Factors Associated with Human Immunodeficiency Virus (HIV) Testing and Counseling among Couples, Bulawayo City, 2015

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Dissertation Submitted in Partial Fulfillment of
Master in Public Health Degree
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August 2015
DECLARATION

I, AMEN GUMBO, certify that this dissertation is the product of my original work. It has been prepared in accordance with the guidelines of the Master of Public Health Programme, University of Zimbabwe. I further attest that this work has not been submitted elsewhere for another degree at this or any other university.

Signature: _____________________________ Date: ____________________

I, having supervised and read this dissertation, I am satisfied that this is the original work of the author in whose name it is being presented. I confirm that the work has been completed satisfactorily for presentation in the examination.

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Professor S. Rusakaniko
ACKNOWLEDGMENTS

I would like to express my sincere gratitude to my field supervisor, Dr Z Hwalima for her guidance and to the staff and management at the Bulawayo City Council, for their unwavering support. Special thanks go to my academic supervisor Dr T. Marufu for his guidance in the preparation of this dissertation. I would also want to express my gratitude to staff from the Department of Community Medicine and Health Studies Office for all the help they rendered to me. Many thanks go to all the study respondents who participated in this study. Last, but not least, I would like to thank all my colleagues for their assistance and my family for social support throughout the study. Above all, I thank God for His guidance.

Amen Gumbo

University of Zimbabwe, August 2015
ABSTRACT

Factors Associated with Human Immunodeficiency Virus (HIV) Testing and Counselling among Couples, Bulawayo City, 2015

Background: Majority of people in stable relationships are not aware of their HIV status. Bulawayo City HTC data showed a decline in the proportion of urban couples who were tested for HIV from 11% in 2010 to 6.7% in 2014. The study was conducted to determine factors associated with HTC among couples in Bulawayo City.

Methods: A one to one unmatched case control study was conducted. A total of 254 women, 127 cases and 127 controls, were recruited. A case was a woman aged 16-35 years who did not receive HTC with her partner. A control was a woman aged 16-35 who had received HTC with her partner. A pretested interviewer administered questionnaire was used to collect data from conveniently selected participants. Bivariate and logistic regression analyses were conducted to identify effect modification and control for confounding.

Results: Staying within a distance of less than 5 km from the health facility (AOR=0.38, 95% CI: 0.21-0.71) and prior discussion of HTC as a couple (AOR=0.43, 95% CI: 0.21-0.87) were independently associated with more likelihood of receiving HTC as a couple. Conflicting work schedules (AOR=2.99, 95% CI: 1.17-5.11) and perceived low risk (AOR=1.78, 95% CI: 1.02-3.10) were found to be independent risk factors for not receiving HTC as a couple.

Conclusion: Testing as a couple was as a result of factors relating to distance of less than 5 km from the health facility, prior discussion of HTC as a couple, low risk perception and conflicting work schedules. Encouraging communication among couples and health education may improve HTC among couples.

Keywords: HIV Testing and Counselling, Couples, Bulawayo City
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<tr>
<td>AIDS-</td>
<td>Acquired Immunodeficiency Syndrome</td>
</tr>
<tr>
<td>ANC-</td>
<td>Antenatal Care</td>
</tr>
<tr>
<td>ART-</td>
<td>Antiretroviral Therapy</td>
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<tr>
<td>CD4+ T cells-</td>
<td>Cluster of Differentiation 4 Cells</td>
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<tr>
<td>CHTC-</td>
<td>Couples HIV Testing and Counselling</td>
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<tr>
<td>CITC-</td>
<td>Client Initiated Testing and Counselling</td>
</tr>
<tr>
<td>DCNO-</td>
<td>Deputy Chief Nursing Officer</td>
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<tr>
<td>HIV-</td>
<td>Human Immune Virus</td>
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<td>HTC-</td>
<td>HIV Testing and Counselling</td>
</tr>
<tr>
<td>IPV-</td>
<td>Intimate Partner Violence</td>
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<td>MRCZ-</td>
<td>Medical Research Council of Zimbabwe</td>
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<tr>
<td>OPD-</td>
<td>Out-Patient-Department</td>
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<tr>
<td>PITC-</td>
<td>Provider Initiated Testing and Counselling</td>
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<td>PLWHA-</td>
<td>People Living With HIV/AIDS</td>
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<tr>
<td>PMTCT-</td>
<td>Prevention of Mother to Child Transmission</td>
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<tr>
<td>SSA-</td>
<td>Sub Saharan Africa</td>
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<tr>
<td>TB-</td>
<td>Tuberculosis</td>
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<td>Acronym</td>
<td>Description</td>
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<tr>
<td>UBH-</td>
<td>United Bulawayo Hospitals</td>
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<td>UNAIDS-</td>
<td>United Nations Programme on HIV/AIDS</td>
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<tr>
<td>VCT-</td>
<td>Voluntary Counselling and Testing</td>
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<td>WHO-</td>
<td>World Health Organisation</td>
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<td>ZDHS-</td>
<td>Zimbabwe Demographic and Health Survey</td>
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CHAPTER 1

INTRODUCTION

1.1 Background information

Human Immunodeficiency Virus (HIV) is the retrovirus that affects the immune system, by destroying the CD4+ T cells. When the immune system is weak, the body becomes vulnerable to attack from opportunistic infections, leading to the development of Acquired Immune Deficiency Syndrome (AIDS) ¹.

According to the World Health Organisation (WHO), there were approximately 35 million people living with HIV/AIDS by the end of 2013 globally. The Sub-Saharan African (SSA) region is most affected with approximately 24.7 million people with HIV in 2013².

The Joint United Nations Programme on HIV and AIDS (UNAIDS) report of 2014 also estimates that 19 million of the 35 million people (54.3%) living with HIV today do not know that they have the virus. The primary contributor to the scale of the epidemic in the Sub-Saharan region is heterosexual transmission³.

The key populations at risk of HIV/AIDS include gay men, sex workers, and injecting drug users. Globally gay men are 19 times more likely to be living with HIV than the general population. The prevalence of HIV among sex workers is 12 times greater than in the general population. It is estimated that 13% of all the people who inject drugs are living with HIV. The other populations at risk include prisoners, populations displaced from home and transgender people³.

Client-initiated testing and counselling (CITC) through free-standing clinics (stand-alone HIV Testing and Counselling (HTC)) is the traditional strategy for identifying those infected with HIV. The evolving epidemic dynamics and increased funding for HIV control have led to the expanded service provision and targeting of population groups not reached by existing strategies. Attendance to CITC is encouraged through promotional materials. HIV diagnosed clients are referred to local health facilities. New HTC strategies have been developed and these include provider initiated HIV testing and counselling (PITC) which is offered to patients at health facilities and mobile HTC offered to communities and homes\textsuperscript{4}. Recently HIV self testing has been introduced in some countries such as the United States of America, United Kingdom and Northern Ireland. Other countries such as Malawi and Zimbabwe are considering its introduction. HIV self testing provides information about HIV status to people who are not reached by the existing strategies\textsuperscript{5}.

Cohabiting couples now represent the world’s largest HIV risk group\textsuperscript{6}. The majority of people in relationships are unaware of their HIV status\textsuperscript{7}. Large proportion of new HIV infection in Sub Saharan Africa occurs within stable relationships\textsuperscript{8}. It is estimated that more than half of new infections could be preventable by Voluntary Counselling and Testing (VCT) targeted towards couples\textsuperscript{8}. HIV testing and counselling (HTC) is a key strategic entry point to prevention, treatment, care and support. It is important for individuals and couples to be aware of their HIV status as this will help them make informed decisions about their future\textsuperscript{9}.

Several countries have introduced HTC for couples, where they are tested and counselled and receive their test results together. This allows couples to plan, and make important life decisions. Key populations, such as sex workers and injecting drug users have also been
targeted by prevention strategies and interventions. It is important for these strategies and services to be provided in the context of confidentiality and non-discrimination.

The WHO has outlined five important components which must be respected by HTC service providers. These are as follows:

- Consent
- Confidentiality
- Counselling
- Correct test results
- Connection/linkage to prevention, care and treatment.

A couple is defined as two persons in an ongoing sexual relationship, and each of these persons is referred to as a “partner” in the relationship.

Couples’ HIV testing and counselling (CHTC) refers to HIV testing and counselling for two or more sexual partners together. They could be married, cohabiting, regular sexual partners or intending to have sex. They undergo counselling and testing in the same sitting and receive results together. CHTC is an important intervention aimed at preventing the transmission of HIV among individuals who are sexual partners as well as to their unborn children and breastfeeding infants.

**Advantages of CHTC**

- The environment is safe for couples to discuss risk concerns
- Couples hear the same information and messages together
- The counsellor has the opportunity to ease tension and diffuse blame
- Counselling messages are based on the results of both individuals
• The individual is not burdened with the need to disclose the results and persuade the partner to be tested.

• Counselling facilitates communication and cooperation required for risk reduction

• Care and treatment decisions can be made together

• Couples can engage in decision making for the future

**Benefits of couples HIV testing and counselling.**

There are potential benefits for couples testing together as illustrated in figure 1 below. 

**Figure 1: Potential benefits of couples HIV testing and counselling**

**SOURCE:** WHO (2012) Guidance on couples HIV testing and counselling
1.2 HIV Testing in Zimbabwe

In Zimbabwe, HIV testing started in 1984 through the screening of donated blood. Diagnostic HIV testing became available in 1990\(^1\).

In 1999 the Government of Zimbabwe launched the National HIV Policy in order to guide HIV/AIDS interventions and strategies. The strategies included Voluntary Counselling and Testing (VCT), which sought to reduce risk behaviour through the promotion of behaviour change. The government realized the importance of knowledge of HIV status as an important prevention strategy that influenced positive behaviour change. It reduces stigma and discrimination surrounding HIV/AIDS\(^2\).

According to the 2013 Zimbabwe National HIV and AIDS Estimates, national adult (15-49 years) HIV prevalence is estimated at 14.99%. HIV prevalence among young population (15-24 years) is estimated at 5.3%\(^3\).

According to the 2010/11 Zimbabwe Demographic and Health Survey (ZDHS), 15% of Zimbabwean adults aged 15-49 years are infected with HIV down from 18% in the 2005/6 ZDHS\(^4\). This shows that the HIV prevalence has declined by 3% over a 5 year period from 2006 to 2011\(^5\). In terms of HIV testing, the testing rates were higher among females (80%) than men (69%). Stable unions such as marriage and “living together” do not seem to provide protection from HIV as these groups have HIV prevalence rate (16.8%) that is higher than the national average\(^6\).

Zimbabwe uses the three approaches to HTC; the client-initiated HTC such as in VCT which requires individuals to initiate HTC services, the provider initiated approach which requires health care providers to initiate HTC in health settings, and the mandatory approach which

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\(^1\) HIV Testing became available in 1990.

\(^2\) The government realized the importance of knowledge of HIV status as an important prevention strategy that influenced positive behaviour change.

\(^3\) HIV prevalence among young population (15-24 years) is estimated at 5.3%.

\(^4\) Zimbabwean adults aged 15-49 years are infected with HIV down from 18% in the 2005/6 ZDHS.

\(^5\) HIV prevalence has declined by 3% over a 5 year period from 2006 to 2011.

