

Barriers, motivators and benefits influencing the uptake of Couple Voluntary Counselling and Testing in Kilifi, Kenya: *“Kila mtu ana roho yake. Ni uamuzi wake.”*

(Everyone has his own heart and has to decide for himself)

MA EHPID – Master of Arts Education, Health Promotion, and International development.

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2. Glossary

AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Treatment
ANC	Antenatal Clinic
CBO	Community based Organisation
CCRC	Comprehensive Care and Research Clinic
CDC	Centres for Disease Control
CHIVC	Community HIV Centre
CORP	Community Resource Person
CSSN	Couple Social Support Network
CVCT	Couples Voluntary Counselling and Testing
DASCO	District AIDS and STI Coordinator
dc	Discordant couple
DSS	Demographic Surveillance System
DTC	Diagnostic Testing and Counselling
FGD	Focus Group Discussion
HIV	Human Immunodeficiency Virus
IAVI	International AIDS Vaccine Initiative
IMB	Information-Motivation-Behavioural skills model
IUHE	International Union for Health education
KDH	Kilifi District Hospital
KDHS	Kenya Demographic Health Survey
KEMRI-CGMR-C	Kenya Medical Research Centre – Centre of Geographical and Medical Research Coast

NACC	National AIDS Control Council
PLWHA	People Living With HIV AIDS
PMTCT	Prevention of Mother To Child Transmission
SSP	Social Science Perspectives
STI	Sexually Transmitted Infection
UNAIDS	United Nations AIDS
UNGASS	United Nations General Assembly Special Session on HIV/AIDS
VCT	Voluntary Counselling and Testing
WHO	World Health Organisation

3. Abstract

Couples Voluntary HIV Counselling and Testing (CVCT) has increasingly been accepted as an effective public health tool for preventing new HIV infections particularly within HIV discordant couples. Over the past three years, the KEMRI-HIV project has upscaled HIV counselling and testing and introduced CVCT to the Kilifi community on the coast of Kenya. Despite using various innovative health promotion techniques involving community outreaches, mass media and community peer educators, the uptake of the service is thought to be low. Between July and December 2006, we conducted a mixed methodology study to assess the effectiveness of CVCT promotion, estimate the uptake of the service in Kilifi Township and identify barriers, benefits and motivators which may influence couples to take up the service. This study involved a quantitative survey of 211 women aged between 18 and 29, four focus group discussions with community volunteers and 10 in-depth interviews with discordant couples who regularly attend HIV counselling and testing. The Information-Motivation-Behavioural skills model (IMB) was used as a framework to analyse the data.

The study concludes that many women have been made aware of CVCT through health promotion strategies with 12% of women in regular relationships reporting that they had undergone CVCT. Many barriers benefits and motivators were reported, influencing couples' decision-making process with regard to utilising CVCT. Fear of the consequences of testing and trust, both within a relationship, and between the community and the service provider

emerged as important factors influencing CVCT behaviour adoption. Future promotions must be geared towards improving the community's perception of the service provider, giving clear and culturally appropriate information about HIV and CVCT and providing an excellent quality of service to couples.

4. Introduction

The majority of new HIV infections in Africa occur within couple relationships where one partner is HIV infected whilst the other is HIV uninfected (Malamba, Mermin, Bunnell, Mubangizi, Kalule, Marum, Hu, Wangalwa, Smith, and Downing 2005). In Kenya, the prevalence of discordant couples is 7% (Kenya 2004) with a slightly higher prevalence of 9% in urban areas of Kilifi situated on the coast (Sanders 2004). Estimates for annual HIV transmission within HIV sero-discordant couples vary between 7% and 20% depending on whether the couple have received HIV counselling and testing (Allen, Meinzen-Derr, Kautzman, Zulu, Trask, Fideli, Musonda, Kasolo, Gao, and Haworth 2003; Malamba et al. 2005). Many authors argue that Couple Voluntary Counselling and Testing (CVCT) has a great potential to reduce transmission rates in sub-Saharan Africa through the following mechanisms:

- Risk reduction through behaviour change following knowing ones status and education about HIV transmission – this is thought to be particularly effective for discordant couples (Lurie, Williams, Zuma, Mkaya-Mwamburi, Garnett, Sweat, Gittelsohn, and Karim 2003)
- Continuous risk reduction counselling and monitoring of HIV status through regular counselling and testing for HIV discordant couples (Allen et al. 2003)
- Referral of infected partners for care including Anti Retroviral Treatment (ART) – lowering of viral load following ART lowers transmission within discordant couples (Bunnell, Ekwaru, Solberg, Wamai, Bikaako-Kajura,

Were, Coutinho, Liechty, Madraa, Rutherford, and Mermin 2006; Cohen 2000; Malamba et al. 2005)

Despite improvements in HIV testing facilities and care for People Living with HIV/AIDS (PLWHA), the CVCT service in Kilifi town on the coast of Kenya, is being under utilised. Fewer than 2000 couples have come to know their status together in the past two years at the Community HIV Centre.

4.1 Purpose of the study

In this study I aim to evaluate the effectiveness of community mobilisations aimed at promoting Couple Voluntary counselling and Testing (CVCT) in Kilifi Town. I will also investigate issues surrounding the uptake the service. The findings of this study will guide future HIV prevention interventions in order to make care and testing facilities more accessible to the people of Kilifi Township. In addition to this it is hoped that the study findings will contribute to the wider literature on promotion of HIV counselling and testing.

4.2 Research question

What are the factors influencing couple's decisions to attend or not to attend CVCT in Kilifi Township?

4.3 Specific objectives

1. To estimate the uptake of CVCT amongst urban couples in Kilifi township
2. To explore the community's knowledge about the CVCT service in Kilifi

3. To identify perceived barriers, motivators and benefits of CVCT held by people in Kilifi which may affect their decision to attend CVCT

4.4 Methodology

This study comprises of a combination of qualitative and quantitative data collection methods. The community's uptake, knowledge and awareness of CVCT were evaluated through a survey of 211 women living in urban Kilifi. In-depth interviews with discordant couples and focus group discussions with community resource persons gave a more detailed description of the issues surrounding uptake of CVCT.

4.5 Structure of the work

In this dissertation, I will give an epidemiological description of HIV/AIDS in sub-Saharan Africa and review the literature on HIV counselling and testing in the region. I will focus the review on the factors which affect the decision people make to voluntarily take up the service. An account will be given of some approaches to promotion of Voluntary Counselling and Testing. Following this I will explain how the Information-Motivation-Behavioural skills model (IMB) can be used to organise and analyse adoption of HIV testing.

Following the literature review I will give an overview of the setting where the study took place including some of the research projects and community mobilisations which are currently on-going. A more detailed description of the methodology will be given in the next section.

The results presented will describe the survey participants' demographic background, their relationships, their experience of HIV testing and their awareness of CVCT. I will then present qualitative data generated in the in-depth interviews and focus group discussions.

The findings of the study will be discussed using the IMB as a framework for analysis. Finally I will summarise the implications of the study to future HIV prevention interventions.

5. Literature Review

In order to explore the current literature surrounding couple voluntary counselling and testing (CVCT), a search was carried out using Pubmed and Google scholar. Other papers were sought through the KEMRI reference library in Kilifi Kenya. In order to give focus to the search, preference was given to papers which dealt specifically with couples VCT particularly in Africa. The following key words were used in the search; couples VCT, voluntary counselling and testing, HIV testing, HIV disclosure.

In this review, I will firstly give a brief description of HIV in the world, and in Kenya, focussing on Kilifi. Following this introduction I describe different authors' opinions on modes of HIV transmission in sub-Saharan Africa and the preference many authors have for CVCT in comparison to VCT. I will then describe how the Information, Motivation Behaviour change model (IMB) will be used to analyse the factors which affect people's decision to test for HIV.

5.1 The HIV pandemic and its effects on Kenya and Kilifi

Target 7 of the WHO Millennium Development Goals is to "Have halted by 2015 and begun to reverse the spread of HIV AIDS" (WHO 2004). Between 2005 and 2007, UNAIDS estimated that U.S.\$27 billion was allocated to avert new HIV infections with a third coming from local governments and the rest from international donors (Stover, Bertozzi, Gutierrez, Walker, Stanecki, Greener, Gouws, Hankins, Garnett, Salomon, Boerma, De Lay, and Ghys 2006). This focussed effort and enormous expenditure is perhaps in recognition that

currently over 40 million people are HIV infected (UNAIDS and WHO 2005) with 13,000 new infections daily. Globally, about 8500 deaths to AIDS occurred every day in 2005 with the largest burden of disease in Africa. The table below illustrates the unequal distribution of HIV in the world with sub-Saharan Africa bearing the brunt of the disease burden.

Table 1: New infections and deaths caused by HIV AIDS in sub-Saharan Africa and the world in 2005.

	Daily AIDS deaths	Daily new HIV infections
Global	8493	13425
Sub-Saharan Africa	6575 (77%)	8767 (71%)

Table drawn from (UNAIDS et al. 2005)

In Kenya as well as other East African countries, the epidemic is on the decline with the national HIV prevalence dropping from 10% in the late 1990s to 7% in 2003 (Kenya 2004). This decline, according to the UNAIDS report of 2005, is partly due to behaviour change. However, behaviour change alone cannot account for prevalence drop. Since the 1990's there has been a steady increase in AIDS mortality with an estimated 300 new deaths occurring each day in Kenya in 2004 (Kenya 2005a). It is also argued that a decline in the number of core transmitters accompanying this will result in an overall population decrease in prevalence (UNAIDS et al. 2005; UNGASS 2006).

