FACTORS INFLUENCING COUPLES' HIV COUNSELING AND TESTING UPTAKE IN KISUMU CITY, KENYA

BY

ACHANDO JACKSON OPOTI

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DECLARATION

This research project is my original work and has not been presented for any award in any other University.

Signature ..... 06 SEPT. 2010 .....

ACHANDO JACKSON OPOTI (MR.) **DATE**

(L50/72656/2008)

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

Signature ..... 09/09/2010 .....

DR. JOHN OURU NYAEGAH **DATE**
LECTURER
DEPARTMENT OF EXTRA MURAL STUDIES
UNIVERSITY OF NAIROBI.

DEDICATION

I dedicate this research project to my wife Martha, daughter Belva, son Franklin, and mother Everlyne; for their motivation and moral support.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ART	Antiretroviral Therapy
BCC	Behaviour Change Communication
CDC	United States Centers for Disease Control and Prevention
CHCT	Couple HIV Counseling and Testing
CHW	Community Health Worker
CIS	Couples Intervention Study
CORPs	Community Own Resource Persons
CVCT	Couples Voluntary Counseling and Testing
DASCO	District AIDS and Sexually Transmitted Infections Coordinator
HAART	Highly Active Antiretroviral Therapy
HIV	Human Immunodeficiency Virus
IDUs	Injection Drug Users
IMB	Information-Motivation-Behavioural skills model
INA	Influence Network Agent
KAIS	Kenya AIDS Indicator Survey
KEMRI	Kenya Medical Research Institute
KNASP	Kenya National HIV/AIDS Strategic Plan
NACC	National AIDS Control Council
NASCOP	National AIDS and STD Control Program
PDMS	Provincial Director of Medical Services
PEPFAR	United States of America President's Emergency Plan for AIDS Relief
PITC	Provider Initiated Testing and Counseling
PMTCT	Prevention of Mother to Child Transmission of HIV
STI	Sexually Transmitted Infection
UNAIDS	The Joint United Nations Program on HIV/AIDS
VCT	Voluntary counseling and Testing
WHO	World Health Organization

ABSTRACT

The study sought to establish factors influencing Couples' HIV Counseling and Testing service Uptake in Kisumu city, Kenya which if addressed amicably, would increase service uptake in the fight against HIV/AIDS. Human Immunodeficiency Virus (HIV) is frequently transmitted in the context of partners in a committed relationship, thus couples focused HIV prevention interventions are a potentially promising modality for reducing infection. Heterosexual couples represent the largest risk group for HIV in sub-Saharan Africa, with greater than 60% of new infections being acquired from a spouse. Although there have been ongoing efforts to scale up uptake of Voluntary Counseling and Testing (VCT), coverage and usage still remains low among couples. Current statistics indicate that HIV incidence in sub-Saharan Africa is fueled by HIV discordance among stable heterosexual relationships. Uptake of couple HIV counseling and testing (CHCT) is the way to go for the fight against HIV/AIDS to be way. Few people however go for the service as couples. The study was guided by the following objectives: to identify personal factors influencing CHCT uptake; to establish whether service factors influence CHCT uptake; to examine community factors influencing CHCT uptake; and to determine whether logistical support factors influence CHCT uptake. The information, motivation and behavioural skills (IMB) model by Fisher and Fisher (1992) was used to organize the variables tested by the researcher. The setting of the study was Kisumu city, Nyanza province in Kenya. A descriptive survey design was adopted and assisted questionnaires were used to collect both qualitative and quantitative data to answer the research questions. All consenting couples who walked into selected VCT centres in the city for counseling and testing were eligible for participation in the study. Two VCT sites were selected for data collection for a period of three weeks. 374 participants (187 couples) were sampled purposively and participated in the study. Data collected for the study was reviewed and cleaned at collection point and every evening prior to entry into an MS Access database in order to minimize errors of omission and commission. Statistical package for social sciences (SPSS) version 12.0.1 was used to analyze the data in order to give descriptive statistics and presented in tables in the form of frequencies and percentages on how the various variables influenced CHCT service uptake. Findings from the study revealed that most of the respondents were aware of the availability of CHCT services, with radio/television as the commonest information source. A majority of respondents reported the urge to know each others status as the reason for testing. Fears of stigma/discrimination and relationship disharmony were reported as the major barriers to testing as couples both as personal and community factors. The study recommends increased awareness on benefits of CHCT in order to encourage more couples to come forth for counseling and testing. A multi-pronged awareness creation strategy would go a long way to ensure a well informed community with respect to a promising HIV/AIDS prevention strategy. Further research is suggested on ways of making community own resource persons (CORPs) successful in mobilizing couples for HIV/AIDS counseling and testing and also on community perceptions of health research and HIV/AIDS care and treatment projects/programs.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) is no longer the strange new disease that was reported by the United States Center for Disease Control (CDC) in 1981 to be affecting homosexual men, a report that marked the formal beginning of the HIV/AIDS era. The virus continues to spread globally, mainly through sexual contact, spreading virtually to every country in the world, infecting 65 million and killing 25 million (UNAIDS/WHO, 2008).

Global databases consistently demonstrate higher incidence, prevalence, mortality and burden of HIV/AIDS (See Appendix III) in developing countries. According to UNAIDS (2008) global updates, 30-36 million people were living with HIV/AIDS by the end of the year 2007. The estimated proportion of persons in the United States of America living with HIV who knew they were infected increased from 75% in 2003 to 79% in 2006 (Campsmith et al, 2010). Their partners may not be aware of this though. This is a sign of progress for HIV prevention because research shows that most individuals reduce risky behaviours that could transmit HIV when they know they are infected (Marks et al, 2006).

In Latin America, HIV epidemics remain generally stable, with transmission occurring among populations at higher risk of exposure (UNAIDS, 2008). Increasing numbers of women in Brazil are becoming infected with HIV, largely by their male sexual partners who might have been infected through unprotected sex with another man or woman, or through using unsterile injecting equipment. In Uruguay, unprotected sex (mostly heterosexual) accounts for two thirds of reported HIV cases. The Caribbean epidemics, just like Sub-Saharan Africa, occur in the context of high levels of poverty and unemployment, gender and other inequalities, and considerable stigma—all of which can fuel the spread of

HIV, as well as hinder efforts to control the epidemics through counseling and testing and referrals. Young girls in the region are at high risk of HIV infection, their susceptibility resulting from the common practice of young girls having relationships with older men, who, by virtue of their age, are more likely to have been exposed and acquired HIV.

Papua New Guinea has made a lot of progress in expanding voluntary counseling and testing sites—about 75 sites are operating country-wide—which has resulted in more people being tested for HIV; the number has tripled since 2002 (UNAIDS, 2008). But HIV/AIDS remains the leading cause of hospital admissions and deaths. At Port Moresby General Hospital for example, up to 70% of beds are reported to be occupied by patients with HIV-related illnesses.

Heterosexual couples represent the largest risk group for HIV in sub-Saharan Africa (Painter, 2001; Joseph, et al 2004; UNAIDS & WHO 2006; Bagala, 2006). Research findings by Joseph et al (2004) in Rwanda and Zambia show that when husbands and wives receive Voluntary Counseling and Testing together as a couple, HIV incidence decreases by over 50 percent per year. However, less than 1% of African couples have received Couples' HIV Counseling and Testing (CHCT) services. Increasing the supply of and demand for CHCT services is critical to the fight against HIV/AIDS. Voluntary counseling and testing (VCT) has emerged as a central prevention strategy in national AIDS control plans in most developing countries because it leads individuals to reduce HIV risk behaviour (Lancet, 2000) and is cost-effective relative to other prevention interventions in the developing world (Sweat et al, 2000). Because many developing countries are now able to plan for antiretroviral therapy (ART) implementation, VCT has emerged as an important entry point, linking people to care and prevention. Reported barriers to accessing HIV Counseling and Testing services include stigmatization, geographical inaccessibility, lack of effective social promotion, inefficient counseling and testing practices, and cost (Vermund & Wilson, 2003).

In many African countries where multiple concurrent partnerships are blamed for high HIV incidence, couples' counseling is now being highly recommended. There are suggestions for reaching couples through partner testing in home- and facility-based treatment and care programs, the integration of partner testing into provider-initiated testing and counseling and prevention of mother-to-child transmission programs, as well as door-to-door testing and bio-medical interventions such as voluntary medical male circumcision (VMMC).

The Kenya Demographic and Health Survey (KDHS, 2003) findings indicated that 6.7 percent of Kenyan adults (15-49 years) were infected with HIV. The Kenya AIDS Indicator Survey (KAIS 2007) on the other hand showed a HIV prevalence of 7.1 percent in the general Kenyan adult population (15-64 years; 7.4 percent for age 15-49 years), with a prevalence of between 15-50 percent among high-risk groups identified as commercial sex workers, same sex partners, migrant workers, prisoners, personnel of the uniformed forces, intra-venous drug users and individuals in discordant relationships (NASCOP, 2008b).

Three priority areas have been identified to achieve the current Kenya National HIV/AIDS Strategic Plan (KNASP) 2005/6-2009/10 goal (www.aidskenyaorg, 2009). Thus: Prevent new infections; improve the quality of life of people infected with and affected by HIV/AIDS; and Mitigate the socio-economic effect of HIV/AIDS. Given that about 93 percent of Kenyan adults are not infected with HIV, efforts to reduce the number of new HIV infections in both vulnerable groups and the general population are critical in the struggle to further reduce the incidence (NACC, 2005). All prevention strategies can only be made possible first through knowing ones HIV status and that of his/her sexual partner(s). Couples' counseling and testing does not only help couples know their status but it provides an opportunity to identify discordant couples and then helping them to know better how to manage themselves.

1.2 Statement of the problem

The HIV/AIDS epidemic has emerged as a major threat to the achievement of the Millennium Development Goals (MDGs); the sixth MDG by the United Nations is to combat HIV/AIDS and other diseases (UNAIDS Global epidemic Report, 2008). While care and treatment for HIV/AIDS is now readily and widely available, the sustained incidence and prevalence of the infection is worrying to many stakeholders.

Voluntary counseling and testing (VCT) for couples is an important HIV-prevention effort in sub-Saharan Africa where a substantial proportion of HIV transmission occurs within stable partnerships. According to the latest Kenya AIDS Indicator Survey, 10 percent of married couples have at least one HIV-infected person, but just 22 percent of couples know the HIV status of their sexual partners (NASCOP, 2009). An estimated 44 percent of new HIV infections in Kenya occur among married or cohabiting couples; HIV discordance is also a problem, with 6 percent of couples - or 344,000 - having at least one HIV-positive partner (NASCOP, 2009).

In some countries like Uganda, successful acceptance of couples' VCT has been demonstrated even in rural-based centres (Allen et al, 2003). However, advocacy for CHCT is relatively new in Kenya (NASCOP, 2001) and therefore, widespread implementation of couples' counseling is lacking throughout the nation. Consequently, factors that determine CHCT utilization in Kenya have not been fully understood. This study was therefore planned to inform HIV/AIDS advocates, care givers and researchers. It examined this by answering the main question: What are the factors influencing couples to attend VCT as a couple?

1.3 The Purpose of the Study

The purpose of the study was to identify factors influencing Couples' HIV Counseling and Testing (CHCT) uptake in Kisumu city.

1.4 The Objectives of the Study

The study was guided by the following objectives:

1. To identify personal factors influencing Couples' HIV Counseling and Testing service uptake in Kisumu city
2. To establish whether service factors influence Couples' HIV Counseling and Testing in the city
3. To examine community factors influencing Couples' HIV Counseling and Testing service uptake in Kisumu city
4. To determine whether logistical support factors influence Couples' HIV Counseling and Testing service uptake in Kisumu city

1.5 The Research Questions

The following research questions were to be answered by the study:

1. What personal factors influence Couples' HIV Counseling and Testing uptake in Kisumu city?
2. Do service factors influence Couples' HIV Counseling and Testing uptake in Kisumu city?
3. Do community factors influence Couples' HIV Counseling and Testing uptake in Kisumu city?
4. Are logistical support factors influencing Couples' HIV Counseling and Testing uptake in Kisumu city?

1.6 The Significance of the Study

Prevention of HIV/AIDS remains a major challenge in Kenya; what with low levels of HIV testing, high rates of HIV discordance within couple relationships, and concurrent

epidemics with other sexually transmitted infections. Policy makers and program planners need the highest quality data and information to implement, monitor and evaluate HIV prevention, care and treatment services. Since the majority of new infections occur within stable sexual relationships as outlined in section 1.1, Couples' HIV Counseling and Testing was thought of as an important tool in curbing the spread of HIV in sub-Saharan Africa and therefore the study area. However, CHCT could only be effective if couples are willing to adopt this new behaviour.

The study sought to investigate factors that enhanced or prevented the adoption of this new behaviour. It is therefore hoped that information gathered during the study would be used to guide and advise future strategies to promote HIV risk reduction strategies including CHCT both by HIV/AIDS prevention/treatment researchers and the public health section of the Ministry of Health in Kenya and sub-Saharan Africa. The information is also hoped to contribute new inputs to the wider literature on behaviour adoption and promotion of HIV counseling and testing. Sustainability of CHCT service demand and delivery will also be ensured rather than the fluctuations currently witnessed. Various stakeholders including District AIDS and STI coordinators (DASCO), HIV researchers and workers, the Non-Governmental organizations and Community Based Organizations with a bias towards HIV/AIDS may also find the results from the proposed study invaluable for planning future HIV prevention strategies.

1.7 Limitations of the Study

The study was confined to Kisumu city. There were however, other towns in Nyanza Province and Kenya at large that could be considered as possible settings. Kisumu city, however, being the capital town of Nyanza province, a province with the highest HIV prevalence rate was thought of as a better setting since it is a converging point for western

Kenya. Findings from the study were thought to be more valuable and easily generalizable to other high prevalence areas. Only couples who visited VCT centres within the town were sampled.

Being a city, some of the couples sampled were not city residents. Information obtained from them was also considered in the final analysis and therefore assumed consistent with city dwellers and the country as a whole. Other couples who did not get a chance during sampling missed out yet they would have given equally valuable information. Counselors encouraged individual testers to refer their partners for testing and therefore those who did had a chance for participation as couples. Getting permission from one of the selected sites took too long, delaying participant accrual. The research team increased the time of data collection by one week and concentrated on the two sites which were cooperative.

1.8 Delimitations of the Study

The study was delimited to couples seeking CHCT services within Kisumu city and who were sampled. Couples in stable sexual relationships represent one of the largest risk groups and therefore targeting couples contributed vital information that could change the trend of spread of HIV in Nyanza province and Kenya. Individual members of selected couple had questionnaires administered to them separately for independent responses to the research tool.

1.9 Basic Assumptions of the Study

The study assumed that all heterosexual couples seeking CHCT services within the study area would be above age of consent, willing and ready to participate. It was also assumed that all purposively selected VCT centres would support the study implementation

and that most if not all the couples to be sampled would be literate. This way, the number of couples at the disposal of the researcher for consideration into the study would be significantly sufficient to draw adequate conclusions.

1.10 Definitions of Significant Terms used in the Study

Counseling: Focused talk directed at encouraging couples to utilize CHCT services

Couple: A pair of the opposite gender (i.e. male and female) and in a sexual relationship or soon establishing a sexual relationship. Influence

Discordant Couple: A married or cohabitating and sexually active couple in which one partner is HIV positive and the other is HIV negative.

Influencing: Persuading community members to seek CHCT services

Information: How the community is notified or enlightened about HIV/AIDS and counseling and testing points

Testing: The process of collecting a sample of blood by finger pricking to check for the presence or absence of HIV

Uptake: Accessing and receiving HIV counseling and testing services

1.11 Organization of the Study

This research project report is organized into five main chapters. Chapter one gives the background of the study, statement of the problem, purpose of the study, research objectives, research questions, significance of the study, scope of the study, basic assumptions of the study, limitations, delimitations and definition of significant terms as used in the study. Chapter two gives a global HIV/AIDS overview; CHCT uptake overview; Personal factors influencing CHCT service uptake; Service factors influencing CHCT uptake; Community factors influencing CHCT uptake; and Logistical support factors influencing

CHCT uptake. Also included in this chapter are the theoretical and conceptual frameworks on which this study was based as well as a summary of the literature reviewed. The Information-Motivation-Behavioural skills (IMB) model is explained with respect to how the model was utilized to organize and analyze adoption of HIV counseling and testing among couples. Chapter three describes the research design, area of study and target population, sample selection and sample size, data collection methods and instruments, validity and reliability of instruments, data analysis techniques, while chapter four presents introduction, themes on which data was presented, interpretation and discussion of data. Chapter five of this research report gives an introduction, summary of findings, conclusion, recommendations, the study's contribution to knowledge and suggestions for further research. This is followed by a list of chronologically organized reference materials utilized in the study and attached appendices.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter outlines literature reviewed in relation to the study based on a number of thematic areas. Thus: Global HIV/AIDS overview; CHCT uptake overview; Personal factors influencing CHCT service uptake; Service factors influencing CHCT uptake; Community factors influencing CHCT uptake; and Logistical support factors influencing CHCT uptake. Also included in this chapter are the theoretical and conceptual frameworks on which this study was based as well as a summary of the literature reviewed.