\(^6\) Stable unions such as marriage and “living together” do not seem to provide protection from HIV as these groups have HIV prevalence rate (16.8%) that is higher than the national average.
requires that HIV testing and counselling be performed for specific reasons requested by a court of law.\textsuperscript{12}

1.3 Study Setting: City Of Bulawayo

Bulawayo City is the second largest city in Zimbabwe. It has an estimated population of 653337 (CSO 2012). In terms of health delivery the city is served by one hospital and nineteen health facilities which are owned by the local authority. The Central Government runs the three central hospitals namely Ingutsheni, United Bulawayo Hospitals and Mpilo Central Hospital. Health care services are also provided by private clinics and hospitals.

\textit{Figure 2: Map of the City of Bulawayo}

(Source of map: http://www.radiodialogue.com/bulawayo-significant-dates-in-the-last-120-years/)
1.4 HIV Testing and Counselling in Bulawayo City

HIV testing and counselling in Bulawayo City started in the early 1990s, with blood specimen being taken to Mpilo Hospital for processing. The system was set up to assist people in knowing their HIV status and to help prevent the spread of the disease in Bulawayo City. Twenty health facilities (20 clinics and 1 hospital) for Bulawayo City Council and the three government hospitals (Mpilo, United Bulawayo Hospitals (UBH) and Ingutsheni) offer HIV testing and counselling services. Private institutions also offer HTC services.

HIV testing and counselling uses the three strategies that are enshrined in the National HTC guidelines. All council institutions and government hospitals offer the Provider Initiated Testing and Counselling (PITC). Client Initiated HIV Testing and Counselling (CITC) also known as Voluntary Counselling and Testing is offered by the three New Start Centres, namely Nkulumane and Bambani New Start Centres as well as the Matabeleland AIDS Organisation. There are three independent VCT facilities; two are run by the Population Services International (PSI) and the other run by the Matabeleland AIDS Organisation.

1.5 Problem Statement

HIV Testing and Counselling (HTC) services are offered daily in Bulawayo City Council Clinics. The services are offered in the Out-patient Department (OPD), antenatal care (ANC), and tuberculosis (TB) rooms. Voluntary counselling and testing centres (VCTs) also provide the services. According to the Bulawayo City health information system, there is a declining trend in the proportion of urban couples who were tested for HIV during the period 2010 – 2014 in Bulawayo city council clinics (Figure 2).
Figure 3: Graph showing the proportion of HTC among urban couples in Bulawayo City, 2010-2014

The Zimbabwe Demographic Health Survey 2010-2011 reports a 16.8% prevalence of HIV among the married/living together couples. It is therefore important for couples to be tested and be informed of their status as this may allow them to plan and make HIV prevention/treatment choices and seek care and support. We investigated factors associated with HTC among couples in Bulawayo City, 2015.

1.6 Justification of Study

The ZDHS 2010-2011 reports an HIV prevalence of 16.8% among couples who were married, cohabiting and living together as compared to 8.3% of individuals who never married but had sexual intercourse. This suggests that HIV transmission is higher in the married than unmarried individuals. Research has also shown that couples who test together are more likely to adopt prevention measures than those who test individually. Several studies have also focused on high risk populations such as commercial sex workers; a few have targeted the couples. It is therefore important to elucidate factors associated with HIV
testing among couples so as to come up with recommendations which may address and reduce HIV transmission among couples.

1.7 Research Question

What are the factors associated with HTC among couples in Bulawayo City?

1.8 Conceptual Framework

The following conceptual framework has been developed from literature, to assist in analysing the factors associated with HIV testing and counselling.

**Socio-demographic factors**
- Age
- Marriage duration
- Education
- Partner education

**Socio-economic factors**
- Employment status
- Monthly income

**Health services factors**
- Distance
- Long waiting queue
- HCW attitude
- Privacy and confidentiality

**Client-related factors**
- Fear of HIV test results
- Stigma
- Perceived low risk
- Conflicting work schedules
- Fear of divorce
- Prior discussion of HTC with partner

*Figure 4: Conceptual Framework of HTC among couples*
CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

Literature review focuses on socio-demographic, socioeconomic, client-related, health services and provider-client relationship factors associated with uptake of HTC among couples.

2.1 Socio-demographic factors

Gender and religion

The ZDHS (2010/11) reports a higher uptake of HTC in women (80%) as compared to men (69%)\(^\text{15}\). The low uptake of HTC among men is a barrier to early HIV treatment and care and could have negative effects on those affected.

Lower uptake of the HTC was found in both men and women of minority religions or those with no religious orientation at all as compared to men and women of Christian religion\(^\text{11,15}\). Religious beliefs and influences determine sexual behaviours.

Level of education

The level of education has been shown to be associated with uptake of health services including HIV testing. A study conducted among young people in Nigeria revealed that young people who had at least a secondary education were 60% times more likely to accept HTC than their counterparts with primary or no education\(^\text{16}\). Another study conducted among couples in Zimbabwe in 2003 revealed that the likelihood of being HIV tested was associated with the level of education\(^\text{6}\). The study reported about twice the likelihood of a person with secondary education and above testing for HIV compared with those with no education. The
level of education and employment status were associated with the prevalence of HTC among married couples in Swaziland\textsuperscript{17}.

\subsection*{2.2 Socio-economic factors}

A study by Musheke et-al in 2013 revealed that financial costs (such as transport costs) associated with accessing HTC services had an effect on the uptake of HTC in SSA. Fortunately, HIV testing has become free in many countries, where user fees were charged, individuals assessed the benefits of HTC against other competing human needs. The indirect opportunity costs such as leaving one’s income generating projects and taking time away from work dissuaded people from HTC\textsuperscript{18}.

In a study by Membe et-al in 2011, three-quarters of invited couples in Kigali and nine in ten couples in Lusaka did not seek HTC. Barriers to HTC included the lack of money for transportation\textsuperscript{19,20}.

Low uptake of facility-based HTC among members of the poorest income quartile was reported in Sub-Saharan African countries where 25.4\% of respondents in the upper income quartiles had ever been tested for HIV at a healthcare facility, and only 16.9\% of the poorest had been tested\textsuperscript{21}. In this study Couples’ HIV testing was poor among couples irrespective of their income or social status.

Conflicting work schedules were highlighted as barrier factors to the uptake of HTC among couples in Uganda. Testing as a couple was hindered by the fact that men were in their places of work and therefore had no time for couples HTC\textsuperscript{22}. 
2.3 Health service factors

Distance

The main reason for being tested for HIV among women in Zimbabwe was the acceptance of HIV testing when offered (particularly in the context of antenatal care), whereas for men it was volunteering to be tested. For both women and men, the most common reasons for not being tested were lack of access to testing services\(^2\). Distance to testing facilities and lack of transportation money to attend couples HIV testing and counselling were the major factors that hindered couples’ HIV testing in Kanyama Compound, Lusaka\(^{20, 24, 25}\). The distance to testing centres demotivates those who may want to seek HTC. Mobile services which bring the services right to the people have been recommended in most settings.

Untrained staff

Health facility assessments that were carried out in Uganda revealed that health units were often understaffed and in some facilities there were no staff trained in HTC\(^{26}\). Inadequate numbers of staff trained in HIV testing and counselling was also reported in Zimbabwe\(^{25}\). The shortage of staff trained in HIV testing and counselling hinders the smooth implementation of HTC.

Long Patient Waiting Time

Women participating in a study in South Africa disclosed that they waited too long at the health facility before being tested for HIV so they left without taking the HIV test. Other respondents highlighted that there were queues for HTC and that discouraged them from taking the test and thus kept on postponing\(^{27}\).
Privacy

Maintenance of privacy is of paramount importance in HTC. Participants from a study carried out in five sub metro health facilities providing HTC services in Kumasi Metropolis, Ghana, complained that testing was done in the open with no privacy. They mentioned that the way HTC was done, and the results disclosed, deterred them from taking the test\(^\text{27}\). Married couples who came with their partners for HTC in Rakai district, Uganda cited the lack of privacy as a barrier to HTC\(^\text{28}\). When HTC is done in an open area there is the likelihood of another patient getting to know another one’s status\(^\text{27}\). This lack of privacy, therefore deters utilisation of HTC services.

Lack of confidentiality

Worries about the confidentiality of VCT and the fear that test results would be shared by health care workers within the community were reported in South Africa\(^\text{29}\). Lack of confidentiality was reported by 2.3% of the respondents in a Kenyan study\(^\text{30}\). The perceived lack of confidentiality by health staff; perceived lack of confidence in the competence of health personnel; and perceived poor attitude of health staff dissuaded people from testing in Sub Saharan Africa\(^\text{18}\).

Perceived Health Care Worker Attitude

Perceived rude health worker attitude was a significant factor influencing HTC among study participants in Johannesburg and Eastern Uganda. Participants with secondary school education and above were more likely to report poor health worker attitude as a factor hindering HTC\(^\text{31}\). Perceived rude attitude of health staff discouraged people from testing in Sub Saharan Africa\(^\text{18, 24}\). The need for training of health workers to improve their attitudes has been recommended to enable utilisation of HTC services.
**Availability of Test Kits**

Lack of HIV test kits at health facilities in and around Iringa, Tanzania was mentioned by both clients and health care workers\textsuperscript{32}. An assessment done in Zimbabwe revealed that most health care institutions had inadequate stocks of HIV test kits and so were unable to offer PITC services to all clients\textsuperscript{25}.

**2.4 Client-related factors**

A number of client related barriers associated with HTC among couples have been identified and among these is the fear of stigma, perceived low risk of HIV infection, fear of test results, prior discussion of HTC and fear of partner’s reaction\textsuperscript{33}.

**Stigma**

Stigma has been identified as a barrier to HIV testing with negative consequences for HIV/AIDS prevention and treatment. Couples from Lusaka (51\%) reported stigma as the major barrier that prevented them from testing\textsuperscript{34}. A study in South Africa revealed that HIV was still seen as a death sentence. People living with HIV/AIDS (PLWHA) were held responsible for contracting the HIV infection. HIV/AIDS was associated with adultery and multiple sexual partners\textsuperscript{29}. In a study conducted in Tanzania, 26.5\% of respondents did not want to test because of stigmatisation\textsuperscript{30,33}. Fear of stigma was reported as a barrier to the uptake of HTC in many settings in Sub Saharan Africa mainly because HIV transmission is mostly heterosexual. Those who are seen at testing sites are associated with multiple sexual partners and are assumed to be HIV positive\textsuperscript{18}. Once people begin to fear the stigma associated with HIV testing they will not go for HIV testing and counselling and HIV will continue spreading in the communities.
**Perceived low risk of getting HIV infected**

Individuals in a study conducted in SSA assessed their risk of HIV infection and thought they were at low risk of HIV infection. These interpretations of being at low risk of HIV infection negatively affected the uptake of HIV testing. This lay assessment influences behaviour. Those who perceived themselves as being infected already do not see the importance of knowing their HIV status. Thus, HTC is usually undertaken when there is a decline in health status of an individual\(^{18}\). In a South Africa study, participants who were married were 1.5 times more likely to report a low-risk perception of HIV as a barrier to HCT when compared with single participants\(^{35}\).

A study conducted in Tanzania on factors affecting HTC among married participants revealed that about 70% of married participants reported that they did not think that they were at risk of HIV infection\(^{33}\). A third of respondents in a study on the barriers to and determinants of HTC among adults in Nigeria, felt they were not at risk of HIV infection and hence could not take the test\(^{36,24}\). Many people are at risk of HIV but perceive themselves as having little or no risk. One’s self-perceived risk has been found to be often inaccurate\(^{31}\).