According to the Kenya Demographic Health Survey (2004) and the NACC databook (Kenya 2005a), 1.3 million people out of a population of 30 million were HIV infected in 2004 with the highest prevalence being amongst women

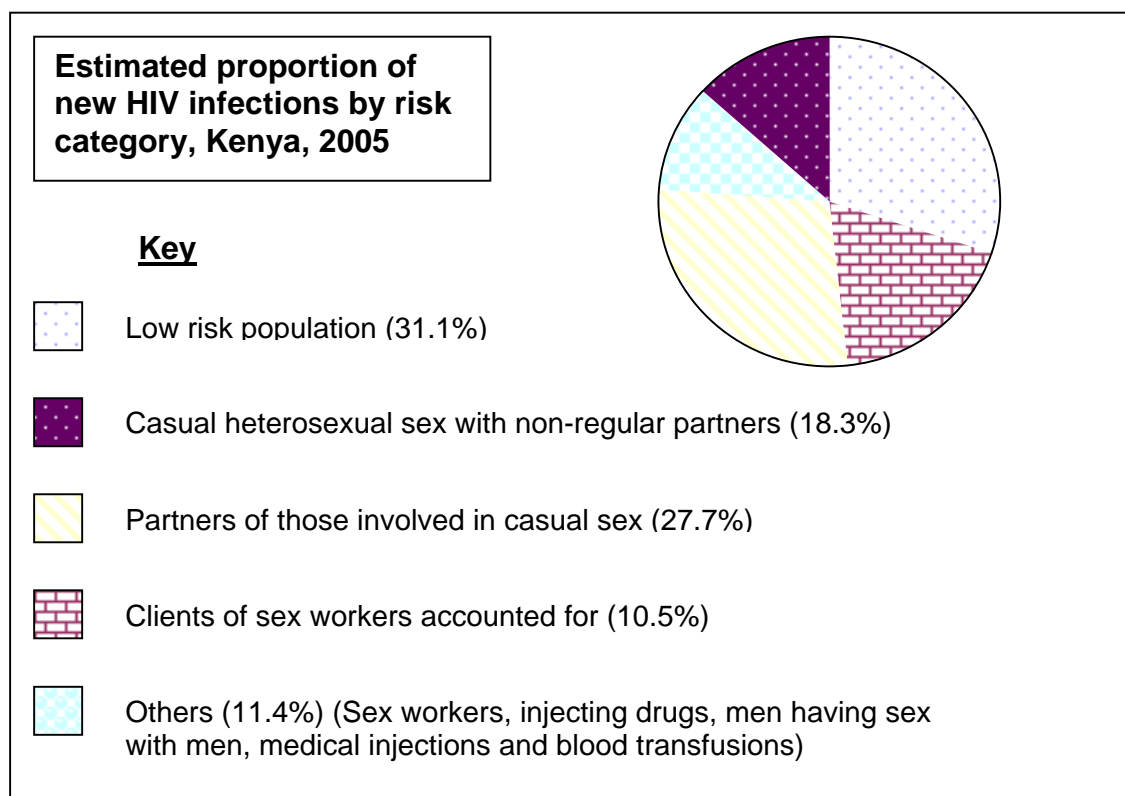
living in urban areas (9.7%). Furthermore, in 2004 an estimated 90,000 new adult infections occurred translating to 250 new infections every day (Kenya 2005a).

In the coast of Kenya, the prevalence was quoted as 5.8% in 2003 (Kenya 2004). In Kilifi, the picture is very similar with urban HIV prevalence in Kilifi town estimated to be 10 % in women and 5% in men (Sanders 2004). This high prevalence is accompanied by poverty, low educational levels, gender differences in educational levels, and cultural practices which may enhance the risk of increased vulnerability to HIV infection (Molyneux, Peshu, and Marsh 2005; Nyaga, Kimani, Mwabu, and Kimenyi 2004; UNGASS 2006). 16% of Kenyan women between the age of 16 and 24 reported receiving money, gifts or favours for sex (UNGASS 2006).

5.2 Transmission of HIV in Sub-Saharan Africa

In order to target resources towards successful HIV prevention interventions, it is important to look at features of HIV transmission for the specific target population. In a mathematical modelling exercise carried out in 2006, it is argued that different regions of the world have different modes of HIV transmission (Gouws, White, Stover, and Brown 2006). In Kenya, Gouws et al estimate that 90% of transmission occurs in heterosexual sex. The pie diagram below illustrates a breakdown of transmission patterns:

Table 2: Estimation of new HIV infections by risk category, Kenya, 2005.



Drawn from Gouws et al. 2006

The two largest proportions of the chart are taken up by the low risk population and the partners of those involved in casual sex. Thus, nearly two thirds of new adult infections potentially occur within cohabiting or married couples. In addition to this, it could be argued that the remaining sections represent opportunities for HIV to enter HIV concordant negative couples. Furthermore, a comparison of the epidemic in various regions of the world suggests that African men and women are more likely to have 2-3 concurrent partnerships overlapping for periods of months or years than Asians or south Americans (Halperin and Epstein 2004). Whilst Gouws et al (2006) recommend

interventions targeting condom use in casual sex, Halperin and Epstein suggest public health efforts geared towards regular partner reduction.

Three studies by Kalichman, Rompa, Luke and Austin (2002), Carpenter, Kamali, Ruberantwari, Malamba and Whitworth (1999) and Lurie et al (2003) attempt to capture the dynamics of transmission into, and within couples in three sub-Saharan countries. HIV infected men, according to Kalichman et al (2002) are significantly more likely to infect a regular partner than a non-regular partner because they are less likely to use a condom with the former.

Carpenter et al (1999) studied the rates of HIV transmission within couples in rural Uganda. In this study involving a 7-year follow-up of 2200 adults in a population cohort, the authors found that HIV incidence in women with HIV infected spouses was twice of that for men with HIV infected wives. Furthermore, they claim that men are twice as likely to bring HIV infection into a previously concordant negative couple relationship. In a study involving South African mine workers, Lurie et al (2003) estimated that migrant and non-migrant men are 26 and 10 times, respectively, more likely to become infected from outside the marriage than from within.

These three studies give an illustration of how couples may become HIV discordant, placing the uninfected spouse at a high risk of HIV infection. All three studies argue for the need for countries to include Couples VCT in their national prevention packages. Lurie et al argue that CVCT may be more effective than individual VCT as a prevention strategy.

Wawer, Gray, Sewankambo, Serwadda, Li, Laeyendecker, Kiwanuka, Kigozi, Kiddugavu, Lutalo, Nalugoda, Wabwire-Mangen, Meehan, and Quinn (2005) estimate the probability of HIV transmission within a discordant couple per coital act. In a study involving 741 couples in stable relationships in Uganda, discordant couples were identified retrospectively and followed up for a maximum period of 40 months. Couples reported an average of 10 coital acts per month and the investigators calculated an HIV transmission of 0.0012 infections per coital act. This rate of infection varies considerably with duration from seroconversion for the infected partner, the rate is estimated to be 100 times higher for uninfected partners of discordant couples than individuals who have sex with partners of unknown HIV status (Varghese, Maher, Peterman, Branson, and Steketee 2002). Varghese et al found that knowledge of partners HIV status significantly reduces the risk of HIV infection. He argues that one way in which individuals can prevent infection is by attending CVCT.

5.3 The mechanisms CVCT presents for HIV risk reduction

A WHO document entitled "The Right to Know" published in 2003 advocates for an upscaling of VCT stating the intervention represents opportunities for:

- Individuals to initiate/maintain reduced risk behaviours
- Individuals to gain early access to HIV treatment and prevention - PMTCT
- Communities to reduce denial, stigma and discrimination

(WHO 2003)

In the next section, I will look at the effectiveness of VCT and CVCT in terms of achieving the above goals.

5.4 Effectiveness of CVCT in changing behaviour

Many authors advocate for the upscaling of CVCT as a means of reducing risk of HIV infection. In a literature review, Painter (2001) refers to several studies strongly advocating for increased HIV counselling targeted towards couples. He argues that CVCT 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 hypothesises that increased numbers of people taking up CVCT 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 upscaling VCT can bring about a reduction in transmission and stigma surrounding HIV. In a very critical assessment of VCT, Kippax argues that although VCT 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. He criticises VCT as being “disempowering” because of its positioning of clients as passive recipients of “top-down” advice. Other studies have demonstrated effectiveness of Couple HIV Counselling and Testing. In this section I will look at studies which have attempted to assess the effectiveness of VCT and CVCT as an HIV prevention intervention.

5.5 VCT and CVCT as Public Health HIV Prevention Tools

In a study offering home based VCT to couples where one partner was already accessing HIV care at an ART clinic, 43% of spouses were found to be HIV uninfected – 99% of whom did not know their HIV status (Were, Mermin, Wamai, Awor, Bechange, Moss, Solberg, Downing, Coutinho, and Bunnell 2006). Misconceptions surrounding discordance, according to Bunnell, Nassozi, Marum, Mubangizi, Malamba, Dillon, Kalule, Bahizi, Musoke and Mermin (2005), prevents acceptance of couple status making negotiation of risk reduction strategies to prevent HIV infection difficult within a couple relationship. These misconceptions included the belief that the uninfected partner was immune to HIV infection.

