.7.3 Theory of Reasoned Action

This theory was established by Martin Fishbein and Icek Ajzen in 1980. The theory main assumption in this philosophy is that men are usually normal and make foreseeable use of evidence presented to them. Here, couples in marriage with HIV/AIDS prevention and transmission knowledge would ponder risks or consequences of health connected behavior beforehand being involved in them. People's feelings in themselves for performing a behavior act are attitude. The model maintains that, boldness is influenced by the beliefs on what could materialize as a result of what was done. It is the only most effortlessly remembered results that actually affect attitudes. For example, if an individual initially thought that 'seeing' someone having sex that is unprotected is thrilling' then this the belief will control his attitude on use of condom (Montano, & Kasprzyk, 2015).

It matters not much that he believes also such sex that is unprotected give him exposures to HIV/AIDS. That certainty may not easily come to mind and the individual may think that it is others who will be infected for engaging in sex which is unprotected. Intentions to involve or not in certain conduct are privately held believes toward the specific behavior and socially resolute subjective standards that signify belief of a person those others think he should act in a particular way (Mishra, Akman and Mishra, 2014). Alternatively, subjective customs are the individual's observations of social stimulus about doing a behavior. For instance, if an individual feel those adolescents mostly engage in sex that is unprotected, then he will notice existence of a norm favoring practice like those. This belief therefore will affect that person boldness regarding sex. Norms that are subjective are influenced by significant others pressure.

If somebody feels that a person she is interested to please, like her teacher or parent, might want them not to have sex before wedding, then these others opinions shall have an effect on social pressure perceptions for doing so (Mishra, Akman and Mishra, 2014).

However, intents towards a behavior related to health does not assure action necessarily. Programs of health education on HIV/AIDS are founded on theory of reasoned action by Ajzen (1985). The postulation is that distinct reason controls human action including restraint or indulgence or when their health is threatened (Mishra, Akman, & Mishra, 2014). The taken action rest on the extent of one faith he can get a disease, the disease severity, extent of information exposure on the disease and believe of an individual on a preventive act has less cost than rewards. Programs of health education on HIV/AIDS are founded on these gears (WHO, 2017). This concept is appropriate to this research because couples who are married may decide rationally based on information they have on HIV/AIDS. If couples who are married are informed and consider being at risk, they are expected to have optimistic attitude on practices of safer sex. Alternatively, with inadequate information and awareness of immunity one is expected to have bad attitude on practices of safer sex. Safer sex performance adoption to counter HIV/AIDS is expected to be real when couples who are married have inclusive HIV/AIDS information and if they perceive infection risks to be big.

2.8 Conceptual Framework

A conceptual framework in research is perceived as the overall framework depicted diagrammatically in order to connect all the study aspects being investigated. Specifically, a conceptual framework explains diagrammatically the existing

association among the study variables. For this study purpose, the independent variables are pretest counselling, awareness of HIV, Models of testing and accessibility to testing sites while dependent variable is HIV testing.

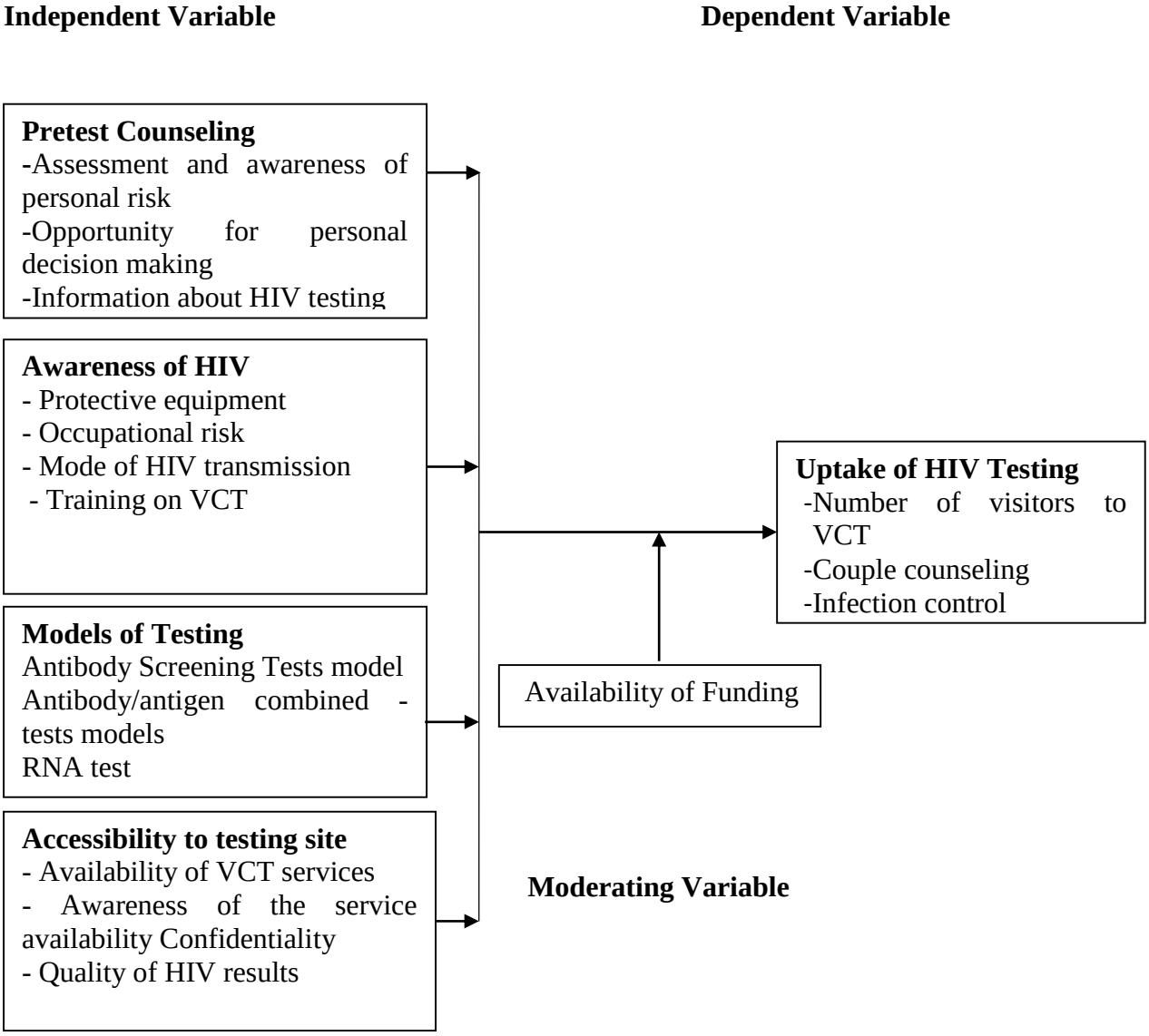

Figure 2.1: Conceptual Framework

2.8.1 Pre-test counseling

This process precedes testing and helps the couples to make informed decisions in regarding to the HIV/AIDS testing. The clinician discusses the general benefits, risks, and limitations of testing, as clear communication at this stage can ease adaptation to

results later. Pre-test counselling normally includes deliberations on: awareness and assessment of individual risk, and HIV infection transmission; what is HIV test and the test purpose; a chance for making decision about testing for HIV; meaning of a negative and positive result, together with the practical consequences for instance care and medical treatment, carnal relations, psycho-social consequences; strategies to lessen risk and sex that is safe; and subsequent handling positive result, counting whom to inform and recognizing requirements and support amenities. Once the patient is given adequate counseling, and is ready for testing, the actual testing is conducted.

2.8.2 Awareness of HIV/AIDS

This is the knowledge regarding HIV/AIDS. Awareness about HIV transmission as well as its prevention is not well understood among many people. This has been therefore a stumbling block to testing for many individuals. It should also be noted that, even for individuals who have the knowledge, being diagnosed with HIV/AIDS causes many people to grow feelings of helplessness and hopelessness and a feeling that is late for change in behavior. The awareness of HIV/AIDS should not only be about HIV counseling and testing, but also about benefits after the test. In that regard, this would enhance the demand for the testing services.

2.8.3 Models of Testing

Several forms of blood or body fluids are usually tested in order to identify whether a person has HIV. Several methods/models are used to achieve the objective. However, most of the HIV test models can't right away detect HIV, as it takes some duration for a man’s body to create antibodies or virus to multiply in the body. Some of the models include Strip Rapid Tests, ELISA tests or immunoassay, ribonucleic acid

among others. These methods differ in terms of invasiveness, cost and accuracy. Based on these factors, a patient may decide to take the test or not to take the test. For instance, if a method is too expensive for a couple, it may limit their ability to take up HIV testing. Further, if a method is accurate and inexpensive or even free, it may encourage the couples to take up testing.

2.8.4 Accessibility of the Testing Sites

Accessibility to the testing sites also determines couples ability to uptake testing of HIV. In that regard, testing sites should be set up in numerous strategic places to intensify access. To further intensify access, mobile VCT services should be provided. Nonetheless, there are a number of factors that tends to have significant impacts on the individual's ability to access HIV testing sites which includes quality testing, confidentiality and adequate provision of referral systems for those diagnosed with HIV. Further, other factors that determine accessibility include, distance travelled by the couple in search for the testing sites and the availability of transport to the site. Therefore, when the sites are easily accessible owing to distance and availability of transport to and from the testing sites, couples may take up the testing of the HIV/AIDS.

2.9 Knowledge Gaps

This section presents the gap in knowledge. It therefore presents similar studies that have been done with their findings and eventually presenting the gap the current study seeks to fill.

Table 2.1: Knowledge Gaps

Variable	Authors	Title	Findings	Gaps in Knowledge
Pretest Counseling and Uptake of HIV Testing	Markwick, Ti, Callon, Feng, Wood, & Kerr, (2014)	willingness to engage in peer-delivered HIV voluntary counselling and testing among people who inject drugs	The study results established that out of 600 individuals, 51.5% indicated their will to obtain peer-delivered pretest counselling, 40.7 per cent to obtain peer-delivered rapid HIV testing and 42.8 per cent to obtain peer-delivered post-test counselling. Multivariate analyses identified significant positive relations between the will for pretest counselling and having applied	The study was undertaken in Canada which is a developed nation while the current study will be undertaken in Kenya which is a developing country.

			Vancouver's supervised injection facility, In site, or being a VANDU member (a local drug user organization) (all $p<0.05$).	
	Matovu, Todd, Wanyenze, Wabwire-Mangen, and Serwadda (2015)	Correlation of previous couples' HIV counseling and testing uptake among married individuals in three HIV prevalence strata in Rakai, Uganda	The results indicated that there was no significant difference in previous receipt of couples' HCT between low (n=309, 43.9%), middle (n=295, 41.7%), and high (n=242, 39.7%) HIV prevalence settings (p=0.61). Marital order was not significantly associated with previous receipt of couples' HCT. However, marital duration [five or more years vis-à-vis 1–2 years: adjusted odds ratio (aOR): 1.06; 95% confidence interval	This study only focused on correlation between HIV counseling and testing uptake among married individuals. The current study sought to establish, the influence of HIV pretest counseling, model of testing, awareness and accessibility of test sites on uptake of HIV testing among married couples. This influence

			(95% CI): 1.04–1.08] and awareness about the existence of couples' HCT services within the Rakai community cohort (aOR: 7.58; 95% CI: 5.63–10.20) were significantly associated with previous receipt of couples' HCT.	was measured individually and collectively.
	Desgrées-du-Loû and Orne-Gliemann (2018)	Couple-centred testing and counseling for HIV serodiscordant heterosexual couples in sub-Saharan Africa	The results indicated that, in five African countries at least two-thirds of couples with at least one HIV-positive partner were HIV serodiscordant; in half of them, the woman was the HIV-positive partner.	Despite the study being conducted in Sub-Saharan Africa, the concentration of the study was among the serodiscordant couples. This study aimed at establishing the determinants of HIV testing uptake among couples.
	Lolekha,	Assessment of a	2,435 (54%) women came for ANC	This study was conducted in