2.2 Global HIV/AIDS Overview

Global databases have consistently demonstrated higher incidence, prevalence, mortality and burden of HIV/AIDS, tuberculosis and other communicable diseases in developing countries. According to UNAIDS global updates (2008), 30-36 million people were living with HIV/AIDS by the end of 2007. Two thirds of the HIV infected people are found in sub-Saharan Africa, with an adult prevalence of 7.2 percent. Sixty four (64) percent of all new global infections are from sub-Saharan Africa, with transmissions occurring predominantly through heterosexual routes or from mother to child. Approximately 75% of new HIV infections are acquired from a spouse or stable partner, with the highest HIV prevalence occurring among people in stable sexual partnerships in Sub -Saharan Africa (Ntombi, 2006).

According to UNAIDS (2007), AIDS epidemic updates, heterosexual sex formed the largest proportion (42%) of HIV diagnoses in Western Europe in 2006. Less than one third (29%) are attributable to unsafe sex between men, while a diminishing proportion of diagnoses (6%) are reported among injection drug users (IDUs). The majority of

heterosexually transmitted HIV cases are reported to have originated in countries with high prevalence in sub-Saharan Africa; with more than 50% of HIV diagnoses occurring in women. In North America, unprotected sex between men accounts for the largest proportion of new HIV diagnoses in 2005: 53% in the United States of America and 45% in Canada with the epidemic continuing to disproportionately affect African Americans in the United States and Aboriginal persons in Canada. In many Central European countries, unprotected sex between men and women is the main mode of infection, including Albania, Bosnia and Herzegovina, Bulgaria, Romania and Turkey. Unsafe sex between men predominates in Croatia, the Czech Republic, Hungary and Slovenia.

New HIV infections in Papua New Guinea more than doubled from 2002 to 2006, with some 84% of all reported HIV infections found in rural areas, where more than 80% of the country's nearly 6 million people live (UNAIDS, 2007). The main mode of HIV transmission in Papua New Guinea appears to be unsafe heterosexual intercourse, although for most reported infections, information about the mode of transmission was missing. The country has made a lot of progress in expanding voluntary counseling and testing sites—about 75 sites are operating country-wide—which has resulted in more people being tested for HIV; the number has tripled each since 2002. But HIV/AIDS remains the leading cause of hospital admissions and deaths. At Port Moresby General Hospital for example, up to 70% of beds are reported to be occupied by patients with HIV-related illnesses.

In Latin America, HIV epidemics remain generally stable, but HIV transmission continues to occur among populations at higher risk of exposure (UNAIDS, 2007). Increasing numbers of women in Brazil are becoming infected with HIV, largely by their male sexual partners who might have been infected through unprotected sex with another man or woman, or through using unsterile injecting equipment. In Uruguay, unprotected sex (mostly

heterosexual) accounts for an estimated two thirds of reported HIV cases. All these point towards the need for knowledge of one another's HIV status.

Sexual intercourse is the primary mode of HIV transmission in the Caribbean region, with unprotected sex between sex workers and clients a key factor in the spread of HIV. The Caribbean epidemics occur in the context of high levels of poverty and unemployment, gender and other inequalities, and considerable stigma—all of which can fuel the spread of HIV, as well as hinder efforts to control the epidemics. Young girls in the region are at high risk of HIV infection. An important contributing factor to their susceptibility is the common practice of young girls having relationships with older men, who, by virtue of their age, are more likely to have acquired HIV. The scaling up of prevention of mother-to-child transmission of HIV programs in several countries, including Barbados, Guyana and Jamaica, has significantly reduced the rate of transmission to infants. In Jamaica, 90% of pregnant women attending public antenatal clinics are now screened for HIV—a sevenfold increase since 2002—as are more than half the people attending sexually transmitted infection clinics. They are a good target for partner referral programs.

Ukraine has the highest adult HIV prevalence of any country in Europe or Central Asia—annual HIV diagnoses have more than doubled since 2001, with injecting drug use as the main mode of HIV transmission in Ukraine. The country has taken substantial steps to limit HIV transmission from mothers to children. In 2006, 95% of all pregnant women were tested for HIV, and 93% of HIV-positive women who gave birth had been receiving antiretroviral prophylaxis to prevent HIV transmission during pregnancy and delivery.

By 2007, new HIV infections had risen by almost 20% since 2001 in East Asia (UNAIDS, 2007). HIV prevalence is highest in South-East Asia, with wide variation in epidemic trends. Myanmar, Thailand and Cambodia have shown declining HIV prevalence, but the epidemic is growing at a particularly high rate in Indonesia and in Viet Nam.

Although the proportion of people living with HIV in India is lower than previously estimated, the epidemic continues to affect large numbers of people. Overall, China has stepped up its response to the HIV epidemic in recent years. Free HIV testing is available at more than 3000 sites across all 31 Chinese provinces, and an estimated 30, 000 patients were receiving antiretroviral therapy (ART) by the end of 2006.

Viet Nam is one Asian country that is reaping returns on investments in HIV prevention efforts. Condom promotion projects at the community-level in five provinces have resulted in safer behaviour among street-based sex workers and their clients, with condom use tripling from about 20% in 2001 to 60% in 2004, while condom use with husbands and boyfriends more than doubled from 16% to 38% over the same period. A 2007 study in Cambodia provides evidence that well-focused and sustained prevention efforts can help reverse the spread of HIV (UNAIDS/WHO, 2007). Nationally, HIV prevalence in Cambodia declined to an estimated 0.9% among adults in 2006, down from the revised estimates of 1.2% in 2003 and the peak of 2% in 1998. One important factor over the past decade has been the significant increase of condom use during paid sex in brothels—as well as reports of fewer men actually buying sex. Myanmar's epidemic shows signs of a decline, with HIV prevalence among pregnant women at antenatal clinics having dropped from 2.2% in 2000 to 1.5% in 2006. Despite the overall decline in prevalence, the high infection levels found among young people (2.2% in 2005) are a concern, as is the persistently elevated prevalence of HIV among key populations at higher risk (UNAIDS/WHO, 2007).

Uneven HIV surveillance systems pose challenges in determining the patterns and trends of the epidemics in many countries of Middle East and Northern African region. A key factor that could be fueling the epidemic in the region is the apparent increase in unprotected extramarital sex—reflected in high levels of other sexually transmitted infections in some countries. Although overall numbers of reported HIV cases in the region remain small, they

have been increasing in several countries, partly due to expanded HIV testing efforts. One such example is Algeria, where reported HIV cases doubled between 2001 and 2006. In some countries, the proportion of HIV-positive women is growing, as the epidemic spreads from mostly male injecting drug users and the clients of sex workers to their wives and girlfriends. While unprotected paid sex is a key factor in the HIV epidemics throughout the region, injecting drug use is the main route of HIV transmission in many countries, including Afghanistan, the Islamic Republic of Iran and the Libyan Arab Jamahiriya, and features in the epidemics of Algeria, Morocco, the Syrian Arab Republic and Tunisia.

Sub-Saharan Africa remains the region most affected by the AIDS epidemic, with more than two thirds (68%) of all people infected with HIV living there. Women are disproportionately affected, representing 61% of people living with HIV in the region. In most of sub-Saharan Africa, national HIV prevalence has either stabilized or is showing signs of a decline (UNAIDS/WHO, 2007). Côte d'Ivoire, Kenya and Zimbabwe have all seen some drops in national prevalence, continuing earlier trends. In 2007, Southern Africa accounted for almost a third (32%) of all new HIV infections and AIDS-related deaths globally. With some 5.5 million people living with HIV, South Africa is the country with the largest number of infections in the world. Reflecting similar trends from other countries in the region, young women in South Africa face greater risks of becoming infected than men: among 15–24-year-olds, they account for around 90% of new HIV infections. Swaziland's national adult HIV prevalence of 26% is the highest in the world.

Studies from Benin have shown that women and men who had sex with a non-regular partner were more likely to use condoms when doing so. Condom use in higher risk sex rose from 9% to 25% for women and from 22% to 40% for men between 1996 and 2006. Adult national HIV prevalence in the Central African Republic is among the highest in all of West and Central Africa, estimated at 6.2% in a 2006 national survey.

In most of East Africa, adult HIV prevalence is either stable or declining slightly. The latter trend is most evident in Kenya, which is experiencing a slow but steady decline in HIV infections amid evidence of changing behaviour, especially among young unmarried adults. The prevalence of 14.9% (KAIS, 2007) in Nyanza province, double the national rate is however worrying to most stakeholders.

Future global projections of the extent of the HIV/AIDS epidemic cannot be made with any precision; the level of precision depends on what action is taken by affected states. In some scenarios, governments, societies and other interest stakeholders mount a very vigorous and wide-ranging response, recognizing HIV/AIDS as much more than just a health issue, and so HIV prevalence eventually decreases. In other projections, good intentions fail to deliver anything more than just short-term and fractured responses in the worst-hit countries, and the number of people living with HIV soars (UNAIDS, 2005). Although there are promising signs that the HIV/AIDS epidemic is in the retreat mode, the World Health Organization predicts that AIDS will remain a leading cause of death worldwide for several decades to come (WHO, 2008).

2.3 Overview of Couples' HIV Counseling and Testing and HIV Prevention

Couples' HIV counseling and testing is the simultaneous counseling and testing of two individuals in a sexual relationship. When couples are tested together the "burden" of disclosure is shifted from either member of the couple to the attending counselor, thus avoiding the situation of non-disclosure brought about by fear of rejection (Grinstead, 2001). Non-disclosure of a positive HIV status is common among couples in whom either member goes for testing alone (Wenger, et al 1994). This is a drawback to the fight against HIV/AIDS as it has been shown that knowledge of partner's HIV status enhances safe sexual behaviour (Lancet, 2000; Roth et al 2001).

Strategies that attempt to modify behaviour remain the cornerstone of HIV prevention efforts (Pequegnat and Stover, 2000). Seeking HIV counseling and testing together as couples remains a promising king pin in the fight against HIV/AIDS. Counseling and testing couples can provide life-saving benefits; reduce HIV transmission, sexually transmitted infections, and unintended pregnancies among couples (King et al, 1993; Lancet, 2000). There is a growing consensus that Couples' HIV Counseling and Testing (CHCT) should be widely disseminated, but many cultural and logistical obstacles remain (Roth et al, 2001). CHCT is an effective HIV prevention strategy, popular with informed clients and can be used to screen for HIV treatment and social services (Sams et al, 2004). Without promotion and education however, the demand for CHCT services has been low in Sub Saharan Africa. An estimated 33 million people worldwide are living with HIV/AIDS, yet it is estimated that less than 20 percent of them know they are HIV-infected. Less than 1% of African husbands and wives have received voluntary counseling and testing services as a couple (Sams et al, 2004).

Many authors advocate for the up scaling of CHCT as a means of reducing risk of HIV infection. Painter (2001), while referring to several studies, strongly advocating for increased HIV counseling targeted towards couples. He argues that CHCT has the potential to reduce horizontal transmission between spouses as well as vertical transmission through PMTCT intervention and seeking safer infant feeding strategies. On a population level, he postulates that increased numbers of people taking up CHCT has the potential of inducing societal behaviour change resulting in less denial of HIV and increased openness between couples regarding sexuality. Kippax (2006) disputes these claims stating that there is little evidence that up scaling VCT/CHCT can bring about a reduction in transmission and stigma surrounding HIV. In a very critical assessment of VCT/CHCT, Kippax argues that although the strategy may be effective in reducing the likelihood of HIV infected persons infecting others, there is very little evidence to support its effectiveness in persuading HIV uninfected

individuals to reduce risk behaviour. Other studies have demonstrated effectiveness of Couple HIV Counseling and Testing.

Several factors affect demand for and supply of CHCT services in Sub Saharan Africa. Demand for CHCT is often low because of the belief that monogamy is 'safe', fear of stigma, gender inequality, and lack of knowledge of the availability of CHCT (McKenna et al, 1997; Roth et al, 2001; Castle, 2003; Bakari et al, 2000; Ginwalla et al, 2002). Given the low demand, policymakers and other influential groups have not promoted CHCT. In turn, funding agencies have not supported CHCT services, further compromising supply and ensuring low utilization, with areas experiencing high supply and demand being due to HIV/AIDS research activity. Given the known beneficial impacts of CHCT (Kamenga et al, 1991), it is critical that this continuous cycle of low demand and low supply is interrupted (Painter, 2001).

The expansion of services to help individuals, couples and families especially in Sub-Saharan Africa to learn their HIV status is a cornerstone to the provision of HIV prevention, treatment and care services (http://www.cdc.gov/gap). The U.S. President's Emergency Plan for AIDS Relief (PEPFAR) supports efforts by host nations to dramatically expand HIV counseling and testing services. HIV counseling and testing occurs where consent is obtained and testing is performed in accordance with international standards. Within these standards, countries use a range of services to meet their specific needs. Client-initiated or self-referred counseling and testing is requested by an individual while in health care settings, provider-initiated counseling and testing (PITC) occurs when health care workers recommend an HIV test and the patient chooses to accept rather than decline (Opt-out counseling and testing).

In sub-Saharan Africa, a large proportion of current HIV infections occur within stable relationships, either because of prior infection of one of the partners or infidelity during the life of the relationship (Desgrées-du-Loû & Orne-Gliemann, 2003). As new

resources become available for Africans living with HIV/AIDS, CHCT should be broadly implemented as a point of entry for prevention, care and support (Allen et al, 2007). A number of strategies have been employed by governments and collaborating organizations to promote uptake of counseling and testing for HIV/AIDS. For example, PEPFAR works in partnership with a number of host nations to sponsor a wide range of activities, including support for counseling and testing sites, training, country and program assessment, test kit procurement, promotion activities, quality assurance, and monitoring and evaluation (http://www.cdc.gov/gap). Researchers in the field of HIV/AIDS prevention and treatment use a variety of strategies to scale up counseling and testing in order to recruit from those tested.

Mutual testing (when both partners in a sexual relationship undergo HIV counseling and testing at the same time) serves as an effective HIV prevention strategy within the context of a committed, monogamous or even polygamous relationship as is the case for the study area. Despite positive outcomes, couple-oriented programs have not been implemented on a large scale in Sub-Saharan Africa. To stimulate and strengthen HIV prevention efforts, increased attention to promote prevention and testing and counseling for couples in stable relationships is required (Desgrées-du-Loû & Orne-Gliemann, 2003). This chapter looks at some such strategies and their success ranges where applicable.

2.4 Personal Factors Influencing Couples' HIV Counseling and Testing Uptake

Literature, albeit scarce, indicates that several individual and contextual factors influence VCT/CHCT uptake. A number of personal factors affect the extent to which CHCT services are utilized by community members; most of them are pegged on the amount and quality of information that an individual has, their health status and health seeking behaviour,

age, gender, marital status, length of relationship, educational level, risk perception, and residence. Some of these factors are documented herein from the available literature.

2.4.1 Information on Couples' HIV Counseling and Testing Services

Awareness is the cornerstone in any endeavour that involves the community. According to the Information-Motivation-Behavioural skills (IMB) model (Fisher et al. 1992; Fisher et al, 2002) as illustrated in figure 2.1, individuals and couples base their decision to attend HIV counseling and testing on the information they have about HIV and the counseling and testing services, their motivation to adopt the new strategy of attending HIV risk reduction behaviour counseling and on their behavioural skills which will enable them to practice the desired behaviour. The authors of the model present the barriers and benefits described in the literature reviewed and classify them in terms of the determinants of behaviour change according to the IMB model. These factors are classified into barriers and motivators which influence both men and women to take up HIV testing services.

The amount, type, relevance and quality of information people have about HIV greatly influence their motivation to utilize the available counseling and testing (VCT/CHCT) services. The misunderstanding of HIV discordance amongst couples is one factor which may influence motivation (Bunnell et al, 2005). According to Bunnell et al (2005), couples find it difficult to understand how one partner may be infected whilst the other is uninfected following repeated HIV exposures through unprotected sex. Couples give several explanations for this including immunity of the negative partner; the negative partner is actually infected; infection is only possible through rough sex and that God gives protection against infection. All of these factors, according to Bunnell et al. (2005), contribute to a denial of HIV risk for the negative partner within discordant couples, subsequently resulting in a limited risk reduction strategy.

In the United States, misconceptions surrounding discordance lead to people "testing by proxy" (Morin, 2006) (i.e. people assuming that they have the same status as their already tested partner(s). The same is experienced the world over. Bunnell et al. (2005) recommends that counselors should be empowered with a better understanding of HIV/AIDS and discordance so that improved messages are given to individuals and couples during counseling sessions. A better understanding of discordance on a societal level may allow people to understand that their HIV status may be different from that of their partner. This would in turn reinforce the importance of both partners within a couple knowing their HIV status together.