**Fear of discordant test results**

Many participants in a study on couples counselling and testing for HIV at antenatal clinics in Tanzania agreed on the importance of incorporating CVCT at ANC, while others expressed reservations due to the cultural belief that ANC was for women. Nonetheless, many feared that disclosure of HIV-positive status to an HIV-negative spouse could result in abandonment, divorce or violence against the woman regardless of her sero-status\(^{37}\).

The fear of discordant test results was also highlighted in focus group discussions held in Harare among factory working men\(^{38}\). In Uganda, there was fear that HIV discordance results
could be used as confirmation of infidelity among married couples and thus could strain relationships\textsuperscript{18}.

**Fear of test results**

The fear of HIV test results has been reported by many studies. The fear of knowing one’s HIV status, and the resulting consequences, is a major barrier. A study in Uganda revealed that 16% of women and 9% of men did not want to know if they had the virus. They were concerned about the reactions of their partners (separation, loss of income, physical abuse), family members (blame, neglect), and the community at large (gossip, discrimination)\textsuperscript{26, 30}. Barriers to couples testing in Northern Tanzania included potential conflicts that may arise following a positive HIV test. Couples highlighted that the barrier was the partner’s reaction to positive results\textsuperscript{39}. The fear of social exclusion had negative effects on the uptake of HTC in SSA. The fear of losing social support and sexual partners, and the fear of straining marital relationships, including abandonment, divorce, or even violence inhibited the uptake of HTC\textsuperscript{18, 22}.

**Prior discussion of HTC with partner**

A study conducted in Uganda revealed that those that had ever received couples' HTC were significantly more likely to report prior discussion of HIV testing with their partners. According to the results of this study, when couples discuss HIV testing and counselling, there is likelihood that they will test as a couple\textsuperscript{40}. 
CHAPTER 3
OBJECTIVES AND HYPOTHESES

3.1 Broad Objective

- To assess the factors associated with HTC among couples in Bulawayo City, 2015

3.2 Specific Objectives

- To determine the socio-demographic factors associated with HTC among couples in Bulawayo City, 2015.
- To determine the socio-economic factors associated with HTC among couples in Bulawayo City, 2015
- To assess the health service factors associated with HTC among couples in Bulawayo City, 2015.
- To determine client related factors associated with HTC among couples in Bulawayo City, 2015.

3.3 Hypotheses

H₀: There is no association between marriage duration (socio-demographic factor) and HTC among couples.

H₀: There is no association between monthly income (socio-economic factor) and HTC among couples.

H₀: There is no association between distance (health service factor) and HTC among couples.

H₀: There is no association between perceived low risk (client-related factor) and HTC among couples.
CHAPTER 4
MATERIALS AND METHODS

4.0 Introduction

This chapter will describe the research methods used in this study. It will look at study design, study setting, study population, sample size and sampling procedures. Data capturing and analysis and ethical considerations will also be covered.

4.1 Study Design

A one on one unmatched case-control study was carried out in Bulawayo City. A case-control study design was chosen because it is timely and cost effective. It has the ability to compare between women who were tested either as individuals or as a couple. The design was also chosen because of its ability to examine multiple etiological factors associated with HTC.

Case

A woman aged 16-35 years who was married, living together or cohabiting for at least one year, residing in Bulawayo City and was not counselled and tested for HIV together with her partner in Bulawayo City between June and July 2015. Men were left out due to their poor health seeking behaviour and busy schedules.

Control

A woman aged 16-35 years who was married, living together or cohabiting for at least one year, residing in Bulawayo City and was counselled and tested for HIV together with her partner in Bulawayo City between June and July 2015.
4.2 Study Setting and Population

The study was conducted in 10 selected council clinics and 1 central hospital and 2 VCTs in Bulawayo City. The study was conducted among married and cohabiting women in the 16-35 years age group.

4.3 Sample Size and Sampling Procedure

4.3.1 Sample size

The sample size was calculated using the Fleiss formula for independent case control studies, where alpha is 0.05, power is 0.80 (β=1-0.80). OR (odds of exposure between cases and controls), \( n_1 = \) number of cases, \( P_1 \) is the proportion of cases with exposure, \( P_2 \) is the proportion of controls with exposure, \( r \) is the ratio of cases and controls, \( Za/2 \) is the Z score for two tailed test based on \( \alpha \) level, and \( Z_{1-\beta} \) is the Z score for one tailed test based on \( \beta \) level.

\[
P_1 = \frac{P_2 \cdot \text{OR}}{1 + [P_2 \cdot (\text{OR}-1)]}
\]

\[
= \frac{0.22 \times 2.25}{1 + (0.22 \times (2.25-1))} = 0.39
\]

\[
q_1 = (1-P_1) = (1-0.39) = 0.62
\]

\[
P_2 = 0.22
\]

\[
q_2 = (1-p^2) = (1-0.22) = 0.78
\]

\[
\hat{p} = \frac{p_1 + r \cdot p_2}{r+1} = \frac{0.39 + 0.22}{2} = 0.31
\]

\[
q_0 = (1-\hat{p}) = (1-0.31) = 0.69
\]

\[
n_1 = \left[\frac{Za/2 \sqrt{r+1} \cdot \hat{p} \cdot q_0 + Z_{1-\beta} \sqrt{r p_1 q_1 + p_2 q_2}}{r (p_1 - p_2)}\right]^2
\]

\[
= \left[1.96 \sqrt{2 \times 0.31 \times 0.69} + 0.84 \sqrt{0.39 \times 0.61 + 0.22 \times 0.78}\right]^2
\]
\[ \left(0.31-0.22\right)^2 \]
\[ = \left[1.282+0.5375\right]^2 \]
\[ = \frac{1.8195^2}{0.17^2} \]
\[ n_1 = n_2 \]
\[ = 115 \text{ cases and 115 controls} \]

Assuming a 22% frequency of exposure in the controls reported a low perceived risk of HIV and an odds ratio of 2.25 (CI 1.32; 3.83) Matovu J, et-al (2014) in Determinants of HIV Counselling and Testing Uptake among Individuals in long term sexual relationships in Uganda”. Factoring an attrition rate of 10%, a sample size of 127 cases and 127 controls was calculated.

4.3.2 Sampling of facilities

Stratified sampling was utilised to select study sites.

- Bulawayo City Council has a total of twenty (20) health facilities and these represented stratum one

- Two central hospitals in Bulawayo represented stratum 2

- Three VCTs in Bulawayo represented stratum 3

Ten (10) out of the twenty (20) council health facilities were randomly selected using simple random sampling. Twenty (20) small pieces of paper with each written a name of a health facility were put in a closed box. The box was shaken to ensure randomisation and ten papers with health facility names were randomly selected using the lottery method. The same method was used in the selection of a central hospital and VCTs. One of the two central hospitals was selected using simple random sampling. Two out of the three VCTs were selected using simple random sampling.
A total of 13 facilities were therefore selected for this study, i.e. 10 council clinics, 1 central hospital and 2 VCT.

4.3.3 Sampling of study participants

Study participants were conveniently selected. Participants who met the inclusion criteria were interviewed after HTC.

4.4 Key informants (KIs)

KIs were HIV programme managers and had specific knowledge about HIV Testing and Counselling in Bulawayo City. A total of fourteen key informants were interviewed. These included the HIV focal person for Bulawayo City, nurses in charge at health facilities and the matron of the central hospital.

4.5 Inclusion criteria and Exclusion criteria

4.5.1 Inclusion criteria

- All consenting (legally or customarily married and cohabiting) women.
- Women attending the selected council clinics, hospital and VCTs for HTC in Bulawayo City.

4.5.2 Exclusion criteria

- All non-consenting women
- Women who were critically ill
4.6 Data collection tools

- An interviewer administered questionnaire was used to collect data on socio-demographic, socio-economic, health services, and client related factors associated with HTC among couples.

- Key informant interviews were held with Nurses-in-charge at council clinics and the hospital, and VCT site managers using an interview guide.

- Desk review of the HTC registers to verify those tested either as individuals or as a couple.

4.7 Data Analysis

Quantitative data were analysed using the Epi-info 3.5.3 version to:

- Calculate frequencies, proportions, and means.

- Calculate measures of association such as odds ratios (OR)

- Carry out stratified analysis to identify possible confounding or effect modification.

- Carry out logistic regression analysis (multivariate) to control for possible confounding.

- Carry out significance testing (chi-square test for statistical significance of the difference in measured variables).

Qualitative data were sorted and analysed by the following themes; health worker training in HTC, availability of furniture and space, availability of IEC materials, and health workers attitude.
4.8 Permission to Proceed

Permission to conduct the study was obtained from the Health Studies Office (HSO), Director of Health Services of the City of Bulawayo, and the Clinical Director of Mpilo Central Hospital followed by approval to proceed with the study from the Medical Research Council of Zimbabwe (MRCZ/ B/890).

4.9 Ethical Considerations

Informed written consent was obtained from all study participants. The purpose and aims of the study were explained to study participants. Discomforts and benefits of participating in the study were also explained to study participants. Participation was voluntary and there were no financial gains for participating in the study. Confidentiality was ensured and maintained by not recording the names of the study participants. Ethical approval was obtained from the Joint Research Ethics Committee of Parirenyatwa Hospital (JREC/168/15)

Safety and confidentiality of completed questionnaires were maintained. The information was stored in a password protected file on a computer and only the researcher had access to the file. Research material is kept in a lockable cupboard in a lockable office.

4.10 Pretesting of Study

Data collection tools were pretested at Njube and Maqhawe clinic in Bulawayo City. Twenty HIV Testing and Counselling women were conveniently selected and interviewed. The purpose was to check on response rate, willingness to answer questions, the acceptability and validity of the questions and the appropriateness of the sampling procedure for study participants. The optimal time for conducting the interviews, the feasibility of administering the data collection tools as well as the feasibility of the planned data analysis was checked.
Clarity of the questions was checked and corrections were made where ambiguities were found.

**Questionnaire for women**

Sections A, B, and C had no changes to be made. Questions were entered and analysed without difficulties.

Section D had questions 30-37. Question 36 on the previous questionnaire applied to cases only and was further developed to come up with eleven more questions which could now be answered by both cases and controls.

**Questionnaire for health workers**

No changes were made on the questionnaire for key informants

**4.11. Table 1: Variables Measured**

<table>
<thead>
<tr>
<th>Concept</th>
<th>Variable Measured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio-demographic factors</td>
<td>Age, sex, marriage duration, level of education, partner’s level of education,</td>
</tr>
<tr>
<td></td>
<td>religion, partner support</td>
</tr>
<tr>
<td>Socio-economic factors</td>
<td>Employment status, partner’s employment status, family size, monthly income</td>
</tr>
<tr>
<td>Health services factors</td>
<td>Distance from a health facility, attitude of health workers, long waiting times,</td>
</tr>
<tr>
<td></td>
<td>lack of privacy and confidentiality</td>
</tr>
<tr>
<td>Client related factors</td>
<td>Stigma, fear of HIV testing, fear of divorce, perceived low risk, conflicting</td>
</tr>
<tr>
<td></td>
<td>work schedules, prior discussion of HTC.</td>
</tr>
</tbody>
</table>
CHAPTER 5

RESULTS

5.0 Introduction

This chapter focuses on data analysis and presentation on socio-demographic factors, socio-economic factors, health service factors and client-related factors associated with HIV testing and counselling among couples in Bulawayo City.