	Kullerk, Wolfe, Klumthanom, Singhagowin, Pattanasin, and Voramongkol, (2014)	couples HIV counseling and testing program for pregnant women and their partners in antenatal care (ANC) in 7 provinces in Thailand	alone; 2,089 (46%) came with partners. Among men presenting with partners, 2,003 (96%) received couples counseling.	Thailand, despite it being a developing country, its socioeconomic parameters may defer from Kenyas and therefore the results obtained in that study may not be generalised to the Kenyan case.
Knowledge/Awareness of HIV/AIDS and Uptake of HIV Testing	Kline, A. (2014)	The effects of HIV/AIDS knowledge during adolescence: the	Findings demonstrated significant relationships between HIV/AIDS knowledge and increased condom use as well as HIV/AIDS knowledge and fewer sexual partners during current sexual	This study was undertaken in the United States which is a developed country while the current study will be undertaken in Kenya which is a developing

		role of this knowledge in predicting sexual behaviors and outcomes	activity. One's personal perceived risk had no significant relationship with HIV/AIDS knowledge.	state. In addition, the study examined the effects of HIV/AIDS knowledge during adolescence which is a different context from the current study.
	Chirwa, Malata and Norr (2019)	HIV prevention awareness and practices among married couples in Malawi.	All couples were aware of HIV prevention methods and talked about them in their marriages. Both wives and husbands initiated the discussions.	The study results only sought to study the level of HIV prevention awareness and practises among the married couples. It therefore fails to link the findings to the uptake of HIV testing among the married couples.
	Omanje, Bosire and	Knowledge and perceptions of		Similarly, this study's gist was Knowledge and perceptions of

	Mwenda (2015)	HIV/AIDS among married couples in Kenya		HIV/AIDS among married couples in Kenya. It however fails to link the knowledge to the uptake of testing of HIV/AIDS among married couples.
	Gile (2013)	Knowledge related to HIV/AIDS, behaviors and attitude of ECSC public	Most of (staff and students) interviewee know on HIV&AIDS. It was established that all interviewee never noticed they risk contracting HIV. Sex that is unsafe, multiple sexual partners were present amongst all religious assemblies, students and married staff. Nevertheless, compared to respondents who were female, males were more exposed to sex	This study was conducted among the student as opposed to the married couple. The current study seeks to establish how knowledge related to HIV/AIDS influences the uptake of HIV/AIDS testing among married couples in Kenya.

			that is unsafe.	
Models of Testing and Uptake of HIV Testing	Luo et al, (2018)	Development of an agent-based model to investigate the impact of HIV self-testing programs on men who have sex with men in Atlanta and Seattle.	The study outcomes showed that the estimation of changes in 10-year HIV incidence based on counterfactual scenarios of HIV self-test distribution strategies and their impact on testing behaviors.	The study was conducted in the United States which is a developed country while the current study will be conducted in Kenya.
	Nah et al. (2017)	Test-and-treat approach to HIV/AIDS: a	Openly design a control policy that is country-specific, quantitative displaying tactics to every location with diverse	The study was conducted in the Australia which is a developed country while the current study

		primer for mathematical modeling	epidemiological background zone would need multi-disciplinary partnership amongst different disciplines specialists.	will be conducted in Kenya.
	Wilkinson, A. L., El-Hayek, C., Spelman, T., Fairley, C. K., Leslie, D., McBryde, E. S., ... & Stoové, M. (2016).	A 'test and treat' prevention strategy in Australia requires innovative HIV testing models: a cohort study of repeat testing among 'high-risk'men who have sex with	Recurrence testing trends amongst MSM demarcated as 'top risk' rendering to testing rules of Australia. Accounts of HIV test from MSM joining clinics in top caseload in Melbourne were categorized as high risk. Two results of examination in 3 and 6 months remained allotted to examination within persons' records pane. Undesirable binomial regressions measured tendencies in HIV overall testing and recurring in 3 and 6 months.	The study was conducted in the Australia which is a developed country while the current study will be conducted in Kenya.

		men		
Accessibility to Testing Site and Uptake of HIV Testing	Tabana, H. (2013)	Uptake of HIV testing: assessing the impact of a home-based intervention in rural South Africa	The study results established that women reported higher testing rates than men, 39% versus 17% respectively (Paper I). The HBHCT intervention increased testing rates from 32% to 69% in the intervention arm, whereas a lesser increase was identified in the control arm, from 31per cent to 47 per cent.	The study was conducted in South Africa while the current study will be done in Kenya. In addition, the study was based on a different context from the current study.
	Chamie, et al, (2014)	Uptake of community-based HIV testing during a multi-disease health campaign	There are a number of factors that tends to have significant impacts on the individual's ability to access HIV testing sites which includes quality testing, confidentiality and adequate provision of referral systems for those	This study only focused on individual's ability to access HIV testing sites. The current study sought to establish, the influence of HIV pretest counseling, model of testing,

		in rural Uganda	diagnosed with HIV	awareness and accessibility of test sites on uptake of HIV testing among married couples. This influence was measured individually and collectively.
	Njau, B., Ostermann, J., Brown, D., Mühlbacher, A., Reddy, E., & Thielman, N. (2014).	HIV testing preferences in Tanzania: a qualitative exploration of the importance of confidentiality, accessibility, and quality of service	Factors like VCT location, rapid testing availability and palliative care home visiting influences the uptake of VCT significantly	The main gist of the study was confidentiality, accessibility, and quality of service and the uptake. The current study goes a step further to investigate the effects of HIV pretest counseling and model of testing on uptake of HIV testing among married couples

2.10 Summary of Literature Review

Reviewed literature indicates that most of couples in marriage do not know their own or their partner's HIV status. The empirical studies reviewed has highlighted that interventions to increase awareness of HIV status and to promote couples' HIV counseling and testing are direly needed. Further, Counseling of couples before testing tends to be a successful tactic in changing sexual risk actions, particularly in HIV-discordant couples and enhancing uptake of HIV testing. The literature reviewed has also highlighted that increasing awareness on the nature, transmission modes, and HIV/AIDS prevention enhances the uptake of testing among couples and reduces the risk of transmission. Affordability, time taken and appropriateness of models of testing also influence the uptake of testing as pointed by the reviewed literature. The literature reviewed indicated that accessibility of test sites in terms of distance, infrastructure and means of transport influenced the uptake of HIV/AIDS test in the community.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This section offers the method that was employed to do the research. It encompasses the study design, population target, instruments of collecting data and processes and data analysis method.

3.2 Research Design

It alludes to the whole strategy used by a researcher to integrate various study components in a manner that is logical and coherent for purposes of ensuring that the problem under research is addressed effectively. For the purpose of this research, there was use of a descriptive research design which is applied in describing features of a population or phenomenon being studied (Orodho, 2003). Referring to Mugenda and Mugenda (2008), the descriptive research drive is to report and determine how issues are, as well as helping in founding the present population status under research. Gay (1992) claimed that reviews are report study requiring collection of measurable data from illustration. They help in explaining, telling or discovering the position of existing variables, (Mugenda & Mugenda, 2008).

3.3 Target Population of the Study

The population targeted was composed of residents of Bosamaro Chache Ward. Bosamaro Chache ward has a total population of 39,750 covering around 46.9 square kilometers (Nyamira County Government, 2019). Further, the study also targeted the community leaders and personnel working in health centers in the ward. The community leaders and representatives from the health centers were drawn each from

the sub-locations of Ikobe, Bigege, Enchoro and Kegogi. In that regard, the total population targeted for this study was 39,758.

Table 3.1: Population of the Study

Category	Target Population
General public	39,750
Community leaders	4
Health workers	4
Total	39,758

Source: Nyamira County Government 2019

3.4 Sample size and Sampling Procedure

The section presents size of sample determination. Therefore, the formula for sample determination is described as well as the sample size. In this section, the researcher also presents the sampling procedure.

3.4.1 Sample size

In determining the size of sample, the following Yamane (1967) formula was applied.

$$n = \frac{\mathrm{N}}{1 + N(e)^2}$$

Where n = Sample Size

N = Population (39,758 residents of Bosamaro Chache Ward)

e = precision level (0.05)

From the formula, the calculation of the sample size was as follows;

$$= \frac{39{,}758}{1 + 39{,}758\ (0.05)^2} \qquad = \frac{39{,}758}{99.3975}$$

$$= 399.98 \cong 400$$

The sample size comprised of 400 community members from Bosamaro Chache Ward drawn proportionately from the four sub-location and included the community leaders and representatives from the public health centers. The distribution of the respondents in the sample was as shown on Table 3.2.

Table 3.2: Sample Size

Category	Target Population	Sample
General public	39,758	392
Community leaders	4	4
Health workers	4	4
Total	39,766	400

3.4.2 Sampling Procedure

From the population of 39,758 residents of Bosamaro Chache Ward in the sub-locations of Ikobe, Bigege, Enchoro and Kegogi, the study picked a sample through stratified random sampling technique. Cooper and Schindler (2003) postulates, stratified random sampling often reduces the error of sampling in population. In stratified random sampling, every population element has equal opportunity of getting chosen at every draw. The respondents' distribution in the sample is as depicted on Table 3.2.

3.5 Data Collection Instruments

These are instruments used to measure information on the target variables, in a systematically recognized manner which allows an individual to solve the declared questions under research, test hypotheses, and weigh the results For the purpose of this study; interview guides and questionnaire were applied in collecting primary data

(Kotler, 2006). A questionnaire is assembly of objects which respondents should react to, generally in writing. The research involved with variables that cannot be observed directly for instance respondents' feelings, opinion, and perception. Such info can be described best through questionnaires, (Oso, 2009). Questionnaires were used to gather loads of data over a brief period. It is ideal for the respondents are well-educated. Kombo and Tromp (2006), show that questionnaire that is structured is the used of questions previously arranged through the research. The open-ended queries provided extra info which may have never been arrested in questions that are close-ended. Also, data required would be described easily in writing, and it is advanced in accord with the study objectives. Questions to tackle each study query were contained within. Every variable was made operational to find what to employ as a ration to it.

3.5.1 Pilot Study

Dillman (1978) stated that the researcher conducts a pre-test to ensure clearness and correct questionnaire interpretation. To achieve this, the researcher conducted a pilot study comprising of 40 respondents, which is 10% of the study sample size. This was taken from target population in Bosamaro Chache Ward. Responses that were gotten from the pilot survey weren't included in the final research since they were for measuring validity and reliability only and pilot study did not amount to an actual study. Their responses were compared to assess if there are any inconsistencies. In cases of inconsistences, the questionnaires were edited to make sure that it was fit for data collection in the actual study. Some of the issues related to whether the pretesting respondents understood the questions, could see all the sections, understood what the study are about and if all options were provided in the choices. The piloting also addressed issues of the length of the questionnaire and the respondents' comfort as they filled the forms.

3.5.2 Validity of the Research Instrument

Bridget and Lewin (2005) describes validity as the extent to which illustration of trial objects signifies the test content is intended to quantity. Saunders et al. (2007) indicated that content validity is an amount of the extent to which information gathered by use of a certain tool signifies a precise field or specific concept content as planned. Lacity and Jansen (1994) defines validity as a logic in addition to being convincing and looking correct to the student. Ensuring validity of the research instruments is very essential as this ensured that the research instruments were able to collect relevant information as per the study objectives. Mugenda and Mugenda (2003) contended that normal process in validity of content assessing of a portion is to employ an expert or professional in a specific turf. To find research instrument validity, the scholar asked for experts' opinions in the study field particularly the scholar's orators and supervisor. This simplifies the required modification and revision of the study tools thus increasing validity.

3.5.3 Reliability of the Research Instrument

Reliability alludes to how much an instrument used in research produces same outcomes on various conditions under same circumstances. It also refers to the consistency degree with which an instrument of conducting research is able to measure that which it's intended to examine (Bell, 2010). Reliability provides the inner steadiness of information gathered, and this makes sure that information has a specific inner steady design. If the responses contain no design, this shows that maybe the trial is too hard and therefore respondents just randomly guess the responses, (Mugenda & Mugenda, 1999). This reliability approximation was assessed using Cronbach Alpha coefficient (α).

Reliability of study tool shall get improved using a pre-test which shall be performed in the same ward. However, the data from the pilot study won't be used in the real research. Piloting selected a group of 40 respondents which is 10% of the study sample. According to Cooper and Schindler (2003), the pre-test cluster could vary between 25 and 100 items, but it doesn't have to be selected statistically. The participants were suitably selected since arithmetical circumstances aren't essential for the pre-test, (Cooper & Schindler, 2003).

3.5.4 Reliability Results

Table 4.2 gives a summary of the reliability results for questionnaire per variable in the study.

Table 4.3: Reliability Results Variables

	Reliability Statistics Cronbach's	No of items
Pre-test counselling	.824.	7
Awareness of HIV/AIDS	722	5
Models of Testing	.759	5
Accessibility to Testing Site	.792	5
Uptake of HIV	.801	6

Table 4.2 presents the study findings regarding analysis on reliability. For this research, reliability was warranted by use of a piloted questionnaire which was given to 10 participants, who weren't part of the main study. The 10 respondents were chosen from adjacent Borabu ward. From the findings, the Cronbach Alpha coefficients for pretest counseling, uptake of HIV, accessibility to testing site, models of testing, and Awareness of HIV/AIDS were 0.824, 0.801, 0.792, 759 and 0.722. These Cronbach Alpha coefficients were over 0.70 signifying that the used instrument was quite reliable.