Couples' HIV Counseling and Testing is viewed as being parallel to VCT in terms of its introduction as a concept in HIV infection control. As such, CHCT is evolving in the same way as VCT whose utilization initially was hampered by lack of awareness (McKenna et al 1997; Nawaha et al 2002). Therefore for CHCT to succeed in our communities, awareness campaigns need to be mounted that vigorously focus on its advantages over VCT.

2.4.2 Risk Perception

In a study conducted in a rural community in Malawi to document the preferences of HIV counseling and testing for men and women, knowledge of the location of the test site, an increased perception of HIV risk of infection and knowledge of someone infected/affected by HIV/AIDS increased the likelihood of desiring to attend VCT (de Graft-Johnson, Paz-Soldan, Kasote, and Tsui, 2005). Morin et al., 2006, in a study in Zimbabwe similarly reported that "testers" were more likely to have a higher self risk perception and to know the location of a VCT site than "non-testers.

Kalichman & Simbayi (2004), in a study of a Black township in Cape Town reported that cultural explanations for HIV and AIDS held by inhabitants had a negative effect on

motivation to adopt desirable risk reduction strategies such as HIV testing. A common belief was that HIV/AIDS was created by spirits. They however suggest that traditional beliefs about the cause of HIV-AIDS and AIDS stigmas are mediated by AIDS-related knowledge (Kalichman & Simbayi, 2004).

World Health Organization (WHO) in a 2003 document entitled "The Right to Know" supports an up scaling of Voluntary Counseling and Testing stating that the intervention represents opportunities for: Individuals and couples to initiate/maintain reduced risk behaviour, Individuals and couples to gain early access to HIV treatment and prevention (PMTCT, HAART, support groups) and communities to reduce denial, stigma and discrimination with respect to HIV/AIDS. Painter (2001), while referring to several studies strongly advocating for increased HIV counseling targeted towards couples argues that CHCT has the potential to reduce horizontal transmission between spouses as well as vertical transmission through PMTCT intervention and seeking safer conception and infant feeding strategies. On a population level, Painter (2001) hypothesizes that increased numbers of couples taking up CHCT has the potential of inducing societal behaviour change resulting in less denial of HIV and increased openness between couples regarding sexuality.

2.4.3 Age and Gender

A number of studies have examined age in relation to HIV testing. Nguyen et al. (2006) indicated that 50 percent of all new HIV infections in the United States were among adolescents (ages 10 to 19 years) and young adults (ages 20 to 24 years). In addition, among those infected, half had not been tested. Liddicoat et al. (2006) found that older people generally refuse testing because of a perceived lack of risk for infection. These findings are in fine with the results of Inungu (2002) that individuals 18 to 24 years of age and those 50

years and older were less likely to have been tested for HIV compared with those ranging in age from 25 to 49.

Gender is a very important socio-demographic variable in the consideration of VCT/CHCT service uptake (Inungu, 2002; Kalichman & Coley, 1995; Kline & Strickler, 1993). Researchers from different time periods have showed different results regarding HIV testing rates for men and women. In the early 1990s, few women sought HIV testing (Kalichman & Coley, 1995; Kline & Strickler, 1993). However, as HIV prevention efforts increased, women reported higher testing rates than men (Inungu, 2002). These studies do not however document much on the correlation between gender and CHCT uptake.

In many in African communities, the male partner of a couple is the decision maker and in the majority of cases, the sole bread earner. This means that the male partner will inevitably determine the couple's decision to attend CHCT. In some cultures, the belief that a man should not walk with the female partner "to whatever service" is the antithesis of the CHCT principle and has been identified as posing a major threat to couples going to the testing centres as couples (Ayuo et al, 2009). Many community leaders should be educated to be examples by ignoring this cultural belief for others to follow. In Bushenyi District of Uganda, Nuwaha et al (2002) found that it takes the influence of one sexual partner for the couple to use VCT/CHCT services. VCT is well known to the community but CHCT is still a new concept and many people may not be aware of it, let alone its advantages.

2.4.4 The Fear Factor

Fear of the consequences of testing and trust, both within a relationship and between the community and the service providers often emerge as important factors influencing CHCT behaviour adoption. Many authors recommend that future CHCT promotions must be

geared towards improving the community's perception of the service provider, giving clear and culturally appropriate information about HIV and CHCT and providing an excellent quality of service to couples. A lack of faith or trust that couples may have in the testing site's ability to keep HIV test results private is also a barrier to uptake of the services (Day et al, 2003; de Paoli, Manongi, and Klepp, 2004; Fylkesnes, et al, 1999; Matovu et al, 2005; Pool, Nyanzi, and Whitworth, 2001).

2.4.5 Health Status and Health Seeking Behaviour

People who are feeling well have no motivation to visit a health facility (Ewart, 1991) let alone queuing for counseling and testing services Killewo et al. (1998); Nuwaha et al. (2002); and Fylkesnes & Siziya (2004), have demonstrated that utilization of VCT for HIV is highly dependent on poor self-rated health and self-perceived risk for HIV infection. Majority of potential users of CHCT are healthy people with no or little motivation to visit let alone spend substantial time at a health facility. Strategies to reach and convince these healthy individuals to spare some time and get counseled and tested for HIV/AIDS are therefore crucial.

2.4.6 Education Level and Couples' HIV Counseling and Testing Uptake

Educational level has been studied extensively in relation to HIV testing. However, studies of the association between educational level and HIV testing have yielded inconsistent results. Some (Fernandez et al., 2003; Grinstead et al., 1997; Inungu, 2002) found that individuals with higher education backgrounds were more likely than their counterparts to seek HIV testing, whereas others (Ebrahim et al., 2004; Lopez-Quintero, Shtarkshall, & Neumark, 2005) reported that individuals' education backgrounds were not significantly related to their HIV testing rates.

2.4.7 Relationship Status and Couples' HIV Counseling and Testing Uptake

Studies have found a relationship between marital status and HIV testing rates. Grinstead et al. (1997) indicated that unmarried respondents were 2.4 times more likely than those of other marital statuses to be tested. Ebrahim et al. (2004) and Inungu (2002) found that people who were separated, divorced, or widowed were more likely than their married counterparts to have been tested for HIV, perhaps because married respondents perceive themselves to be at less risk of infection. A study examining barriers to HIV testing among Hispanics in the United States (Lopez-Quintero et al., 2005) also found that married people were less likely to seek testing. In a sample of young adults, Nguyen et al. (2006) also found that married young adults were less likely than unmarried young adults to report HIV testing rates.

Women in monogamous marriages often perceive a low risk of contracting HIV. These same women however lack the power to negotiate and fear offending their husbands (Taegtmeyer et al, 2006). In a recent study of women attending an HIV VCT centre in Bangalore, India, 42% reported exposure to violence. Studies in the West and in India have demonstrated a positive relationship between sexual risk behaviours, partner violence and subsequent risk for HIV (Collins et al, 2005; Schensul et al, 2006). In sum, the literature supports the finding that unmarried people are more likely to be tested for HIV. Little is however documented with respect to couple HIV counseling and testing.

2.4.8 The Desire to Know

Knowledge of each other's HIV status has been reported as the greatest drive behind CHCT service uptake. The principal reason for consenting to test either individually or as a couple has been reported as the desire to know the results to benefit self and prevent the spread of the virus to partners (Jones et al, 1993; Killewo et al, 1998). Conviction about the

importance of HIV testing and a realistic risk appraisal, often lead to higher service uptake rates.

2.5 Community Factors Influencing Couples' HIV Counseling and Testing Uptake

Individuals and couples who seek VCT/CHCT services are drawn from within the community. Information on HIV/AIDS and ways of preventing the spread, morbidity and mortality associated with HIV/AIDS is the key to winning the fight against the epidemic. Availability of services is one thing while utilization is another. Community members need to be informed of available options for their health care and support. Several mobilization and awareness creation methods have been utilized with varying degrees of success to encourage individuals and couples to seek counseling and testing for HIV/AIDS. Some are outline below as documented in the reviewed literature.

2.5.1 Influence Network Agents Model as used by researchers

The importance of social networks and community leaders involvement in changing attitudes towards HIV/AIDS has been shown to have significant impact on risk perception among individuals and couples (Helleringer and Kohler, 2005; Trinitapoli, 2006; Kohler, Behrman and Watkins, 2007). Influence Network Agents (INA) model is a community-based model/program for the promotion of VCT among individuals and couples that was first used in the two cities study (Kigali, Rwanda and Lusaka, Zambia) by Allen, et al 2007. The model consists of influential people selected from the health, religious, non-governmental, and private sectors within the community, trained and contracted to invite individuals and couples for VCT/CHCT. Testing for HIV is offered but not required as part of the four day training on Standard Operating Procedures (SOPs) developed to guide all INA related training and outreach activities (Allen et al, 2007). In the two cities study, INAs invited couples to mobile

testing units (MU) in local churches, schools and administrative offices. This dramatically increased demand for CHCT. Predictors of successful invitations (resulting in a couple being tested) included inviting couples together, inviting couples known to INAs, and issuing invitations after public announcements (Allen et al, 2007).

Each couple invitation was identified by a numeric code including a unique INA identifier and an invitation number. A corresponding "invitation receipt" with the same numeric code allowed the INA to record basic demographic data about the invited couples, including age of man and woman, duration of cohabitation, number of children, and residential neighborhood. No names or couple identifiers were recorded. INAs also recorded date and time of the invitation; location of contact (i.e. couple home, INA home, workplace, community); the relationship of the INA to the invitee (i.e. family member, friend, professional or social contact, or just met/unknown); who received the invitation (couple, man, woman); and whether the invitation was preceded by a public endorsement for CHCT by the INA or another community leader (Allen et al, 2007).

The Kigali and Lusaka study confirms that influential members of the community [or community own resource persons (CORPS)] are willing and able to promote CHCT in Africa. During the study, INAs self-identified with one of four main categories, but many INAs wore more than one 'hat' and used a variety of networks, including friends, family, professional contacts, and social settings to promote CHCT. Zambian INAs were more likely than their Rwandan counterparts to identify their faith-based 'hat' as their most prominent role in CHCT promotion. This may be due to the central role that religion plays in the Zambian culture (Mukuka and Slonim-Nevo, 2006).

Influence Network Agents (INAs) are most effective when addressing couples, a strategy that removes the pressure on one spouse to carry the message to the other. Delivering invitations in settings that allowed discreet conversation e.g. in INA homes allows fear and

stigma to be openly discussed. Fewer than one in ten invitations were delivered in INA homes, but of those one third to one half resulted in couples seeking testing. This is also indicative of the strength of the relationship between the INA and the couple. Locations such as the couples' home and workplace also prove to be more conducive to successful invitation than public locations such as markets, churches, or social gatherings as noted by others involved in VCT/CHCT research in Zambia, Uganda, and Malawi (Wolff et al, 2005; Angotti et al, 2007).

In a recent study conducted in Kilifi Township at the Kenyan coast to establish barriers, motivators and benefits influencing the uptake of couples voluntary counseling and testing between July and December 2006, a large proportion of the women interviewed reported that they were aware of HIV testing services with 85% having heard of CHCT (Davis, 2006). Sources of knowledge reported were newspapers, t-shirts, or Kenya Medical Research Institute (KEMRI)-trained Community Own Resource Persons (CORPs). Forty three (43) % respondents spontaneously mentioned KEMRI volunteers/workers/outreaches when asked where they had heard of CHCT. These findings further suggest that trained influence network agents play a big role in disseminating information about CHCT and therefore uptake.

2.5.2 Work Place Mobilization

Many people spend a great deal of their day time at their places of work, only reclining back home later in the day or over weekends or holidays. The time while working is usually the same time most VCT centres are operational. Strategies that reach out to the working community are therefore a vital move towards boosting service uptake among those in both formal and informal employment.

Studies have shown that large numbers of couples can be recruited by targeting large employers and the military (Lurie et al, 2003; Ryder et al, 2000). Workplace recruitment is important because it can be used to target men. Because men have traditionally been the decision-making partners in couple relationships in Africa, outreach strategies directed towards men are needed. Many larger companies have peer health educators who can give out information about CHCT programs. The CHCT providers meet with workplace peer health educators as part of their outreach activities and set up a referral and linkage system to CHCT information and clinics.

Population Services International (PSI) in Lesotho and Swaziland has counseling and testing programs christened "New Start" that offer mobile and workplace services. In Swaziland, mobile Counseling and Testing focuses on chiefdoms, Faith Based Organizations (FBOs) and health clinics. In Lesotho, the focus is on workplace locations (such as textile factories) and rural communities (Daniella & Agai, 2009). PSI has developed the Corporate AIDS Prevention (CAP) Program as a comprehensive resource for corporate clients working to reduce the impact of HIV/AIDS in the workplace. The CAP Program hopes to: increase employee knowledge and awareness about HIV/AIDS, increase employee personal risk perception, improve employee confidence in their ability to prevent transmission, increase employee access to condoms, reduce HIV related social stigma within community, leading to improved family and social support, and provide employees with HIV counseling and testing and refer employees for care and support.

It is rare however, to find couples at the same work place as individuals that comprise a couple often times pursue varied careers and/or trades. With the above objectives however, strategies targeting work places have the potential to inform and prime individuals towards health seeking behaviour and decision making leading to increased acceptance and uptake of services including VCT/CHCT. Work places are also rich grounds for mobile services.

2.5.3 Home Based Counseling and Testing and Mobile Testing

Home Based Counseling and Testing (HBCT) and Mobile Testing, a service that involves moving away from facility based service delivery and reaching out to the beneficiaries at the comfort and confidence of their homes or community has gained prominence lately. It is a strategy that is especially useful in reaching out to clients in resource poor settings. In Rwanda, the Rwanda Defense Force provides counseling and testing services to military members (http://www.cdc.gov/gap). Many soldiers in the Rwandan military are deployed in hard-to-reach areas with minimal access to HIV counseling and testing and treatment services. In response, an integrated mobile counseling and testing unit and a mobile video unit travel to each of the Defense Force's 12 brigades. This has seen many people in the initially war torn country accessing counseling and testing and HIV/AIDS care and support. Often times, couples are reached through such a move, and one of the largest HIV discordant couples cohort has been accumulated in Rwanda through this strategy in collaboration with influence agent networks as elaborated in section 2.5.1.

In the neighbouring Uganda, community health workers are trained by The AIDS Support Organization (TASO) to visit the homes of antiretroviral treatment patients. The workers offer home-based HIV counseling and testing services to household members. The program links HIV-positive family members to treatment and care programs and delivers prevention interventions to HIV discordant couples (www.cdc.gov/std) and has acted as an important recruitment tool for an ongoing HIV discordant trial in that country. Such a move is yet to be initiated in Kenya where those accessing care are encouraged to come with their sexual partner to the clinic. This move is also only possible where disclosure has occurred and stigma low.

In Kenya, mobile counseling and testing is being expanded throughout the country to the general population and youths as well as to special populations, including nomads, the

hearing-impaired, prisoners, and wildlife wardens and their families (http://www.cdc.gov/gap).

2.5.4 Community Mobilization/Outreach for Couples' HIV Counseling and Testing

Many authors prescribe multiple health promotion approaches to optimize coverage and communication of desired community behaviour change with respect to HIV/AIDS (Hubley, 2004; Kalichman and Simbayi 2004). Hubley (2004) argues that mass media promotion can support and reinforce effective face-to-face communication whilst the 1991 Helsinki position paper on Meeting Global Health Challenges prescribes multiple methods of health education. These methods include community organization and development, legislative and policy development, large-scale campaigns and a wide range of community strategies. National policy change can increase the uptake of CHCT as experienced in Uganda. Painter (2001), in his review of HIV prevention interventions describes how a policy in Uganda promoting behavior change and open discussion of AIDS-related issues, resulted in greater willingness by couples to be tested together. Following the policy change in 1992, the number of people requesting CHCT as opposed to individual VCT increased from 8% to nearly a third of all clients in Ugandan clinics.

In the 1980's, many mass media HIV prevention strategies relied on fear arousal as a means of promoting risk reduction (Halperin, 2006), for example the "AIDS kills" adverts in Britain. Halperin (2006) argues that the stigmatizing effects of these campaigns can be balanced by combining them with effective behaviour change communication. He concludes that the "zero-grazing" campaign in Uganda promoting faithfulness to one partner and the 100% condom use campaign in Thai brothels produced efficacious results when combined with fear-based approaches.

Kalichman and Simbayi (2004), in agreement with Hubley (2004) states that mass media alone is not sufficient to address deeply held traditional beliefs which may act as barriers to adoption of health promoting behaviour. He advocates for building on traditional health beliefs by working closely with traditional healers. Thus, a better understanding of health beliefs and local culture may contribute to the design of effective and culturally appropriate interventions. In an article on behaviour change models for AIDS risk reduction in sub-Saharan Africa, Odutolu (2005) conveys an essential need for behaviour change strategies to work with social networks. Acceptability within these networks depends on complying with the social norms held by the group. He argues for working with community and peer leaders because of their strong influence in traditional African societies. In Malawi, community drama has been used as a culturally appropriate way of promoting HIV testing in a rural community (Rumsey et al, 2004). Following community dramas, community members displayed improved awareness and attitudes towards HIV and VCT.