5.1 Socio-demographic characteristics of study participants

A total of 127 cases and 127 controls were recruited into the study. The median age in years for cases was 24 ($Q_1=21; Q_3=28$). The median age in years for controls was 24 ($Q_1=21; Q_3=28$). Twenty-seven percent of cases were cohabiting compared to 24% of controls. Seventy-one percent of the cases had attained secondary education compared to 77% of the controls. Cases and controls were comparable with respect to all socio-demographic characteristics. Table 2 summarises the socio-demographic characteristics of study participants.

Table 2: Socio-demographic characteristics of study participants, Bulawayo City, 2015

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Cases n=127 (%)</th>
<th>Controls n=127 (%)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years</td>
<td>16-20</td>
<td>28(22)</td>
<td>31(24)</td>
<td>0.66</td>
</tr>
<tr>
<td></td>
<td>21-25</td>
<td>42(33)</td>
<td>47(37)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>26-30</td>
<td>38 (30)</td>
<td>38 (30)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31-35</td>
<td>19(15)</td>
<td>11(9)</td>
<td></td>
</tr>
<tr>
<td>Median age in years</td>
<td>24 ($Q_1=21; Q_3=28$)</td>
<td>24 ($Q_1=21; Q_3=28$)</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Type of Union</td>
<td>Cohabiting</td>
<td>27 (21)</td>
<td>24(19)</td>
<td>0.64</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>100 (79)</td>
<td>103 (81)</td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------</td>
<td>----------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td><strong>Marriage duration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-5 years</td>
<td>106 (83)</td>
<td>98 (77)</td>
<td>0.13</td>
<td></td>
</tr>
<tr>
<td>6-10 years</td>
<td>18 (14)</td>
<td>27 (21)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11-15 years</td>
<td>3 (2)</td>
<td>2 (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>No. of children</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-1</td>
<td>84 (66)</td>
<td>77 (61)</td>
<td>0.36</td>
<td></td>
</tr>
<tr>
<td>2-4</td>
<td>43 (34)</td>
<td>50 (39)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Highest level of</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>1 (1)</td>
<td>4 (3)</td>
<td>0.30</td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>22 (19)</td>
<td>13 (10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary</td>
<td>90 (71)</td>
<td>98 (77)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tertiary</td>
<td>14 (11)</td>
<td>12 (9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Partner’s highest level of education</strong></td>
<td></td>
<td></td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>5 (4)</td>
<td>6 (5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary</td>
<td>97 (76)</td>
<td>109 (86)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tertiary</td>
<td>25 (20)</td>
<td>12 (9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Religious affiliation</strong></td>
<td></td>
<td></td>
<td>0.21</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>5 (4)</td>
<td>9 (7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>30 (26)</td>
<td>22 (14)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pentecostal</td>
<td>37 (27)</td>
<td>48 (41)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional</td>
<td>2 (2)</td>
<td>2 (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apostolic</td>
<td>12 (9)</td>
<td>15 (12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protestants</td>
<td>41 (32)</td>
<td>31 (24)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.2: Socio-economic factors associated with HTC among couples, Bulawayo City, 2015

An assessment of socio-economic factors associated with HTC among couples was done. The results demonstrate that none of the factors were significantly associated with HTC among couples in Bulawayo City. Table 3 summarises the results.

Table 3: Socio-economic factors associated with HTC among couples, Bulawayo City, 2015

<table>
<thead>
<tr>
<th>Factor</th>
<th>Exposure status</th>
<th>Cases n=127 (%)</th>
<th>Controls n=127 (%)</th>
<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>Yes</td>
<td>37(29)</td>
<td>29(23)</td>
<td>1.39 (0.79-2.44)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>90(71)</td>
<td>98(77)</td>
<td></td>
</tr>
<tr>
<td>Partner’s employment status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>Yes</td>
<td>115(90)</td>
<td>113(89)</td>
<td>1.19 (0.53-2.68)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>13(10)</td>
<td>14(11)</td>
<td></td>
</tr>
<tr>
<td>Average monthly household income (USD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;$200</td>
<td>Yes</td>
<td>35(28)</td>
<td>47(37)</td>
<td>0.65 (0.38-1.10)</td>
</tr>
<tr>
<td>$201-$400</td>
<td>Yes</td>
<td>57(45)</td>
<td>52(41)</td>
<td>1.17 (0.71-1.93)</td>
</tr>
<tr>
<td>$401-$600</td>
<td>Yes</td>
<td>22 (17)</td>
<td>18(14)</td>
<td>1.27 (0.64-2.50)</td>
</tr>
<tr>
<td>$601-$1000</td>
<td>Yes</td>
<td>9 (7)</td>
<td>7(6)</td>
<td>1.31 (0.47-3.63)</td>
</tr>
<tr>
<td>+$1000</td>
<td>Yes</td>
<td>4(3)</td>
<td>3(2)</td>
<td>1.34 (0.29-6.13)</td>
</tr>
</tbody>
</table>
5.3: Health service factors associated with HTC among couples, Bulawayo City, 2015

Staying within a distance of less than 5 kilometres from the health facility (OR=0.40, 95% CI: 0.23-0.73), and perceiving health workers to be friendly (OR=0.52, 95% CI: 0.28-0.95) were significant factors associated with a more likelihood of receiving HTC as a couple (Table 4).

Table 4: Health service factors associated with HTC among couples, Bulawayo City, 2015

<table>
<thead>
<tr>
<th>Factor</th>
<th>Exposure Status</th>
<th>Cases n=127 (%)</th>
<th>Controls n=127 (%)</th>
<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5Km from health facility</td>
<td>Yes</td>
<td>82 (64)</td>
<td>104(82)</td>
<td>0.40* (0.23-0.73)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>45 (35)</td>
<td>23 (18)</td>
<td></td>
</tr>
<tr>
<td>Long waiting time</td>
<td>Yes</td>
<td>47 (37)</td>
<td>36 (28)</td>
<td>1.49 (0.88-2.52)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>80 (63)</td>
<td>91 (72)</td>
<td></td>
</tr>
<tr>
<td>Perceived friendly health workers</td>
<td>Yes</td>
<td>93 (73)</td>
<td>107 (63)</td>
<td>0.52* (0.28-0.95)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>34 (27)</td>
<td>20 (39)</td>
<td></td>
</tr>
<tr>
<td>Privacy and confidentiality</td>
<td>Yes</td>
<td>94 (74)</td>
<td>97 (76)</td>
<td>0.88 (0.50-1.56)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>33 (26)</td>
<td>30 (24)</td>
<td></td>
</tr>
<tr>
<td>Convenient clinic operating hours</td>
<td>Yes</td>
<td>92 (72)</td>
<td>100 (79)</td>
<td>0.71 (0.40-1.26)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>35 (28)</td>
<td>27 (21)</td>
<td></td>
</tr>
</tbody>
</table>

* = statistically significant at p-value <0.05

5.4: Client related factors associated with HTC among couples

Prior discussion of HTC as a couple (OR=0.40, 95% CI: 0.20-0.78) and inviting partners for HTC (OR=0.33, 95% CI: 0.13-0.82) were significant factors associated with a more likelihood of receiving HTC as a couple.

Women who reported that their partners’ work schedules conflicted with the clinics operating times (OR=3.00, 95% CI: 1.80-5.00), were 3.0 times more likely not to receive HTC as a couple.
couple, while women who perceived themselves to be at low risk of HIV infection (OR=1.91, 95% CI: 1.14-3.20) were 1.91 times more likely not to receive HTC as a couple (Table 5).

Table 5: Client-related factors associated with HTC among couples, Bulawayo City, 2015

<table>
<thead>
<tr>
<th>Factor</th>
<th>Exposure Status</th>
<th>Cases n=127 (%)</th>
<th>Control n=127 (%)</th>
<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple sexual partners</td>
<td>Yes</td>
<td>14(11)</td>
<td>9(7)</td>
<td>1.62 (0.68-3.90)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>113(89)</td>
<td>118(93)</td>
<td></td>
</tr>
<tr>
<td>Prior discussion of HTC as a couple</td>
<td>Yes</td>
<td>95(75)</td>
<td>112(88)</td>
<td>0.40* (0.20-0.78)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>32(25)</td>
<td>15(12)</td>
<td></td>
</tr>
<tr>
<td>Invited partner for HTC</td>
<td>Yes</td>
<td>108(85)</td>
<td>120(94)</td>
<td>0.33*(0.13-0.82)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>19(15)</td>
<td>7(6)</td>
<td></td>
</tr>
<tr>
<td>Conflicting work schedules</td>
<td>Yes</td>
<td>82(65)</td>
<td>48(38)</td>
<td>3.0* (1.80-5.0)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>45(35)</td>
<td>79(62)</td>
<td></td>
</tr>
<tr>
<td>Fear of knowing HTC results as a couple</td>
<td>Yes</td>
<td>87(69)</td>
<td>79(62)</td>
<td>1.32 (0.79-2.22)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>40(32)</td>
<td>48(38)</td>
<td></td>
</tr>
<tr>
<td>Perceived low risk of HIV</td>
<td>Yes</td>
<td>57(45)</td>
<td>38(30)</td>
<td>1.91* (1.14-3.20)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>70(55)</td>
<td>89(70)</td>
<td></td>
</tr>
<tr>
<td>Fear of past sexual lifestyle</td>
<td>Yes</td>
<td>34(27)</td>
<td>24(19)</td>
<td>1.57 (0.87-2.84)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>93(73)</td>
<td>103(81)</td>
<td></td>
</tr>
<tr>
<td>Fear of stigma and discrimination</td>
<td>Yes</td>
<td>84(66)</td>
<td>82(65)</td>
<td>1.07 (0.64-1.80)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>45(35)</td>
<td>43(34)</td>
<td></td>
</tr>
<tr>
<td>Fear of testing positive</td>
<td>Yes</td>
<td>95(75)</td>
<td>84(66)</td>
<td>1.52 (0.88-2.62)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>34(25)</td>
<td>43(34)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------</td>
<td>-------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>Perceive HIV status to be similar to partner’s</td>
<td>64(50)</td>
<td>63(50)</td>
<td>1.17 (0.72-1.92)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>59(47)</td>
<td>68(54)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fear of divorce</td>
<td>56(44)</td>
<td>71(56)</td>
<td>1.14 (0.69-1.87)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>52(41)</td>
<td>75(59)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* = statistically significant at p-value <0.05

5.5 Results from Key Informants

A total of 14 Key informants were interviewed. They reported that health workers had been trained in HTC, but there were, however staff shortages in council and government facilities due to the freezing of the posts. Space and furniture for HTC was reported to be adequate. Information Education and Communication (IEC) materials which promote couples testing were reported to be inadequate. Health workers were reported to be friendly. Couples that come for HTC together were given first preference for HTC as an incentive.