3.6 Data Collection Procedures

The researcher acquired data collection letter from the department that was presented to participants in order to be given consent for collecting the requisite data from the participants. The researcher assured respondents that all the information obtained was kept confidential. The researcher also engaged services of 2 research assistants who got trained about procedures for collection of data so as to assist in administering questionnaires. The researcher administered the interview guides personally to the selected respondents. The scholar managed questionnaires and interviews individually to selected sample with the assistance of trained study assistants. The researcher and trained research assistants issued the questionnaires then wait for them to be filled by the respondents then collect. But, if it was hard to complete as the scholar or his helpers wait, a drop and later pick technique was used where questionnaires were issued to the respondents and collected later. To guarantee high response rate, follow up contact were done to keep reminding respondents to finish filling in the questionnaires. This gave the researcher room for establishing rapport, explaining the study's purpose and definition of those items which the respondents may not have understood clearly. The study took approximately 2 week to collect data for the study.

3.7 Data Analysis and Techniques

Data Analysis alludes to the procedure of gathering, modeling and transferring data with a purpose of obtaining beneficial information, providing a conclusion as well as supporting policy making. Once data collection is complete, the researcher checked questionnaires for consistency and completeness. The data edited data was then be coded into a computer software for analysis purpose. Statistical Package for Social Sciences (SPSS Version 23.0) was used for data analysis. Descriptive statistics like

standard deviation, mean, percentages and frequencies was approximated for every quantitative variable and presentation of the information done in the form of graphs and tables. Qualitative data was analyzed based on the content matter of the responses. Responses with shared patterns or themes were classified in one group in coherent groupings. Presentation of the response was done in prose

Correlation inferential analysis was used for analysis. Correlation is a quantity of the degree of relation between 2 or more variables which have been gathered from the similar class of subjects (Oso, 2009). Correlation is applied where a researcher needs to make a prediction and description of the link between 2 or many variables on the basis of direction and magnitude. Regression model was used in order to establish the relationship that exists between independent variables (pretest counseling, awareness of HIV/AIDS, models of testing and accessibility to testing site) and the dependent variable (uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County). The relationship of the equation was a linear equation as shown below;

$$Y = \beta 0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where; Y= uptake of HIV testing among married couples; β_0 = constant term; $\beta_1 - \beta_4$ = Beta coefficients (intercepts for independent variables); X_1= pretest counseling; X_2= awareness of HIV/AIDS; X_3= models of testing; X_4= accessibility to testing site and ε = Error term.

Presentation of the findings was done through the use of tables for more analysis and for purposes of facilitating comparison, whereas the table's explanation was provided in prose. This produced quantitative reports by use of means and standard deviations, percentages and tabulations. The study used p-value on regression analysis for

hypothesis testing. On the regression coefficient table, where the p-value was less than 0.05, then, the null hypothesis was rejected and alternative hypothesis accepted.

3.8 Ethical Considerations

Ethics is described as behavioral standards which distinguish between the appropriate and inappropriate conduct thus protecting every of the study's subjects, Resnick (2011). This research gathered information that was sensitive; thus, the study is morally responsible of handling the gathered data with utmost modesty. The researcher ensured that the study was carried out according to the highest dictates of ethical conduct in research by first seeking permission from the respondents to carry out the study. In addition, healthy relationships with the study participants were maintained by briefing them about the purpose of the study and their role in it. In the briefs, the voluntary nature of their participation in the study was emphasized. The participants were assured of confidentiality and anonymity during the study and afterwards.

3.9 Operationalization of Variables

Operational definition alludes to a variable's measurement. It's the definition of operation which is to be applied in the variable measurement (Mugenda & Mugenda, 2003). The operationalization is as presented on Table 3.4 below.

Table 3.4: Operationalization of variables

Objectives	Variables	Indicators	Measurement scale	Tools of Data Analysis	Specific tool
To establish the factors influencing the uptake of routine voluntary counseling and HIV testing among the married couples in rural areas of Bosamaro Chache Ward, Nyamira County	Dependent: Uptake of HIV testing among married couples	-Number of visitors to -VCT -Couple counseling - Infection control	Interval & Ratio	Descriptive Inferential	Frequencies Means Regression
To establish how the pretest counseling as a procedure of HIV testing influence the uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County.	Independent: Pretest counseling	-Assessment and awareness of personal risk -Opportunity for personal decision making -Information about HIV testing	Interval & Ratio	Descriptive Inferential	Frequencies Means Regression
To assess the influence of knowledge/awareness of HIV/AIDS on uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County.	Independent: Awareness	-Protective equipment -Occupational risk -Mode of HIV transmission -Training on VCT	Interval & Ratio	Descriptive Inferential	Frequencies Means Regression
To determine how models of testing influence uptake of HIV testing among married couples in Bosamaro	Independent: Models of testing	-Antibody Screening -Tests model -Antibody/antigen	Interval & Ratio	Descriptive Inferential	Frequencies Means Regression

Chache Ward, Nyamira County.		combined -tests models -RNA test			
To establish how accessibility to testing site influences uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County.	Independent: Accessibility to testing site	-Availability of VCT services -Awareness of the service availability -Confidentiality -Quality of HIV results	Interval & Ratio	Descriptive Inferential	Frequencies Means Regression

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

The chapter provides a discussion on interpretation of the findings obtained and their presentation. As well, it outlines information concerning the participants' background, analysis findings on the basis of the study's objectives. Inferential and the descriptive statistics are applied in this research for purposes of discussing the research findings.

4.2.1 Questionnaire Return Rate

The size of the sample was to comprise of the 400 participants that the research targeted from where 368 completed filling the questionnaires and returned them forming a 92 per cent rate of return. All the questionnaires that were returned were adequate filled and therefore the return rate was the same as the response rate.

Table 4.5: Response Rate

	Questionnaires Administered	Questionnaires filled & Returned	Percentage
Respondents	400	368	92%

Source: Research data, (2019)

This rate of response was found as satisfactory towards making the study's conclusions since it was representative. Mugenda and Mugenda (2003), contends that a 50 per cent rate of return is sufficient to do an analysis as well as give a report, a 60 per cent rate of return tends to be good while a 70 per cent rate of return and above tends to be excellent.

4.2 Background Information

The research begun by doing an analysis of the respondent's background information. Specifically, the sough information included the village, gender, respondents, age and the nearest healthy center.

4.2.1 Distribution of Respondents by Gender

The involved teachers were asked to specify their individual category of gender. The purpose for that was to ensure an unbiased engagement of the female and the male participants. The table below presents the results.

Table 4.6: Distribution of Respondents by Gender

	Frequency	Percentage
Male	206	57.2%
Female	154	42.8%
Total	360	100.0%

Results gathered from the distribution of gender evidenced that a 57.2 per cent of the engaged participants were of the male gender while a 42.8 per cent of participants were of the female gender. This means, the two genders experienced a fair involvement in the study and thus the study findings didn't suffer biasness as far as gender is concerned.

4.2.4 Distribution of Respondents by Age Category

Participants got requested to give an indication of their individual age brackets. The table below presents the results.

Table 4.7: Age category

	Frequency	Percentage
Less than 25 years	69	19.2%
25-35 years	139	38.6%
35- 45 years	118	32.8%
Over 45 years	34	9.4%
Total	360	100.0%

Based on the research findings, a 38.6 per cent of participants specified that their ages lied between the 25-35 years bracket, a 32.8 per cent of participants specified that their ages lied between the 35- 45 years bracket, a 19.2 per cent of participants specified that their ages lied below the 25 years bracket whereas a 9.4per cent of participants specified that their ages were above 45 years. That meant that there was a fair representation of every age set.

Participants were required to indicate the village where they lived, results show that respondents came from various villages among the named include; Ikobe, Bigege, Enchoro and Kegogi also Respondents were required to indicate the nearest health center. Among the listed include; Tinga Health Centre, Kiang'inda Health Centre, Nyanturago Health Centre.

4.3 Pretest Counseling

The study focused on determining how much pretest counseling enhances HIV-testing uptake amongst married couples in Bosamaro Chache Ward.

Table 4.8: Extent to which Pretest Counseling enhances uptake of HIV Testing

	Frequency	Percentage
Little extent	16	4.4%
Moderate	75	20.8%
Great extent	170	47.2%
Very great extent	99	27.5%
Total	360	100.0%

Results revealed that, 47.2% of the participants were of the opinion that pretest counseling enhanced the HIV-test uptake amongst married couples to a great extent, 27.5% of survey participants specified to a very great extent whereas 20.8% of participants specified to a moderate extent, while 4.4% of survey participants

specified to a little extent. This means, pretest counseling enhanced the HIV-test uptake amongst married couples to a great extent. Participants were asked to specify by how much they were in agreement with the statements below related to pretest counseling as well as HIV-test uptake amongst married couples.

Table 4.9: Pretest counseling and uptake of HIV testing among couples.

Statements	N	Min	Max	Mean	Std. Dev
Pretest counseling is an opportunity to facilitate a patient's informed decision-making about undergoing HIV testing	360	2	5	4.15	0.76
Pretest counseling is helpful as it discusses the general benefits, risks, and limitations of testing.	360	2	5	4.08	1.01
Pretest counseling offers clear communication before testing and therefore ease adaptation to results that are disclosed later	360	2	5	4.01	0.93
Pretest counseling ensures a person has adequate information for making a reasonable decision concerning having a test for HIV	360	2	5	3.93	0.84
Pretest counseling helps in assessment and awareness of personal risk and the transmission of HIV infection	360	2	5	4.24	0.81
Pretest counseling offers information on practical consequences like medical care and treatment and subsequent coping with a positive test result thus encouraging individual to take up testing	360	2	5	3.92	0.99
Pretest counseling gives guidelines on safer sex and strategies to reduce risk and thus encourages individual to take up testing	360	2	5	3.85	0.98
Composite mean				**4.026**	**0.903**

Statistical findings show that a big number of participants were in agreement that pretest counseling helps in assessment and awareness of personal risk and the transmission of HIV infection (M=4.24 SD=0.81) pretest counseling is an opportunity to facilitate a patient's informed decision-making about undergoing HIV testing (M= 4.15 SD=0.76) and that pretest counseling is helpful as it discusses the general

benefits, risks, and limitations of testing (M= 4.08 SD=1.01). These outcomes agree with the study finding by Krakowiak et al, (2016) that pretest counseling is considered to be very beneficial provided that testing for HIV is a disturbing event.

Further the study established that pretest counseling offers clear communication before testing and therefore ease adaptation to results that are disclosed later (M=4.01 SD=0.93), pretest counseling ensures a person has adequate information for making a reasonable decision concerning having a test for HIV (M= 3.93 SD=0.84) pretest counseling offers information on practical consequences like medical care and treatment and subsequent coping with a positive test result thus encouraging individual to take up testing (M=3.92 SD=0.99) and that pretest counseling gives guidelines on safer sex and strategies to reduce risk and thus encourages individual to take up testing (M= 3.85 SD=0.98). These outcomes concur with the research finding by Markwick et al, (2014) that it is important that the HIV testing process be escorted by counseling. The composite mean for pretest counseling and uptake of HIV testing among couples was 4.026 with a standard deviation of 0.903 indicating that pretest counseling influences uptake of HIV testing among couples to a great extent.

The study required that the community leaders state whether pretests counseling enhanced HIV-test uptake amongst married couples in Bosamaro Chache Ward. Community leaders reported that pretest counseling enhanced uptake of HIV testing among married couples in Bosamaro Chache Ward, Leader also indicated that pretest counseling gives a room for joint disclosure on the HIV-status within an atmosphere where a worker or counselor can give support. Pretest counseling helped in informing prevention decisions, access to options for family planning, support, care and treatment for couples.

Further, study required that health workers in the area comment on how pretest counseling enhanced the HIV-test uptake amongst married couples in Bosamaro Chache Ward. The Health Workers stressed that taking the HIV test is a very traumatic event therefore provision of HIV testing and counseling (HTC) tends to be a key driver to the testing of HIV, preventing it as well as treating it, and a critical element on attempts of achieving total accessibility to the HIV services. Counseling programs moderates the process of identification of persons that are HIV-positive and connecting those individuals to treatment and care and this improves their outcomes on health and lower transmission of HIV by suppressing the virus. Health Workers stressed that counseling helps couples to live with HIV with a positive mind and gives them guidance and support concerning any challenge which they might encounter and that the verbal well-versed approval provided for HIV-testing and also being provided with information relating to HIV prior and after the test were important.

Health workers were also asked to comment on the length of pretest counseling and on how it determined the HIV-test uptake amongst married couples. To this, the health workers reported that holding a long pretest counseling session may discourage the HIV-test uptake amongst married couples, however Health Workers indicated that the period consumed depends on couples psychological preparedness and positivity on all topics learned.