2.5.5 Stigma and Discrimination

Stigma refers to unfavorable attitudes and beliefs directed towards a person suspected or infected with HIV/AIDS while discrimination is the unjustifiably different treatment given to different people or groups. Although there are important benefits to knowing one's and the partner's HIV status, HIV infection in many communities, is a stigmatizing condition, and this can lead to negative outcomes for people following testing. Stigma may actively prevent people accessing care, gaining support, and preventing onward transmission. Many people are afraid to seek HIV services because they fear stigma and discrimination from their families and communities. (UNAIDS, 2000) Furthermore, fear and stigmatization associated with HIV testing can minimize public acceptance of the VCT, dwarfing the role the service can play in prevention and control initiatives.

In a study by Laver (2001) of rural adult Zimbabweans' preparedness for HIV testing, fear of being seen by friends and stigmatization were reported to be among the major factors preventing people from visiting VCT centres. Similar findings were reported by Day et al. (2003) in a study of attitudes to HIV among mine workers in South Africa.

People naturally exhibit anxiety should their test for any disease turn positive. But if the disease in question has no cure and is amenable to stigmatization such as HIV infection, then this anxiety takes a different turn and becomes fear. Handling discordant HIV test results is the major drawback to CHCT success. Nuwaha et al. (2002) in a study in Bushenyi District in Uganda found that there are severe negative consequences to a positive HIV test result while Grinstead et al. (2001) demonstrated that these negative consequences include possibility of ending relationships if a couple's result is discordant. The anticipated negative consequences fuel the fear of testing positive (Day et al, 2003). Fear of positive result may be the main reason why most people remain untested despite country-wide campaigns.

Willingness to undergo CHCT is often associated with previous HIV testing, better knowledge of HIV and lower perception of stigma and discrimination (Zhang et al, 2007). It has been shown by Grinstead et al. (2001) that positive health and social life events are more common than the negative ones therefore potential users of CHCT should be reassured that their fears are unwarranted.

2.6 Service Factors Influencing CHCT Uptake

Couples' HIV counseling and testing services are often offered in different settings, either in static sites or as mentioned in the preceding sections, within the community. The services are also being integrated within health facilities for example in antenatal and family planning clinics in order to increase coverage and/or uptake. This section covers service related issues that affect CHCT uptake in one way or another.

2.6.1 Provider Initiated Counseling and Testing

Most efforts toward HIV testing have previously focused on voluntary counseling and testing (VCT) as the primary means of providing testing and encouraging people to become aware of their HIV status. However, coverage has been low, with the number being tested much lower than that required to identify even those requiring HAART (Perez, 2006; Scott, Bansi, and Ivens, 2006). As part of the response to the problem, the WHO has introduced opt-out testing (UNAIDS/WHO, 2004). In this scenario, HIV testing is offered routinely to all patients attending a particular healthcare service, such as an antenatal clinic, even though they are asymptomatic for HIV disease. The emphasis is changed from client initiated (as in VCT) to provider initiated testing and counseling. The test is still voluntary, with the option to refuse testing (opt out). Such an approach has been shown to increase uptake of testing in settings such as the USA (Chou et al, 2005). It may also decrease the stigma associated with choosing to have a test – in as much as everyone is having the test offered irrespective of perceived risk.

In Nigeria, counseling and testing in medical settings has been rapidly scaled-up, with nurses trained in counseling and testing and posted in medical wards to perform HIV tests for patients and their family members. Some service providers have experienced a tenfold increase in the number of people tested, allowing health care workers to identify HIV-positive patients who may be eligible for antiretroviral treatment (http://www.cdc.gov/gap). Provider initiated counseling and testing has been widely practiced in antenatal clinics as part of Prevention of Mother to Child Transmission (PMTCT). It is however depended upon the pregnant woman being able to convince her partner to visit clinic with her, a practice that remains uncommon among male partners.

2.6.2 Nature of the Site and Service

In a study on determinants in HIV counseling and testing in couples in the North Rift, Kenya, (Ayuo et al 2009), a feeling was shared among participants that HIV counseling and testing should be prompt and most probably on the same day in order to reduce the amount of time a couple spends at a VCT centre. The same study also found out that assigning at least one counselor per site to handle couples is vital since it takes a lot of effort to encourage a couple to seek CHCT services.

2.7 Logistical Support Factors

Logistical factors influencing access and utilization of VCT and CHCT are also documented. These are factors that intertwine with other factors as above documented to either enhance or hinder CHCT uptake. Morin et al. 2006, in a study to assess the acceptability of mobile VCT in Zimbabwe found out that for people who lived far away from a testing site, distance, cost and inconvenient working hours were major barriers to uptake. Fylkesnes et al, 1999 in a much earlier study mentioned long waiting time at the clinic or testing site as a factor which makes VCT/CHCT undesirable among many. the ideal location of centres basically address two issues discussed earlier; stigma and cultural practices. Therefore the CHCT services must be as convenient as possible to the potential users. There are suggestions that for CHCT services to succeed, the facilities must be close to the people utilizing the services, making the services easily and quickly accessible. These accessibility issues, when tackled would also ensure that the "undesirable" practice of walking with spouse is minimized by reducing the distance to the test centres (Bakari et al, 2000). Home testing and hidden location of centres are suggestions meant to address the issue of stigma. Similar sentiments have been documented by Laver et al, (2001) and van Dyk and van Dyk, (2003).

2.8 Theoretical Framework: Information-Motivation-Behavioural skills model

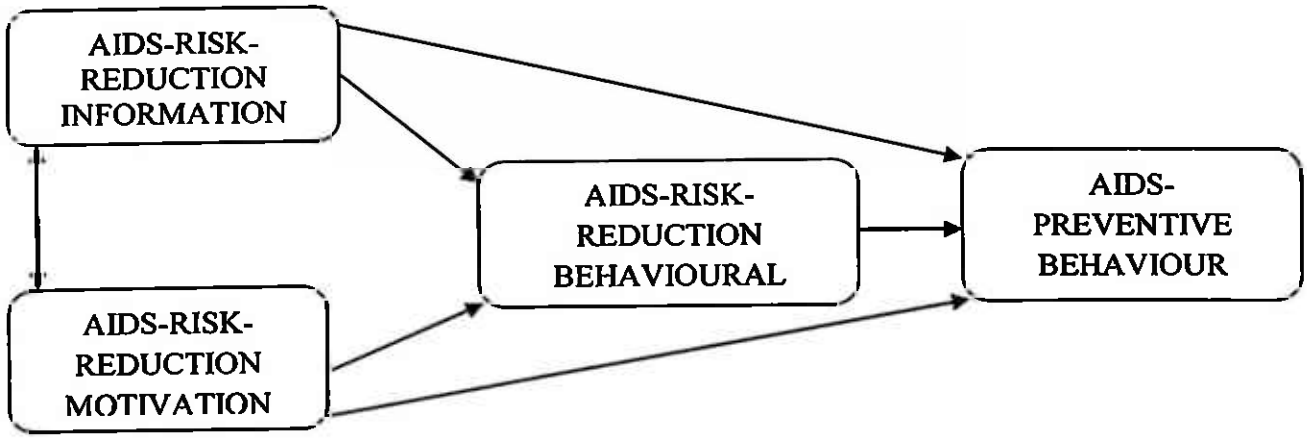
In this study, the Information-Motivation-Behavioural skills (IMB) model was used to organize the study and guide analysis of the data that was generated. The model has been described in various publications by Fisher et al (Fisher et al. 1992; Fisher et al, 1996; Fisher et al, 2002) and used with success in many studies addressing HIV behaviour change (Kalichman and Simbayi, 2004; Kalichman et al, 2006). According to the IMB model, there are three fundamental determinants of HIV/AIDS risk reduction; Information, Motivation and Behavioural Skills. A prerequisite to behaviour change is that the individual and/or couple have *Information* about HIV transmission and risk reduction strategies. Information alone is not sufficient to stimulate behaviour change.

To act on knowledge, *Motivation* is required to perform the behaviour change. Some of 6the factors which influence motivation to undergo CHCT include: Attitude towards CHCT – The IMB uses the Theory of Reasoned Action by Fishbein and Ajzen to define motivation as a behavioural intention to perform, dependent on attitudes towards the behaviour or action; Social Norms – Some aspects of life have strong social construction, including explaining the causes of ill health and even death. This factor outlines community's support and acceptance of HIV counseling and testing, and perceived costs and benefits of adopting the practice. Cultural beliefs may also influence the decision to adopt the desired behaviour (seeking CHCT services); Self-efficacy – Fisher and Fisher relate behavioural skills to Bandura's concept of Self-efficacy, which in this context could be thought of as confidence and ability to utilize health services including voluntary couple counseling and testing for HIV and Barriers – Fishbein (2000) argues that barriers influence people's motivation to adopt HIV prevention strategies of which CHCT is the backbone.

The third fundamental determinant of HIV/AIDS risk reduction according to the IMB model is for individuals to possess *behavioural skills* in order to take action. In relation to

adoption of CHCT, these skills may include; the ability of partners to discuss sexual issues, or to be able to engage in public behaviours such as attending HIV testing together. The model asserts that behavioural skills needed for behaviour change are derived from information about the behaviour and the motivation to adopt it.

Figure 2.1: The Information-Motivation-Behavioural skills model



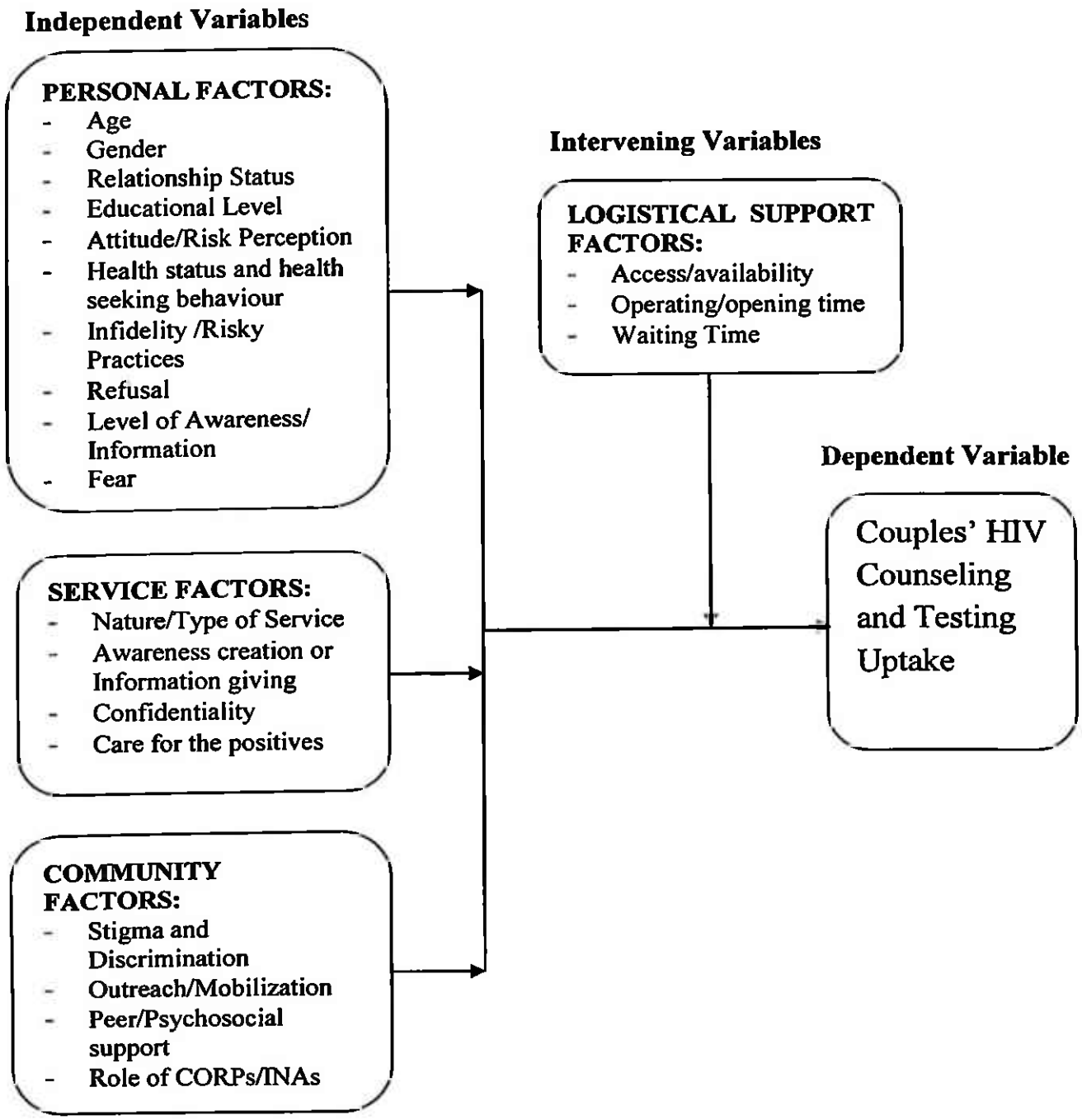
Source: Fisher and Fisher (1992)

Although information, motivation and behavioural skills are critical to decision making with regard to CHCT uptake, the IMB model does not bring out the aspect of consistency and constancy of messages articulated to the general community in order to keep members motivated. Behavioural skills are often reinforced through repetitive actions. Despite this weakness, the model strongly supports development of necessary behavioural skills that are crucial to HIV prevention. Well interpreted, the model can guide activities aimed at ensuring that members of the community are properly involved in their own health improvement activities, thus sustainability.

2.9 The Conceptual Framework

The study was guided by the following conceptual framework as conceived by the researcher. This is illustrated in figure 2.2.

Figure 2.2: Conceptual Framework the Study.



Individual, community and institutional factors all played an important role in influencing uptake of Couple HIV Counseling and Testing services. Individuals constitute couples and their attitudes, health status, risk perception, self efficacy (confidence), level of information/awareness all influence decision making with respect to health and health seeking behaviour. A number of decisions made by individuals and couples are dictated by the social construction of such aspects as prescribed by the society in which they have been

brought up. How the surrounding community defines HIV/AIDS and perceives services related to HIV often binds members of the same community to the same line of faith. Some communities are also a hindrance to development of facilities and services that promote good health. Some facilities within a community may be underutilized due to objection by various stakeholders. Also, attitudes of some service providers may discourage individuals and couples from seeking services. Some people prefer stand alone sites to integrated sites while others would rather wait for mobile services. All these constitute independent variables. The individual factors, community factors, and service/institutional factors continuously interact, influencing each other with respect to decision making on health seeking behaviour.

All factors held at a constant, some other factors may interplay (intervene) to affect whether or not couples will seek the desired behaviour (CHCT uptake). The dependent variable here was CHCT uptake while factors like distance of site, costs involved, waiting time, availability of easy referrals and how many centres are available are intervening. All this need to be put into account while promoting a service with promising results yet often perceived variedly by community members and stakeholders.

2.10 Summary of Literature Reviewed

Reviewed literature revealed several factors influencing individuals and couples decision to take up HIV counseling and testing services. The literature also outlined factors which to focus on couples to include those mainly used by HIV prevention researchers targeting couples. These factors included the use of community own resource persons (CORPS), otherwise christened influence agent networks (INAs), home based counseling and testing and provider initiated testing and counseling. This forms a shift from the traditional system where once informed, individuals made a choice to or not to access the service. It is

noteworthy that most of the literature concentrated on majorly sub-Saharan Africa as this region carries the burden of HIV/AIDS and most current interventions are based here.

The literature suggested that multiple methods of health promotion ranging from large-scale mass media campaigns to culturally appropriate group or individual peer communication are essential in promoting HIV testing as a healthy behaviour. This study aimed to identify the factors which influence couple's decisions to attend CHCT in Kisumu City. An attempt was made to determine whether these factors were limited to the study population alone or support what had been revealed by the reviewed literature. The researcher estimated the real and perceived barriers, and motivators held by couples which may have affected their decision to take up CHCT as a crucial HIV risk reduction strategy.

The gaps and unmet needs in Kenya as identified by the Kenya AIDS Indicator Survey (KAIS) of 2007 included: lack of knowledge of own or partner's HIV status remained an important obstacle to prevention; special efforts were needed to scale up HIV testing in married and cohabiting relationships to identify discordant couples and target prevention interventions within these relationships; support for disclosure of HIV status and partner testing in married or cohabiting partnerships should be expanded, especially for infected individuals; and HIV testing should be expanded to increase the number of HIV infected adults who know their status. It was therefore crucial to understand factors influencing CHCT uptake that should either be reinforced or worked on to neutralize negative influences.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the methodology that was used in conducting the study. These are described under the following headlines: Research design, Target population, Sample selection and sample size, Research instrument, Data collection procedures and data analysis techniques.