5.6 Stratified Analysis

The crude odds ratio (COR=0.33, 95% CI 0.13-0.82) falls within the stratum specific odds ratios (0.045, 6.44). The effect of partner invitation for HTC as a couple was modified by whether the study participants had prior discussion of HTC or not. Partner invitation among couples with a history of prior discussion on HTC was associated with a more likelihood of receiving HTC as a couple (OR 0.045, 95% CI 0.01-0.34). Partner invitation among couples without a history of prior discussion on HTC, was associated with a more likelihood of not testing as a couple (OR 6.44, 95% CI 1.33-31.1) (Table 6).
### Table 6: Partner invitation stratified by prior discussion of HTC, Bulawayo City, 2015

<table>
<thead>
<tr>
<th>Factor</th>
<th>Exposure Status</th>
<th>Cases</th>
<th>Controls</th>
<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prior discussion</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partner invitation</td>
<td>Yes</td>
<td>79(83)</td>
<td>111(99)</td>
<td>0.045 (0.01 – 0.34)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>16(17)</td>
<td>1(1)</td>
<td></td>
</tr>
<tr>
<td><strong>No prior discussion</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partner invitation</td>
<td>Yes</td>
<td>29(91)</td>
<td>9(60)</td>
<td>6.44 (1.33 – 31.1)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>3(9)</td>
<td>6(40)</td>
<td></td>
</tr>
<tr>
<td><strong>Crude</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partner invitation</td>
<td>Yes</td>
<td>108(85)</td>
<td>120(94)</td>
<td>0.33 (0.13 – 0.82)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>19(15)</td>
<td>7(6)</td>
<td></td>
</tr>
</tbody>
</table>

χ² =14.31  
*p= 0.0002

### 5.7: Independent factors associated with HIV testing among couples, Bulawayo City, 2015.

Forward stepwise logistic regression was used to determine the factors associated with HTC among couples. Staying within a distance of less than 5 km (AOR=0.38, 95% CI: 0.21–0.71) and prior discussion of HTC as a couple (AOR=0.43, 95% CI: 0.21–0.87) were independently associated with more likelihood of receiving HTC as a couple. Conflicting schedules (AOR=2.99, 95% CI: 1.17–5.11) and perceived low risk (AOR=1.78, 95% CI: 1.02–3.10) were independent risk factors for not receiving HTC as a couple (Table 7).

### Table 7: Independent factors associated with HTC among couples, Bulawayo City, 2015.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Crude OR</th>
<th>Adjusted OR</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A distance of less than 5 km</td>
<td>0.40</td>
<td>0.38</td>
<td>(0.21-0.71)</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Prior discussion of HTC as a couple</td>
<td>0.40</td>
<td>0.43</td>
<td>(0.21-0.87)</td>
<td>0.02</td>
</tr>
<tr>
<td>Conflicting work schedules</td>
<td>3.00</td>
<td>2.99</td>
<td>(1.17-5.11)</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Perceived low risk</td>
<td>1.91</td>
<td>1.78</td>
<td>(1.02-3.10)</td>
<td>0.04</td>
</tr>
</tbody>
</table>
CHAPTER 6
DISCUSSIONS

6.1 Discussions

Our results show that distance of less than 5 km from a health facility, low risk perception of HIV infection, prior discussion of HTC with a partner, perceiving health workers to be friendly, conflicting work schedules and having invited partner for HTC were significant factors associated with HTC.

A distance of less than 5km from a health facility was associated with an increased likelihood of receiving HTC as a couple. Most of the residential areas in Bulawayo City are served by council clinics which are within a walking distance, thus increasing access to HTC services and other services. A distance of less than 5 km enables HTC clients to walk to the testing site at no cost. Those staying within a distance of less than five kilometres from the health facility are also likely to know the existence of the testing site and thus increase the utilisation of the HTC services. Larson et-al in 2010 found similar results in Eastern Uganda, where extreme distances to the health facilities was cited as a major factor that discouraged couples from going for couples HTC24.

Far distances to testing centres often involve cost in transport fares and opportunity costs. Another study from Western Uganda by Bwambale et-al in 2008 indicated that there were few health facilities in Uganda which were also located far from where people lived thereby making HTC inaccessible42. Mobile HTC services are encouraged in order to reach couples who stay far from health facilities and VCTs.

The friendly attitude of health workers was significant in predicting whether couples were tested together or not. Bulawayo City has employed primary care counsellors in almost all
clinics. These are trained cadres whose duties are mainly HTC. Health worker trainings have been conducted on quality care, client care and public relations. This is contrary to findings by Byamugisha et-al in 2010 where unfriendly health workers were reported to have used harsh language on Ugandan women. Several studies have also shown unfriendly health workers' attitude across Sub Saharan Africa. More training in quality care, public relations and customer/client care are encouraged as they are more likely to improve the attitudes of health workers and this will ultimately increase the utilisation of HTC services.

In this study prior discussion of HTC as a couple was associated with an increased uptake of HTC among couples because when couples discuss about HIV testing and counselling in their relationships it is likely to reduce the fears (fear of divorce and fears of HIV testing and counselling and fear of past sexual life) associated with couples HTC and provide confidence to seek HTC, thereby increasing the chances of testing as a couple. When couples communicate in their relationships it is also likely that joint decisions to seek HTC are made. Matovu J, et-al in 2014 found similar results in Uganda that couples’ HTC was significantly associated with prior discussion of HTC with partner. This finding suggests that intra-spouse communication about HTC among couples should be encouraged at all testing sites as it increases HTC among couples.

Inviting a partner for HTC was a significant factor predictive of more couples receiving HTC. Wallet-al in 2012 found similar results in Lusaka, Zambia, where invitations that were initiated by the woman partner were 20% more likely to predict uptake of HTC among couples. Formal invitation letters have also been used in other settings such as Rwanda, Zambia and South Africa to invite men to come for testing in antenatal care together with their partners and this increased uptake of HTC among couples. Formal invitation letters have
not been tried on couples in the general population. Encouraging women to invite their partners for HIV testing would improve HTC among couples.

This study demonstrated that conflicting work schedules were associated with more likelihood of not receiving HTC as a couple. Most (89%) of the women in this study reported their male partners to be employed and thus are usually at their work places most of the times. It is likely that they lack time for HTC with their partners as the clinic hours often conflict with working hours. Wanyenze et-al in a qualitative study in 2014 found similar results in Uganda, where men reported conflicting work schedules as a barrier to HTC.

Perceived low risk of HIV infection was associated with more likelihood of not receiving HTC as a couple. It is likely that those who perceive themselves to be at low risk of HIV infection may not understand the importance of HTC and thus may not seek HTC. HIV testing is usually undertaken when there is a decline in the individual’s health status. Some people feel at low risk because of the trust that they have in their partners. Tshuma et-al in 2015 found similar results in South Africa. Participants who were married were 50% more likely to report a low-risk perception of contracting HIV as a barrier to HTC than single participants. Haraka et-al in 2012 found similar results in Tanzania, where 70% of study participants did not want to test because they did not think they were at risk of HIV infection. Several studies show that the self-assessment of risk is usually inaccurate and low perception of risk has also been found to correlate with a high prevalence of HIV infection.

In this study, long waiting time was associated with a more likelihood of not receiving HTC as a couple, but was not statistically significant. Long waiting time has also been associated with overburdened staff. When health workers are overburdened with the number of clients for HTC and any other services, long waiting queues become a common phenomenon. The Council and government facilities are understaffed due to the fact that the government has
frozen posts barring the recruitment of additional staff in line with the increasing demand for health care. This may also affect the time that is spent on a single client. Ditekemena et-al in Sub Saharan Africa in 2012, found out that long waiting time discouraged women and their partners from HTC. Men who are employed often lack the flexibility to wait for longer periods for HTC. Reducing the long waiting time for couples seeking HIV testing and counselling will result in the increased utilisation of HTC services.

The fear of testing positive was not statistically significant in this study. An HIV positive result may lead to rejection, abandonment, violence and accusations of infidelity among couples. Similar findings were reported in Northern Tanzania by Njau et-al in 2012 where couples highlighted that the barrier was the partner’s reaction to HIV positive results, that a person could be blamed, stigmatized or discriminated, being beaten or divorced. Wanyenze et-al in 2008 found similar results in Ugandan hospitals where some of the reasons for declining HTC included the fear of a positive HIV test result.

This study was carried out to test the hypotheses that HTC among couples is not associated with marriage duration, monthly income, and distance to the health facility and perceived low risk of HIV infection. We failed to reject the null hypothesis that HTC is not associated with marriage duration and monthly income and conclude that HTC was associated with distance to the nearest health facility and perceived low risk of HIV infection.

6.2 Limitations of the study

Due to the difficulties of managing to have a couple for interview, we used married and cohabiting women to represent the views and practices of a couple. It is possible that they may not have represented their partners well in some aspects of the study.
A convenient sample of women who attended health facilities and VCTs for HTC was used in the study and this may have compromised the external validity of our results due to selection bias.

6.3 Conclusions

In view of the study findings, we conclude that distance to the health facility and perceived friendly health workers, prior discussion of HTC, inviting partners for HTC, conflicting schedules, perceived low risk of HIV infection, were associated with HTC among couples.

A distance of less than five kilometres from the health facility and prior discussion of HTC with a partner were independent factors associated with receiving HTC as couples. Conflicting work schedules and perceived low risk of HIV infection were independent risk factors associated with not receiving HTC as couples. Perceiving health workers to be friendly and inviting a partner for HTC were significant factors associated with more likelihood of HTC among couples in Bulawayo City. Study results may assist in improving HTC among couples in Bulawayo City.

6.4 Recommendations

1. To encourage women to give verbal invitations to their partners to come for HIV testing and counselling. **Health Workers, Sisters in Charge**

2. Mobile HTC services to reach couples who stay far from health facilities and VCTs. **Director of Health Services, Voluntary Counselling and Testing Centres**

3. Health education among couples in order to address the low risk perception of HIV infection. **Senior Health Promotions Officer**

4. To promote HIV testing and counselling among couples through the holding of special couples days during weekends where they are encouraged to test together
and will also learn about the benefits associated with testing as a couple and get tested. **Senior Health Promotions Officer**
REFERENCES


10. Integrated HIV Prevention, Treatment, Care and Support Training Guide: Ministry of Health and Child Care, January 2015.


Appendix 1: ENGLISH QUESTIONNAIRE

Questionnaire No.________

1) Date of interview: ____________ 2) Health centre: _______________

A. DEMOGRAPHIC INFORMATION (In this first section, I will start by asking you general questions about yourself and your immediate family)

3. Status of respondent Case [ ] Control [ ]

4. How old are you? _______years (at last birthday)

5. How old is your partner...................

6. What type of marriage are you in?
   Constitutional [ ] Customary [ ] Cohabiting [ ]

7. For how long have you been in living together with your partner/spouse?
   \[1 \text{ year} [ ] 1-5\text{yrs} [ ] 6-10\text{yrs} [ ] 11-15\text{yrs} [ ]

8. Have you ever been to school? Yes [ ] No [ ]

9. What is your highest level of education?
   None [ ] Primary [ ] Secondary [ ] Tertiary [ ]

10. What is your partner’s highest level of education?
    None [ ] Primary [ ] Secondary [ ] Tertiary [ ]

11. What is your religion?
    Pentecostal [ ] Catholic [ ] Apostolic [ ] Adventist [ ] Methodist [ ]
    Muslim [ ] Traditionalist [ ] Anglican [ ] none [ ] other (specify)....................