The health workers were required to comment on the coverage of various themes related to HIV/AIDS during pretest counseling in your health center. The health workers reported that during pretest counseling, various topics were discussed satisfactorily. The health workers reported that HIV/AIDS counseling address issues such as uncertainty on the disease' progress, particularly because present options of treatment prolong the life-expectancy; challenges in their relationship with their

partners; issues around disclosure for a positive HIV status; how to handle fear, stereotypes and stigma linked to the disease; financial and career concerns; suicidal thoughts and depression; sexual relationships; anxiety and stress; existential and spiritual matters; and concerns about dying and death.

Table 4.10: Pearson Correlation between Pre-test Counselling and uptake of HIV testing among Married Couples

Independent Variable		Growth	Strategic Orientation
Pre-test Counseling	Pearson Correlation	.225	1
	Sig. (P-value)	.000	
	N	360	

*. Correlation is only significant at the 0.01 level

The research aimed at establishing the relation between pre-test counselling and a HIV-test uptake amongst married couples. A Pearson Correlation test was conducted and the outcome as the table above presented indicated a correlation ($r(360) = 0.225$; $p<0.001$) between pre-test counselling and a HIV-test uptake amongst married couples. This means, pre-test counselling has a positive correlation to the uptake of HIV testing among married couples. Additionally, a correlation between the 2 variables proved as significant, whereby $p<0.001$ meaning a linear relation between the pre-test counselling and uptake of HIV testing among married couples. This shows that pre-test counselling impacted significantly on the HIV-test uptake among married couples.

Table 4.11: Pre-test Counselling and uptake of HIV testing among Married Couples Model

Model Summary					
R	R Square	Adjusted R Square	Std. Error of the Estimate		
.225a	0.051	0.048	0.976		
ANOVA					
Sum of Squares	Sum of Squares	d.f	Mean Square	F	Sig.
Regression	16.110	1	16.110	16.916	.000b
Residual	301.890	358	0.952		
Total	318	359			
Coefficients					
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	8.115	4.027		2.015	
Pre-test Counseling	0.225	0.055	0.134	4.113	0.000

The study objectives sought to establish whether pre-test counseling determines the HIV-test uptake among married couples in Bosamaro Chache Ward, Nyamira County. The coefficient of determination (R squared) of 0.051 signifies that 5.1% of uptake of HIV testing among married couples may be credited to pre-test counseling. The 4.8% adjusted R-square shows, pre-test counseling while excluding the constant variable clarified the change in uptake of HIV testing among married couples by 5.1%. The remaining percentage can be explained by other variables excluded from the model. R of 0.225 shows that there is positive correlation between pre-test counseling and the uptake of HIV testing among married couples. The Se of 0.976 represents on average the extent by which the independent variables deviate from the line of best fit.

The outcomes from Analysis of Variance (ANOVA) for the coefficient of regression as illustrated in the above table show the presence of a significant relation between pre-test counseling and the uptake of HIV testing among married couples (F=16.916, p value < 0.001). That implies, the pre-test counseling coefficient does not equate to a zero in the model used.

The research postulated that pretest counseling, as a procedure in testing of HIV significantly determine the HIV testing uptake among the married couples in Bosamaro Chache Ward, Nyamira County. The findings of the research showed a significant and positive relation was found between pre-test counseling and the uptake of HIV testing among married couples (β=0.225 and t=4.113) which has a (p-value <0.001). In addition, the coefficients from the analysis of a linear regression signifies that this model; $Y= \beta 0 + \beta_1 X_1$, is expressively fit. The equation's purpose was predicting the HIV-test uptake amongst married couples from X_1= pre-test counseling; becomes= $0.225X_1$. This indicates that uptake of HIV testing among married couples = 0.225* pre-test counseling. The model uptake of testing for HIV amongst married couples in Bosamaro Chache Ward, Nyamira County = β (pre-test counseling) holds as suggested by these test. This affirms a positively linear relation between pre-test counseling and uptake of HIV testing among married couples in Bosamaro Chache Ward. Therefore, a unit increase in pre-test counseling index led to an increase in uptake of HIV testing among married couples in Bosamaro Chache Ward index by 0.225. Because the computed p-value was found as below 0.05 as the table above shows, the alternative hypothesis was accepted and the null-hypothesis rejected then gave a conclusion that pretest counseling, as a procedure in testing of HIV significantly determine the HIV testing uptake among the married couples in Bosamaro Chache Ward, Nyamira County.

4.4 Awareness of HIV/AIDS

The survey aimed at establishing the level by which awareness of HIV/AIDS enhances uptake of HIV testing among married couples in Bosamaro Chache Ward.

Table 4.12: Extent to which Awareness of HIV/AIDS enhances uptake of HIV Testing

	Frequency	Percentage
Little extent	20	5.6%
Moderate extent	18	5.0%
Great extent	201	55.8%
Very great extent	121	33.6%
Total	360	100.0%

Results revealed that, majority of the participants (55.8%) were of the opinion that awareness on HIV/AIDS enhanced uptake of HIV-testing amongst married couples to a great extent, 33.6% of the survey participants specified to a very great extent, 5.6 per cent of participants specified a little extent while a 5.0 per cent of participants indicate to a moderate extent. This means awareness on HIV/AIDS enhanced the uptake of HIV-testing amongst married couples to a great extent.

Participants were required to specify how much they were in agreement with the following statements related to awareness of HIV/AIDS and uptake of HIV testing among married couples.

Table 4.13: Awareness of HIV/AIDS and uptake of HIV testing among couples

Statements	N	Min	Max	Mean	Std. Dev
Awareness especially on transmission of HIV and how it can be prevented alleviates misconceptions and thus enhances uptake of HIV Testing	360	2.0	5.0	4.21	0.71
The idea/knowledge of being diagnosed with HIV/AIDS causes many individuals to develop feelings of hopelessness and helplessness and this limits up take of HIV testing	360	2.0	5.0	4.26	0.59
Well-articulated awareness campaign may demystify HIV/AIDS infection and thus allowing more people to take up HIV testing	360	2.0	5.0	3.93	0.85
Awareness enhance adequate knowledge about HIV counseling and testing and this acts as a preventive strategy	360	2.0	5.0	4.09	0.88
Awareness creation ensures that individuals have adequate knowledge on the advantages of HIV/AIDS testing thus boosting the demand for the testing.	360	2.0	5.0	4.01	0.88
Composite mean				**4.1**	**0.782**

Statistical findings show that a big number of participants were in agreement that the idea/knowledge of being diagnosed with HIV/AIDS causes many individuals to develop feelings of hopelessness and helplessness and this limits up take of HIV testing (M= 4.26SD=0.59) awareness especially on transmission of HIV and how it can be prevented alleviates misconceptions and thus enhances uptake of HIV Testing (M= 4.21 SD=0.71) and that awareness enhance adequate knowledge about HIV counseling and testing and this acts as a preventive strategy (M= 4.09 SD=0.88).

These above outcomes are in-line with those of Apanga, Akparibo, and Awoonor (2015) that an individual awareness is linked with significant acceptance of testing of HIV among couples who received prior pre-test counseling.

Further the study established that awareness creation ensures that individuals have adequate knowledge on the advantages of HIV/AIDS testing thus boosting the demand for testing (M= 4.01 SD=0.88) and that well-articulated awareness campaign may demystify HIV/AIDS infection and thus allowing more people to take up HIV testing (M= 3.93 SD=0.85). These findings concur with the study finding by Gebremedhin, Wang, & Tesfamariam, (2017) uptake of HIV testing amongst individual' in zones is positively correlated, quality of awareness campaigns made in the same location, targeted individual's and their knowledge and practices regarding prevention of HIV such as use of condom among individuals infected with HIV/AIDS (PLHIV). The Composite mean for awareness of HIV/AIDS and uptake of HIV testing among couples was 4.1 with a standard deviation of 0.782, this indicated that awareness of HIV/AIDS influenced uptake of HIV testing among couples to a great extent.

Further, the study asked the community leaders whether the organized awareness programmes sensitized the people on benefits of uptake of HIV testing among married couples. They were further required by the researcher to comment on the forms of awareness campaigns, frequency and benefits realized. The leaders reported that they had never organized on a pure HIV sensitization gathering however they indicated that during other public gathering they always invited a healthy practitioner who took the stage and sensitized people on essence of HIV testing among married couples. Community leaders also reported that the campaigns have been rampant, periodic campaigns have yielded to positive results.

The sought to know from the health workers whether there was any organized awareness programmes for sensitizing the society on the benefits of uptake of HIV testing among married couples. The study required the health workers to comment on the forms of awareness campaigns, frequency, who organize them and benefits realized. The health workers reported that there were organized awareness programmes for sensitizing the society on the benefits of uptake of HIV testing among married couples. Such awareness took place on periodically on public gathering, they also partnered with faith based organizations whereby counseling sessions for married and those willing to enter into marriage were enrolled in the counseling program.

Further, the research requested the health workers to specify if they considered the awareness campaigns adequate. Majority of the Health workers working in healthy facilities in Bosamaro reported that the awareness programmed was not adequate; they also indicated that the programme suffers from resource adequacy thus compromising the rolling out process. Others indicated that the campaigns need to be conducted directly in villages as opposed to the current situation whereby only those who are visiting hospitals

Table 4.14: Pearson Correlation between Awareness of HIV/AIDS and uptake of HIV Testing among Married Couples

Independent Variable		Growth	Resource Orientation
Awareness of HIV/AIDS	Pearson Correlation	.360	1
	Sig. (P-value)	.000	
	N	360	

*. Correlation is only significant at the 0.01 level

The survey focused on establishing the relation between awareness on HIV/AIDS and the HIV-test uptake amongst married couples. A Pearson Correlation was performed and the result of the Pearson Correlation test as presented in Table 4.15 show a correlation ($r(360) = 0.360$; $p<0.001$) between the awareness of HIV/AIDS and uptake of HIV testing among married couples. This implies that the awareness of HIV/AIDS is positively correlated to the uptake of HIV testing among married couples. Additionally, there existed a significant correlation between the 2 variables, that is $p<0.001$ implying a linear relationship between awareness on HIV/AIDS and the HIV-test uptake amongst married couples. This shows that awareness of HIV/AIDS impacted significantly on uptake of HIV testing among married couples.

Table 4.15: Awareness of HIV/AIDS and uptake of HIV testing among Married Couples Model

Model Summary			
R	R Square	Adjusted R Square	Std. Error of the Estimate
.360a	.129	.127	.934

ANOVA					
Sum of Squares	Sum of Squares	d.f	Mean Square	F	Sig.
Regression	41.158	1	41.158	47.128	.000b
Residual	276.842	358	.873		
Total	318.000	359			

Coefficients					
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	10.728	3.935		2.726	
Awareness of HIV/AIDS	.360	.052	0.215	6.865	0.000

The study objective two sought to assess the influence of awareness of HIV/AIDS as a determinant of HIV-testing uptake among married couples in Bosamaro Chache Ward, Nyamira County. The coefficient of determination (R squared) of 0.129 shows

that 12.9% of uptake of HIV testing among married couples may be credited to awareness of HIV/AIDS. The adjusted R-square of 12.7% indicates that awareness of HIV/AIDS while excluding the constant variable described the shift in HIV-testing uptake amongst married couples by 12.7%. The percentage that remained may be described by some other variables that the model did not include. The R of 0.360 indicates a positive correlation between HIV-testing uptake among married couples and awareness of HIV/AIDS. The Se 0.934 represents on average, the extent by which independent variables deviates from the line of best fit.

The outcome of ANOVA for the regression coefficient as the table above illustrates showed that a significant relation existed between awareness on HIV/AIDS and HIV-testing uptake amongst married couples ($F=47.128$, p value < 0.001). That implies that the HIV/AIDS awareness coefficient in the model at least does not equate to a zero.

The survey postulated that HIV/AIDS awareness significantly determines the HIV testing uptake amongst married couples in Bosamaro Chache Ward, Nyamira County. The outcomes of the survey further indicated that there was a positive significant relationship between awareness of HIV/AIDS and uptake of HIV testing among married couples ($\beta=0.360$ and $t=6.865$) which has a (p-value <0.001). In addition, the linear regression coefficient signifies that the applied model $Y= \beta 0 + \beta_2 X_2$, is significantly fit. The general form of the equation was to predict uptake of HIV testing among married couples in Bosamaro Chache Ward from X_2= awareness of HIV/AIDS; becomes= $0.360X_2$. This indicates that uptake of HIV testing among married couples in Bosamaro Chache Ward = 0.360* awareness of HIV/AIDS.