3.2 Research Design

The researcher adopted a descriptive survey design while implementing the study. A descriptive design was appropriate for the study because information unique to the most at risk group for HIV infection was gathered and used to generate statistics showing various factors that influenced couples to or not to seek counseling and testing as couples. Descriptive survey is a method of collecting information by interviewing or administering questionnaires to a sample from the population (Orodho, 2003). This design can also be used when collecting information about people's attitudes, opinions, habits or any variety of social issues (Orodho and Kombo, 2002). It was therefore the most suitable design to use while attempting to answer the research questions as outlined in section 1.5 above. The use of descriptive survey as proposed dealt with variables as they occurred and how they were interrelated (Orodho, 2005). This avoided the trouble of retention as exhibited in research studies which involve multiple visits as those seeking counseling and testing are not frequent visitors to VCT centres.

Assisted questionnaires were used in line with this study design. Views were sought from samples comprising individuals in couple relationships purposively selected from selected VCT centres. This method was used systematically for collecting information from

participants by obtaining their responses to questions using the questionnaire as an instrument for data collection. It was useful in evaluating CHCT as an intervention to reduce HIV/AIDS spread.

3.3 Target Population

Target population is a set of individual items and objects with some common observable characteristics (Mugenda and Mugenda, 1999). Heterosexual couples have a common risk of HIV transmission especially when the partners do not know each others HIV status. The study was conducted in Kisumu city and targeted all heterosexual couples seeking HVI/AIDS counseling and testing services within the city. Kisumu city was chosen for the study because, like many other urban areas, it is exposed to the wholesome influences of city life. The choice was guided by the fact that Kisumu is a cosmopolitan town in Western Kenya. The city lies within Latitude O 20'S and O 50'S and Longitude 33 20'E and 35 20'E. Kisumu covers a total area of 1,177.5sq km of which 918.5 sq km is arable land and 259sq kilometer is occupied by water mass which support agriculture and fishing on the shores of Lake Victoria.

Kisumu is the third largest town in Kenya and is also the poorest of the major towns in the country with a prevalence of absolute poverty of 48% (KDHS 2003). It is the headquarters of Kisumu District, as well as Nyanza Province respectively. Kisumu city lies within Winam division (formerly known as Kisumu Municipality) which covers an area of 395.05 sq km with a population of 350,365 (Kisumu District Development Plan 2002-2008). Winam Division is also leading in HIV/AIDS prevalence at 38% with a high death rate of people in the productive age bracket (Ibid) that was targeted by the study.

The economic activities range from service, fishing, industrial and agricultural. The city is majorly inhabited by the Luo community who mainly depend on fishing for livelihood. Health services include; preventive, promotive and curative services, with about 33

operational health facilities, 13 of which are directly under the management of Kisumu City Council. The regional New Nyanza Provincial General Hospital and Kisumu District hospital are both located within the Kisumu city area. The town has developed progressively from a railway terminus and internal port in 1901, to become the leading commercial/trading, industrial, communication and administrative centre in the Lake Victoria basin, an area that traverses three provinces of Nyanza, Western and western Rift Valley. In addition, Kisumu serves as the communication and trading confluence for the Great Lakes region - Tanzania, Uganda, Rwanda and Burundi.

Table 3.1: Population of Kisumu City

Area	Male	Female	Total
Bandari	3771	3268	**7039**
Kaloleni	6467	7048	**13515**
Northern	5438	4679	**10117**
Southern	5062	4562	**9624**
Total	**20738**	**19557**	**40295**

Source: 1999 Population and Housing Census (KNBS, 2001)

Table 3.1 indicates that by the time of the 1999 Population and housing census, the study area (yet to be elevated to city status by then), had an overall population of 40,295 people. The study targeted those in the reproductive age group who were likely to seek CHCT services during the study period. The reproductive age group refers to males and females within the age bracket of 15-49 years. From Table 3.2, the researcher was able to estimate the proportion of the population within the city. Thus from the details in the table, 245, 989 out of 504, 359 (the greater Kisumu district population) which gave 48.7726% as

the proportion of the reproductive population. With a total population of 40,295 therefore, the target population was estimated to be 40,295 x 0.47726, giving a likely 19652.92 (19653) people from which the required sample for investigation was drawn.

Table 3.2: Population of the reproductive age group of Kisumu

Age Group	Male	Female	Total
15-19	30676	33019	**63695**
20-24	25594	28223	**53817**
25-29	19325	19523	**38848**
30-34	14908	14896	**29804**
35-39	12243	12904	**25147**
40-44	9743	9570	**19313**
45-49	7865	7500	**15365**
Total	**120354**	**125635**	**245989**
Total population	**248735**	**255624**	**504359**

Source: 1999 Population and Housing Census (KNBS, 2001)

3.4 Sample Selection and Sample Size

Sampling is the process of selecting subjects of cases in order to draw conclusions about an entire population (Orodho, 2005). It is that part of statistical practice concerned with the selection of individual observations intended to yield some knowledge about a population of interest and is useful in research because one learns some information about a group by studying a few of its members thus saving time and money.

Within Kisumu city, the estimated number of individuals who were presumed likely to be in a sexual relationship, or soon establishing a relationship, and that are targeted for

HIV/AIDS counseling and testing was estimated to be 19653 individuals. Within Kisumu city, a number of voluntary counseling and testing (VCT) centres offer both VCT and CHCT services; two of the centres, Ondiek VCT centre within Ondiek estate and Lumumba Health Centre VCT centre were selected randomly for purposes of questionnaire administration. At 95% confidence level and a confidence interval of 5, 187 couples (187 males and 187 females) were to be selected purposively for the study. It was assumed that the decision to seek CHCT is randomly distributed within the population and so the sample though purposive, was random as well and therefore representative.

To estimate sample size required for a cross-sectional descriptive survey (study) such as this one required a specification of an estimate of the proportion of couples visiting VCT/CHCT centres who end up taking up the CHCT services, the desired level of confidence for the proportion estimate; and a tolerance error margin or width of the confidence interval (a measure of precision of the estimate), so that the necessary sample size is then calculable for a given precision level. The sample size formula below was used to estimate the sample size for the study.

$$n = \frac{z_{\alpha}^2 \hat{p}(1-\hat{p})}{m^2}$$ ---------- (Donner, 1984).

Where:

n= Sample size

p= Expected proportion or estimated proportion of couples visiting VCT/CHCT centres who end up taking up the CHCT services.

m= degree of precision or a tolerance error margin or width of the confidence interval (a measure of precision of the estimate). At the end of a study, a researcher needs to present the prevalence with its 95% confidence interval. The width of that CI is always two times of the precision (width of CI = 2*m*). If the width of the CI is wide the estimated prevalence may be considered as

a poor estimate. The narrower the CI, the precise is the estimate. To obtain a narrower CI, we needed to design a study with a smaller *m* (good precision or smaller error of estimate).

Z_α= is the standard normal distribution value for which the probability of falling above α is 95% (the level of our confidence). For α=0.05, $Z_{0.05}$=1.96, that is for a 95% CI, z=1.96.

For this study, the researcher specified the level of confidence as 95%, an error margin of ±5% as being considered acceptable and from a past study (Ayuo et al, 2009), it was expected that 90% of the of couples visiting VCT/CHCT centres end up taking up the CHCT services. Using the information in the sample size formula above, an estimated sample of $n=\frac{z^2}{m^2}\hat{p}(1-\hat{p})=\frac{1.96^2}{0.05^2}\times 0.90\times 0.1=138$ was deemed to be necessary to achieve the required sufficient precision for the estimated prevalence of CHCT uptake, i.e., the sample size needed to be 95% certain that the proportion estimated was within 5% of the true prevalence rate is 138 couples. Anticipating a percentage of non-participation, this sample size was adjusted upwards by 5% to 145 couples.

In an attempt to capture different perspectives of couples finding out their HIV status, a purposive sample of 187 couples (374 individuals) walking into the two selected VCT centres and willing to participate were selected and consented for questionnaire administration (i.e. all the couples who walked into the selected centres and consented to participate). All consenting couples walking into the VCT centres within Kisumu city were selected until the desired number was attained and even surpassed. Questionnaire administration took place either as the couples waited to be served, during the session as they waited for results or soon after receiving the service. It was however notable that interviews while couples waited to be served or during the session yielded more objective responses unlike after service as the test results often leave the individuals emotional.

3.5 Research Instrument

The study utilized the questionnaire to elicit the requisite information. The questionnaire was interviewer administered (assisted questionnaire) to obtain information from each member of the selected couple. The questionnaire consisted of items that sought information on personal factors influencing CHCT uptake; community factors influencing CHCT uptake; service factors influencing CHCT uptake; and logistical support factors influencing CHCT uptake. Most of the questions were closed ended with one open ended item included on the respondents' understanding of the meaning of the CHCT process.

3.5.1 Pilot Testing

Ten (10) questionnaires were administered to 5 couples (10 individuals) as a pilot test prior to study implementation. This was an important step in the research process because it helped the researcher to identify vague questions and unclear instructions. It also helped the research team to capture important comments and suggestions from the respondents that enabled the researcher to improve efficiency of the instrument. The pilot test also helped in enhancing the reliability of the instrument as consistent measures of the concept being studied were determined. Through the pilot study, other common responses were captured and included in the tool. The data collected during pilot testing was prepared, analyzed and interpreted thus leading to further review of the instrument in readiness for the main study data collection phase.

3.5.2 Validity of the Research Instrument

Validity is the extent to which the instrument captures what it purports to measure. It is the accuracy and meaningfulness of inferences which are based on the research results. It is the degree to which results obtained from the analysis of the data actually represent the

phenomenon under study (Mugenda and Mugenda, 1999). Validity deals with how accurately the instrument represents the variables of the study. To uphold content validity, the investigator discussed the contents of qualitative data with the supervisors before generalizations and conclusions are made. Further, the investigator and research assistants noted down and interpreted the circumstances upon which arguments were elicited. This ensured that all sentiments were scrutinized before being accepted as valid findings of the study. Also, completed questionnaires were reviewed at the primary data entry point for completeness and accuracy. This ensured that any discrepancies are clarified prior to the departure of respondents. A second level of data quality checks was carried out prior to electronic data entry in order to ensure as accurate and complete data is captured as possible. The source documents (completed questionnaires) were coded chronologically and then filed for easy reference as needed during data cleaning.

To avoid instrumentation as a threat to internal validity, the same research team was involved from pilot testing through the life of the study. This ensured administration of questions is uniform and consistent. In order to ensure generalizable research findings (i.e. external validity), it was believed that HIV is randomly distributed within the general population. The couples interviewed were therefore assumed to be representative of the community from which they were drawn. Piloting the research instrument prior to full implementation helped to determine whether a cause effect relationship indeed existed between the variables and seeking CHCT services.

3.5.3 Reliability of the Research Instrument

Reliability is the level of internal consistency or stability of the research tool over time. In this study, a high level of reliability (at least 70%) was preferred by the investigation team and this therefore ensured that questions were designed and put across in the simplest

way possible and read out aloud as written. This was accompanied by in-line and/or side notes where applicable to enable respondents understand the requirements, thereby providing reliable responses. A measuring instrument is reliable to the extent that it provides consistent results. Interviewer codes were used to identify research assistants who were responsible for particular entries. Also, the training offered prior to study implementation ensured consistent interviewing among the research assistants. The tool was also pre-tested as outlined in section 3.5.1 above before utilization. This offered the research team a chance to determine how reliable the tool would be in capturing the desired data. In an attempt to enhance internal reliability, questions that answer to the same objective were grouped together in sections.

Reliability of the research tool was tested using the empirical procedure of split – half of the pre-test responses. In computing split–half reliability, the pre-test responses were randomly grouped into two halves and then each half was compared with the other to get the correlation coefficient (r) as computed using SPSS version 12.0.1. The formula is thus:

$$r\ (\text{Split-half}) = \frac{N\sum xy - (\sum x)(\sum y)}{\sqrt{[N\sum x^2 - (\sum x)^2][N\sum y^2]}}$$

Where : x = group 1 scores y = group 2 scores

$\sum x$ = Sum of x scores

$\sum y$ = Sum of y scores

$\sum x^2$ = Sum of squares of x scores

$\sum y^2$ = Sum of squares of y scores

$\sum xy$ = Sum of product of x and y scores

N = Sum of paired scores

The correlation coefficient (r) of the halves was corrected by the Kappa (k) correlation formula and a correlation coefficient of 0.84 obtained. Generally, a coefficient of

at least 0.70 is acceptable (Mugenda and Mugenda 1998). The research tool was therefore deemed reliable and so data collection proceeded.

3.6 Data Collection Procedures

The study began by recruitment and training of 4 research assistants (2 per selected VCT centre) to help with data collection and processing. This was followed by consensus building involving the investigator and the research assistants. The session was used to discuss each of the items contained in the research instrument to ensure that they were well understood by the research team. At the end of the session, necessary adjustments such as rationalization of the budgets, restatement of unclear questions and instructions, removal of irrelevant questions and grammatical errors were effected before the final copies were produced. Research Authorization and permit to collect data in order to answer the research questions were obtained from the National Council of Science and Technology. Copies of the approval letter and permit were presented to the District Commissioner, Kisumu East district in which the city lies for notification and a request for an introductory letter to the Provincial Director of Medical Services, Nyanza Province, District Education Officer and District Officer of Winam Division. The site in-charges of each of the participating VCT centres were approached for support with positive outcomes.

3.6.1 Questionnaire Administration

The research team visited the research stations in person for purpose of introduction, familiarization and questionnaire distribution, administration and collection of completed questionnaires. The researcher and/or research assistants stated the purpose of research, value and the importance of responding by participants who were guaranteed utmost confidentiality. The research team also orally explained the usefulness of the study, requesting the respondents to respond the tool to the best of their understanding and honestly.

The research instrument was interviewer administered, giving room for discussions and clarification, while asking the questions in a socially acceptable way.

Before setting out for each day, the researcher made consultations with the research assistants. Every evening, review was done on both successes and failures and areas that needed to be improved were looked into. Based on this, a work plan for daily activity was made. Deliberations were centered on approach to site counselors, uncooperative couples and general approaches for sourcing information on cases of inability to conceptualize items in questions. All issues relating to data collection were discussed, agreed upon and used as a basis for planning for activities of the following day. The process continued until the last day when all data was be collected. Separate files were maintained for rough field notes, daily summons and weekly summons. Verification was essential as all entries were relevant for data analysis.

Data collection began upon analysis, interpretation of results from the pilot testing, proving that the tool was reliable (Refer section 3.5.2) and revision of research instruments as necessary. Sampling was done in accordance with the purposive sampling procedures elucidated under subsection 3.4. The process took 3 weeks to complete. By the end of the data collection period, 187 couples (374 subjects) had been talked to and consented for the study from the two sites.

3.7 Data Analysis Techniques

Before data entry, the questionnaires were checked for completeness and the data was then cleaned to ensure quality. Although visiting the counseling and testing centre as a couple was part of the eligibility criteria, the unit of analysis was individuals. The statistical package for social sciences (SPSS) version 12.0.1 was applied to run and produce descriptive statistics in the form of frequencies and percentages of factors influencing CHCT uptake, while tables were

used to summarize the same statistics. For the qualitative data processing and analysis, the content analysis technique was undertaken as an activity simultaneous with data collection and analysis.

3.8 Ethical Considerations

Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) remains a highly sensitive and ethical subject in the society. The study was implemented only upon approval by the faculty board following successful defense of the project document and any appendices thereof. A permit and research authorization letter were then obtained from the National Council of Science and Technology, Ministry of Higher Education, Science and Technology and thereafter the District Commissioner of Kisumu East notified of the research before study implementation. Permission to interview consenting participants was sort from the site in-charges of participating VCT centres. An information sheet seeking respondents' permission to be part of the study was given to all potential participants (Refer Appendix I for Letter of Transmittal). The permit approving the study was attached to the research instrument and letter of transmittal and handed over to VCT site in-charges as a confirmation that the study was legitimately being implemented. This done, written informed consent for participation was obtained from all willing participants.

The major ethical issues during study implementation were informed consent, privacy and confidentiality of the respondents given the sensitive nature of HIV/AIDS. Occurring in the context of counseling and testing for HIV, a session during which all this concerns are upheld, the study ensured ethical conduct. The respondents had the freedom to ignore items/questions in the research instrument that they did not wish to respond to. Couple codes, not names were used on the questionnaire as identifiers in order to ensure high level confidentiality.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSIONS.

4.1 Introduction

This chapter presents the findings discussed under thematic sub sections in line with the study objectives. Although many underlying themes emerging from the study findings cross-cut the framework of the IMB model, the personal, community, service and logistical support factors influencing CHCT uptake are presented as they emerged from the data collected. The IMB model has been used to a greater extent in the discussion to disentangle some of the issues uncovered during the study.

4.2 Questionnaire Return rate

All administered questionnaires were returned to the researcher, representing 100% return rate. Since the researcher used assisted questionnaires, all questionnaires administered to the respondents were returned on the spot, ensuring the 100% return rate. Two sites were actively involved in data collection. The completed questionnaires were collected every evening or at the worst, within 24 hours of completion for cleaning, coding and entry into an MS Access database in preparation for analysis and presentation. Table 4.1 summarizes how each site contributed to the study data.