12. Does your religion allow you to have your blood taken and tested for HIV?
    Yes [ ] No [ ]

13. What is your partner’s religion?
    Pentecostal [ ] Catholic [ ] Apostolic [ ] Adventist [ ] Methodist [ ]
    Muslim [ ] Traditionalist [ ] Anglican [ ] none [ ] other (specify).....................
14. Does your partner’s religion allow him/her to be HIV tested? Yes [ ] No [ ]

B. SOCIO-ECONOMIC FACTORS (Now I will ask you a few questions to do with the socio-economic environment which you live in.)

15. How many dependants do you have?
0-1 [ ] 2-4 [ ] 5+ [ ] None [ ]

16. What is your employment status?
Formally employed [ ] informally employed [ ] Not employed [ ]
Other (specify).........................

17. What is your partner’s employment status?
Formally employed [ ] informally employed [ ] Not employed [ ]
Other (specify).........................

18. What is your household’s monthly income?
<$200 [ ] $200-$400 [ ] $400-$600 [ ] $600-$1000 [ ] +$1000 [ ]

C. HEALTH SERVICES FACTORS (I will now ask you a few questions to do with the health services offered by the health facilities around.)

19. How far is the nearest health facility from where you stay?
Less than 5 km [ ] 5-10 km [ ] more than 10km [ ] no idea [ ] other (specify).........................

20. Would you say this distance is near or far?
Near [ ] far [ ] don’t know [ ]

21. How do you travel to the clinic?
Public transport [ ] Walk [ ] Bicycle [ ] Drive [ ] other (specify).........................

22. How long does it take you to get to the clinic?
5-10 min [ ] 10-20min [ ] 20-30min [ ] 30min–1hr [ ] other (specify).........................
23. Do you perceive the health workers at this facility to be friendly? Yes [ ] No [ ]

24. Do you believe there is privacy and confidentiality in the HIV testing and counselling process at this facility? Yes [ ] No [ ]

25. Do you believe your HIV test results are safe with the health workers and will not be disclosed to anyone else? Yes [ ] No [ ]

26. How would you feel about the communication skills of the services provider to you? Poor [ ] Good [ ] Fair [ ]

27. Do you wait for a long time before you are HIV tested at this facility? Yes [ ] No [ ]

28. If yes for how long do you wait? 30 mins-1Hr [ ] 1Hr-2Hrs [ ] 3-4Hrs [ ] Other (specify)..........................

29. Are the clinic’s operating hours convenient for you to come with your partners for HIV testing? Yes [ ] No [ ]

30. In your opinion does the local health facility have adequate resources needed by the health facility staff to carry out their duties? Yes [ ] No [ ]

D. CLIENT-RELATED FACTORS (I will now ask you a few questions to do with your own related factors)

31. Do you have multiple sexual partners? Yes [ ] No [ ]

32. If yes do you use condoms? Yes [ ] No [ ]

33. If not why? ..............................................................

34. Have you ever discussed HIV testing with your partner? Yes [ ] No [ ]

35. Have you ever invited your partner to come for HIV testing with you? Yes [ ] No [ ]

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36. If not why? .................................................................................

37. Do you feel comfortable visiting the clinic with your partner for HIV testing?
   Yes [ ]  No [ ]

38. Does your partner allow you to get tested for HIV? Yes [ ] No [ ]

39. Have you ever been tested for HIV as a couple? Yes [ ] No [ ]

40. Do conflicting work schedules hinder you from testing for HIV as a couple?
   Yes [ ] No [ ]

41. Are you afraid to know your status as a couple? Yes [ ] No [ ]

42. Are you afraid of testing HIV positive as a couple? Yes [ ] No [ ]

43. Do you perceive that you are at low risk of HIV infection? Yes [ ] No [ ]

44. Are you afraid your past sexual lifestyle might have exposed you to HIV infection?
   Yes [ ] No [ ]

45. Are you afraid that testing for HIV as a couple may lead to divorce? Yes [ ] No [ ]

46. Following testing as a couple are you afraid of stigma and discrimination? Yes [ ] No [ ]

47. Do you think your HIV status is based on your partner’s? Yes [ ] No [ ]
Appendix 2: NDEBELE QUESTIONNAIRE

Imibuzo
Liphepha lesingaki.________

1. Usuku lokubuzwa: __________ 2. Ibizo Ikekliniki: ______________

A. OKUMAYELANA LAWE (Kusigaba lesisakuqala, ngizakubuza imibuzo emayelana lawe lemul i yakho.)

3. Isimo sakho Case [ ] Control [ ]

4. Uleminyaka emingaki egcweleyo? ______

5. Omunye wakho/ umkaho uleminyaka emingaki egcweleyo?

6. Ubulili: Owesilisa [ ] Owesintwana [ ]

7. Khetha okukodwa ngaphansi okuchaza ukuhlala kwenu ndawonye?
Silesithupha somtshado [ ] kwaqhutshwa isintu [ ] Sihlalisene [ ]

8. Selihlale lonke okwesikhathi esinganani lomunye wakho/ lomkakho?
Ngaphansi kwe1 year [ ] 1-5 [ ] 6-10yrs [ ] 11-15yrs [ ]

9. Wake waya yini esikolo? Ye [ ] Hatshi [ ]

10. Wafunda wafika ngaphi?
Angifundanga [ ] Primary [ ] Secondary [ ] ekholeji/ university [ ]

11. Omunye wakho wafunda wafikangaphi?
Kafundanga [ ] Primary [ ] Secondary [ ] ekholeji/ university [ ]

12. Inkolo yakho?
Pentecostal [ ] Catholic [ ] Apostolic [ ] Adventist [ ] Methodist [ ]
Muslim [ ] Amasiko [ ] Anglican [ ] angila [ ] ayiqanjwangwa (Chaza)......................

13. Inkolo yakho iyakuvumela ukuthi uhlolwe igazi kudingwa ukuthi ungaba leHIV yini?
Ye [ ] Hatshi [ ]

14. Inkolo yomunye wakho?
Pentecostal [ ] Catholic [ ] Apostolic [ ] Adventist [ ] Methodist [ ]
Muslim [ ] Amasiko [ ] Anglican [ ] Kala [ ] Ayiqanjwanga (Chaza)......................
15. Inkolo yakhe iyamvumela ukuthi ahlolwe igazi kudingwa ukuthi angabaleHIV yini?
Ye [ ] Hatshi [ ]

**B. INZUZO (Ngizakubuza imibuzo emilutshwana mayelana ngendlela oziselela ngayo.)**

16. Bangaki abantu obaselelayo?

<table>
<thead>
<tr>
<th>None</th>
<th>0-1</th>
<th>2-4</th>
<th>5+</th>
</tr>
</thead>
</table>

17. Kuyini oziphilisa ngakho?
Ngighatshiwe [ ] ngiyazisebenza [ ] Angilalaengikwenzayo [ ]

18. Omunye wakho uziphilisa ngani?
Uqhatshiwe [ ] Uyazisebenza [ ] Kasebenzi [ ] Okunye (Chaza).................

19. Lithola malini ngenyanga eliyisebenzisayo?
<$200 [ ] $200-$400 [ ] $400-600 [ ] $600-$1000 [ ] +$1000 [ ]

**C. EZEMPLAKAHL</code>

\text{Ezempila kahle eziseduzane lawe) }

20. Kukhatshana okunganani emtholwa mpilo?
Ngaphansi 5 km [ ] 5-10 km [ ] more than 10km [ ] angikwazi [ ] ngokunye (Chaza)......................

21. Umango lo ungaba?
Seduzane [ ] Khatshana [ ] Angikwazi [ ]

22. Uhamba ngani usiya emtholwa mpilo?
Amakhombi [ ] ngenyawo [ ] ngembayisikili [ ] ngemota yami [ ] ngokunye (chaza)............

23. Kukuthatha isikhathi esinganani ukuya emthlwa mpilo?
5-10 min [ ] 10-20min [ ] 20-30min [ ] 30min-1hr [ ] ngokunye (chaza).............
24. Izisebenzi zempila kahle zilomusa yini? Ye [ ] Hatshi [ ]

25. Ngokubona kwakho kulemfihlo yini ekliniki ngokuhlolwa kweHIV? Ye [ ] Hatshi [ ]

26. Uyazithemba izisebenzi zekliniki ukuthi zizagcina kahle impumela yokuhlolwa kwakho?
   Ye [ ] Hatshi [ ]

27. Indlela izisebenzi ezikhulumisana lawe ngayo injani?
   Imbi [ ] inhle [ ] iphakathilaphakathi [ ]

28. Umuntu uyamelela yini isikhathi eside ukuthi ahlolwe iHIV?
   Ye [ ] Hatshi [ ]

29. Nxa uthe ye, yisikhathi esinganani?
   30 mins-1Hr [ ] 1Hr-2Hrs [ ] 3-4Hrs [ ]
   Ngokunye (chaza)..................

30. Amahola lapho ikilinika ivulile, uyenelisa yini ukuhamba lesithandwa sakho liyehlolwa iHIV? Ye [ ] Hatshi [ ]

31. Ngokubona kwakho izisebenzi zilakho yini okumele zikusebenzise okwaneleyo? Ye [ ]
    Hatshi [ ]

E. OKUPHATHELENE LAWE  
(Ngizakubuza imibuzo emilutshwana mayelana ngawe)

32. Bangaki abantu oya labo emacancini? Oyedwa [ ] bayedlula oyedwa []

33. Nxa besedlula oyedwa uyasebenzisa yini amakhondonu? Ye [ ] Hatshi [ ]

34. Nxa ungasebenzisi uyekelelani? ..............................................................

35. Usuke waxoxa lomunye wakho ngokuhlolwa iHIV? Ye [ ] Hatshi []

36. Usuke waxxusa isithandwa sakho ukuthi liyehlolwa igazi lilonke na? Ye [ ] Hatshi [ ]

37. Nxa ungakaze uyekelelani? .................................................................

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38. Uzwa ukhululekile yini ukuvakatshela ikilinika lesithandwa sakho ukuyahlolwa IHIV?  
Ye [ ] Hatshi [ ]

39. Umngakho uyavuma yini ukuthi uhlolwe iHIV? Ye [ ] Hatshi [ ]

40. Selake lahlolwa yini igazi libabili? Ye [ ] Hatshi [ ]

41. Ukwehlukana kwezikhati zomsebenzi lesithandwa sakho kuyengabela yini ukuthi liyehlowa igcikwane le HIV lonke? Ye [ ] Hatshi [ ]

42. Liyesaba ukwazi isimo senu lobabili mayelana igcikwane le HIV Na? Ye [ ] Hatshi [ ]

43. Liyesaba ukutholakala lilegcikwane leHIV lobabili Na?

44. Ngokubona kwakho igcikwane leHIV ngeke likuhlasele kalula Na? Ye [ ] Hatshi [ ]

45. Uyesaba yini ukuthi imbali yakho mayelana ngendaba zecansi kungenzeka ikulethele igcikwane leHIV Na? Ye [ ] Hatshi [ ]

46. Uyesaba ukuthi ukuhlolwa lesithandwa sakho libabili kungalehlukanisa Na? Ye [ ] Hatshi [ ]

47. Uyesaba ukuthi uma lingahlolwa igazi lesithandwa sakho libabili, kungacina kulobandlululo omunye esetholakala elegcikwane? Ye [ ] Hatshi [ ]

48. Uyavumela lakho ukuthi isimo sakho mayelana legcikwane leHIV seyame komunye wakho? Ye [ ] Hatshi [ ]
Appendix 3: Shona Questionnaire