The model of testing uptake for HIV among married couples in Bosamaro Chache Ward = β (awareness of HIV/AIDS) maintains as these tests suggested. This confirms

that there is a positive linear relationship between awareness of HIV/AIDS and uptake of HIV testing among married couples in Bosamaro Chache Ward. Thus, an increase in one unit in the usage of awareness on HIV/AIDS index resulted to a rise in uptake of HIV testing among married couples index by 0.360. Because the p-value was found as below 0.05, null hypothesis was rejected while the alternative was accepted then concluded that awareness of HIV/AIDS significantly determines the testing uptake for HIV amongst married couples in Bosamaro Chache Ward, Nyamira County.

4.5 Models of Testing

The study purposed to measure by what level the testing models enhances uptake of HIV testing among married couples in Bosamaro Chache Ward.

Table 4.16: Extent to which Models of Testing enhanced uptake of HIV testing

	Frequency	Percentage
Moderate extent	17	4.7%
Great extent	223	61.9%
Very great extent	120	33.3%
Total	360	100.0%

Results revealed that, 61.9% of the participants indicated that models of testing enhanced the testing uptake for HIV amongst married couples to a great extent, 33.3 v per cent of participants signposted to a very great extent while a 4.7 per cent of participants signposted to a moderate extent. This implies that models of testing enhanced the testing uptake for HIV amongst married couples in Bosamaro Chache Ward to a great extent.

Participants were required to specify by how much they were in agreement with the following statements related to models of HIV testing and uptake of HIV testing among married couples.

Table 4.17: Models of HIV Testing and uptake of HIV Testing among Couples

Statements	N	Min	Max	Mean	Std. Dev
Some models of testing are very invasive and thus deter individual to take up testing.	360	3.00	5.00	4.28	0.63
Some model of testing fail to detect early infections and therefore individuals who would test after engaging in illicit unprotected sex may get a false negative	360	3.00	5.00	4.13	0.63
Some of the most accurate models of testing are expensive and thus discourage individuals from taking the test	360	2.00	5.00	3.99	0.84
Most of the models of testing are slow in giving out results making the wait period long for impatient individuals	360	4.00	5.00	4.44	0.50
The fear of infection during testing due to poor handling of the test tools also deter individuals from taking up HIV/AIDS testing	360	2.00	5.00	4.25	0.74
Composite mean				**4.218**	**0.668**

Results show that a big number of participants were in agreement that most of the models of testing are slow in giving out results making the wait period long for impatient individuals (M= 4.44 SD=0.50), some models of testing are very invasive and thus deter individual to take up testing (M= 4.28 SD=0.63) and that the fear of infection during testing due to poor handling of the test tools also deter individuals from taking up HIV/AIDS testing (M=4.25 SD=0.74).These outcomes concur with the outcomes of the study by Luo et al, (2018) that HIV testing models are aimed at getting individuals who are not aware of what their HIV-status is, or the ones at the risk of getting HIV, testing and connected to the services aimed at preventing, caring and treating HIV.

For instance Rapid tests were found beneficial in settings that were far from centers of treatment and within areas where the vulnerability and prevalence of HIV.

Further the study established that some model of testing fail to detect early infections and therefore individuals who would test after engaging in illicit unprotected sex may get a false negative (M= 4.13 SD=0.63) and that some of the most accurate models of testing are expensive and thus discourage individuals from taking the test (M= 3.99 SD=0.84). The composite mean for models of HIV testing and uptake of HIV testing among couples was 4.218 with a standard deviation of 0.668, indicating that models of HIV testing influences uptake of HIV testing among couples to a very great extent. The outcomes above agree with those of Wilkison et al, (2016) where he found that the rapid tests for HIV are supposed to be applied for purposes of facilitating the counseling and testing process for HIV, elevate acceptability and accessibility of services and minimizing loss incurred in follow-up. Rapid tests were found beneficial in settings that were far from centers of treatment and within areas where the vulnerability and prevalence of HIV.

The researcher also required the community leader to indicate whether there were times that they organize free VCT services for the local communities. To this, the leaders reported they only organized for free VCT services for the local communities whenever such sponsorship came along. According to Community leaders, VCT services are supposed to give attention ton populations in which the rates of testing for HIV are still suboptimal, counting the main populations and youth groups from where a big number of couples arise from. Organizations and providers of Health-care providing HTS are supposed to coordinate with advocacy institutions, legal authorities and community-based organizations to guarantee an environment which enables and supports individuals to learn their status on HIV.

Further, the study required that the leaders indicate whether there were any notable benefits realized after organized VCT services in terms of behavioral changes, uptake of VCT services among other benefits. Community leaders reported increases uptake of HIV testing was beneficial in identification of new infections of HIV in geographic zones or population where there's a high dominance of infections of HIV. Based on the Community leaders, achieving supreme effectiveness, counseling of couples are supposed to be incorporated for specific circumstances and populations. Even though every main constituent of pre-test counseling is supposed to be applied in whichever population, the messaging about strategies of reducing risks is supposed to be purposed for every population.

The study also asked the health workers to indicate if there are notable benefits realized after organized VCT services in terms of behavioral changes, uptake of VCT services among others. The health workers reported that free VCT services had led to realization of various benefits among which include change in behavior, Healthy workers reported that such services led to reduction of the sum of partners who are not aware of their status on HIV, it also led to a rise in uptake and regularity of testing of HIV. Testing solely doesn't augment awareness concerning HIV-status between couples, but as well addresses the doorway for services for prevention, care and treatment services.

Also, the study asked the health workers whether in their opinion privacy in the testing sites was upheld. The health workers reported that in most cases these facilities were located in open places within the hospital compound and this restricted majority of the individuals from seeking the services from fear of stigmatization incase diagnosed with the HIV.

Healthy workers also disclosed that residents of Bosamaro Ward were uncomfortable with whenever they realized that the healthy worker was known to them, thus recommending that the facility should be run by employees from a deferent zone.

Table 4.18: Pearson Correlation between Models of HIV Testing and Uptake of HIV Testing among Married Couples

Independent Variable		Growth	Reward Philosophy
Models of HIV Testing	Pearson Correlation	.263	1
	Sig. (P-value)	.000	
	N	360	

*. Correlation is only significant at the 0.01 level

The researched focused on establishing if a model of testing determines the testing uptake of HIV amongst married couples in Bosamaro Chache Ward, Nyamira County. A Pearson Correlation was performed and the result of the Pearson correlation test as presented in Table 4.19 show a correlation ($r(360) = 0.263$; $p<0.000$) between models of testing and the uptake of HIV testing among married couples. This implies that the models of testing are positively correlated to the the testing uptake of HIV amongst married couples. Additionally, the correlation between the 2 variables was found as significant, whereby $p<0.000$ meaning a linear-relationship between the testing models and testing uptake for HIV amongst married couples. This shows that models of testing impacted significantly on the uptake of HIV testing among married couples.

Table 4.19: Models of HIV Testing and uptake of HIV testing among Married Couples Model

Model Summary					
R	R Square	Adjusted R Square	Std. Error of the Estimate		
.263a	.069	.066	.966		
ANOVA					
Sum of Squares	Sum of Squares	Df	Mean Square	F	Sig.
Regression	21.989	1	21.989	23.548	.000b
Residual	296.011	358	.934		
Total	318.000	359			
Coefficients					
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	7.923	3.053		2.595	
Models of HIV Testing	0.263	.054	0.1571	4.853	.000

The study objective three sought to establish whether models of testing determine the testing uptake for HIV amongst married couples in Bosamaro Chache Ward, Nyamira County. The 0.06 factor which is the coefficient of determination (R squared) expresses that a 6.90 per cent of testing uptake for HIV amongst married couples can be described by the models of testing. The 6.6 per cent for adjusted R-squared signifies that the mmodels of testing while excluding the constant variable described the shift in uptake of HIV testing among married couples by 6.60%. The percentage remaining can be attributed to other aspects that the model did not include. The R of 0.263 signifies a positive correlation between uptake of HIV testing among married couples and models of testing. The Standard error of 0.966 signifies how much the independent variables deviate from the line of best fit.

The outcome of ANOVA for a regression coefficient as the table below shows, revealed an existing significant relation between models of testing and uptake of HIV testing among married couples (F=23.548, p value < 0.001). This implies that the testing models' coefficient at least does not equate to zero.

The survey postulated that testing models considerably determine HIV testing uptake among married couples in Bosamaro Chache Ward, Nyamira County. The findings of the survey showed there existed a significantly positive connection between models of testing and testing uptake for HIV amongst married couples in Bosamaro Chache Ward (β=0.263 and t=4.853) which has a (p-value <0.001). In addition, the linear regression analysis coefficients shows that the model $Y= \beta 0 + \beta_3 X_3$, is significantly fit. The equation's overall nature aimed at predicting testing uptake for HIV amongst married couples in Bosamaro Chache Ward from X_3= models of testing; becomes= $0.263X_3$. This indicates that testing uptake for HIV amongst married couples in Bosamaro Chache Ward = 0.263* models of testing. The model testing uptake for HIV amongst married couples in Bosamaro Chache Ward = β (models of testing) holds as suggested by these test. This confirms that there is a positive linear relationship between models of testing and uptake of HIV testing among married couples in Bosamaro Chache Ward. Thus, an increase by one unit in the usage of testing models resulted to a rise in uptake of HIV testing among married couples in Bosamaro Chache Ward index by 0.263. Because the p-value was found as being below 0.05 as the table below shows, null hypothesis got rejected while the alternative hypothesis got accepted then concluded that testing models considerably determine HIV testing uptake among married couples in Bosamaro Chache Ward, Nyamira County.

4.6 Accessibility to Testing Site

The study aimed at determining the level by which accessibility to testing site influenced the testing uptake for HIV amongst married couples in Bosamaro Chache Ward.

Table 4.20: Extent to which Accessibility to Testing Site enhanced uptake of HIV Testing

	Frequency	Percentage
Little extent	50	13.9%
Moderate extent	67	18.6%
great extent	174	48.3%
Very great extent	69	19.2%
Total	360	100.0%

Results revealed that, 48.3% of the participants indicated that accessibility to testing site enhanced the testing uptake for HIV amongst married couples to a great extent, 19.2 per cent of the survey participants marked to a very great extent, 18.6 per cent of participants marked a moderate extent whereas a 13.9 per cent of participants marked to a little extent. This implies that accessibility to testing site enhanced the testing uptake for HIV amongst married couples in Bosamaro Chache Ward to a great extent.

Participants were asked to give an indication of how much they were in agreement with the following statements related to accessibility to testing site and testing uptake for HIV amongst married couples.

Table 4.21: Accessibility to Testing Site and uptake of HIV Testing among Couples

Statements	N	Min	Max	Mean	Std. Dev
There are only a few health centers in the ward and therefore accessibility is a challenge thus limiting people in up-taking of HIV testing	360	2.0	5.0	4.19	0.75
There lacks mobile VCT services to bridge the accessibility gap thus making the services not easily accessible to mobile VCT services to individuals	360	2.0	5.0	3.88	1.00
The VCT are not placed in exclusive places making them not confidential to users	360	2.0	5.0	4.14	0.84
Those located near VCT center may prefer to go to a VCT center far away from the sight of their neighbors so that they are not suspected to be infected	360	2.0	5.0	4.02	1.03
Most VCT center fail to offer convenience to individuals seeking VCT services and thus acts as a deterrent	360	3.0	5.0	4.20	0.66
Composite mean				**4.086**	**0.856**

Data obtained show that majority of the survey participants agreed that most VCT center in Bosamaro Chache Ward fail to offer convenience to individuals seeking VCT services and thus acts as a deterrent (M= 4.20 SD=0.66) there are only a few health centers in the ward and therefore accessibility is a challenge thus limiting people in up-taking of HIV testing (M= 4.19 SD=0.75) and that the VCTs are not placed in exclusive places making them not confidential to users (M=4.14 SD=0.84).

These outcomes align with those of the study finding by Chamie, et al, 2014) revealed that individual's ability to access HIV testing sites which includes quality testing, confidentiality and adequate provision of referral systems for those diagnosed with HIV have significant impact on testing uptake for HIV amongst individuals.

Further the study established that those located near VCT center may prefer to go to a VCT center far away from the sight of their neighbors so that they are not suspected to be infected (M= 4.02 SD=1.03) and that there lacks mobile VCT services to bridge the accessibility gap thus making the services not easily accessible to mobile VCT services to individuals (M= 3.88 SD=1.00). The composite mean for accessibility to testing site and uptake of HIV testing among couples was 4.086 with a standard deviation of 0.856, this highlights that accessibility to testing site influenced uptake of HIV testing among couples to a great extent. These above results align with the findings by Njau, Ostermann, Brown, Mühlbacher, Reddy, & Thielman, (2014) in places where HIV/AIDS stigma is strong, proximity could be a barricade to use the service as potential customers might prefer to visit a VCT center that is far from the neighbor's sight, who might suspect that they are infected just for the reason that they went to a center of VCT.