Matovu, Gray, Makumbi, Wawer, Serwadda, Kigozi, Sewankambo, and Nalugoda (2005) conducted a study which involved HIV testing of over 10,000 people in Rakai, Uganda. This was followed by a prospective assessment of risk behaviour and HIV incidence of acceptors and non-acceptors of VCT. The authors reported that VCT had no effect on VCT acceptor's risk reduction and did not reduce incidence for HIV uninfected persons. However, they argue that the intervention has a higher efficacy in reducing risk behaviour for HIV infected individuals and HIV discordant couples.

Bunnell et al (2006) report reductions in risky behaviour for discordant couples following initiating ART and risk reduction counselling. Risk behaviour was defined as inconsistent condom use with negative partners or partners of unknown HIV status. Coates (2000) found that HIV infected individuals were

more likely to reduce risky behaviour than uninfected individuals. In this paper, Coates suggests that HIV counselling and testing for couples would be most beneficial for detecting undiagnosed infection and preventing infection within HIV discordant couples. This is supported by Weinhardt who conducted a meta-analysis of 27 studies, finding that HIV counselling and testing was most effective as secondary prevention (Weinhardt, Carey, Johnson, and Bickham 1999). Secondary prevention, otherwise known as positive prevention refers to reducing the risk of HIV transmission through counselling HIV infected people. Combining the evidence from Bunnell et al (2006), Coates et al (2000) and Weinhardt et al (1999), it could be argued that CVCT is of most benefit to discordant couples in order to prevent transmission from the infected to the uninfected partner.

5.6 Other mechanisms in which CVCT can lead to HIV risk reduction

Apart from persuading people to adopt lower HIV risk behaviours, there are other mechanisms cited in the literature where CVCT can lead to a decrease in transmission. CVCT can act as a gateway for accessing antiretroviral treatment and male circumcision. The latter is now widely being recognised as giving men protection from HIV infection.

The Right to Know states that VCT can assist HIV infected individuals in accessing care and antiretroviral treatment. Some studies have shown that Antiretroviral treatment can reduce HIV transmission by lowering population viral loads (Bunnell et al. 2006; Cohen 2000; Malamba et al. 2005). Kippax

(2006) counters this argument by stating that the beneficial effects of ART in terms of lowering viral loads may be overwhelmed by sexual disinhibition which may accompany recovery. Bunnell et al defend their earlier claims in 2006 where they states that for 926 HIV-infected adults, providing ART, prevention counselling, and partner VCT was associated with reduced sexual risk behaviour and estimated risk of HIV transmission during the first 6 months of therapy (Bunnell et al. 2006). They conclude that combining ART provision with risk reduction counselling may reduce HIV transmission within discordant couples in Africa.

Many studies have shown the efficacy of male circumcision in giving men a limited degree of protection from infection (Auvert, Taljaard, Lagarde, Sobngwi-Tambekou, Sitta, and Puren 2005; Malamba et al. 2005; Quinn 2007). But as far back as 2000 in Rakai Uganda, transmission within discordant couples where the male partner was uninfected and circumcised was documented to be very low (Gray, Kiwanuka, Quinn, Sewankambo, Serwadda, Mangen, Lutalo, Nalugoda, Kelly, Meehan, Chen, Li, and Wawer 2000) . At the University of Nairobi STD/AIDS Collaborative Group Annual Review meeting in January 2007, Robert Bailey of the University of Illinois reported on a randomised controlled trial of male circumcision in Kisumu Kenya. This yet to be published study, involving 2784 initially uncircumcised men, reports that circumcision gives up to 60% protection against infection. Following these findings HIV research sites supported by IAVI are incorporating messages about the benefits of circumcision to HIV uninfected men in discordant relationships. On an individual level, counsellors also stress the importance of condom use for

circumcised men to prevent behaviour disinhibition which may be caused by a perceived lower risk of infection.

5.7 Community Mobilisation of CVCT

Several authors prescribe a combination of health promotion approaches to optimise coverage and communication of desired community behaviour change (Hubley 2004; IUHE, WHO, and CDC 1991; Kalichman and Simbayi 2004). Hubley 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 organisation and development, legislative and policy development, large-scale campaigns and a wide range of community strategies. An example of how national policy change can increase the uptake of CVCT was 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 CVCT as opposed to individual VCT increased from 8% to nearly a third of all clients in a Ugandan clinic.

In the 80's, many mass media HIV prevention strategies relied on fear arousal as a means of promoting risk reduction (Halperin 2006). An example of this is the "AIDS kills" adverts in Britain. Halperin argues that the stigmatising 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 states that mass media alone is not sufficient to address deeply held traditional beliefs which may act as barriers to adoption of health promoting behaviours. 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, Oduro conveys an essential need for behaviour change strategies to work with social networks (Oduro 2005). 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 was used as a culturally appropriate way of promoting HIV testing in a rural community (Rumsey, Brabin, Mfutso-Bengo, Cuevas, Hogg, and Brabin 2004). Following community dramas community members displayed improved awareness and attitudes towards HIV and VCT.

The literature reviewed suggests that multiple methods of health promotion ranging from large-scale mass media campaigns to culturally appropriate group

or individual peer communication is essential in promoting HIV testing as a healthy behaviour.

5.8 The Information-Motivation-Behavioural skills model (IMB)

The Information-Motivation-Behavioural skills model (IMB) has been selected as a theoretical framework to organise and analyse the data generated in this study. This model has been described in various publications by Fisher et al. (Fisher et al. 1992; Fisher, Fisher, Bryan, and Misovich 2002; Fisher, Fisher, Misovich, Kimble, and Malloy 1996) and used successfully in various studies addressing HIV behaviour change (Kalichman and Simbayi 2003; Kalichman, Simbayi, Cain, Jooste, Skinner, and Cherry 2006)

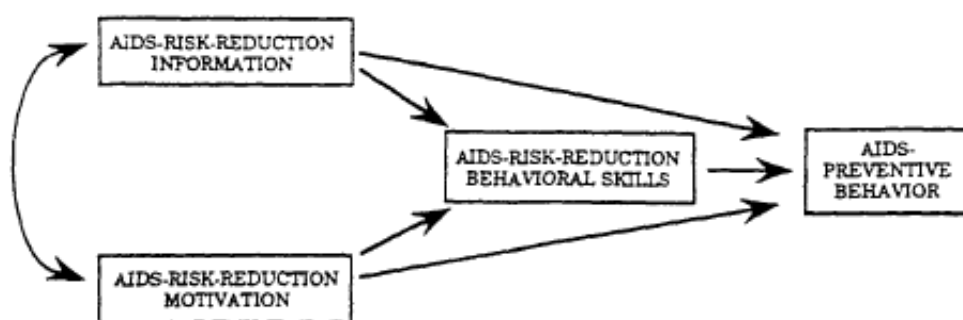
According to the IMB, there are three fundamental determinants of HIV AIDS risk reduction; *Information, Motivation and Behavioural Skills*. A prerequisite to behaviour change is that the individual has *Information* about transmission of HIV and risk reduction strategies. This information need not be too specific, for example, knowledge of t-cells may not be necessary but information should be relevant to the behaviour which is desirable for adoption. According to IMB, Information alone is not sufficient to stimulate behaviour change. To act on this knowledge, *Motivation* is required to perform the behaviour change. For the analysis of the data generated in this project, I have included four factors which influence motivation:

- a) Attitude to behaviour – 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.

- b) Social Norms – The community’s support and acceptance of the behaviour, and perceived costs and benefits of adopting the behaviour. Cultural beliefs may also influence the decision to adopt the desired behaviour.
- c) 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 utilise health services
- d) Barriers – Fishbein (2000) argues that barriers influence people’s motivation adopt HIV prevention strategies

The third fundamental determinant of HIV AIDS risk reduction according to the IMB model is for individuals to possess *behavioural skills* in order to act. In relation of adoption of CVCT, these skills may be for example, the ability of partners to discuss sexual issues, or to be able to engage in public behaviours such as attending HIV testing site. The IMB claims that behavioural skills needed for behaviour change are derived form information about the behaviour and the motivation to adopt it.

Fig 1. Three fundamental determinants of AIDS-risk reduction (Fisher and Fisher 1992)



The IMB prescribes a three-stage mechanism in assessing the effectiveness of risk reduction interventions:

- i. Eliciting existing culturally appropriate info about the behaviour. The use of qualitative methods is encouraged so that all issues are explored which emerge from the specific population.
- ii. Empirically targeted interventions based on the information gathered in the first stage
- iii. Evaluation research to assess the effectiveness of the intervention.

The scope of this study does not allow for following this three stage process in evaluating past interventions. However, qualitative analysis of the data generated in the study within the IMB framework may shed some light on what may work better for future interventions.

5.9 Factors which affect uptake of CVCT – Barriers and perceived benefits

According to the IMB, individuals base their decision to attend HIV counselling and testing on the information they have about HIV and the counselling & testing service, their motivation to adopt the new strategy of attending HIV risk reduction behaviour counselling and on their behavioural skills which will enable them to conduct the desired behaviour. I will 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. For convenience I have divided the barriers and benefits into three sections. In the first sections I

will look at the barriers and motivators which influence both men and women to take up HIV testing services. In the following two sections I will present factors which influence men and women separately. At the end of the review I will present a table summarising all issues mentioned and will attempt to relate them to the determinants of the IMB model.