Table 4.1: Questionnaire Return Rate

Site	Administered	Returned	Percent
Lumumba	202	202	54.0
Ondiek	172	172	46.0
Total	**374**	**374**	**100.0**

Two hundred and two (202) and one hundred and seventy two (172) respondents were recruited from Lumumba and Ondiek VCT centres respectively during the participant accrual time. All the couples approached for questionnaire administration accepted to participate in the study. An equal number of male and female respondents were recruited since the study targeted couples seeking CHCT services.

4.3 Personal Factors Influencing Couples' HIV Counseling and Testing Uptake

The researcher sought to find out the personal characteristics of couples seeking CHCT services to include: type of couple relationships, educational level, number of children, age, and degree of cohabitation and/or duration of the relationship.

4.3.1 Age of respondents by gender

The study sought to establish the age of people who visit VCT/CHCT centres for counseling and testing as couples. Table 4.2 illustrates the age findings of the study by gender.

Table 4.2: Age of respondents by gender

	GENDER		
Age of Respondents	**Female**	**Male**	**Total**
15-24	90 (48.1%)	22 (11.8%)	112 (29.9%)
25-34	64 (34.2%)	97 (51.9%)	161 (43.0%)
35-44	22 (11.8%)	31 (16.6%)	53 (14.2%)
45-54	8 (4.3%)	21 (11.2%)	29 (7.8%)
=>55	3 (1.6%)	16 (8.6%)	19 (5.1%)
Total	**187 (100.0%)**	**187 (100.0%)**	**374 (100.0%)**

From the study findings, 90 (48.1%) and 22 (11.8%) female and male respondents respectively were below the age of 24 years. Within the age range of 25-34 years were 64 (34.2%) and 97 (51.9%) female and male respondents, with 22 (11.8%) and 31 (16.6%)

female and male respondents respectively falling within the age range of 35-44 years. Only 2 and 21 and 3 and 8 female and male respondents reported age within 45-54 and above 55 years respectively.

A majority of the respondents (72.9%) were below 35 years of age. More female testers (48.1%) than male testers (11.8%) were below the age of 25 years. This is encouraging since HIV is greatest among women younger than 25 years. The findings of the study are line with findings by Inungu (2002) that showed individuals younger than 25 years of age and older than 50 years are often reluctant to test for HIV, with the bulk of testers falling within the age range of 25-49 years of age. Previous studies however concentrated on individual rather than couple testers.

4.3.2 Educational Level of Respondents by Gender

The study also sought to find out the educational level of respondents with a view of finding out whether there is a relationship between formal education and seeking CHCT services. Table 4.3 summarizes the findings with respect to this characteristic of respondents.

Table 4.3: Educational level of Respondents by Gender

	GENDER			
	Female		Male	
Education	**Frequency**	**Percent**	**Frequency**	**Percent**
None	4	2.1	4	2.1
Primary	104	55.6	72	38.5
Secondary	56	29.9	79	42.2
Tertiary	23	12.3	32	17.1
Total	**187**	**100.0**	**187**	**100.0**

From the findings, 4 male and 4 female (2.1%) respondents reported not having any education at all, with 104 (55.6%) female and 72 (38.5%) male respondents reporting primary level education. 56 (29.9%) and 79 (42.2..5) female and male respondents respectively reported secondary education while 23 (12.3%) and 32 (17.1%) female and male respondents respectively reported tertiary education.

Therefore, only a minority of respondents (2.1%) lacked any form of formal education; with the rest of the respondents having at least some basic education. That is 47.1 % primary, 36.1% secondary and 14.7% college/university education. More females than males have had basic education while a comparable number across gender had secondary education (i.e. 55.6% and 38.5% for females and males respectively). Some level of basic education appears therefore to be vital for making decisions with respect to accessing CHCT and other related services. The respondents therefore represent a fairly literate community from which they were drawn. Previous studies of the association between educational level and HIV testing have however yielded inconsistent results. According to Fernandez et al., (2003); Grinstead et al., (1997); and Inungu, (2002), individuals with higher education backgrounds were more likely than their counterparts to seek HIV testing, whereas others (Ebrahim et al., 2004; Lopez-Quintero, Shtarkshall, & Neumark, 2005) reported that individuals' education backgrounds were not significantly related to their HIV testing rates.

4.3.3 Types of couple relationships

The researcher sought to establish the various types of couple relationships that respondents described themselves to belong to by the time of the study. This was in order to find out whether there is a relationship between couple relationship and CHCT service uptake. Table 4.4 illustrates the findings.

Table 4.4: Types of Couple Relationships

Relationship Status	Frequency	Percent
Co-Habiting	6	1.6
Dating	90	24.1
Married Monogamous	227	60.7
Married polygamous	42	11.2
Regular sex partners	6	1.6
Reuniting	3	0.8
Total	**374**	**100.0**

The study reported findings regarding types of couple relationships as follows: 3 (0.8%) reuniting; 6 (1.6%) cohabiting with a similar margin as regular sexual partners; 90 (24.1%) dating; 42 (11.2%) married polygamous and 227 (60.7%) married monogamous.

Based on the study findings, most of the respondents (60.7%) described themselves as being in married monogamous relationships. This was followed by those respondents who reported to be dating, standing at 24.1%. This was important and relates to the responses towards the question on what finally motivated the respondents to seek CHCT services (refer table 4.9) where only 9.1% of the female and 8.6 % of the male respondents reported having tested as a requirement prior to marriage. Against the belief that monogamy is perceived as safe with respect to HIV transmission, the same provides a favourable environment for decision making with respect to CHCT uptake. In view of the fact that over 50% of current HIV incidence is within stable marital/cohabiting relationships (Ntombi, 2006), these findings are promising.

4.3.4 Length of Relationship

In line with the relationship status, the study sought to find out the length of the relationship and whether this had an influence on CHCT uptake. The findings are summarized in table 4.5.

Table 4.5: Length of Relationship

Length of Relationship (yrs)	Frequency	Percent
0-5	240	64.2
6-10	79	21.1
11-15	27	7.2
16-20	6	1.6
21-25	4	1.1
26-30	8	2.1
31-35	5	1.3
36-40	1	0.3
41-45	4	1.1
Total	374	**100.0**

With regards to duration of the couple relationship, the study findings as illustrated in table 4.5 showed that 240 (64.2%) of the respondents had been in the current relationship for at most 5 years, with 79 (21.1%) and 27 (7.2%) reporting at most 10 and 15 years respectively. The findings also indicate that 8 (2.1%), 6 (1.6%) 5 (1.3%) and 4 (1.1%) of the respondents reported being in the relationship for 26-30, 16-20 31-35 and 21-25 years respectively. The rest of the respondents, representing less than 2% reported relationships longer than 35 years.

A majority (64.2%) of the people seeking CHCT services within the city therefore belong to young relationships that have lasted at most 5 years from establishment. Those who have been in a relationship with each other for more than 30 years represented less than 3 % of the respondents. Younger respondents who have been together for less than 30 years are therefore the most frequent clients at the VCT/CHCT centres within the city.

4.3.5 Regularity of Staying Together as a Couple

How often couples stay together for respondents who described themselves as being in monogamous, polygamous or regular relationships is illustrated in table 4.6.

Table 4.6: Degree of Cohabitation

Stay Together	Frequency	Percent
All the time	266	95.0
On weekends	8	2.9
One/two weekends per month	6	2.1
Total	**374**	**100.0**

From the study findings, a large percentage (95%) of the couples selected reported staying together all the time, with the rest staying together on weekends. Regular stay together is therefore an important factor in decision making on seeking CHCT uptake. Most couples as illustrated in table 4.4 described themselves to be in monogamous relationships stay together all the time as shown in table 4.6. Regular stay together therefore enhances CHCT uptake.

4.3.6 Residence of the Respondents

The study sought to establish the residence of those seeking CHCT services within the city i.e. where city residents or not. The findings are illustrated in Table 4.7.

Table 4.7: Residence of Respondents

	GENDER			
	Female		Male	
City Resident	Frequency	Percent	Frequency	Percent
No	111	59.4	107	57.2
Yes	76	40.6	80	42.8
Total	**187**	**100.0**	**187**	**100.0**

From the study findings, 111 (59.4%) and 107 (57.2%) of the female and male respondents do not stay within the city but come from outside of the city for the services. Only 42.8% of the respondents are city dwellers. These findings showed that during the study period, a large percentage of those seeking CHCT services were not city residents, a probable indicator that often times; people seek counseling and testing services away from their residence.

4.3.7 Number of children per respondent

Child bearing and upbringing has recently been associated with increased uptake of HIV counseling and testing services. The researcher sought to establish the number of children each respondent had, whether with the present partner. The findings are summarized in Table 4.8.

Table 4.8: Number of Children per Respondent

	GENDER			
	Female		Male	
Number of Children	Frequency	Percent	Frequency	Percent
0	61	32.6	60	32.1
1-3	92	49.2	80	42.8
4-6	30	16.0	32	17.1
7-9	4	2.1	12	6.4
10-12	0	0.0	3	1.6
Total	**187**	**100.0**	**187**	**100.0**

From the study findings, 61 (32.6%) and 60 (32.1%) of the female and male respondent respectively reported not having any child at all while 92 (49.2%) and 80 (42.8%) of the female and male respondents respectively reported having between 1 and 3 children. Also, 30 (16%) and 32 (17.1%) of female and male respondents respectively reported having between 4 and 6 children. The rest of the respondents reported between 7 and 12 children.

A majority of the respondents (78.4%) had at most 3 children with less than 2% having 10 children and above. People with fewer children and who are still within their reproductive age group are shown by the study to frequently utilize CHCT services. This may reflect the current drive by the Ministry of Health through NASCOP to increase uptake of provider initiated testing and counseling (PITC) especially among pregnant women and other outpatient attendees.

4.3.8 Personal Factors Enhancing Couples' HIV Counseling and Testing Uptake

In view of personal factors, the study, through the question: "What influenced/motivated you to seek CHCT/VCT services today?" sought to find out positive factors enhancing CHCT uptake within the city. The findings were as illustrated in table 4.9.

Table 4.9: Personal motivators to Couples' HIV Counseling and Testing Uptake

	GENDER			
	Female		Male	
Personal CHCT Motivators	**Frequency**	**Percent**	**Frequency**	**Percent**
Know each others Status	161	86.1	161	86.1
Pregnancy	26	7.0	0	0.0
Sickness	18	9.6	23	12.3
Prior to Marriage	17	9.1	16	8.6
Partner Referral	16	8.6	26	13.9
Infidelity	4	2.1	3	1.6
Child Sickness	1	0.5	1	0.5
Reunion	12	6.4	12	6.4
New Relationship	23	12.3	25	13.4
Repeat Testing	11	5.9	11	5.9

Study results showed that 161 (86.1%) female respondents and a similar number of male respondents tested in order to know each others HIV status with 26 (7%) of the female respondents testing in relation to pregnancy. Sickness of either self or partner was reported as the reason behind testing by 18 (9.6%) and 23 (12.3%) of the female and male respondents. Testing as a requirement prior to marriage was reported by 17 (9.1%) and 16 (8.6%) of female and male respondents respectively. Sixteen (8.6%) and 26 (13.9%) of the female and male respondents reported seeking CHCT services after being referred by their partners. Infidelity on the other hand was reported by 4 (2.1%) and 3 (1.6%) of the female and male respondents as the reason behind CHCT uptake. Less than 1% of both male and female

respondents reported testing due to a sick child. Twelve (6.4%) of female and equal number of male respondents reported CHCT uptake while re-uniting. Testing due to a new sexual relationship was reported by 23 (12.3%) and 25 (13.4%) of the female and male respondent respectively, with 11 (5.9%) of either gender reporting repeat/confirmatory testing.

From these findings, it is evident that the desire to know each others status was the major personal reason behind CHCT uptake, standing at 86.1% for both male and female respondents. This was followed by new relationships at 12.8%. Modalities to increase people's desire to know each others HIV status are therefore necessary to sustain the drive behind CHCT uptake within the study area and the rest of sub-Saharan Africa.

4.3.9 Personal Barriers to Couples' HIV Counseling and Testing Uptake

Despite the drive to increase CHCT uptake, some factors have been reported to hinder service uptake. The study sought to find out these personal barriers to CHCT uptake. The findings on barriers are summarized in table 4.10.

Table 4.10: Personal Barriers to Couples' HIV Counseling and Testing Uptake

	GENDER			
	Female		Male	
Personal Barriers	**Frequency**	**Percent**	**Frequency**	**Percent**
Being Married	64	34.2	66	35.5
Stigma/discrimination	54	28.9	76	40.9
Fear of rel. discord	116	62.0	122	65.6
Unfaithfulness	43	23.0	38	20.4
Partner Refusal	90	48.1	10	5.4
Unstable relationship	5	2.7	3	1.6
Lack of time together	10	5.3	10	5.4
Advanced age	1	0.5	5	2.7

Responses to the question: "What, in your opinion, makes people not to uptake CHCT services?" were analyzed in an attempt to establish personal barriers to CHCT uptake. Being married/in a sexual relationship for a long period was reported by 64 (34.2%) and 66 (35.5%) of the female and male respondents as leading to low risk perception and therefore making such couples not to seek CHCT uptake. Fear of stigma and discrimination was reported by 54 (28.9%) and 76 (40.9%) of the female and male respondents respectively, while fear of relationship discord based on the HIV status was reported by 116 (62.0%) and 122 (65.6%) of female and male respondents. Unfaithfulness was also reported, with 43 (23.0%) and 38 (20.4%) of the female and male respondents reporting this as a reason preventing uptake. Ninety (48.1%) of female respondents against 10 (5.4%) of male respondents reported partner refusal as a barrier to CHCT uptake. Unstable relationships, lack of time together as couples and advanced age were also reported by some participants across gender as barriers to CHCT uptake within the city.

Based on these results, fear was reported by a majority of respondents, with 63.8% reporting the fear of relationship discord while 34.9% of the respondents reported fear of stigma and discrimination as the reason behind many people not coming out to seek and uptake CHCT services. The findings from this study were in agreement with findings from a study in Kilifi, Kenya (Davies, 2006) which showed fear was the greatest barrier to CHCT service uptake. The Kilifi study showed that respondents fear going to the VCT site; having ones HIV positive status known in the community; sickness; lack of treatment; quarrelling with partner and marital problems; abandonment/isolation form family and community; partner reaction; early death caused by shock; committing suicide after finding HIV positive status; and death. 34.9% of the respondents reported low risk perception as a result of long duration in marriage or sexual relationship as a reason preventing uptake. Lack or breech of confidentiality (perceived or real) was identified among the major deterrents to CHCT uptake

within the study area. These findings are in agreement with findings by Ayuo et al, 2009 and de Graft-Johnson, Paz-Soldan, Kasote, and Tsui, (2005) and Morin et al., (2006) that indicated that those who seek counseling and testing have a high risk perception and do not mind seeking testing and counseling services yet very few such individuals exist.

4.4 Service Factors Influencing Couples' HIV Counseling & Testing service uptake

The researcher sought to find out factors in the control of service providers that influence CHCT uptake. This include prior testing during which CHCT information could have been delivered, and provider initiated counseling and testing especially during antenatal clinic and while seeking medical care.

4.4.1 Prior Testing for HIV

For all participants, the study sought to establish whether they had previously tested for HIV or not irrespective of whether it was individual testing or CHCT. This was in order to find out the extend to which partners refer each other for testing. The researcher also sought to establish those who had been unwell that sought medical attention in any health facility. This was to be compared to the proportion of those who learnt about CHCT from a health care worker as captured under information sources as documented in section 4.5. People often get information through different media. This is illustrated in table 4.11 below.

Table 4.11: Prior Testing for HIV by Gender

	GENDER			
	Female		Male	
Prior HIV Testing	Frequency	Percent	Frequency	Percent
No	44	23.5	93	49.7
Yes	143	76.5	94	50.3
Total	**187**	**100.0**	**187**	**100.0**

One hundred and forty three (76.5%) and 94(50.3%) female and male respondents respectively reported having had HIV testing prior to the study. A majority of female (76.5%) than male (50.3%) respondents had therefore been tested for HIV prior to visiting the selected centres as a couple. It is common knowledge that women have better health seeking behaviour as compared to men. As will be seen in table 4.8, only 17% and 14% of female and male respondents respectively reported being informed about CHCT by a health care worker. Partner arousal was also reported (see table 4.8) among 7% and 14% of female and male respondents respectively, indicating that VCT and health care workers need to encourage their clients and/or patients not only to test but also to refer their sexual contacts for the same.

4.4.2 Seeking Medical Care last one Year

The study sought to find out the role played by health care workers in encouraging counseling and testing for HIV. This was through first asking each respondent whether or not they had sought health care in the last one year prior to the study. The findings are illustrated in table 4.12.

Table 4.12: Sort Medical Care

	GENDER			
	Female		Male	
Sort Med Care	Frequency	Percent	Frequency	Percent
No	69	36.9	124	66.3
Yes	118	63.1	63	33.7
Total	**187**	**100.0**	**187**	**100.0**

A majority of the respondents (51.6%) had not sought medical care in the past year, with more females (63.1%) than males (33.7%) reporting having sought health care. This

implies that most of those who visit VCT centres are healthy individuals and may not have interacted with health care workers in one year prior to the interview.