The study also requested the community leaders to comment on the general accessibility to testing site within the community. In that regard, they were required to indicate how far the test sites are to the general community on average. According to the leaders, the accessibility to testing site within the location had failed to factor in regional balance in terms of population distribution in the area; however they indicated that all road networks linking to the facility with neighborhoods were in good condition.

Leaders also indicated that transportation cost incurred by some of the couples in the community depending on their residential place varied substantially and could influence uptake of free HIV testing and counseling.

The health workers were asked to comment on the general accessibility to testing site within the community, how far the test sites are to the general community on average. The health workers indicated that not all healthy facilities in Bosamaro ward were equipped with full operational VCT services, they also stresses that there are few facilities in the area as compared to the population in there recommending for development of VCT centers and employment of technical expertise in those facilities. In that regard, the testing sites were not easily accessible to the general public.

The health workers reported that distance to the testing sites determined the uptake of HIV testing among married couples was also a significant predictor on trend in seeking on HIV counseling and test services among married couples, they explained that couples residing far away from healthy facilities complained on transportation cost thus limiting their chances of attending counseling and testing programme.

The study sought to establish whether in a bid to enhance accessibility, there were times there were organize free VCT services for the local communities. Also, the study sought to establish how this determined uptake of HIV testing among married couples. The health workers reported that free VCT services for the local communities presented a rare opportunity for community's members to have key questions concerning HIV raised and answered; Healthy workers also took the chance to stress on the importance HIV testing especially for couples.

They also remarked that provision of free VCT services at local communities level increases awareness amongst couples thus leading to positive trend in seeking of HIV testing and counseling services.

Table 4.22: Pearson Correlation between Accessibility to Testing Site and Uptake of HIV Testing among Married Couples

Independent Variable		Growth	Entrepreneurial Culture
Accessibility Testing Site	toPearson Correlation	0.336	1
	Sig. (P-value)	.000	
	N	360	

*. Correlation is only significant at the 0.01 level

The research aimed at establishing the connection between accesses to the testing center and testing uptake for HIV amongst married couples. A Pearson Correlation was carried out and its outcome as the table above presents ($r(360) = 0.336$; $p<0.001$) between access to the testing center and testing uptake for HIV amongst married couples. This implies that accessibility to testing site is positively correlated to the testing uptake for HIV amongst married couples. Additionally, the correlation among the 2 variables was found as significant, whereby $p<0.001$, meaning a linear-relationship between access to the testing centre and testing uptake for HIV amongst married couples. This shows that accessibility to testing site impacted significantly on the uptake of HIV testing among married couples.

Table 4.23: Accessibility to Testing Site and uptake of HIV testing among married couples Model

Model Summary			
R	R Square	Adjusted R Square	Std. Error of the Estimate
.193a	.037	.034	.983

ANOVA					
Sum of Squares	Sum of Squares	Df	Mean Square	F	Sig.
Regression	11.873	1	11.873	12.295	.001b
Residual	306.127	358	.966		
Total	318.000	359			

Coefficients					
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	6.316	2.063		3.062	
Accessibility to Testing Site	.193	.055	0.115	3.506	.001

The objective of the research was focused on establishing the relation between access to the testing center and testing uptake for HIV amongst married couples. The coefficient of determination (R squared) of 0.037 shows that 3.70% of uptake of HIV testing among married couples can be explained by accessibility to testing site as indicated in Table 4.24. The adjusted R-square of 3.4% indicates that accessibility to testing site in exclusion of the constant variable explained the uptake of HIV testing among married couples by 3.40%. The remaining percentage can be explained by other factors excluded from the model. The R (0.193) shows that there is a positive correlation between uptake of HIV testing among married couples and accessibility to testing site. The standard error of estimate (0.983) shows the average deviation of the independent variables from the line of best fit.

The ANOVA result for regression coefficient as the table above shows, there existed a significant relation between accessibility to testing site and uptake of HIV testing among married couples (F=12.295, p value < 0.001). This implies that the entrepreneurial culture coefficient at least does not equate to zero.

The research posited that accessibility to testing site significantly determine HIV testing uptake amongst married couples in Bosamaro Chache Ward, Nyamira County. The findings of the research indicated that there was a positive significant relationship between accessibility to testing site and uptake of testing for HIV amongst married couples in Bosamaro Chache Ward (β= 0.193 and t= 3.506) which has a (p-value <0.05). Further, the linear regression analysis coefficients shows that the model $Y= \beta_0 + \beta_4X_4$, is significantly fit. The general form of the equation was to predict uptake of HIV testing among married couples in Bosamaro Chache Ward from X_4= accessibility to testing site; becomes= $(0.193)X_4$. This indicates that uptake of testing for HIV amongst married couples in Bosamaro Chache Ward = (-0.193)* accessibility to testing site. The model uptake of HIV testing among married couples in Bosamaro Chache Ward = β (accessibility to testing site) holds like the tests suggested. This confirms that there is a positive significant linear relationship between accessibility to testing site and uptake of HIV testing among married couples in Bosamaro Chache Ward. Therefore, a unit increase in accessibility to testing site index led to an increase in uptake of HIV testing among married couples in Bosamaro Chache Ward index by 0.193. Because the p-value was found as below 0.05, the null hypothesis got rejected while the alternative hypothesis got accepted and a conclusion arrived at that accessibility to testing site significantly determine HIV testing uptake amongst married couples in Bosamaro Chache Ward, Nyamira County.

4.7 HIV Testing Among Married Couples

Participants got requested to give an indication of how much they were in agreement with the statements that follow on testing uptake for HIV amongst married couples.

Table 4.24: Uptake of HIV testing among married couples.

Statements	N	Min	Max	Mean	Std. Dev
Most people fear disclosure of their test results to their partners	360	3.00	5.00	4.20	0.80
Proper testing among couple should entail visiting VCT together	360	3.00	5.00	4.13	0.78
Couple should receive counselling	360	3.00	5.00	4.28	0.63
infected Couples receive management of HIV/AIDS tips together when they visit VCT	360	3.00	5.00	4.29	0.70
Visiting VCT together, the couples are guided on preventive strategies for infection control	360	3.00	5.00	3.89	0.81
Composite Mean				**4.158**	**0.744**

Results show that majority of the survey participants agreed that infected couples receive management of HIV/AIDS tips together when they visit VCT (M= 4.29 SD=0.70), couple should receive counseling (M= 4.28 SD=0.63), most people fear disclosure of their test results to their partners (M=4.20 SD=0.80) that proper testing among couple should entail visiting VCT together (M=4.13 SD=0.78) and Visiting VCT together, the couples are guided on preventive strategies for infection control (M= 3.89 SD=0.81). The composite mean for statements related to uptake of HIV testing among married couples was 4.158 with a standard deviation of 0.744 indicating that the respondents agreed to the statements related to uptake of HIV testing among married couples. These findings are in support of the study finding by Helleringer & Kohler, (2007) HTC is a key element of strategies of HIV prevention.

The community leaders were asked by the study to describe the overall testing uptake for HIV amongst married couples in their area. The Community leaders indicated that the uptake was moderate. They also reported that the HIV testing among married couples aid in creating a conducive environment where couples are able to have a potential discussion on difficult concerns, like sexual agreements. According to Community leaders, counselling and testing for HIV for couples gives a platform for open debate on sexual agreements, with a counselor's aid. This aids both partners in fully understanding the consensus that might protect them better from HIV.

The researcher asked the health workers to describe the overall uptake of HIV testing among married couples indicating whether it was satisfactory. According to the health workers, HIV testing among married couples was not adequate and hence not satisfactory. They recommended that HIV testing and counseling services among married couples require privacy to offer counseling, embanked with strategies for referral to post-test care and diagnostic services, Healthy workers reported that testing among married couples require accurate information and documentation procedures towards ensuring confidentiality and accuracy of every patient's information on their tests and diagnostics; and a sufficient supply of rapid/simple tests, condoms and customer information materials.

4.10 Determinants of HIV Testing Programme Uptake among Married Couples

The research aims at establishing HIV testing determinants amongst the married couples. In that regard, the researcher aimed at establishing the combined effect of Uptake of HIV testing among married couples, pre-test counseling, Awareness of HIV/AIDS, models of testing and Accessibility to testing site on HIV testing among the married couples. In addition, the research also aimed at establishing the effect of

each of the independent variable on HIV testing among the married couples when all the factors are put into consideration.

4.10.1 Correlations

For purposes of determining the relation between the research variables, the research applied the Karl Pearson's product moment correlation analysis. The table below presents the outcomes:

Table 4.25 Correlations

		Uptake of HIV testing among married couples	Pre-test counseling	Awareness of HIV/AIDS	Models of testing	Accessibility to testing site
Uptake of HIV testing among married couples	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	360				
Pre-test counseling	Pearson Correlation	.396**	1			
	Sig. (2-tailed)	.000				
	N	360	360			
Awareness of HIV/AIDS	Pearson Correlation	.325**	.176**	1		
	Sig. (2-tailed)	.000	.001			
	N	360	360	360		
Models of testing	Pearson Correlation	.423**	.266**	.074	1	.
	Sig. (2-tailed)	.000	.000	.161		
	N	360	360	360	360	
Accessibility to testing site	Pearson Correlation	.341**	.033	.064	.279**	1
	Sig. (2-tailed)	.000	.535	.224	.000	
	N	360	360	360	360	360

Based on the outcomes shown above, this research identified a positive correlation between pre-test counseling and testing uptake for HIV amongst married couples in

Bosamaro Chache Ward as the correlation figure of 0.396 showed. The connection was strong because it was identified as statistically significant since the value of significance was 0.000 and hence below 0.005. These results concurs with the study by Krakowiak et al, (2016) that pretest counseling is considered to be very beneficial provided the actuality that HIV testing is a disturbing event.

As well, the research identified a positively correlated relation between awareness of HIV/AIDS and uptake of HIV testing among married couples in Bosamaro Chache Ward as shown by the 0.325 factor of correlation, this is a weak relation, however, they found the relation as having statistical significance since the value of significance was 0.000 that was below 0.005. The outcomes are in line with the study by Apanga, Akparibo, and Awoonor (2015) an individual awareness is linked with significant acceptance of testing of HIV among couples who received prior pre-test counseling.

According to the study results, models of testing and testing uptake for HIV amongst married couples were positively correlated in Bosamaro Chache Ward as the 0.423 factor of correlation showed. The connection was strong because it was identified as statistically significant since the value of significance was 0.000 and hence below 0.005. These outcomes concurs with the study by Luo et al, (2018) HIV testing models are designed to get people who are unaware of their status, or those at risk of HIV, testing and linked to HIV prevention, treatment and care services. For instance Rapid tests were found useful settings remote from treatment centers and in areas of high prevalence and vulnerability to HIV.

Accessibility to testing site and uptake of HIV testing among married couples in Bosamaro Chache Ward had a positive correlation as shown by correlation factor of 0.341, this strong relationship was found to be statistically significant as the significant value was 0.000 which is less than 0.005, These findings concurs with the study research by Njau, Ostermann, Brown, Mühlbacher, Reddy, & Thielman, (2014) in places where HIV/AIDS stigma is strong, proximity could be a barricade to use the service as potential customers might prefer to visit a VCT center that is far from the neighbor's sight, who might suspect that they are infected just for the reason that they went to a center of VCT.

4.10.2 Regression Test

For this research, a multiple regression analysis was carried out for purposes of testing the effect amongst predictor variables. This study applied the statistical package for social sciences (SPSS V 21.0) in coding, entering and computing the multiple regressions' measurements.

Table 4.26: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.618[a]	.382	.375	.57388

Source: Research data, (2019)

A coefficient of determination was applied in evaluating the fitness of the model. The adjusted R^2 alludes to the percentage of variation within the dependent elements jointly or uniquely explained by independent variables. This model identified an R^2 of 0.375 on average and that meant that 37.5 per cent of variations in the testing uptake for HIV amongst married couples in Bosamaro Chache Ward, Nyamira County are described by the study's independent variables (pre-test counseling, awareness of

HIV/AIDS, models of testing, and accessibility to testing site). Further, the research measured the model's significance by using the ANOVA approach.

Table 4.27: ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	72.139	4	18.035	54.759	.000[b]
	Residual	116.917	355	.329		
	Total	189.055	359			

Critical value = 4.59

Based on the statics of ANOVA, the research identified that the model of regression possessed a 0.00% level of significance which simply represented the idealness of the data towards drawing conclusions about the population factors as the significance value (p-value) was below 5 per cent. The value computed was higher than the critical value (54.759> 4.59) an indication that pre-test counseling, awareness of HIV/AIDS, models of testing, and accessibility to testing site all have significant impact on testing uptake for HIV amongst married couples in Bosamaro Chache Ward, Nyamira County. The value of significance was found as being below 0.05 showing the model's significance.