5.10 Factors affecting the likelihood of HIV testing uptake amongst both men and women.

The amount, type, relevance and quality of information people have about HIV will greatly influence their motivation to utilise the VCT/CVCT service. One factor mentioned in the literature reviewed which may influence motivation was the misunderstanding of discordancy amongst couples (Bunnell et al. 2005). Bunnell et al. describe how couples find it difficult to understand that one partner may be infected whilst the other is uninfected following repeated HIV exposures through unprotected sex. Couples gave several explanations for this including immunity, the negative partner is actually infected, infection is only possible through rough sex and that God gives protection against infection. All of these factors, the authors claim, 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 discordancy lead to people “testing by proxy” (Morrill, 2006). In other words, people assuming that they have the same status as their partners. Bunnell (2005) recommends that counsellors should be empowered with a better understanding of discordancy so that improved messages are given to couples during counselling sessions. A better understanding of discordancy on a

societal level may allow people to understand that their HIV status may be different to that of their partner. This would in turn reinforce the importance of both partners within a couple knowing their HIV status.

In a rural community in Malawi, a study was conducted to document the preferences of HIV Counselling and testing amongst 1516 participants (deGraft-Johnson, Paz-Soldan, Kasote, and Tsui 2005). Many factors were reported to be associated with uptake or desire to uptake VCT. For men and women, knowledge of the location of the test site, an increased perception of HIV risk of infection and knowledge of someone affected by HIV/AIDS increased the likelihood of desiring to attend VCT. Morin et al 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 (Morin, Khumalo-Sakutukwa, Charlebois, Routh, Fritz, Lane, Vaki, Fiamma, and Coates 2006).

In a study by Kalichman et al (2004), the authors report that cultural explanations for HIV and AIDS held by inhabitants of a Black township in Cape Town 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. However they suggest that traditional beliefs about the cause of HIV-AIDS and AIDS stigmas are mediated by AIDS-related knowledge.

Five studies reviewed mentioned fear of confidentiality breaches as a major barrier to uptake of HIV testing. This perhaps is an indication of a lack of faith or

trust clients may have in the testing site's ability to keep HIV test results private (Day, Miyamura, Grant, Leeuw, Munsamy, Baggaley, and Churchyard 2003; de Paoli, Manongi, and Klepp 2004; Fylkesnes, Haworth, Rosensvard, and Kwapa 1999; Matovu et al. 2005; Pool, Nyanzi, and Whitworth 2001).

Two studies reviewed mentioned logistical barriers to accessing VCT and CVCT. Morrin in a study to assess the acceptability of mobile VCT found that for people who lived far away from a testing site, distance, cost and Inconvenient hours were major barriers to uptake (Morin et al. 2006). Fylkesnes et al in a much earlier study mention long waiting time at the clinic as a factor which makes VCT undesirable (Fylkesnes et al. 1999).

Maman, Mbwambo, Hogan, Kilonzo, and Sweat (2001) suggest that men and women often have different motivations for seeking HIV testing services. According to the study, more often than not, men tested as a preventative strategy to confirm negative status whereas women tested to confirm HIV+ status when they or their children were ill. It could be argued that this is perhaps an oversimplification of the different issues men and women have surrounding HIV testing. However, the literature reviewed does imply that men and women have different motivators and barriers a discussed in the next sections.

5.11 Factors affecting the likelihood of HIV testing uptake amongst women

Often social and cultural norms dictate household decision making concerning healthcare preventing women from using or learning new preventative behavioural skills. In a study entitled “Women’s barriers to HIV-1 testing and disclosure,” Maman et al (2001) list the challenges faced by women in Muhumbili, Tanzania. Many of the challenges mentioned cut across all determinants of behaviour change according to the IMB. Affecting the motivation to attend HIV counselling and testing; women feared disclosing of HIV status to their partner and the subsequent reaction of the partner. Many women mentioned their partners held negative attitudes towards HIV testing. Maman et al (2002) in another study conducted in Muhumbili, describe how embedded social norms related to sexuality and physical violence are towards women. These norms can prevent women from adopting behaviours which may have positive outcomes on their health and the health of their children. In another study looking at the barriers women have to HIV testing at hospital maternity wards, Pool et al (2001) agree that fear of physical violence from husbands following a positive test result posed a major barrier to HIV testing. In addition to this, mothers feared stigmatisation from maternity staff. These fears may have been caused by rumours that maternity staff were killing off HIV infected babies as a strategy to prevent HIV. These subjective norms may strongly affect women’s motivation to undergo an HIV test. Another possibility is that women with low self-efficacy construct or use rumours to justify their actions.

Subjective norms can also have a supportive effect on adopting HIV preventative behaviours such as attending CVCT. Maman in his study on women's barriers to HIV-1 testing and disclosure reported that people who had taken up VCT described the social support they received from close friends and family and counsellors as being strong motivators for testing (Maman et al. 2001).

5.12 Factors affecting the likelihood of HIV testing uptake amongst men.

Two of the studies reviewed documented factors which affected men's decisions to take up HIV counselling and testing. For migrant mine-workers in South Africa, a study in 2003 found that even though knowledge of HIV transmission and prevention was good, many barriers were reported preventing men from utilising VCT (Day et al. 2003). This is consistent with the IMB theory, in that information alone is not sufficient to bring about behaviour change. The greatest barrier men faced, according to the study, was fear. This was broken down into; fear of being HIV-positive, fear of knowing positive status and opting for suicide, fear of stigma from colleagues, fear of illness and death and fear of losing one's job. Subjective norms weighed heavily on men's' motivation to test, with fear of peer ridicule preventing men from attending the workplace VCT site. Other significant barriers cited in this paper were a perceived lack of medication for HIV infected individuals following the test¹ and a denial of risk behaviour. Sickness often motivated men to seek HIV counselling and testing with 49% of men saying that men should go for testing when they have an STI,

¹ At the time of this study, ART was not easily available for this community

TB or weight loss. This is perhaps a contrary finding to Maman's (2001) view on the different motivations men and women have for HIV testing.

DeGraft-Johnson et al (2005) report that men with pregnant partners, multiple partners or knowledge of 5 risk reduction methods, perhaps surprisingly, lowered the likelihood of ever being tested. However, among untested men, knowledge of a testing location, a perception of being at a moderate or high risk and HIV preventative behaviours was significantly associated with a desire to be tested. Of those who had never tested, 76% of men and 61% of women reported that they had a desire for testing. Clearly there is a significant difference between "desire to test" and "have ever been tested." It could be argued that responding "yes" to desire to test has no actual bearing on whether the participant will actually go ahead and test. In addition to this there is a possibility that participants may have over reported a willingness to test in order to please the health-worker who was collecting the data. I would argue that a true measure of willingness to test can only be gained in situations such as cross-sectional prevalence surveys where participants consent to undergo an HIV test and refusal rates are documented.

5.13 Summary of factors affecting the uptake of HIV counselling and testing services

The literature reviewed has documented the factors influencing individuals and couples decision to take up HIV counselling and testing services. Table 3 gives a summary of these factors and attempts to classify them according to the determinants of IMB.

Table 3: Factors affecting the uptake of HIV counselling and testing services

Factors which increase the likelihood of HIV testing uptake (willingness to test)	Mechanism of influence
Knowledge of PLWHA	Increased knowledge about HIV and AIDS positively affecting motivation to take up HIV counselling and testing – <i>Attitudes to behaviour and/or knowledge</i>
Knowledge of whereabouts of VCT site	
Knowledge of risk behaviour	
Sickness of child or self	Treatment seeking strategy positively affecting motivation to take up HIV counselling and testing – <i>attitude to behaviour</i>
Perception of risk of infection	
Strong social support from partner, friends, family, counsellor and community	Social norms positively affecting motivation to take up HIV counselling and testing – <i>social norms</i>
Factors decreasing the likelihood of HIV testing uptake (barriers)	
Poor information about discordancy	Lack of knowledge or alternative explanations about HIV and AIDS negatively affecting motivation to take up HIV counselling and testing. Could possibly have arisen from a lack of institutional trust – <i>attitudes to behaviour</i>
Cultural beliefs leading to denial of HIV	
Fear of breached confidentiality	
Women: fear of disclosure and partner reaction (abandonment, violence etc.)	Fears and social norms negatively affecting motivation to take up HIV counselling and testing – perhaps caused by barriers in communication between couples – <i>social norms</i>
Men: fear of; being HIV+ and committing suicide, illness, being stigmatised, losing employment, peer ridicule at attending VCT	
Men: denial of risk behaviour, having multiple partners, having a pregnant partner	Lack of information/social norms and current behaviour/situation negatively affecting motivation to take up HIV counselling and testing – <i>attitudes to behaviour</i>
Logistical barriers; distance from VCT site, cost, inconvenient hours and clinic waiting time, perceived lack of available treatment	Real or perceived barriers negatively affecting motivation to take up HIV counselling and testing – <i>barriers</i>

It is important to note that the above factors arise from a range of different forms of HIV testing settings including VCT, CVCT, antenatal testing, maternity

testing and mobile or community VCT. This study aims to focus on the factors which may influence couple's decisions to attend or not attend CVCT in Kilifi Township. Specifically, I will estimate the uptake of CVCT, explore the community's knowledge about the service and identify perceived barriers, motivators and benefits held by couples which may affect their decision to take up CVCT as a HIV risk reduction strategy.