Questionnaire No.________

1) Zuva retsvakiridzo: ____________ 2) Zita rechipatara: ________________

A. MAGARIRO NEMABEREKERWO ENYU

3. Status of respondent Case [ ] Control [ ]

4. Mune makore mangani? ______

5. Ko mudiwa wenyu ane makore mangani?.....................

6. Sex: Mukadzi [ ]

7. Murimuwanano ipi?

     Kuroorwa zviri pamutemo [ ] Kuroorwa pachivanhu [ ] Kuchaya mapoto [ ] Barika [ ]

8. Mava nenguva yakadii muchigara mese?

     ≤1 year [ ] 1-5yrs [ ] 6-10yrs [ ] 11-15yrs [ ]

9. Makaenda kuchikoro here? Hongu [ ] Kwete [ ]

10. Makadzidza kusika papi?

     None [ ] Primary [ ] Secondary [ ] Tertiary [ ]

11. Ko murume wenyu akasvikawo papi nefundo?

     None [ ] Primary [ ] Secondary [ ] Tertiary [ ]

12. Munoenda kuchechi ipi?

     Pentecostal [ ] Catholic [ ] Apostolic [ ] Adventist [ ] Methodist [ ]

     Muslim [ ] Traditionalist [ ] Anglican [ ] handiendi [ ]

13. Chechi yenyu inobvuma here kuti mutorwe ropa muchiongororwa utachiona?

     Hongu [ ] Kwete [ ]

14. Chechi inopinda murume wenyu neipi

     Pentecostal [ ] Catholic [ ] Apostolic [ ] Adventist [ ] Methodist [ ]

     Muslim [ ] Traditionalist [ ] Anglican [ ] none [ ] other (specify).....................
15. Chechi yemurume wenyu inobvuma here kuti atorwe ropa achiongororwa utachiona?

Hongu [ ] Kwete [ ]

B. ZVEUPFUMI NEMAGARIRO *(Ndichakubvunzai zveupfumi nemagariro enyu.)*

16. Mune vana vangani?

Hatina [ ] 0-1 [ ] 2-4 [ ] 5+ [ ]

17. Munoshanda?

Formally employed [ ] informally employed [ ] Not employed [ ]

18. Ko murume wenyu anoshanda?

Formally employed [ ] informally employed [ ] Not employed [ ]

19. Pakukwera kwemwedzi tingati mungatambira marii?

<$200 [ ] $200-$400 [ ] $400-600 [ ] $600-$1000 [ ] +$1000 [ ]

C. ZVEUTANO *(Ndichakubvunzai zvine chekuita neutano mumagariro enyu)*

20. Chipatara chiri pedyo nemi chiri kure zvakadii?

Pasipemakiromita mashanu [ ] makiromita mashanu kusika kugumi [ ] makiromita ari pamusoro pegumi [ ] handizivi [ ]

21. Mungati kure here kana kutii pedyo?

Pedyo [ ] Kure [ ] Handizivi [ ]

22. Munofamba sei kusika kuchipatara?

Kukwira muchovha [ ] netsoka [ ] kutasva bhasikoro [ ] Kuchaira mota [ ]

23. Zvinokutorerai nguva yakadii?

5-10 min [ ] 10-20min [ ] 20-30min [ ] 30min-1hr [ ] other (specify).................

24. Vashandi vepano vanemutsa here? Hongu [ ] Kwete [ ]

25. Munofunga here kuti pane kuvanzika here pamunoongorerwa ropa? Hongu [ ] Kwete [ ]

26. Munofunga kuti zvakabuda pakuongororwa kwenyu zvakachengetedzeka here?

Hongu [ ] Kwete [ ]
27. Mungati kudii nenzira iyo vashandi vanotaura nemi?

Yakaipa [ ] Yakanaka [ ] iri pakati nepakati [ ]

28. Makamira nguva yakareba here musati maongororwa?

Hongu [ ] Kwete [ ]

29. Kana muchiti hongu, makamira zvakadii?

30 mins-1Hr [ ] 1Hr-2Hrs [ ] 3-4Hrs [ ]

30. Nguva dzinovhura nekuzvara chipatara dzakakunakirai here kuti muende munoongorwa nemurume wenyu? Hongu [ ] Kwete [ ]

31. Semaonero enyu vashandi vane zvekushandisa here zvakakwana zvingaita kuti vaite basa ravo nemazvo? Hongu [ ] Kwete [ ]

E.ZVINE CHEKUITA NEMWI (Ndichakubvunzai zvinechekuita nemwi)

32. Mune vadiwa vangani vepabonde? mumwe [ ] vazhinji [ ]

33. Kana vari vazhinji, munishandisa here makondomu kuzvidzivirira? Hongu [ ] Kwete [ ]

34. Kana mushingashandisi ngenyi musingashandisi? ..............................................................

35. Makambotaura here nyaya yekuongororwa ropa mese? Yes [ ] No [ ]

36. Makambokokawo here murume wenyu kuti muende mese kunoongororwa ropa maererano nehutachiona hwemukondombera? Hongu [ ] Kwete [ ]

37. Kanamusinga, ngenyi?.................................

38. Munonzwamakasungunuka here kuuya nemurume wenyu kuzoongororwa hutachiona hwemukondombera?

Hongu [ ] Kwete [ ]


40. Makamboongororwa here ropa maerenano nehutachiona hwemukondombera mese nguva imwe? Hongu [ ] Kwete [ ]
41. Pangava nezviningamupinyu here zvekumabasa zvingaita kuti musawana nguva yekuongororwa ropa maererano neutachiona hwemukondombera muri vaviri nguva imwe? Hongu [ ] Kwete [ ]

42. Mungatya here kuongororwa ropa maererano neutachiona hwemukondombera muri vaviri nguva imwe chete? Hongu [ ] Kwete [ ]

43. Mungatya here kuwanikwa mune hutachiona uhu? Hongu [ ] Kwete [ ]

44. Munofunga kuti muri panjodzi shoma here yekuwana utachiona hwemukondombera? Hongu [ ] Kwete [ ]

45. Munofunga here kuti mararamiro enyu maererano nezvepabode angava akakuiyai panjodzi yeutachiona hwemukondombera? Hongu [ ] Kwete [ ]

46 Mungatya here kuti luongororwa kwenyu muri vaviri nguva imwe chete kungakonzera kurambana? Hongu [ ] Kwete [ ]

47. Mushure mekuongororwa muri vaviri mungatya here kuti pangaita rutarura mushure mekunge maonekwa muneutachiona? Hongu [ ] Kwete [ ]

48. Munofunga here kuti chimiro chenyu maererana neutachiona ndicho chimirowo cheumwe wenyu? Hongu [ ] Kwete [ ]
Appendix 4: Interview Guide for Key Informants

Questionnaire No. __

Good day to you. My name is Amen Gumbo; I am a Public Health Resident officer with Bulawayo City Health Services Department. I am carrying out a study on factors associated with low HIV testing and counselling among couples in Bulawayo City 2015. I’m going to ask you a few questions on the HIV testing and counselling among couples. Please feel free to respond as frankly as you can. All information you give will be treated in strict confidence as no names will be written on the questionnaires. The information will only be used for the purpose of this study.

1. Date of interview _____/___/________

2. Name of health centre _______________________

3. Position: __________________

4. How long have you been employed by your current employer? ..........years/months

5. How long have you been in the current post? _____ yrs/months

6. According to information available at Health Information, there has been a decline in the proportion of couples tested for HIV for the past 5 years. What do you think are the major reasons? .......................................................... ..........................................................

7. Do you have any challenges on couples’ HIV testing at your facility? Yes [ ] No [ ]

8. If yes, what are the challenges? .......................................................... ..........................................................

9. Do you have adequate staff here to do HIV testing and counselling? Yes [ ] No [ ]

10. Do you have trained staff in HIV testing and counselling? Yes [ ] No [ ]

11. Do you think your facility here is couples- friendly? Yes [ ] No [ ]
12. Do you have enough space and furniture for couples HIV testing and counselling?  
Yes [ ] No [ ]

13. Do you sometimes run out of HIV testing kits and other supplies required for HIV testing? Yes [ ] No [ ]

14. Do you think that there is privacy and confidentiality in the HIV testing and counselling process? Yes [ ] No [ ]

15. If no, what are the reasons?.....................................................

16. Is your staff friendly towards couples coming for HIV testing and counselling?  
Yes [ ] No [ ]

17. If no, why? .............................................................................................................

18. Do you have promotional materials that encourage couples to test together? Yes [ ] No [ ]

19. If yes have they been distributed? .................................................................

20. What have you done as a facility to improve couples testing?  
........................................................................................................................................

21. In your opinion, what strategies can be implemented to improve couples HIV testing and counselling in Bulawayo? .................................................................
Appendix 5: CONSENT FORM

UNIVERSITY OF ZIMBABWE – DEPARTMENT OF COMMUNITY MEDICINE

PARTICIPANTS INFORMED CONSENT

PROTOCOL TITLE: Factors Associated with HIV Testing and Counseling among Couples in Bulawayo City, 2015

NAME OF RESEARCHER: Amen Gumbo

PHONE : 0773 055 440

PROJECT DESCRIPTION:

You have decided to take part in the research study named above. The study will collect your information about your age, gender and income and risk factors for HIV Testing and Counseling among Couples in Bulawayo City. This consent form gives you information about the collection, storage and future use of data collected from you. Please ask if you have any questions. You will be asked to sign or make your mark on this form to indicate whether or not you agree to participate in the study. You will be offered a copy of this form to keep and will keep the other form for at least 3 years.

YOUR RIGHTS

Before you decide whether or not to volunteer for this study, you must understand its purpose, how it may help you, the risks to you, and what is expected of you. This process is called informed consent.

PURPOSE OF RESEARCH STUDY

The study seeks to determine factors Associated with HIV Testing and Counseling among Couples in Bulawayo City, 2015. The factors being looked at are divided into demographic factors, socioeconomic factors, health service factors, and client-related factors.
PROCEDURES INVOLVED IN THE STUDY

Data will be collected using an interviewer administered questionnaire. The questionnaire you will respond to consists of open ended and closed ended questions and also a closed-ended rating scale question.

DISCOMFORTS AND RISKS

There are ethical risks related to storing your information. It is possible that if others find out information about you in the questionnaire, it could cause you problems of stigmatization. To minimise this risk your information will be strictly put under lock and key. Information collected from you will be used only for academic purposes.

POTENTIAL BENEFITS

There are no immediate benefits to you from having your information stored. You and others could benefit in the future from research done on you.

STUDY WITHDRAWAL

You may choose not to enter the study or withdraw from the study at any time without loss of benefits entitled to you.
CONFIDENTIALITY OF RECORDS
Completed questionnaires will be kept under lock and key for at least 3 years after which they may be destroyed. To keep your information private, your name will not be written on the questionnaire.

PROBLEMS/QUESTIONS
Please ask about this research or consent now. If you have any questions in future please ask.