Additionally, the research applied the table of coefficients in determining the model of the study. The outcomes are presented in the table 4.17.

Table 4.28: Coefficients

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.447	.287		5.036	.000
	Pre-Test Counseling	.525	.084	.275	6.254	.000
	Awareness Of HIV/AIDS	.437	.077	.241	5.680	.000
	Models Of Testing	.482	.082	.264	5.863	.000
	Accessibility To Testing Site	.493	.089	.242	5.564	.000

As per the SPSS generated output as presented in table above, the equation ($Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$) becomes:

$$Y = 1.447 + 0.525X_1 + 0.437X_2 + 0.482X_3 + 0.493X_4$$

Based on the model of regression above, a change in one unit of pre-test counseling while holding other factors constant would positively enhance uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County by 0.525; Further the study revealed that a unit change in awareness of HIV/AIDS, while holding the other factors constant would enhance the uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County a factor of 0.437. These findings align with the study finding by Chamie, et al, 2014) revealed that individual's ability to access HIV testing sites which includes quality testing, confidentiality and adequate provision of referral systems for those diagnosed with HIV have significant impact on uptake of HIV testing among individuals.

Further it was identified that a change in one unit in models of testing while holding the other factors constant would enhance uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County by a factor of 0.482, a unit change in accessibility to testing site while putting other aspects on hold would enhance uptake of testing for HIV amongst married couples in Bosamaro Chache Ward, Nyamira County by a factor of 0.493. These findings concur with the study research by Njau, Ostermann, Brown, Mühlbacher, Reddy, & Thielman, (2014) in places where HIV/AIDS stigma is strong, proximity could be a barricade to use the service as potential customers might prefer to visit a VCT center that is far from the neighbor's sight, who might suspect that they are infected just for the reason that they went to a center of VCT.

The method used to compare the significance of predictor variables in the model was by comparing the computed value of probability and α=0.05. Where the value of probability was founds as being below α, and then significance of the predictor variable was recognized otherwise there was not significance. Every predictor variable was significant in this model since the value of their probabilities were below $\alpha = 0.05$.

4.10.3 Hypothesis Testing

The study objective sought to measure the influence of pre-test counseling, HIV/AIDS awareness, HIV testing models and accessibility to testing site determines uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County. The coefficient of determination (R squared) of 0.382 shows that 38.2% of uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County can be explained by pre-test counseling, HIV/AIDS awareness, HIV testing

models and accessibility to testing site. The adjusted R-square of 37.5% indicates that pre-test counseling, HIV/AIDS awareness, HIV testing models and accessibility to testing site in exclusion of the constant variable explained the change in uptake of HIV testing among married couples. The remaining percentage can be explained by other factors excluded from the model. R of 0.618 shows that there is positive correlation between uptake of HIV testing among married couples and pre-test counseling, HIV/AIDS awareness, HIV testing models and accessibility to testing site. The standard error of estimate (0.57388) shows the average deviation of the independent variables from the line of best fit.

The result of Analysis of Variance (ANOVA) for regression coefficient as shown in Table 4.28 revealed that there exists a significant relationship between pre-test counseling, HIV/AIDS awareness, HIV testing models and accessibility to testing site and uptake of HIV testing among married couples (F=54.759, p value < 0.000). This means that the coefficient of pre-test counseling, HIV/AIDS awareness, HIV testing models and accessibility to testing site in the model is at least not equal to zero.

Hypothesis one, H_{A1}: Pretest counseling, as a procedure in testing of HIV significantly determine the HIV testing uptake among the married couples in Bosamaro Chache Ward, Nyamira County

The study hypothesized that pretest counseling, as a procedure in testing of HIV significantly determine the HIV testing uptake among the married couples in Bosamaro Chache Ward, Nyamira County. The study findings indicated that there was a positive significant relationship between pretest counseling and HIV testing uptake among the married couples (β=0.525 and t=6.254) which has a (p-value <0.000). Further, the linear regression analysis coefficients shows that the model $Y= \beta_0 + \beta_1 X_1$, is significantly fit. The general form of the equation was to predict HIV

testing uptake among the married couples from X_1= pretest counseling; becomes= $0.525X_1$. This indicates that HIV testing uptake among the married couples = 0.525* pretest counseling. The model HIV testing uptake among the married couples = β (pretest counseling) holds as suggested by these test. This confirms that there is a positive linear relationship between pretest counseling and HIV testing uptake among the married couples. Therefore, a unit increase in pretest counseling index led to an increase in HIV testing uptake among the married couples index by 0.525. Since the p-value was less than 0.05 as shown in Table 4.29, the null hypothesis was rejected and alternative hypothesis accepted then concluded that pretest counseling improves HIV testing uptake among the married couples in Bosamaro Chache Ward, Nyamira County.

Hypothesis Two, H_{A2}: Awareness of HIV/AIDS significantly determine the uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County

The study hypothesized that awareness of HIV/AIDS significantly determine the uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County. The study findings indicated that there was a positive significant relationship between awareness of HIV/AIDS and uptake of HIV testing among married couples (β=0.437 and t=5.680) which has a (p-value <0.000). Further, the linear regression analysis coefficients shows that the model $Y= \beta_0 + \beta_2X_2$, is significantly fit. The general form of the equation was to predict uptake of HIV testing among married couples from X_2= awareness of HIV/AIDS; becomes= $0.437X_2$. This indicates that uptake of HIV testing among married couples = 0.437* awareness of HIV/AIDS. The model uptake of HIV testing among married couples = β (awareness of HIV/AIDS) holds as suggested by these test. This confirms that there is a positive linear

relationship between awareness of HIV/AIDS and uptake of HIV testing among married couples. Therefore, a unit increase in awareness of HIV/AIDS index led to an increase in uptake of HIV testing among married couples index by 0.437. Since the p-value was less than 0.05 as shown in Table 4.29, the null hypothesis was rejected and alternative hypothesis accepted then concluded that awareness of HIV/AIDS enhances uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County.

Hypothesis Three, H_{A3}: Models of Testing significantly determine HIV testing uptake among married couples in Bosamaro Chache Ward, Nyamira County

The study hypothesized that models of testing significantly determine HIV testing uptake among married couples in Bosamaro Chache Ward, Nyamira County. The study findings indicated that there was a positive significant relationship between models of testing and HIV testing uptake among married couples (β=0.482 and t=5.863) which has a (p-value <0.000). Further, the linear regression analysis coefficients shows that the model $Y= \beta_0 + \beta_3 X_3$, is significantly fit. The general form of the equation was to predict HIV testing uptake among married couples from X_3= models of testing; becomes= $0.482X_3$. This indicates that HIV testing uptake among married couples = 0.482* models of testing. The model HIV testing uptake among married couples = β (models of testing) holds as suggested by these test. This confirms that there is a positive linear relationship between models of testing and HIV testing uptake among married couples. Therefore, a unit increase in models of testing index led to an increase in HIV testing uptake among married couples index by 0.482.

Since the p-value was less than 0.05 as shown in Table 4.29, the null hypothesis was rejected and alternative hypothesis accepted then concluded that models of testing enhances HIV testing uptake among married couples in Bosamaro Chache Ward, Nyamira County.

Hypothesis Four, H_{A4}: Accessibility to testing site significantly determine HIV testing uptake amongst married couples in Bosamaro Chache Ward, Nyamira County

The study hypothesized that accessibility to testing site significantly determine HIV testing uptake amongst married couples in Bosamaro Chache Ward, Nyamira County. The study findings indicated that there was a positive significant relationship between accessibility to testing site and HIV testing uptake amongst married couples (β=0.493 and t=5.564) which has a (p-value <0.000). Further, the linear regression analysis coefficients shows that the model $Y= \beta_0 + \beta_4 X_4$, is significantly fit. The general form of the equation was to predict HIV testing uptake amongst married couples from X_4= accessibility to testing site; becomes= $0.493X_4$. This indicates that HIV testing uptake amongst married couples = 0.493* accessibility to testing site. The model HIV testing uptake amongst married couples = β (accessibility to testing site) holds as suggested by these test. This confirms that there is a positive linear relationship between accessibility to testing site and HIV testing uptake amongst married couples. Therefore, a unit increase in accessibility to testing site index led to an increase in HIV testing uptake amongst married couple's index by 0.493. Since the p-value was less than 0.05 as shown in Table 4.29, the null hypothesis was rejected and alternative hypothesis accepted then concluded that liquidity management regulations enhances HIV testing uptake amongst married couples in Bosamaro Chache Ward, Nyamira County.

CHAPTER FIVE

SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This research sought to measure the determinants of HIV testing uptake among married couples in Bosamaro Chache Ward. The specific objectives were to establish the how pre-test determines the testing uptake for HIV amongst married couples in Bosamaro Chache Ward, Nyamira County, to examine how HIV/AIDS awareness determines the testing uptake for HIV amongst married couples in Bosamaro Chache Ward, Nyamira County, to assess how models of testing determines the uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County and to finally to establish how accessibility to testing site determines HIV testing among married couples in Bosamaro Chache Ward, Nyamira County.

5.2 Summary of the Findings

This section is presented per the objectives of the study. In that regard, its starts off with pretest counseling, awareness of HIV/AIDS, models of testing and finally accessibility to testing site and the testing uptake for HIV amongst couples.

5.2.1 Pretest Counseling

Statistical evidence show that pretest counseling enhanced the uptake of HIV testing among married couples to a great extent, also pretest counseling helps in assessment and awareness of personal risk and the transmission of HIV infection, pretest counseling offers information on practical consequences like medical care and treatment and subsequent coping with a positive test result thus encouraging individual to take up testing, pretest counseling ensures individual has adequate

information for making decisions that are informed concerning having a HIV test and that Pretest counseling is helpful as it discusses the general benefits, risks, and limitations of testing.

Further the study revealed that pretest counseling is an opportunity to facilitate a patient's informed decision-making about undergoing HIV testing, pretest counseling gives guidelines on safer sex and strategies to reduce risk and thus encourages individual to take up testing and that pretest counseling offers clear communication before testing and therefore ease adaptation to results that are disclosed later.

5.2.2 Awareness of HIV/AIDS

Descriptive results reveal that HIV/AIDS awareness enhanced the testing uptake for HIV amongst married couples in Bosamaro Chache Ward to a great extent. According to the findings, awareness creation ensures that individuals have adequate knowledge on the advantages of HIV/AIDS testing thus augmenting demand for the testing services and that awareness especially on transmission of HIV and how it can be prevented alleviates misconceptions and thus enhances uptake of HIV Testing.

Further the study established that the idea/knowledge of being diagnosed with HIV/AIDS causes many individuals to develop feelings of hopelessness and helplessness and this limits up take of HIV testing. In that regard, the findings indicated that well-articulated awareness campaign may demystify HIV/AIDS infection and thus allowing more people to take up HIV testing and that awareness enhances adequate knowledge about HIV counseling and testing.

5.2.3 Models of Testing

Results revealed that the quality with models of testing determined the testing uptake for HIV amongst married couples in Bosamaro Chache Ward to a great extent, also the fear of infection during testing due to poor handling of the test tools also deters individuals from taking up HIV/AIDS testing, some models of testing are very invasive and thus deter individual to take up testing and that most of the models of testing are quick in giving out results. The outcomes align with those of Luo et al, (2018) that HIV testing models are fashioned towards getting individuals who do not know their HIV status, or the ones at the risk of getting HIV, testing and linking to services purposes of preventing and treating HIV. For example the Rapid tests were identified as beneficial in settings that are far-off the centers of treatment and areas that have high vulnerability and prevalence of HIV.

Further the study established that some of the most accurate models of testing are expensive and thus discourage individuals from taking the test and that some model of testing fails to detect early infections and therefore individuals who would test after engaging in illicit unprotected sex may get a false negative. These findings above align with those of Wilkison et al, (2016) that the usage of rapid tests for HIV, is supposed to be applied for purposes of facilitating the counselling and testing process of HIV, boost access and acceptability of the provided services and minimizing the loss incurred in follow-ups.

5.2.4 Accessibility to Testing Site and Uptake of HIV Testing Among Couples

Descriptive results revealed that married couples who lived near VCT center preferred to go to a VCT center far away from the sight of their neighbors so that they are not suspected to be infected, There are only a few health centers in Bosamaro Chache

Ward and therefore accessibility is a challenge thus limiting people in up-taking of HIV testing and that the VCT are not placed in exclusive places making them not confidential to users. These findings are in support of the study finding by Chamie, et al, 2014) revealed that individual's ability to access HIV testing sites which includes quality testing, confidentiality and adequate provision of referral systems for those diagnosed with HIV have significant impact on uptake of HIV testing among individuals.