6. Setting for the study

Figure 2: Map of Kenya showing Kilifi District (sourced from Kilifi DSS)

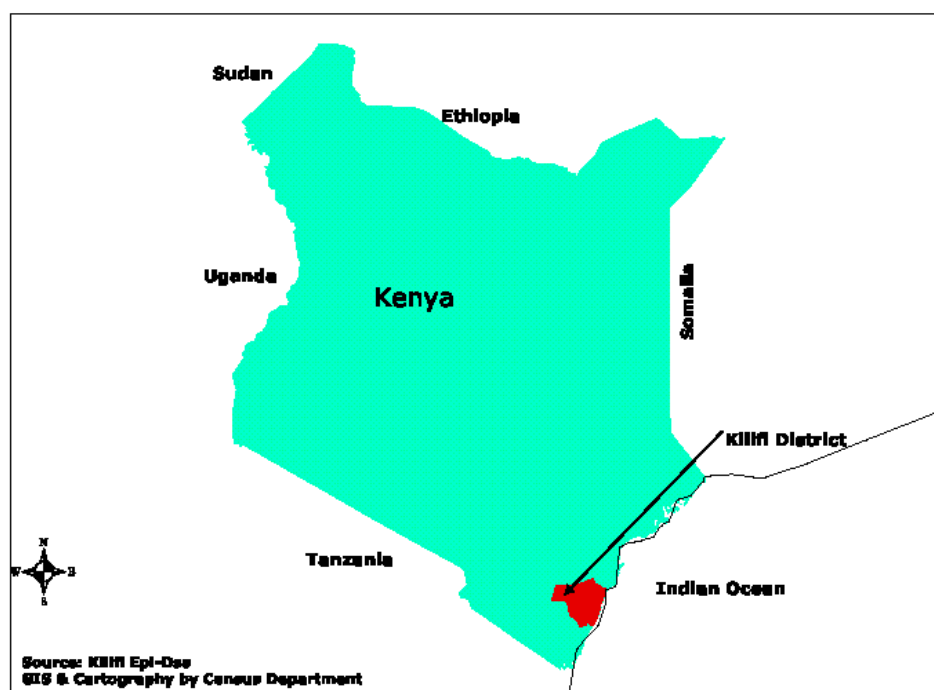
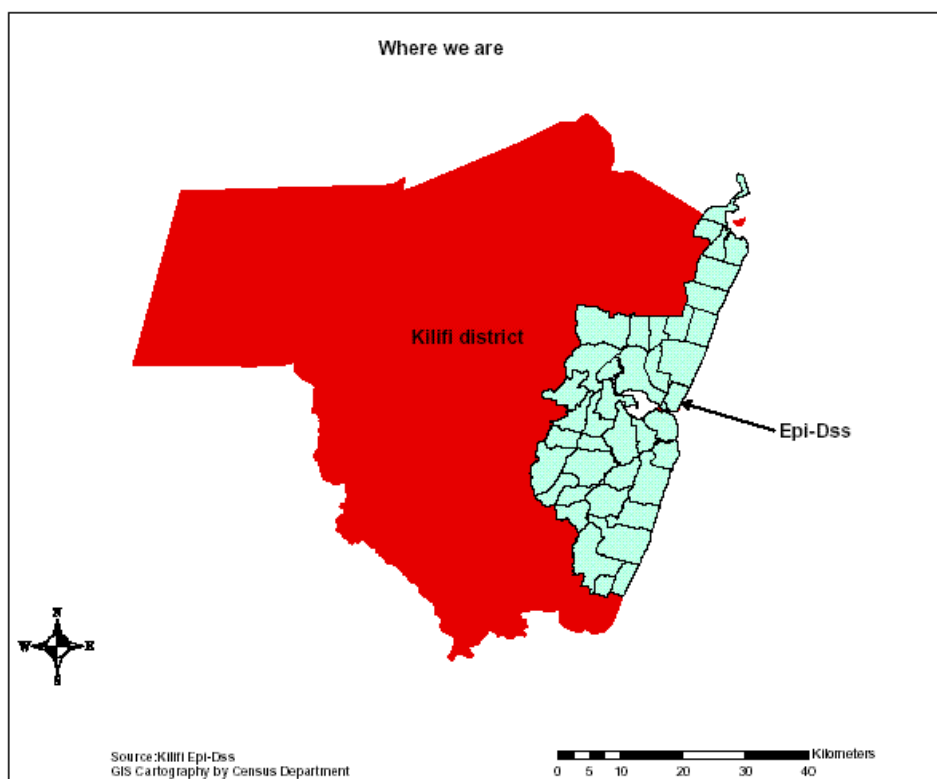


Figure 3: Map of Kilifi District showing DSS area (sourced from Kilifi DSS)



The KEMRI-HIV project is based at the Kenya Medical Research Institute – Centre for Geographic Medicine Research – Coast (KEMRI – CGMR-C) situated at Kilifi which lies 60 kilometres north of Mombasa. This coastal township is home to an estimated 30,000 people of mainly the Mijikenda tribes. The religious background of the inhabitants is mixed with about 30% Muslim, 40% Christian and the remainder having mainly traditional religious beliefs. Kilifi district incorporates the poorest division in Kenya with up to 84% of the population living below the poverty line² (Kenya 2005b). The town serves as the administrative centre for Kilifi District which has an estimated population of 600,000.

The Kilifi District Hospital, in Kilifi town, serves as a referral hospital for the district and shares a compound with the KEMRI-CGMR-Coast. The research institute was established in Kilifi in 1989, funded mostly by The Wellcome Trust. Since 1989, KEMRI has conducted research on paediatric health problems in the region, mainly malaria. More recently, in August 2003, the KEMRI-HIV project was initiated, funded by the International AIDS Vaccine Initiative (IAVI). IAVI's brief was to conduct vaccine feasibility studies in the Kilifi community. These feasibility studies involved a cross-sectional HIV prevalence survey, setting up links with the community and establishing a cohort for a longitudinal incidence study. KEMRI-Kilifi was deemed to be ideally suited for HIV research by IAVI because of its Demographic Surveillance System (DSS). The KEMRI-

² This poverty line as defined by the Kenya Central Bureau of Statistics is derived from the cost of a basic basket of goods. This poverty line is based on the expenditure required to purchase a food basket allowing minimum nutritional requirements to be met (set at 2,250 calories per adult equivalent per day) in addition to the costs of meeting basic non-food needs. In Kenya, this poverty line was estimated to be about KSh. 1,239 and KSh. 2,648 (£10 - £20) for rural and urban households respectively.

DSS covers the region shown in figure 3 and comprises of a team of 18 fieldworkers who census and map 29,000 households quarterly. The census team collects data on births, deaths, pregnancy, immigration and out migration for approximately 230,000 people. This provides a sampling framework for the range of research studies currently being undertaken at Kilifi.

Prior to 2003, no population based HIV research had been conducted in Kilifi. During 2003-2004, HIV testing increased from approximately 600 to 3500 tests per year, largely due to community mobilisation efforts of the KEMRI-HIV group. This increased testing created a demand for healthcare services for PLHWA. In 2005, IAVI, in partnership with KDH and KEMRI, opened a Comprehensive Care and Research Centre (CCRC) providing care including ART provision to PLHWA. Currently over 2000 people have registered at the CCRC with over 800 people (adults and children) initiated on ART. Since November 2003, the KEMRI-HIV project has provided Voluntary Counselling and Testing to approximately 12,000 people which includes an estimated 1400 couples. In July 2004 the results of the 2003 Kenya demographic Health Survey 2003 were published quoting a national HIV prevalence of 6.7%. The KEMRI-HIV cross sectional survey reached similar conclusions for Kilifi Township with HIV prevalence of 10% in women and 5% in men. An estimated 9% of couples in the township were HIV discordant (Sanders 2004).

Demonstrating potential HIV vaccine efficacy requires a cohort of volunteers with a sufficiently high HIV incidence for comparison of the vaccine against placebo. For this reason, participants for the longitudinal incidence study are

selected on the basis of their risk of HIV infection (Sanders 2005). As shown in the literature review, the uninfected partner of a discordant couple is at a higher risk of HIV infection than the general population. Thus, the cohort study in Kilifi has focussed on recruiting discordant couples to study HIV incidence. Participation in this on-going study involves quarterly HIV testing, HIV risk assessment and risk reduction counselling. Many of the couples identified through the cross-sectional study expressed a willingness to participate in the incidence study but further recruitment strategies were required to scale-up the cohort. A detailed description of the two main strategies employed to recruit HIV discordant couples will be given in the next section.

6.1 Strategy 1: Hospital recruitment.

Between 2004 and present, HIV testing at Kilifi District Hospital has increased dramatically. Consequently, an increased number of PLHWA are being referred for care at the CCRC. This referral mechanism offers an opportunity for risk reduction interventions including promotion of CVCT. Discordant couples have been identified through the following mechanisms:

1. Partner invitation for HIV testing for partners of HIV infected clients presenting for healthcare services at the CCRC
2. Offering counselling and testing services to parents of children who were diagnosed HIV positive during diagnostic test on the paediatric ward.
3. Referral of HIV infected patients to the CCRC from ANC, maternity, adult wards and the out-patient departments

4. Counselling sessions with PLWHA geared towards assisting them to disclose their status to their partner subsequent partner invitation for HIV counselling and testing

Table 4 gives a summary of HIV infected adults referred to the CCRC over a three-month period between November 2006 and February 2007.