4.4.3 Couples' HIV Counseling and Testing Information while Seeking Medical Care

In line with section 4.4.2, the study sought to find out the extent to which health care workers spread information on counseling and testing for HIV. Table 4.12 indicates that 181 (48.4%) of the respondents had sought health care within one year prior to questionnaire administration. The researcher asked all those who reported seeking health care whether or not they were offered a HIV test and informed about CHCT. The findings are illustrated in table 4.13.

Table 4.13: HIV Test and Couples' HIV Counseling and Testing Information while seeking Medical Care

		GENDER			
HIV Test/CHCT Inform. Offered		**Female**		**Male**	
		Frequency	**Percent**	**Frequency**	**Percent**
HIV Test Offered	No	66	55.9	42	66.7
	Yes	52	44.1	21	33.3
CHCT Info Given	No	87	73.7	47	74.6
	Yes	31	26.3	16	25.4
Total		**118**	**100.0**	**63**	**100.0**

Out of 181 respondents who reported having sort medical care in the past one year prior to the study, 52 (44.1%) and 21 (33.3%) female and male respondents respectively reported being offered HIV counseling and testing by the health care provider. Also, 31 (26.3%) and 16 (25.4%) of the female and male respondents who reported having sort medical care received information on CHCT services. Health care workers are therefore not a

common source of CHCT information within the study area. The drive towards provider initiated testing and counseling (PITC) should therefore be reinforced in order to prevent high numbers of missed opportunities.

4.4.4 Couples' HIV Counseling and Testing Information While Child Received care

Children's clinics are lately playing the role of information giving with respect to HIV/AIDS. A number of parents have made decisions to take up VCT/CHCT after being counseled and/or advice by an attendant at the child welfare clinic or event outpatient or inpatient sections. The study sought to establish from those respondents who had children whether any of them was admitted or treated in the past one year. For those who responded to the affirmative, they were asked whether a HIV test was offered to the child and VCT/CHCT information offered to them. The findings are summarized in table 4.14.

Table 4.14: Child Treatment as a source of Couples' HIV Counseling and Testing Information

		GENDER			
CHCT Information through Child Clinic		**Female**		**Male**	
		Frequency	**Percent**	**Frequency**	**Percent**
HIV Test Offered to Child	No	35	92.1	10	71.4
	Yes	3	7.9	4	28.6
Given Info on CHCT	No	36	94.7	12	85.7
	Yes	2	5.3	2	14.3

Based on the results, 3 (7.9%) and 4 (28.6%) of the female and male respondents who reported having a child treated were offered a HIV test, with 2 (5.3%) and 2 (14.3%) of the female and male respondents also reporting being given CHCT information. From the findings, only 7.7% of the 52 parents (mostly females) who reported having had a sick child

treated in a health facility received information on CHCT services. At the same time, only 13.5% of the sick children were offered a HIV test, meaning that a similar number of parents were offered a HIV test since it is a requirement that the parents consent to self testing before their child is also tested. These results mirror the number of missed opportunities with respect to knowledge of HIV status within our health facilities. It is noteworthy that provider initiated testing and counseling (PITC) has lately been gaining ground, with health care workers increasingly introducing both out-patients and in-patients to the importance of taking a HIV test either as an individual or as a couple.

4.5 Community Factors Influencing Couples' HIV Counseling and Testing uptake

Factors within the community in which couples live and work often play a crucial role in encouraging or discouraging VCT/CHCT service uptake. The study sought to establish such factors including stigma and discrimination, role of Influence Network Agents (INAs) or community own resource persons (CORPs), and other community outreach/mobilization strategies that create awareness. The findings are summarized in table 4.15.

4.5.1 Couples' HIV Counseling and Testing Information Sources within the Community

According to the Information Motivation and Behavioural skills (IMB) model by Fisher and Fisher 1992, having information about a service often leads to community members seeking such services. The study sought to find out the mode(s) through which respondents learnt about CHCT services. Some respondents learnt about CHCT through multiple modes while others reported only one mode. It was therefore imperative for the research team to find out common information sources within the study community with respect to HIV/AIDS with special reference to CHCT services. This way, the research team

hoped to collect information on the frequently used channels of communication and awareness creation within the catchment area while at the same time identifying modes that have shown positive outcomes elsewhere yet are dormant for recommendations on activation. Table 4.15 summarizes the findings on CHCT information sources.

Table 4.15: Sources of Couples' HIV Counseling and Testing Information by Gender

	GENDER			
	Female		Male	
CHCT Information Sources	**Frequency**	**Percent**	**Frequency**	**Percent**
Pamphlets	14	8.5	25	14.7
Family Members	8	4.8	6	3.5
Radio/TV	71	43.0	80	47.1
Accelerated Mobilization	21	12.7	25	14.7
CBO	3	1.8	3	1.8
NGO	3	1.8	6	3.5
Door To Door Campaigns	20	12.1	18	10.6
Faith Based Organization	8	4.8	6	3.5
Peer Educator	2	1.2	0	0.0
School Function	5	3.0	0	.0
Signpost	21	12.7	27	15.9
Friends	27	16.4	25	14.7
Social Events	19	11.5	21	12.4
Influence Network Agent	5	3.0	2	1.2
VCT Site	54	32.7	60	35.3
Workplace	2	1.2	4	2.4

The study findings, radio and television were reported by 71 (43.0%) and 80 (47.1%) of the female and male respondents respectively while VCT centre staff where reported as information sources to 54 (32.7%) and 60 (35.3%) of the female and male respondents respectively. Written information sources were also reported as follows: Signposts by 21

(12.7%) and 27 (15.9%) female and male respondents respectively and pamphlets/leaflets/fliers by 14 (8.5%) and 25 (14.7%) female and male respondents respectively. Accelerated mobilization, where public address systems are used to broadcast information on roads, at market places and other community venues was reported by 21 (12.7%) and 25 (14.7%) of female and male respondents respectively while social event was reported as an information source by 19 (11.5%) and 21 (12.4%) of female and male respondents respectively. Faith based organizations including churches and mosques were reported as information sources by 8 (4.8%) and 6 (3.5%) of the female and male respondents respectively, with friends informing 27 (16.4%) and 25 (14.7%) of female and male respondents respectively. Information sources including NGOs, CBOs, family member other than partner, peer educators, school functions, work place and influence agent networks reported by less than 5% of respondents across gender.

It is evident from the findings that the Television and Radio both played a crucial role in informing the community about CHCT, with 43.0% and 47.1% female and male respondents respectively reporting having learnt of CHCT through this media. This was followed by VCT counselors who attend to individual testers, reported by 32.7% and 35.3% female and male respondents respectively. Other methods that have been reported prominently in other regions seem less aggressive within the study area. For example, influence network agents (INAs) were reported by only 3% and 2% of female and male respondents respectively, yet this method of community mobilization was the most active mode of information in the Kigali and Lusaka study by Allen, et al 2007. In an area where HIV/AIDS research is prominent as compared to other regions of the country, one would have expected that HIV/AIDS researchers have trained and positioned community educators together with other information and mobilization strategies to enhance service uptake. This study however shows otherwise.

4.5.2 Community Factors Enhancing Couples' HIV Counseling and Testing Uptake

The study sought to establish from among the participants, factors within their community of residence that encourage couples to seek CHCT services. The responses are summarized in table 4.16.

Table 4.16: Community Factors Enhancing Couples' HIV Counseling and Testing Uptake

	GENDER			
	Female		Male	
Motivator	Frequency	Percent	Frequency	Percent
INA/CORPs	1	0.5	4	2.1
Door-to-Door	11	5.9	11	5.9
Increased Awareness	165	88.2	170	90.9

From the findings, 165 (88.2%) and 170 (90.9%) female and male respondents respectively reported that having increased awareness about CHCT and its benefits was the drive behind seeking the services. Also, 11 (5.9%) across gender reported having sought CHCT services following door-to-door campaigns to promote the service while only 1 (0.5%) and 4 (2.1%) female and male respondents respectively reported encouragement from an influence network agent/community own resource person.

It was evident that increased awareness of service availability and therefore access both as an individual and within the community context was the major drive towards CHCT service uptake among the respondents. Influence network agents/community own resource people played an ignorable role in encouraging members of the community to seek CHCT services. As already shown in table 4.15, only 2.1% of the respondents reported knowledge of CHCT services through such agents. This is therefore an outfit that though active elsewhere, has played a minimal role with regards to community education on HIV/AIDS matters.

4.5.3 Community Barriers to Couples' HIV Counseling and Testing Uptake

The community within which people live and operate could also act as a barrier to uptake of some essential services. The study sought to establish factors within the community that based on respondents, act as barriers to successful implementation and uptake of CHCT services. The findings are illustrated in table 4.17.

Table 4.17: Community Barriers to Couples' HIV Counseling and Testing Uptake

	GENDER			
	Female		Male	
Barrier	**Frequency**	**Percent**	**Frequency**	**Percent**
Stigma/Discrimination	54	28.9	76	40.9
Unavailable Services	21	11.2	9	4.8
Unaware of service	11	5.9	15	8.1

From the results, the fear of stigma and discrimination was reported by 54 (28.9%) and 76 (40.9%) of female and male respondents respectively while 21 (11.2%) and 9 (4.8%) of the female and male respondents reported unavailable services as a reason preventing CHCT uptake. Although a majority of respondents as illustrated in table 4.16 reported awareness of CHCT services, 11 (5.9%) and 15 (8.1%) of the female and male respondents respectively reported that some couples may not have come forth due to a lack of awareness.

Stigma and discrimination are often a reality in the context of the wider community. In line with the reported personal barriers to CHCT uptake, a majority of the respondents (28.9% females and 40.9% males) reported the fear of stigma and discrimination as the major impediment towards accessing counseling and testing services as couples. It is therefore prudent for community mobilizers to target this aspect in order for the fear to be defeated.

4.6 Logistical Support Factors Influencing Couples' HIV Counseling and Testing Uptake

Personal, Service and Community factors influencing CHCT uptake often intertwine with other factors within the community. These are the logistical support factors and include aspects such as: distribution and location of service delivery points, operating time, cost of service, and staffing levels. From the preceding sections, a minority of participants (8.0%) reported unavailable services as a barrier to CHCT uptake while 5.4% of the respondents (refer table 4.10) reported lack of time together a factor negatively influencing CHCT uptake. The region therefore has the necessary infrastructure supportive of VCT/CHCT services.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS.

5.1 Introduction

This chapter contains summary of findings, conclusion, recommendations, contributions to knowledge, and suggestions for future research.

5.2 Summary of the Findings

The study sought to identify personal factors influencing Couples' HIV Counseling and Testing service uptake in Kisumu city; establish whether service factors influence Couples' HIV Counseling and Testing services among couples in Kisumu city; examine community factors influencing Couples' HIV Counseling and Testing within the city; and determine whether logistical support factors influence Couples' HIV Counseling and Testing service uptake in Kisumu city.

On personal factors influencing CHCT uptake, findings from the study revealed that most respondents (72.9%) were below 35 years of age seeking CHCT services were in married with 97% of them having at least some level of basic education. A majority (60.7%) of the respondents reported being in married monogamous relationships with 24.1% dating. With respect to length of the relationship, a majority of the respondents (64.2%) reported having been together with their partners for at most 5 years. Most of the respondents who reported to be married of cohabiting (95%) reported staying together all the time, with 78.4 % having at most 3 children. From the study, it was also found out that most (58.3%) of those who visit utilized CHCT services were non city residents.

The study sought to find out personal motivators to CHCT as reported by the respondents. Although multiple responses were often received, a majority (86.1%) of the

respondents reported the desire to know each other's HIV status as the drive behind seeking CHCT uptake. With respect to personal barriers to CHCT uptake, 63.8% of the participants reported the fear of relationship discord/disharmony as the major cause for not uptake, followed by the fear of stigma and discrimination and low perceived risk due to long duration in marriage, both standing at 34.9%. Against the overwhelming effect of fear therefore, many of the respondents who were mostly of a young age were encouraged to test in order to be aware of each others status.

As much as personal factors get members of couples closer to or further away from counseling and testing service delivery points, factors within the control of the service delivery point may either enhance or hinder decision making with respect to service uptake. The study sought to establish whether or not service factors influenced CHCT uptake, especially with respect to provider initiated testing and counseling, partner arousal/referral and generally awareness creation. From the study findings, 63.4% (76.5% females and 50.3% males) reported having had prior HIV testing, with 181 respondents (48.4%) reporting having sought medical care within one year prior to the study. However, only a minority (26.0%) of those who sought medical care received CHCT information. On the other hand, only 7.7% of respondents who reported having a sick child attended to by a health care provider were given information on CHCT services. Health care providers therefore have an influence through information giving yet the study found out that only a small proportion of those seeking care directly or indirectly receive information and motivation to seek CHCT.

All aspects of mobilization and service delivery occur in the context of a community. The study sought to examine whether factors originating from or within the control of the communities in which people live and work have an influence on CHCT uptake. Such factors include but are not limited to the existence of stigma and discrimination against those who test positive for HIV, community awareness and means of creating such awareness, and

activities of community own resource persons including door-to-door (home based counseling and testing) services. The study found out that the radio and television were the commonest source of CHCT related information with 45.1% of the respondents reporting knowledge through this mode. On the other hand, community own resource persons were reported by less than 3% of the respondents.

With respect to community motivators towards CHCT uptake, a majority of the respondents (89.6%) reported that increased awareness of the service and its availability was the main drive towards utilization. The unending stigma and discrimination within the community was reported by 34.9% of the respondents as being the major barrier that prevents people from coming out to utilize CHCT services. Stigma and discrimination, if defeated through the widespread information would therefore lead to overwhelming uptake of the CHCT and other HIV/AIDS related services.

From the results and also preceding sections, it was apparent that logistical factors always come into play with respect to service utilization. Cost was not reported as a barrier towards uptake by any of the participants, with many reporting awareness and highly accessible service points. Logistical support factors, therefore, well placed, have a positive influence towards CHCT uptake.

5.3 Conclusion

The study was conducted to find out factors influencing couples' HIV counseling and testing service uptake in Kisumu city. It was conceived from the fact that this intervention has promising effects to the fight against HIV/AIDS in Kenya, Sub-Saharan Africa and the world over. With HIV discordance contributing to more than 50% of current HIV incidence in Sub-Saharan Africa, strategies targeting increased counseling and testing service uptake and disclosure appear a sure way towards slowing down the spread of HIV. In line with the IMB

model, the study confirmed that once people get sufficient information about a particular service, and receive the necessary drive (motivation) to utilize the service, only then will they embrace the service. The respondents were informed about CHCT service through the various means identified and so were encouraged to utilize the service, if only to know each others status. In this way, the desired behaviour was demonstrated.

A combination of personal factors, service factors, community factors and logistical support factors influence CHCT uptake. The findings from the study emphasize the personal factors as they interplay in the context of the community and various service factors in enhancing or hindering CHCT uptake. High levels of awareness were reported as the major drive that led respondents into wanting to know each other's HIV status, especially among the young couples who have been in the relationship for less than 30 years. Mechanisms to maintain such levels of awareness are therefore encouraged. Also, since HIV/AIDS related stigma and discrimination was cited as a common reason hindering CHCT uptake, CHCT services should empower members of a couple to negotiate better with each other and their family rather than individual based HIV counseling and testing. A realistic appraisal of one's risk of contracting HIV and the importance of retest may also be emphasized in counseling.

5.4 Recommendations

In view of the study findings, there is no single strategy that can drive any intervention geared towards the fight against HIV/AIDS. Against the backdrop of the study findings, this study recommends the following:

1. A multi-pronged awareness creation strategy towards informing the community members about CHCT availability and advantages. Using HIV prevention and treatment interventions in isolation has proved to be a sure way to failure; the health care workers for example only took care of the ill health in most cases yet they could have informed their patients about HIV

counseling and testing service options and even offered the service. Provider initiated testing and counseling (PITC) should therefore be enhanced.

2. Individuals and organizations involved in HIV/AIDS prevention and treatment need to go beyond awareness creation and follow through to ensure that the desired outcome is achieved. Faith based organizations played a negligible role in enlightening their flock about HIV/AIDS and testing services. Such organizations however have a major influence on individuals and families, what with couples' ministries that have become common in our churches. The researcher recommends that organizations take a lead in showing the way with respect to such HIV prevention interventions.
3. The study also recommends a participatory approach to awareness creation and encouraging members of the community to seek counseling and testing. More often than not, projects dealing with HIV/AIDS and related issues have an 'outsider' tag. By empowering and using community own resource persons (CORPs), those championing CHCT services will be able to succeed. This recommendation is based on the research findings to the effect that influence network agent (INAs) influence was not reported prominently among respondents. Researchers and health care givers alike should therefore focus on community and adult education that would generate CORPs that if well supported, will keep the candle burning.
4. Peers always have an influence on each other. In view of this, the study also recommends that couples who have experienced CHCT form groups with a view of reaching out to other couples out there for counseling and testing. This way, their activities will help demystify the notion that CHCT could lead to stigma and discrimination or even relationship discord as was prominently reported by the study participants. The formation, say of couples ambassadors among those already tested would be a sure way of snowballing leading other couples into VCT/CHCT centres.
5. The involvement of youths in the fight against HIV/AIDS is very crucial. Going by the number of those who reported testing as a requirement prior to marriage (mostly the dating

group), there is need to encourage all young couples to seek CHCT services, not just as a requirement before marriage, but as a service that enhances love and support as they head towards commitment. Coming up with youth friendly CHCT centres would go along way in meeting this obligation.