Further the study established that accessibility to testing site enhanced the uptake of HIV testing among married couples in Bosamaro Chache Ward to a great extent, there lacks mobile VCT services to bridge the accessibility gap thus making the services not easily accessible to mobile VCT services to individuals and that most VCT center fail to offer convenience to individuals seeking VCT services and thus acts as a deterrent. These findings are line with the study finding by Njau, Ostermann, Brown, Mühlbacher, Reddy, & Thielman, (2014) in places where HIV/AIDS stigma is strong, proximity could be a barricade to use the service as potential customers might prefer to visit a VCT center that is far from the neighbor's sight, who might suspect that they are infected just for the reason that they went to a center of VCT.

Assessment on uptake of HIV testing among married couples in Bosamaro Chache Ward revealed that Visiting VCT together, the couples are guided on preventive strategies for infection control and that proper testing among couple should entail visiting VCT together. Further the study established that most people fear disclosure of their test results to their partners, couple should receive counseling periodically and that infected couples received management of HIV/AIDS tips together when they visit VCT.

These findings are in support of the study finding by Helleringer & Kohler, (2007) HIV counseling and testing (HTC) is an important element of strategies of HIV prevention.

5.3 Conclusions

The study concludes that provision of pre-test counseling had positive influence on uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County, also it is important that the HIV testing process be escorted by counseling, pretest counseling offers information on practical implications such as medical treatment and care and subsequent coping with a positive test result thus encouraging individual to take up testing and that pretest counseling offers clear communication before testing and therefore ease adaptation to results that are disclosed later.

The study concludes that intensified awareness on HIV/AIDS had positive influence on uptake of HIV testing uptake among married couples in Bosamaro Chache Ward, Nyamira County, individual awareness is linked with significant acceptance of testing of HIV among couples who received prior pre-test counseling and that well-articulated awareness campaign may demystify HIV/AIDS infection and thus allowing more people to take up HIV testing and that awareness enhance adequate knowledge about HIV counseling and testing and this acts as a preventive strategy.

The study concludes that quality with models of testing influenced the uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County again the fear of infection during testing due to poor handling of the test tools, some of the most accurate models of testing are expensive and thus discourage individuals from taking the test and that some models of testing are very invasive and thus deter individual to take up testing and that most of the models of testing are quick in giving out results

The study concludes that accessibility to testing site had a significant impact on uptake of HIV testing among married couples in Bosamaro Chache Ward, Nyamira County for instance individual's ability to access HIV testing sites which includes quality testing, confidentiality and adequate provision of referral systems for those diagnosed with HIV have significant impact on uptake of HIV testing among individuals and that there lacks mobile VCT services to bridge the accessibility gap thus making the services not easily accessible to mobile VCT services to individuals.

5.4 Recommendations

To enhance pretesting counseling checklist or algorithm to guide the healthcare providers through the counseling process should be developed. The healthcare institution should provide the personnel with effective support and training, to enhance their capacity for consistently conveying the right essential advice to customer.

The county government and other stakeholder should hold awareness campaign to disseminate information on HIV prevention and treatment. Further, the awareness campaign should be tackle and stress the importance of uptake of testing among couples. Efforts should be done to promote public awareness about risk of HIV and HIV testing benefits.

The county government through the ministry of healthy should adopt the usage of rapid tests for HIV, for purposes of facilitating the counseling and testing process of HIV, boost access and acceptability of the provided services and minimizing the loss incurred in follow-ups. Regular monitoring as well as evaluation of the tests is supposed to be carried out in the clinics as well as other sites of doing the rapid-tests towards ensuring specificity and sensitivity.

Those that manufacture and distribute the rapid tests for HIV must reveal any challenges with their goods which impact on specificity and sensitivity, in order that a particular test can be pulled from use till the challenge is addressed.

Bosamaro Chache Ward should be equipped with More VCT centers as the available few deterred many from attending counseling and test sessions. Also, well-equipped mobile testing sites should be established to ensure that as many as possible locals of the county are reached. This will increase the HIV testing uptake among married couples.

5.5 Areas for Further Research

This research aimed at assessing the determinants of uptake of HIV testing among married couples in Bosamaro Chache Ward. This research recommends that the same research is supposed to be carried on youth; however the proposed study should cover a wide geographical area that include the entire sub –counties in Nyamira. The reasoning behind targeting the youth is in order to establish if the youth have been taking up testing services. This would assist in establishing if the habits of low uptake of HIV testing by the married couples stems from their youthful days.

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APPENDICES

Appendix I: Letter of Transmittal

Dear Respondent,

RE: DATA COLLECTION REQUEST

My name is John Kebaso, a master's student at University of Nairobi (UON). As a requirement, I am undertaking a study on '**Determinant of HIV testing uptake among married couples in Bosamaro Chache Ward, Nyamira County"**.

I hereby ask you to give me your support through filling the questionnaire or the interview guide in order to help me gather data for the research. The obtained information here is to be addressed with maximum confidentiality and it will be solely applied for purposes of academics only.

Your cooperation will be highly appreciated.

Yours truly,

John Mbogo Kebaso

Appendix II: Questionnaire

Instructions: *The questionnaire aims at collecting data on the variables of the research. It will only be used for the study purposes. The study seeks to investigate the influence of pretest counselling, awareness, testing models, testing cite accessibility on routine HIV counselling and testing among married couples in Bosamaro Chache Ward in Nyamira County. All information provided will be handled with the highest ethical standards. You are asked to respond to the set of statements in the questionnaire sections as guided.*

Please tick (√) the appropriate answer

Section A: Personal Information

1. Gender

   Male [ ] Female [ ]

2. Age bracket in years.

   Less than 25 [ ]

   25-35 [ ]

   35- 45 [ ]

   Over 45 [ ]

3. Indicate the name of your village_____

4. Which is your nearest health center _____

Section B: Pretest Counseling

5. By what level do you contemplate pretest counseling enhances uptake of HIV testing among married couples in Bosamaro Chache Ward?

   No at all [ ] little extent [ ]

   Moderate extent [ ] Great extent [ ]

   Very great extent [ ]

6. Please specify by what level you are in agreement with the statements that follow related to pretest counseling and uptake of testing for HIV amongst married couples. Use a rating scale of 1-5, where 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 strongly Agree. Please tick (✓) all as appropriate.

Statements	**1**	**2**	**3**	**4**	**5**
Pretest counseling is an opportunity to facilitate a patient's informed decision-making about undergoing HIV testing					
Pretest counseling is helpful as it discusses the general benefits, risks, and limitations of testing.					
Pretest counseling offers clear communication before testing and therefore ease adaptation to results that are disclosed later					
Pretest counseling ensures individual has sufficient information to make an informed decision about having an HIV test					
Pretest counseling helps in assessment and awareness of personal risk and the transmission of HIV infection					
Pretest counseling offers information on practical implications such as medical treatment and care and subsequent coping with a positive test result thus encouraging individual to take up testing					
Pretest counseling gives guidelines on safer sex and strategies to reduce risk and thus encourages individual to take up testing					

Section C: Awareness of HIV/AIDS

7. To what extent do you think awareness for HIV/AIDS enhances uptake of testing for HIV amongst married couples in Bosamaro Chache Ward?

No at all [ ] little extent [ ]

Moderate extent [ ] Great extent [ ]

Very great extent [ ]

8. By use of a scale of 1-5, where 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 strongly Agree, Kindly specify by what level you are in agreement with the statements that follow related to awareness of HIV/AIDS and uptake of HIV testing among married couples. Please tick (✓) all as appropriate,

Statements	**1**	**2**	**3**	**4**	**5**
Awareness especially on transmission of HIV and how it can be prevented alleviates misconceptions and thus enhances uptake of HIV Testing					
The idea/knowledge of being diagnosed with HIV/AIDS causes many individuals to develop feelings of hopelessness and helplessness and this limits up take of HIV testing					
Well-articulated awareness campaign may demystify HIV/AIDS infection and thus allowing more people to take up HIV testing					
Awareness enhance adequate knowledge about HIV counseling and testing and this acts as a preventive strategy					
Awareness creation ensures that individuals have adequate knowledge on the advantages of HIV/AIDS testing thus augmenting demand for the services of testing					

Section D: Models of Testing

9. In your own opinion, to what extent do you think models of testing enhances uptake of HIV testing among married couples in Bosamaro Chache Ward?

No at all [ ] little extent [ ]

Moderate extent [ ] Great extent [ ]

Very great extent [ ]

10. Please specify by how much you are in agreement with the statements that follow related to models of HIV testing and uptake of HIV testing among

married couples. Use a scale of 1-5, where 1 = strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 strongly Agree. Please tick (✓) all as appropriate.

Statements	**1**	**2**	**3**	**4**	**5**
Some models of testing are very invasive and thus deter individual to take up testing.					
Some model of testing fail to detect early infections and therefore individuals who would test after engaging in illicit unprotected sex may get a false negative					
Some of the most accurate models of testing are expensive and thus discourage individuals from taking the test					
Most of the models of testing are slow in giving out results making the wait period long for impatient individuals					
The fear of infection during testing due to poor handling of the test tools also deter individuals from taking up HIV/AIDS testing					

Section E: Accessibility to Testing Site

11. To what extent do you think accessibility to testing site enhances uptake of testing for HIV amongst married couples in Bosamaro Chache Ward?

No at all [ ] little extent [ ]

Moderate extent [ ] Great extent [ ]

Very great extent [ ]

Specify by what level are you in agreement with the statements that follow related to accessibility to testing site and uptake of HIV testing among married couples. Use a scale of 1-5, where 1 = strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 strongly Agree. Please tick (✓) all as appropriate.

Statements	1	2	3	4	5
There are only a few health centers in the ward and therefore accessibility is a challenge thus limiting people in up-taking of HIV testing					
There lacks mobile VCT services to bridge the accessibility gap thus making the services not easily accessible to mobile VCT services to individuals					
The VCT are not placed in exclusive places making them not confidential to users					
Those located near VCT center may prefer to go to a VCT center far away from the sight of their neighbors so that they are not suspected to be infected					
Most VCT center fail to offer convenience to individuals seeking VCT services and thus acts as a deterrent.					

Section F: HIV Testing Among Married Couples

12. Please indicate the extent to which you agree with the following statements related uptake of HIV testing among married couples. Use a scale of 1-5, where 1 = strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 strongly Agree. Please tick (✓) all as appropriate.

Statements	1	2	3	4	5
Most people fear disclosure of their test results to their partners					
Proper testing among couple should entail visiting VCT together					
Couple should receive counselling					
infected Couples receive management of HIV/AIDS tips together when they visit VCT					
Visiting VCT together, the couples are guided on preventive strategies for infection control					

Thank you for your participation!!!

Appendix III: Interview Guide for Community Leaders

1. In your opinion, how does pretest counseling enhances uptake of HIV testing among married couples in Bosamaro Chache Ward?
2. Do you also organize awareness programmes to sensitize the community on the benefits of uptake of HIV testing among married couples? If yes, comment on the forms of awareness campaigns, frequency and benefits realized.
3. Kindly comment on the general accessibility to testing site within the community, how far is the test sites to the general community on average?
4. Does this influence uptake of HIV testing among married couples? If yes, how? (*Probe for explanation to the answer*)
5. As community leaders, are there times that you organize free VCT services for the local communities?
6. Are there notable benefits realized after such services in terms of behavioral changes, uptake of VCT services among others?
7. How would you describe the overall uptake of HIV testing among married couples? Is it satisfactory? (*Probe for explanation to the answer*)

Appendix IV: Interview Guide for Health Workers

1. In your opinion, how does pretest counseling enhances uptake of HIV testing among married couples in Bosamaro Chache Ward?
2. How would you describe the length of pretest counseling? How does this influence uptake of HIV testing among married couples?
3. Comment on the coverage of various themes related to HIV/AIDS during pretest counseling in your health center. Is it satisfactory? (*Probe for explanation to the answer*)

4. Are there organized awareness programmes to sensitize the community on the benefits of uptake of HIV testing among married couples? If yes, comment on the forms of awareness campaigns, frequency, who organize them and benefits realized.
5. Do you consider the awareness campaigns adequate? (*Probe for explanation to the answer*)
6. Kindly comment on the general accessibility to testing site within the community, how far is the test sites to the general community on average?
7. In the testing sites, do you think privacy is upheld?
8. Do you think distance from the testing sites influences uptake of HIV testing among married couples? If yes, how?
9. To enhance accessibility, are there times that there are organize free VCT services for the local communities? How does this influence uptake of HIV testing among married couples?
10. Are there notable benefits realized after such services in terms of behavioral changes, uptake of VCT services among others?
11. How would you describe the overall uptake of HIV testing among married couples? Is it satisfactory? (*Probe for explanation to the answer*)