Table 4: HIV +ve tests and referrals to the CCRC – November 2006 – February 2007

Location Done	HIV +VE CCRC referral
CCRC (tested first at the CCRC)	122
Referral from Community HIV Centre (CVCT)	33
Referral from outpatient at KDH	53
Referral from adult female ward at KDH	32
Referral from ANC/PMTCT KDH	25
Referral from KDH-VCT	20
Referral from adult male ward at KDH	19
Referral of parents testing +ve on paediatric ward KDH	7
Referral from TB ward KDH	4
Referral from Maternity ward KDH	5
Referral from amenity ward KDH	3
Total	323

As can be seen in the table, referral and subsequent partner testing represents a tremendous potential for reducing HIV transmission within couples as well as recruitment for HIV incidence research.

6.2 Strategy 2: Community Mobilisation of CVCT.

Promoting CVCT in Kilifi comprises of a combination of communication media. These range from mass media promotions to face-to-face communication involving community volunteers. Many elements of the health promotion strategies previously described in the literature review can be seen in the list below, which summarises promotion since 2004.

- Promotion through posters, leaflets, TV and radio broadcasts
- Promotion through school parent-teachers meetings
- Training of religious leaders in HIV awareness and the benefits of CVCT
- Promotion of CVCT through couple social support networks (CSSNs - post-test support groups)
- Promotion through grass roots NGO and CBO groups
- Promotion through community outreaches (eg couples race through Kilifi Town involving over 2000 participants and spectators, and couples football matches)
- Inviting the constituency MP to promote CVCT in public meetings
- Working with CORPS (Community Resource Persons) peer leaders

During March 2006, 18 CORPS (Community Resource Persons) were elected by community groups in Kilifi Township to promote CVCT. They were selected

by their communities for their communication skills, perceived influence among the community and commitment to HIV prevention. The CORPS participated in a four-day training designed to assist them in promoting CVCT in their communities.

Following the training, CORPS were asked to deliver invitations for CVCT to couples in Kilifi Township and to discuss the benefits of knowing HIV status for a couple. The initiative was evaluated through monitoring of the return of the invitations to the clinic when a couple presented for CVCT. Challenges faced by the CORPS in their attempts to promote CVCT were captured through weekly focus group discussions. During the evaluation period, 18 CORPS visited 615 homes and delivered 350 invitations for CVCT. These invitations resulted in 55 couples receiving CVCT and the identification of one discordant couple. This cascade effect from homes visited to couples attending illustrates that promoting CVCT in Kilifi is no easy task.

6.3 Justification for the study

Since the majority of new infections occur within stable relationships, Couple Voluntary Counselling and Testing may be an important tool in curbing the spread of HIV in sub-Saharan Africa. However, CVCT will only be effective if couples are willing to adopt this new behaviour. This study seeks to find out what are the factors influencing couple's decisions to attend or not to attend CVCT in Kilifi Township? The study objectives are:

- To estimate the uptake of CVCT amongst urban couples in Kilifi township
- To explore the community's knowledge about the CVCT service in Kilifi
- To identify perceived barriers, motivators and benefits of CVCT held by people in Kilifi which may affect their decision to attend CVCT

Information gathered during this study will be used to guide and advise future strategies to promote HIV risk reduction strategies including CVCT. It will also contribute to the wider literature on behaviour adoption and promotion of HIV counselling and testing.

7. Methodology

A mixed methodology was chosen for this study. The data collection methods included focus group discussions (FGD) with Community Resource Persons (CORPS) who promote CVCT in the community, a survey of 211 women from Kilifi Township and in-depth interviews with discordant couples. FGDs with CORPS fed into the design of the women's survey tool. The survey comprised mostly of closed questions with open-ended questions on perceived barriers and benefits of CVCT. Themes emerging from the responses to the open-ended questions gave ideas on questions for the in-depth interviews which would elicit greater detail on the issues surrounding CVCT. Combining quantitative and qualitative methods gave an opportunity to triangulate findings. Data from the cross-sectional study gave an idea of the magnitude of each barrier to CVCT, and deeper issues surrounding finding HIV status as a couple were teased through in-depth interviews and Focus group discussions. The three main methods of data collection will be described in more detail in the following section.

7.1 Data collection Methods

7.1.1 Focus Group discussions with Community Resource Persons (CORPS)

18 CORPS were invited to attend four focus group discussions at the Community HIV Centre in July and August 2006. During the meetings, the CORPS gave individual reports on the number of households visited and the

number of CVCT invitations given to couples. They were then asked to share some of the challenges they faced in promoting CVCT, and the views held by community members about the service. The meetings were held in Kiswahili and facilitated by a community mobiliser, an HIV counsellor and myself. A Kenyan sociology graduate intern took notes during the meetings. These were translated immediately after the discussions to ensure accuracy of recall of the data.

7.1.2 Cross-sectional survey of women in Kilifi Township

A random sample of 400 women aged 18-29 was taken from the most densely populated locations of Kilifi township using the KEMRI-DSS (Demographic Surveillance System) as a sampling frame. The maps overleaf illustrate the population density in Kilifi and the locations sampled.

Figure 4: Maps of Kilifi Township and surrounding locations showing population density and the area sampled

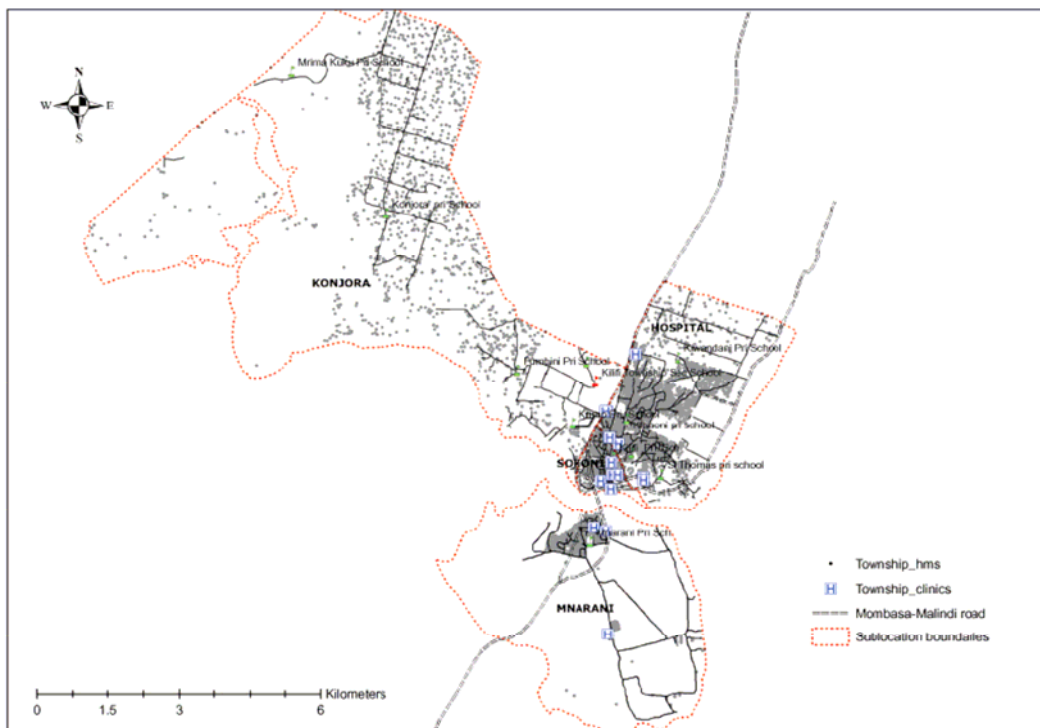
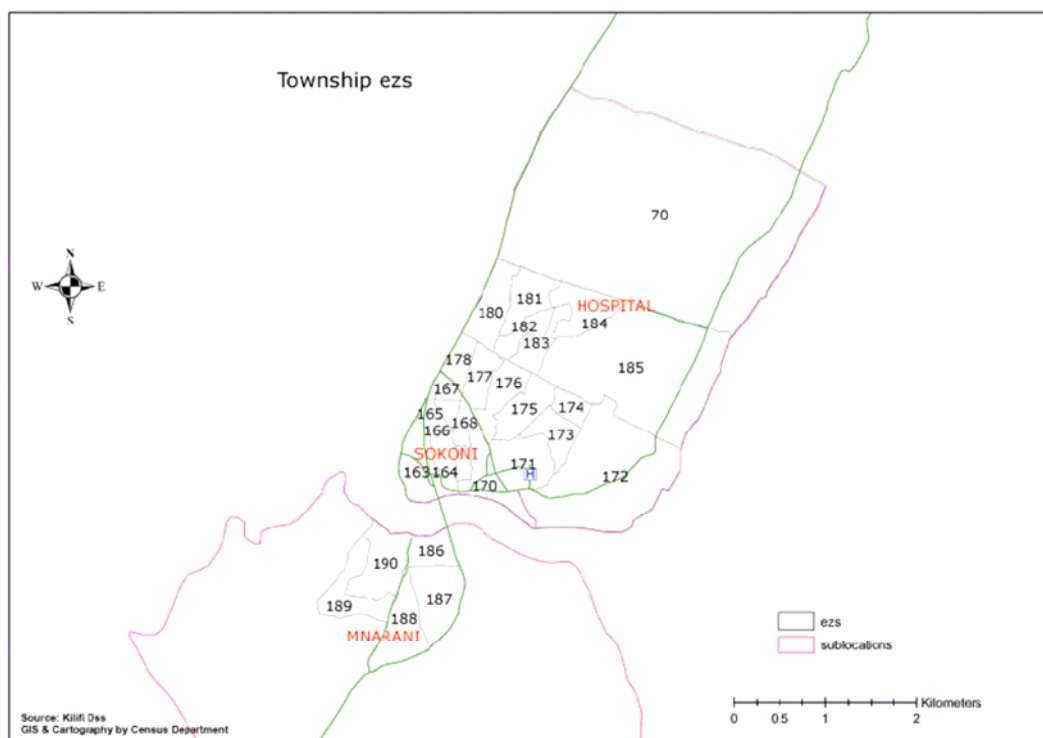