AUTHORIZATION
I have read this paper about the study or it was read to me. I understand the possible risks and benefits of this study. I know being in this study is voluntary. I choose to be in this study. I know I can stop to be in this study and I know I will not lose any benefits entitled to me. I will get a copy of this consent form

_______________________________________________________________
Client Signature or Mark                                      Date

_______________________________________________________________
Client Name (Printed)

_______________________________________________________________
Researcher Signature                                       Date

_______________________________________________________________
Witness Signature
Appendix 6: NDEBELE CONSENT FORM

IFOMU LOKUVUMA UKUBUZWA

Imbangela yokuthi kubele nani eliphansi labantu abathethenayo abahlolwa igcikwane le HIV koBulawayo ngo2015

Ocubungulayo: Amen Gumbo

OCUBUNGULAYO: Amen Gumbo

UCINGO: 0773 055 440

UKUCHASISWA KOHLELO


AMALUNGELO AKHO

Ungakathathi inyathelo lokuvuma ukuphatheka kuloluhlelo kumele uqale uzwisise injongo yalo, lokuthi lungakunceda njani, lokukhangelele kuwe.

INJONGO YOKUCUBUNGULA

INDLELA OKUZAQHUTSHWANGAYO UHLELO

iData izaqoqwa ngefomu yemibuzo. Ifomu ozaphendula kulo liyabe lilemibuzo edinga ingcazelolenga dingi ingcazelol.

UKUNGAPHATHEKI KUMBE INGOZI EZINGAVELA


INZUZO ONGAYITHOLA

Akula nzuzo ezatholakala ngokuthathwa kwengcazelo lempendulo zakho ngemva kwesikhathi esifitshane, kodwa kunganceda wena labanye eminyakeni ezayo.

UKUPHUMA KULOLUHLELO

Ukhululekile ukukhetha ukungabi yingxenye yaloluhlelo kumbe ukutshiya iloba yisiphi isikhathi ofisa ngaso. Awulahlekelwa yinzuzo okumele uzithole eminyakani ezayo ngokutshiya uhlolo lolu.

UKUVIKELEKA KWENCWADI ZOHLELO


IMIBUZO

Ukhululekile ukubuza iloba yiwuphi umbuzo ophathelane lohlelo uchasilwe.

UKUVUMA

Ngibalile kumbe ngibalelwe ngazwisisa ngokupathelane ngalolu hlelo lenzuzo yalo. Ngiyazi ukupathheka kuloluhlelo yikuzifunela kwami njalo ngingatshiya iloba yisiphi isikhathi engifisa ngaso ngingalahlekelwa yinzuzo engingayithola eminyakani ezayo.
ISignature yeclient

Ibizo le client

ISignature yomcubunguli

ISignature yomfakazi
Appendix 7: SHONA CONSENT FORM

FOMU RECHIBVUMIRANO

MUSORO WETSVAGIRIDZO: Tsakurudzo yekuona zvingaita kuti mukadzi nemurume vari muwanano vatadze kuongororwa ropa maererano nehutachiona hwemukondombera (HIV) muguta reBulawayo mugore 2015.

MUTSVAGIRIDZI : Amen Gumbo
PHONE : 0773055440

NHANGA NYAYA
Mabvuma kupinda mutsvakiridzo yataurwa pamusoro apo. Tsvakiridzo iyi ichatora humbowo pamusoro pezvingaita kuti mukadzi nemurume vari muwanano vatadze kuongororwa ropa maererano ne HIV. Chibvumirano ichi chinokupai humbowo maererano nekutorwa kwenyaya yeupenyu hwenyu, machengeterwo aichaitwa uye mashandisirwo aichaitwa mune ramangwana. Kana muine mubvunzo makasununguka kubvunza henyu. Muchakumbirwa kunyora runyoro rwenyu (kusaina) kutaridza kuti muri kubvuma kana kuramba kupinda mutsvakiridzo iyi. Muchasara nebepa rine chibvumirano ichi uye isu tichasara nerimwe ratichachengeta kwemakore matatu.

KODZERO YENYU
Musati mapinda mutsvakiridzo iyi, zvakakosha kuti muzive nhanga yenyaya, zvazvakanakira uye zvakatarisirwa kubva kwamuri. Uku kuita chibvimirano chine kunzwisisa kuti zvinoitirwei.

CHINANGWA CHETSVAKIRIDZO
Tsvakiridzo iyi iri kutsvaka kuona zvingaita kuti mukadzi nemurume vari muwanano vatadze kuongororwa ropa maererano neutachiona hwemukondombera muguta reBulawayo mugore ra 2015. Tiri kutsvaga kuziva makore enyu, makore amagara mese semurume nemukadzi, upfumi nemagario enyu, zveutano uye zveupenyu hwenyu zvingaenderena neongororo.
MATORERO ATICHAITA HUMBOWO HWENYU

Tichashandisa bepa rine muchibvunzo yamuchakumbirwa kupindura.

NJODZI KANA KUSHUNGURUDZIKA MUTSVAKIRIDZO IYI

Pane zvinonogona kusakusungururai zvingaitika patinenge takachengeta humbowo hwenyu. Zvinogona kuitika kuti umwe munhu anogona kuwona humbowo hwenyu zvokonzera kuti magariro enyu mudunhu ange ane kushungurudzika. Kudzivirira izvi tichachengetedza zvakanyanya humbowo hwenyu. Humbowo hwenyu tichahushandisa kune zvekudzidza chete

ZVINGAKUYAMURAIWO PAKUPINDA MUTSVAKIRIDZO IYI

Hapana kuyamurika kwamunoita pakupinda mutsvakiridzo iyi munguva yamunenge muri mutsvakiridzo asi imi nevamwewo munogona kuzoyamurika mune ramangwana.

ISARUDZO YENYU KUPINDA KANA KUREGA KUPINDA MUTSVAKIRIDZO IYI

Hamumanikidzwi kupinda mutsvakiridzo iyi. Makasununguka kubuda mutsvakiridzo iyi nguva ipi zvayo tiri mutsvakiridzo yacho kunyange manga mambobvuma pekutanga uye kubuda mutsvakiridzo iyi hakukanganisi hukama hwenyu nevashandi vepachipatara chenyu.

MACHENGETERWO ACHAITWA HUMBOWO HWENYU

Tichachengerera humbowo hwenyu mukadhibhodhi matichange tichigara takakiya kwemakore matatu. Mushure mezvo tichaparadza humbowo uhu.

MIBVINZO

Kana muine mibvunzo yamusina kugutsikana nemhinduro mukwanisa kusununguka kubvunza kuti ndejekese.

Ndinobvuma kupinda mutsvakiridzo yekuona zvingaita kuti kudzokudzika nemusina kuye mukudzidza kureva rupa maererano neutachiona hwemukondombera (HIV) muguta reBulawayo mugore ra 2015.
<table>
<thead>
<tr>
<th>Siginecha (runyoro rwenyu)</th>
<th>Zuva</th>
</tr>
</thead>
<tbody>
<tr>
<td>__________________________</td>
<td>______</td>
</tr>
<tr>
<td>Zita renyu</td>
<td>Zuva</td>
</tr>
<tr>
<td>__________________________</td>
<td>______</td>
</tr>
<tr>
<td>Siginecha ( yemutsavagiridzi)</td>
<td>Zuva</td>
</tr>
</tbody>
</table>
Appendix 8: Joint Research Ethics Committee Approval Letter

![Joint Research Ethics Committee]

**APPROVAL LETTER**

**Date:** 16th July 2015  
**JREC Ref:** 168/15

**Name of Researcher:**  
Amen Gumbo  
**Address:**  
University of Zimbabwe, Department of Community Medicine

**Re:**  
*Factors Associated With Human Immunodeficiency Virus (HIV) Testing And Counseling Among Couples In Bulawayo City, 2015.*

Thank you for your application for ethical review of the above mentioned research to the Joint Research Ethics Committee. Please be advised that the Joint Research Ethics Committee has reviewed and approved your application to conduct the above named study. You are still required to obtain MRCZ approval and if required by the nature of your study, RCZ approval as well, before you commence the study.

- **APPROVAL NUMBER:** JREC/168/15
- **APPROVAL DATE:** 16th July 2015
- **EXPIRY DATE:** 15th July 2016

This approval is based on the review and approval of the following documents that were submitted to the Joint Ethics Committee:

a) Completed application form  
b) Full Study Protocol  
c) Informed Consent in English and/or appropriate local language  
d) Data collection tool version:

After this date the study may only continue upon renewal. For purposes of renewal please submit a completed renewal form (obtainable from the JREC office) and the following documents before the expiry date:

- a. A Progress report  
- b. A Summary of adverse events.  
- c. A DSMB report

[OHRI IRB Number: IORG 00008914  
PARIRENYATWA GROUP OF HOSPITALS FWA 00019350]
• MODIFICATIONS:

Prior approval is required before implementing any changes in the protocol including changes in the informed consent.

• TERMINATION OF STUDY

On termination of the study you are required to submit a completed request for termination form and a summary of the research findings/results.

Yours sincerely

[Signature]

Professor M M Chidzonga
JREC Chairman
Appendix 9: Medical Research Council of Zimbabwe Approval Letter

Ref: MRCZ/B/890

Amen Gumbo
University of Zimbabwe
Department of Community Medicine
P.O. Box A178
Harare

RE: Factors associated with Human Immune Virus (HIV) testing and counselling among couples, Bulawayo City, 2015

Thank you for the above titled proposal that you submitted to the Medical Research Council of Zimbabwe (MRCZ) for review. Please be advised that the Medical Research Council of Zimbabwe has reviewed and approved your application to conduct the above titled study. This is based on the following documents (among others) that were submitted to the MRCZ for review:

a) Research Protocol
b) Informed Consent Forms (English, Shona and Ndebele)

- APPROVAL NUMBER: MRCZ/B/890
- TYPE OF REVIEW: EXPEDITED
- EFFECTIVE APPROVAL DATE: 04 August, 2015
- EXPIRATION DATE: 03 August, 2016

After this date, this project may only continue upon renewal. For purposes of renewal, a progress report on a standard form obtainable from the MRCZ Website should be submitted three months before the expiration date for continuing review.

- SERIOUS ADVERSE EVENT REPORTING: All serious problems having to do with subject safety must be reported to the Institutional Ethical Review Committee (IERC) as well as the MRCZ within 3 working days using standard forms obtainable from the MRCZ Website.
- MODIFICATIONS: Prior MRCZ and IERC approval using standard forms obtainable from the MRCZ Website is required before implementing any changes in the Protocol (including changes in the consent documents).
- TERMINATION OF STUDY: On termination of a study, a report has to be submitted to the MRCZ using standard forms obtainable from the MRCZ Website.
- QUESTIONS: Please contact the MRCZ on Telephone No. (04) 791792, 791193 or by e-mail on mrcz@mrcz.org.zw.
- OTHER: Please be reminded to send in copies of your research results for our records as well as for Health Research Database.
- You’re also encouraged to submit electronic copies of your publications in peer-reviewed journals that may emanate from this study.

Yours Faithfully,

[Signature]

MRCZ SECRETARIAT
FOR CHAIRPERSON
MEDICAL RESEARCH COUNCIL OF ZIMBABWE

[Stamp]
Appendix 10: Bulawayo City, Approval Letter

TO WHOM IT MAY CONCERN

AUTHORITY TO CONDUCT DISSERTATION IN BULAWAYO CITY

Mr. Amen Gumbo (RI41558M) has been allowed to carry out a study entitled Factors Associated with HIV Testing and Counseling among Couples in Bulawayo City as part of his Masters in Public Health training.

The study will be conducted between June and August 2015.

Any assistance rendered is greatly appreciated.

Yours faithfully,

FOR: DIRECTOR OF HEALTH SERVICES

AG/