5.5 Contribution to Knowledge

Research plays a key role in either confirming the existing body of knowledge and/or contributing to the body of knowledge. The contribution to knowledge by the Kisumu city study is summarized in table 5.1.

Table 5.1: Study's Contribution to Knowledge

Objective	Contribution to body of knowledge
1. To identify personal factors influencing Couples' HIV Counseling and Testing service uptake in Kisumu city	- The study found out that the need to know each other's HIV status is a major driver towards CHCT uptake.
2. To establish whether service factors influence Couples HIV Counseling and Testing in Kisumu city	- Health care workers have a major role to play in creating and sustaining awareness on HIV/AIDs and available prevention strategies.
3. To examine community factors influencing Couples' HIV Counseling and testing uptake in Kisumu city.	- Fear, especially of HIV/AIDS related stigma and discrimination remains the leading barrier to CHCT uptake.
4. To determine whether logistical support factors influence Couples, HIV counseling and testing uptake in Kisumu city.	- Many logistics have been put in place and therefore enhance rather than hinder CHCT uptake.

5.6 Suggestions for Further Research

The study established factors influencing CHCT service uptake among couples seeking the service within VCT/CHCT centres in Kisumu city. CHCT is a relatively new concept that will potentially mitigate the effects of HIV/AIDS within the couple and family setup and the community at large. Further research is therefore suggested in the following areas:

1. Community perceptions on HIV/AIDS research practice
2. The impact of HIV/AIDS research in preventing HIV/AIDS and its effects to the community
3. Neutralizing the fear factor as a leading barrier towards access to HIV/AIDS prevention and/or treatment services.
4. Are couples' counseling and testing approaches, including those that have post-test support for discordant couples, effective in mitigating negative social outcomes, including violence against women?

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APPENDICES

Appendix I

Letter of Transmittal

Mr. Jackson O. Achando

P.O. Box 614-40100, Kisumu.

Tel: +254 734 713 593

April 23, 2010.

Dear Respondent,

RE: REQUEST FOR RESEARCH PARTICIPATION

The above refers. I am a final year Master of Arts student in Project Planning and Management of the University of Nairobi. As part of the requirements for the course, I am undertaking a study on factors influencing Couples' HIV Counseling and Testing service uptake within the city of Kisumu.

You have been nominated to participate in the ongoing research study on factors influencing couples' HIV counseling and testing service uptake in Kisumu city. The interview will take no more than ten (10) minutes and will be incorporated within your counseling and testing service package. Your participation is purely voluntary and so you do not risk losing any benefits from this VCT site if you decline participation. If you choose to participate, please give as accurate and honest answers as possible. Your responses will help inform future decisions on CHCT promotion and delivery strategies.

I humbly submit my request for part of your time while being attended to respond to a set of questions concerning HIV/AIDS counseling and testing and decision making dynamics. As a confidentiality measure, your name will not be required. As a sign that you are willing to take part in this survey, however, you will sign or mark on the questionnaire before you are asked questions. A copy of this letter will be given to you to carry home.

Thanks in advance for your support towards this cause.

Yours Truly,

Jackson O. Achando.

Appendix II

Couples' HIV Counseling and Testing Uptake Questionnaire

Couple Code: |__|__|__| PTID: |__|__|__|__| **Site Code:** |__|__|__|

Participant's statement: **I agree to participate in the CHCT uptake Survey**

Sign: _____ Date: _____

Section A: Personal Factors Influencing CHCT Uptake

1. Age of respondent |__|__| (yrs) Gender M |__| F |__|

   City Resident? |__| Yes |__| No

2. Education Level

   |__| None |__| Primary

   |__| Secondary |__| Tertiary

3. Number of children |__|__|

4. Are you currently in a relationship? |__| Yes |__| No

a. If yes, how would you describe the status of your partnership?

|__| Married Monogamous |__| Married Polygamous

|__| Reuniting |__| Regular Sex Partners

|__| Dating |__| Casual sex partners

|__|Co-Habiting |__| Other **(Specify)** _____

b. How long have you been in this relationship?

|__|__|Years and |__|__|Months

c. Do you stay together as a couple? |__| Yes |__| No

d. If yes above, how often do you stay together?

|__| All the time |__| On weekends |__| One/two weekend(s) per month

|__| Every 3 months |__| Other **(Specify)** _____

5. Have you ever been tested for HIV before?

   |__| No |__| Yes |__| Don't know

6. a. What influenced/Motivated you to seek VCT/CHCT services today? (*Mark all that apply*)

|__| To know each other's status |__| My partner first tested (Partner referral)

|__| Self or partner(s) was too sick |__| A requirement prior to marriage

|__| Partner/self Infidelity |__| Child's sickness or positive test result

|__| Reunion/distance relationship |__| Partner pregnant/Plan to get pregnant

|__| New sexual partner |__| Repeat testing to confirm status

b. What, in your opinion, makes people not to uptake CHCT services?

|__| Infidelity/Unfaithfulness |__| Fear of relationship discord
|__| Lack of time together |__| Unstable relationships
|__| Advanced Age |__| Partner refusal
|__| Low risk perception following longstanding relationships

Section B: Service Factors Influencing CHCT Uptake

7. Have you ever sought medical care at any health facility in the past year? (*Prompt as applicable-A note alongside response encouraged*)

|__| No ⟶ **Go to item 10** |__| Yes ⟶ **Go to item 8**

8. Was an HIV test offered to you? (***Prompt as applicable***)

|__| No |__| Yes

9. Were you given information on Couples HIV Counseling and Testing (CHCT) at that time?

|__| No |__| Yes |__| Don't Know

10. Have any of your children been admitted to a health facility in the last year?

|__| Yes |__| No ⟶ **Go to item 13**
|__| I don't have any children yet ⟶ **Go to item 13**

11. Was an HIV test offered to your child

|__| Yes |__| No ⟶ **Go to item 13**
|__| Don't Know ⟶ **Go to item 13**

12. Were you given information about CHCT at this time?

|__| No |__| Yes

13. In your own opinion, how have the health service facilities/workers influenced CHCT service uptake within the area?

|__| Involvement of community own resource people in awareness creation (INAs/CHWs)
|__| Counseling by ANC/PMTCT/Health service provider (PITC)
|__| Service providers visiting at home (HBCT) or in the community (mobile)
|__| Other (Specify): _____

Section C: Community Factors Influencing CHCT Uptake

14. Prior to today's visit, had you heard of CHCT?

|__| Yes |__| No ⟶ **Go to item 16**

15. How did you hear about CHCT? (*Mark all that apply*)

|__| Pamphlets/fliers/posters/newspapers
|__| Family members
|__| Radio/Television
|__| Accelerated mobilization
|__| Community based organization (CBO)
|__| Non-Governmental Organization (NGO)
|__| Door-to-Door campaign
|__| Faith based Organization
|__| Peer educator
|__| School function (PTA, BOG, child)
|__| Signpost
|__| Friends
|__| Social events
|__| Through sex partner/spouse
|__| Couple ambassador
|__| CAG/CAB
|__| VCT site
|__| Health care worker
|__| At the workplace
|__| Other **(Specify)**

_____

16. What are the factors within your community that enhance/promote CHCT service uptake? (*Mark all that apply*)

|__| Increased Awareness of service availability
|__| HBCT/Mobile services
|__| Community own resource persons activities
|__| Door -to- Door campaigns
|__| Other (Specify): _____

17. Some couples have come for CHCT, whilst others still have not. Can you think of any reason(s) within the family/community as to why couples may not have come for counseling and testing together? (*Prompt for and Mark all that apply*)

|__| Fear of stigma and discrimination
|__| Unavailable/inaccessible services
|__| Unaware of availability of CHCT services
|__| Cultural/Traditional beliefs
|__| Religion against counseling and testing
|__| Other (Specify): _____

Section D: Logistical Support Factors Influencing CHCT Uptake

18. Some factors beyond our control influence the extent to which people utilize a particular service. Please mention some of the factors influencing CHCT uptake in the city.

- |__| Inaccessible location
- |__| Inconvenient working hours
- |__| Concentration of VCT centres within town
- |__| Unaffordable costs
- |__| Other (Specify): _____

Thank you very much for your participation

Appendix III

Regional Statistics for HIV & AIDS, end of 2008

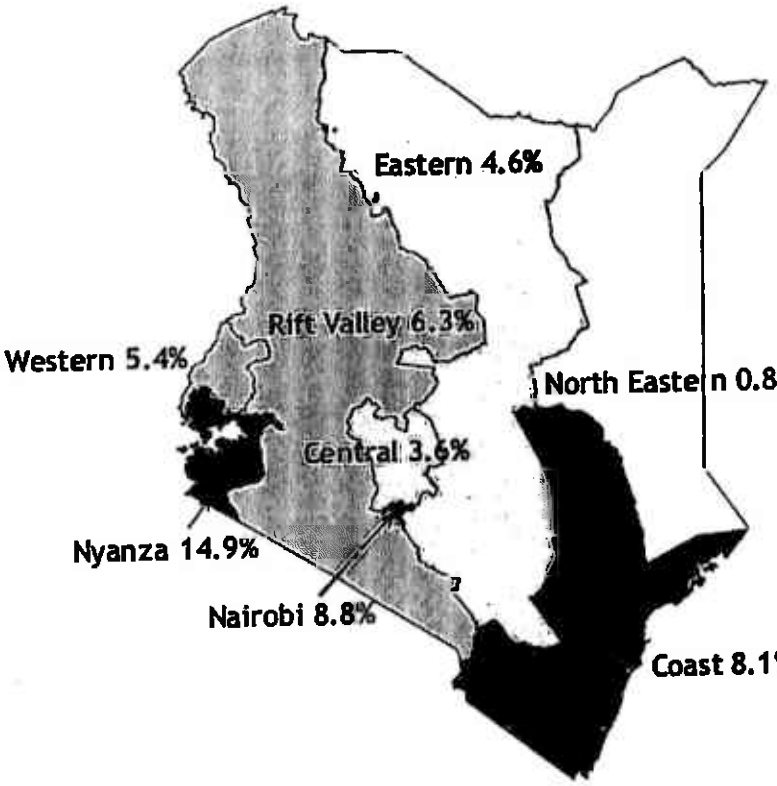
Region	Adults & children living with HIV/AIDS	Adults & children newly infected	Adult prevalence*	Deaths of adults & children
Sub-Saharan Africa	22.4 million	1.9 million	5.2%	1.4 million
North Africa & Middle East	310,000	35,000	0.2%	20,000
South and South-East Asia	3.8 million	280,000	0.3%	270,000
East Asia	850,000	75,000	<0.1%	59,000
Oceania	59,000	3900	0.3%	2,000
Latin America	2.0 million	170,000	0.6%	77,000
Caribbean	240,000	20,000	1.0%	12,000
E. Europe & Central Asia	1.5 million	110,000	0.7%	87,000
North America	1.4 million	55,000	0.4%	25,000
Western & Central Europe	850,000	30,000	0.3%	13,000
Global Total	33.4 million	2.7 million	0.8%	2.0 millio

* Proportion of adults aged 15-49 who were living with HIV/AIDS

Source: UNAIDS (2009, November), 'AIDS epidemic update'

Appendix IV

HIV Prevalence in Kenya by Province



Kenya: 7.1%

Source KAIS Final Report; September 2009

Appendix V

Research Authorization Letter

REPUBLIC OF KENYA

NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telegrams: "SCIENCETECH", Nairobi
Telephone: 254-020-241349, 2213102
254-020-310571, 2213123.
Fax: 254-020-2213215, 318245, 318249
When replying please quote

P.O. Box 30623-00100
NAIROBI-KENYA
Website: www.nest.go.ke

Our Ref: NCST/RR1/12/1/SS/440/3

Date: 25th May 2010

Mr. Jackson Opoti Achando
University of Nairobi
Kisumu Campus
P. O. Box 825
KISUMU

Dear Sir,

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Factors influencing couples' HIV counselling and testing uptake in Kisumu City, Kenya"*** I am pleased to inform you that you have been authorized to undertake research in **Kisumu District** for a period ending ***31st July 2010.***

You are advised to report the **District Commissioner, the District Education Officer and the Provincial Director of Medical Services, Nyanza Province** before embarking on the research project.

On completion of the research, you are expected to submit two copies of the research report/thesis to our office.

P. N. NYAKUNDI
FOR: SECRETARY/CEO

Copy to:

Appendix VI

Research Clearance Permit

PAGE 2

THIS IS TO CERTIFY THAT:

Prof./Dr./Mr./Mrs./Miss ACHANDO JACKSON OPOTI

of (Address) UNIVERSITY OF NAIROBI P.O. BOX 30197, NBI

has been permitted to conduct research in ... Location,

KISUMU District,

NYANZA Province.

on the topic FACTORS INFLUENCING COUPLES' HIV COUNSELING AND TESTING UPTAKE IN KISUMU CITY KENYA.

for a period ending 31ST JULY 20 10

PAGE 3

Research Permit No NCST/RRI/12/1/SS/440

Date of Issue 25/05/2010

Fee received SHS 1,000

Applicant's Signature

Secretary
National Council for
Science and Technology

CONDITIONS

1. You must report to the District Commissioner and the District Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit
2. Government Officers will not be interviewed with-out prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, mining and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2)/four(4) bound copies of your final report for Kenyans and non-Kenyans respectively.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

GPK6055 mt 10/2009

REPUBLIC OF KENYA

RESEARCH CLEARANCE PERMIT

(CONDITIONS — see back page)

Appendix VII

Introductory Letter from the Kisumu East DC

OFFICE OF THE PRESIDENT

Telegrams: "DISTRICTaR", Kisumu
Telephone:
When replying please quote

ADM.4/8 VOL.IX/(208)

OFFICE OF THE DISTRICT COMMISSIONER
KISUMU EAST DISTRICT
P.O. BOX 1921 - 40100
KISUMU

27th May 2010

The District Officer
WINAM DIVISION

RE: RESEARCH AUTHORIZATION
JACKSON OPOTI ACHANDO

The above named is a student at the University of Nairobi.

He has been authorized to carry out research on **"Factors Influencing couples' , HIV counseling an testing uptake in Kisumu City, Kenya"** for a period ending 31st July, 2010.

You are therefore asked to accord herthe necessary assistance he requires.

(WILLY CHEBOI)
FOR: DISTRICT COMMISSIONER
KISUMU EAST DISTRICT

c.c. The District Education Officer
KISUMU EAST DISTRICT

The Provincial Director of Medical Services
NYANZA PROVINCE.

Jackson Opoti Achando

Appendix VIII

Introductory Letter from the Nyanza PDMS

MINISTRY OF MEDICAL SERVICES

Telegrams: "PROV.(MED)"
Telephone: Kisumu 254-057 2020105
Fax: Kisumu 254-057-2023176
E mail: pmonyanza@gmail.com
When replying please quote

PROVINCIAL MEDICAL HEADQUARTERS
NYANZA PROVINCE
P.O. BOX 721

KISUMU

Ref: GN 18/VOL.II/ (11)

June 04, 2010

TO WHOM IT MAY CONCERN

RE: JACKSON OPOTI ACHANDO

The above underlined has been authorized by the National Council of Science and Technology (NCST) to conduct a research on Factors Influencing Couples' HIV Counseling and Testing uptake in Kisumu city, Kenya in pursuit of an M.A. degree in Project Planning and Management of the University of Nairobi. He has duly presented himself to this office as advised by the approving authority.

This letter serves to introduce him to the management of selected Voluntary Counseling and Testing (VCT) centres within the city for implementation of the said research study. He is henceforth advised to share with this office findings and recommendations made from the research once completed.

Please accord him the necessary assistance that the research team may require.

Thanks,

Dr. Lusi, J. O.
Provincial Director of Medical Services (PDMS),
Nyanza Province, Kenya.

Appendix IX

Introductory Letter from the DEO Kisumu East District

MINISTRY OF EDUCATION

Telegrams:

Telephone: Kisumu (057) 2022626
When replying please quote

DISTRICT EDUCATION OFFICE
KISUMU EAST
P.O. BOX 1914
KISUMU.

REF: KSM/MISC/29/11/(54)

4th June, 2010

TO WHOM IT MAY CONCERN

RE: MR. JACKSON OPOTI ACHANDO

The purpose of this letter is to introduce the above named who is a student of University of Nairobi and would like to carry out research on "Factors influencing couples' HIV counseling and testing uptake in Kisumu East for a period ending 31st July, 2010.

Please accord him the necessary assistance he may require.

REBECCA BUTALANYI
DISTRICT EDUCATION OFFICER
KISUMU EAST.