Figure 5: Map of sampled locations for the cross-sectional survey in Kilifi Township



A survey of women was conducted for four main reasons:

- A comparison of the uptake of CVCT against other interventions such as HIV testing at ANC for women would give an indication how well the CVCT service is utilised
- It was hypothesized that a description of the types of sexual/habitation couple relationships existing in Kilifi could be sought by asking women alone.
- Using the DSS as a sampling frame, previous experience of household surveys have shown that women are much easier to find at home during working hours than men. This means that selecting women usually gives a bigger yield of survey respondents from the sample selection.
- It could be argued that since women in Kilifi are more susceptible to HIV infection, they would be the ones who would benefit the most from any intervention

This age range was selected to include women at childbearing age and therefore potentially exposed to HIV. Prevalence has been demonstrated to be higher in urban than in rural Kilifi (Sanders 2004). The survey included questions on the following subject areas:

- Type of relationship: (married/cohabiting monogamous, polygamous, widowed/divorced, non-cohabiting partnership, other);
- Sexual behaviour / possible exposure to HIV
- Attitudes, knowledge and uptake of HIV testing / CVCT / VCT / for self and partner
- Family planning

The questionnaire included a few open ended questions to try to illicit information about the perceived benefits and barriers couples face in coming forward to know their status. Field counsellors felt that better responses would be gained by phrasing the questions to ask their opinions on what barriers 'other couples' had to attending CVCT. This was deemed to be less direct and accusatory than asking about the barriers they personally encountered. The field-counsellors attempted as much as possible, given the practical difficulties of field note taking, to write down the exact verbal responses in the language used by the woman during the interview. In most cases this language was Kiswahili with a few answers given in Kigiriyama and English. At each household, permission to interview the randomly selected women was obtained from household heads.

7.1.3 In-depth interviews with discordant couples

Currently, the HIV project at Kilifi has a cohort of 68 HIV discordant couples in regular follow-up, attending quarterly HIV testing and risk reduction counselling. The HIV counsellors at the project have developed an open and trusting relationship with these couples. It was hypothesised that discordant couples would give barriers and benefits of attending CVCT for people who, arguably, could benefit the most from the service.

Questions for the in-depth interviews were drawn up during discussions with two experienced HIV couple counsellors following analysis of the emerging themes from the cross sectional survey. In an attempt to capture different perspectives and experiences of couples finding out their HIV status, a

purposive sample of discordant couples was made from each category below. Half the couples selected found their HIV status through initial diagnostic testing at the Kilifi District Hospital whilst the other half attended CVCT at the Community HIV Centre or through field couple VCT.

Table 5: Description of discordant couple sample selection for in-depth interviews

Couples who have known their status through Initial DTC at KDH	Couples who have known their status through CVCT (CHIVC or Home testing)
Couple who remained together following discordancy	Couple who remained together following discordancy
Couple who have split / separated – remarried	Couple who have split / separated – remarried
Couple where man is positive	Couple where man is positive
Couple where woman is positive	Couple where woman is positive
Polygamous group	Polygamous group

Participants were explained the purpose of the study and asked to sign a consent form if they agreed to participate. 10 couples consented to participate from the above categories. This sample included two polygamous groups in order to investigate the decision-making dynamics within this type of relationship.

Two experienced HIV counsellors undertook interviews; one counsellor asked the question whilst the other took notes. A decision was taken not to tape the interviews so as not to intimidate the participants when answering questions of a sensitive nature. The counsellors and I translated participant responses immediately after the interviews to ensure accurate recall of the data and achieving a consensus on the content and meaning of the text.

7.2 Data collection timetable

All data collection procedures for this study were carried out between July and December 2006. Table 6 below gives an outline when each activity was conducted.

Table 6: Data collection timetable.

Dates	Data collection method
6 th July – 4 th August 2006	FGDs with Community Resource Persons (CORPS)
15 th July – 8 th October 2006	Cross-sectional survey of women in Kilifi Township
24 th November – 11 th December 2006	In-depth interviews with discordant couples

7.3 Who are we?

The study team comprises of a variety of different people. My personal background is that I'm a British citizen brought up in a single parent, working class Welsh family. I have been a teacher for thirteen years including 3 years in school management. Most of my teaching career has been spent in Kenyan secondary schools. Over the last three years I have managed a VCT site in Kilifi and planned community mobilisation strategies for promoting CVCT. I have undergone VCT several times over the last three years. Although I have a very different cultural background to the research participants, my 13 years experience of living in Kilifi have given me some understanding of local culture. My 3 years experience of promoting HIV counselling and testing has given me a good understanding the health service in Kilifi and fluency in Kiswahili enables me to communicate freely with community members.

The data collectors for the women's survey were trained female HIV counsellors, the majority of whom were born and brought up in Kilifi District. It was thought that women in Kilifi would be more comfortable to share information about HIV testing with female counsellors from the area. This is because they share a common cultural background. Focus group discussions were facilitated by community mobilisers who originate from Kilifi District. Both male and female counsellors who specialise in CVCT conducted in-depth interviews with discordant couples. Again it was deemed important work with local staff because of their understanding of local culture and values.

The CORPS were selected by community volunteers to promote CVCT in Kilifi Township. They are not employed by KEMRI but have their travel costs and expenses reimbursed. This independence from KEMRI allows CORPS to express their opinions about CVCT and the KEMRI freely. It could also be argued that community members are able give more honest responses and opinions to CORPS than perhaps KEMRI employees because of their independence from the organisation.

7.4 Data analysis

7.4.1 Women's survey – includes the quantitative component of the study

Aims of the Women's survey analysis

- To give a demographic background of a sample of women between the ages of 18 and 29 in Kilifi Township
- To describe the types of couple relationship in Kilifi Township
- To estimate the percentage uptake of CVCT among couples in Kilifi
- To list the barriers and benefits of CVCT and to attempt to quantify the extent of their influence

Quantitative data collected from the women's survey was initially double entered into Foxpro. It was then transferred into Stata 9 with Stat-Transfer. Basic demographic data and responses to questions were tabulated and sorted with Stata 9. Following this, cross tabs were carried out on response variables

to see if there were any significant differences or trends according to demographic variables.

A field counsellor and I translated responses to the open ended questions. The responses were intensively read and coded into broad groups in order to ascertain how commonly experienced the reported barriers were. The translating field counsellor was consulted to verify that coding was appropriate for the responses. Responses to these questions often gave rise to multiple codes where women expressed multiple barriers or benefits to CVCT.

7.4.2 Focus group discussions with CORPS and discordant couple interview transcripts

Aims of the qualitative analysis

- To identify the barriers, benefits and motivators experienced and perceived by community members
- To explore issues which influence couple decision making on whether to attend CVCT
- To explore how couples initially discovered their HIV discordant status and how they reacted to the discovery

Following translation, the interview and FGD transcripts were intensively read and re-read with one of the interviewing counsellors to ensure that the correct meaning and expression was captured in each participant statement. Data

analysis was carried out manually following the core process described by Laws (Laws, Harper, and Marcus 2003): transcripts were read to identify emerging themes. The whole dataset was then photocopied and the “cut and paste” technique used to position quotes under theme headings.

In order to validate the themes, a sample of the interview transcripts, along with the tables of barriers (table 14) and benefits (table 15) were given to the KEMRI-CGMR-Coast SSP group³ seven days in advance of a weekly meeting. The SSP group members were asked to independently analyse the transcripts and suggest emerging themes. Suggested themes from the SSP group were noted during the weekly meeting and considered when analysing the whole dataset.

7.5 Data Collection tools

All survey tools including interview schedules and survey questionnaires were drawn up by a team of researchers, field workers, Masters students and HIV counsellors. The overall coordination of the work was done by myself. The tools were discussed and written in English, they were then translated into Kiswahili by a team of HIV counsellors and subsequently back translated to English by an independent group to ensure that the meanings of the original questions were not lost. HIV counsellors were specifically asked to assist in the questionnaire design to ensure that questions surrounding HIV status and sexual behaviour were asked in a sensitive manner. The survey tool was

³ The KEMRI-CGMR-Coast research team includes a group of about 20 Kenyan and international social scientists who meet weekly to discuss on-going studies, recently published social science literature and other issues surrounding social science. This group is known as the Social Science Perspectives (SSP) group.

piloted with 12 women presenting at ANC at Kilifi Hospital and changes were made to the questionnaire based on suggestions of the data-collection team. FGD and in-depth interview tools were improved on during the course of the interviews.

7.6 Ethical considerations

This study was carried out to evaluate CVCT promotion and community mobilization for recruitment of HIV discordant couples into a HIV-Uninfected Cohort Study entitled "A prospective observational feasibility study to assess recruitment and retention and estimate HIV incidence among potential volunteers for an HIV vaccine efficacy trial" (Sanders 2005). This study was approved by the KEMRI-Kilifi Scientific Steering Committee, the National Scientific Steering Committee and the KEMRI National Ethical Review Committee. Specific approval to conduct the Community Mobilization survey was obtained from the director of KEMRI/CGMR-Coast and the District AIDS and STI Coordinator (DASCO). Each interviewee, focus group discussion and survey questionnaire participant was asked to sign an informed consent form prior to participation.

7.7 Limitations of the study

Interviewing discordant couples only gives the views of one group of couples who have utilized the intervention. It would have been desirable to interview refusers, concordant negative couples, and concordant positive couples however this was not possible due to time constraints and ethical clearance. An attempt was made to bridge this gap by eliciting the views of women through

the survey (some of whom were presumably concordant negative, refusers and concordant positives) and the views of community volunteers who visited all combinations of couples.

8. Results

In this section I will present the demographic background of the survey participants. I will then describe the various types of couple relationships women described themselves to be in. This will be followed by a presentation of the qualitative data collected. Two tables will be given summarising responses to open ended questions in the women's survey. Although many underlying themes emerging from the study findings cross-cut the framework of IMB, the barriers, benefits and motivators will be presented as they emerged from the data. The IMB framework will be used to a greater extent in the discussion to disentangle some of the issues uncovered.

8.1 Demographic background, couple relationships and HIV testing

In the Kilifi township survey, 400 women were sampled yielding 211 completed questionnaires, 62 (17%) had out migrated, 87 (21%) could not be found at home following 3 follow-up visits and 41 (10.5%) refused or failed to be present repeatedly for scheduled appointments.

The women interviewed had a mean age of 24 with the number of children ranging from 0 to 6. Women had an average of 1 child, this number increasing with age. The majority of study participants were from coastal ethnic groups including the 9 Mijikenda tribes, as can be seen from table 7. Others were from very diverse ethnic groups. The small numbers from outside the coast prevent

any meaningful statistical analysis of questionnaire responses according to ethnic grouping.

Table 7: Ethnic composition of the survey participants

Ethnic Groups		n	% of women
Coastal ethnic groups	Bajun	5	83
	Chonyi	25	
	Digo	13	
	Duruma	5	
	Giriama	105	
	Jibana	4	
	Kambe	1	
	Kauma	16	
	Pokomo	1	
	Rabai	1	
Upcountry ethnic groups	Kalenjin	1	15
	Kamba	6	
	Kikuyu	6	
	Kisii	1	
	Luhya	4	
	Luo	5	
	Taita	8	
	Taveta	1	
Other	Other	4	2
	Total	211	100

A third of the women had had some formal education with only 8% reporting that they had completed secondary school. Religion was divided into three major groups; no religion (38%), Christian (31%) and Muslim (20%).

Table 8: Educational level of the survey participants

School level	N	% who have completed level
None	149	70
Primary	46	22
Secondary	16	8
Total	211	100

Table 9: Survey participants' reported religion

Religion	N	% religion
Christian	66	31
Muslim	42	20
Traditional	14	7
Other	8	4
N/A	81	38

Types of relationship

The table below gives a description of the types of relationships women described themselves to be in.

Table 10: Survey participants' reported type of religion

Relationship description	n	% of women	Group
Single	66	32%	All n=211
In a relationship	145	68%	
Married Monogamous	98	68%	Those in a relationship N=145
Married Polygynous	16	11%	
Regular Partner/Not Cohabiting	14	10%	
Seperated/Widowed	5	4%	
Other – engaged/regular boyfriend	11	8%	

Finding work near the home is often not possible in Kilifi, resulting in husbands moving to cities (Mombasa, Malindi, Nairobi) for economic reasons. This leads to varying degrees of cohabitation as can be seen in the table below. Table 11 summarises cohabitation of women who described themselves as being in monogamous, polygamous or regular relationships (n=128)

Table 11: Degree of cohabitation for women who described themselves as being in monogamous, polygamous or regular relationships

Degree of cohabitation	n	% of women in regular relationships
The whole time	81	63%
Every Weekend	15	12%
1 or 2 Weekends/Month	8	6%
Does not Cohabit	21	16%
Rarely sees partner	4	3%

HIV testing – Knowledge and practice

A large proportion of the women interviewed reported that they were aware of HIV testing services with 179 (85%) having heard of CVCT. Sources of knowledge reported were newspapers, t-shirts, or KEMRI-trained CORPs. 90 (43%) respondents spontaneously mentioned KEMRI volunteers / workers / outreaches when asked where they had heard of CVCT. Knowledge of CVCT was assessed through open-ended questions. Women commonly described CVCT as a session where both members of a couple were tested for HIV together. It was also widely known that if people were found to be HIV infected, they would be advised on “positive living.” We attempted to find out how this knowledge translated into practice by asking about the women’s experiences of HIV testing. 35% women in relationships reported knowing their partner’s HIV status. However, only a third (35%) of these women had undergone CVCT. Of all women surveyed who were in relationships, 12% had attended CVCT. 80%

of the women who were in a relationship reported a willingness to attend CVCT but only 38 (26%) thought that their partner would also be willing. 37 of the 145 women in relationships (25%) who had not been for CVCT indicated that both they and their partners would be willing to go for testing.

47% of the women interviewed reported that they undergone HIV testing, with the majority learning their status through the Antenatal Clinic (ANC) at Kilifi district Hospital. 122 (57%) reported that they had previously been pregnant and 15 (7%) were pregnant during the time of the interview.

Table 12: Where participants were tested

(If tested) where were you last tested?	n	% reporting being tested
ANC	51	48%
Maternity	6	7%
CCRC	3	3%
KDH VCT	7	7%
KDH Other	1	1%
CHIV	22	21%
Door to Door	13	12%

Cross tabulations were carried out to find any if there were any trends for people who had ever attended CVCT. There was no trend between religion, age, education or degree of cohabitation with likelihood of ever being tested. It

appeared that monogamous couples were more likely to have ever undergone VCT than polygamous groups, as can be seen in the table below, but this was not statistically significant.

Table 13: Monogamous and polygamous couples' reported uptake of CVCT

	Never attended CVCT (%)	Have attended CVCT (%)
Monogamous couples	81 (84%)	16 (16%)
Polygamous groups	17 (94%)	1 (6%)

Pearson $\chi^2(1) = 1.4423$ Pr = 0.230

8.2 Findings from the qualitative analysis

Qualitative Themes from the qualitative analysis are divided into three main sections:

8.2.1 Perceived Barriers to CVCT

8.2.2 Real and perceived benefits

8.2.3 Reasons for testing – Motivators

8.2.1 Perceived barriers to CVCT

Responses to the survey question; “Many couples have come for CVCT, whilst others still have not come. Can you think of any reasons that couples may not come for CVCT together?” can be seen in table 14. Women’s’ responses often contained multiple codes which have been captured in the table (responses are not mutually exclusive).

Table 14: Reported barriers to CVCT

Coded barriers	Number of women Women giving this barrier (%)
Fear / stigma related to: knowing status, death, Being positive, public disclosure / confidentiality, no help / services / treatment, discordancy	103 (48%)
Distrust – Partner fears he may already be infected and does not want partner to know / infidelity (“ana njia nyingi” – he takes many paths)	69 (32%)
Pre-existing marital misunderstandings / Fear of asking husband / Husband won’t agree	18 (8%)
People prefer going alone	16 (7%)
It will bring about marital problems	16 (7%)
There’s no need if partners trust each other	12 (6%)
No time / too much work	8 (4%)
Some men don’t like to walk with partners because they don’t want it known that they are married	9 (4%)
Poor knowledge about CVCT/HIV Person’s HIV status must be the same as partner	9 (4%)
Not important	6 (3%)

Respondents of the survey, the in-depth interviews and the FGDs all described perceived and real barriers preventing people from accessing the CVCT service. The following sub-themes emerged from the data:

- i. Fear
- ii. Trust and household disharmony
- iii. Logistical barriers
- iv. Community knowledge about HIV
- v. Social - cultural norms, beliefs and rumours

i. Fear

By far the biggest barrier according to the survey was fear with 47% of respondent stating that this was a reason which prevented other couples from learning their status. Data from the survey, the interviews and the FGDs give the following fears of attending CVCT:

Fear of:

- 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+ status
- Death

Fear of death, either through illness and suicide was quite common as the following quotes illustrate. Surprisingly, many people believed that the shock of knowing ones positive status would give rise to sudden death. One woman stated, “They don’t want to go for CVCT because if they have the virus they will have an attack of “presha” (high blood pressure) and they’ll die.” (124, woman, single, 19, never tested)

Husband: “For a person to come here, he must have counselled himself to be ready to receive any kind of result. Others think they will be shocked and die. Others fear to be tested. Others fear they will lose their friends, lack of education/ignorance contributes to people not testing. (dc 06, Polygamous discordant couple, wife HIV +ve (37), husband HIV –ve (39), 27/11/06)

As alluded to in the last quote, fear of isolation and abandonment was mentioned frequently as a reason for not wanting to know the HIV status. This was particularly true for men perhaps exacerbated by a denial amongst peers and difficulty to disclose to close family members:

Husband: Maybe because of cultural reasons, some people think that if they turn out to be positive they will be isolated and thought to be of no

use. (dc 18, Polygamous discordant couple, wife HIV +ve (26), husband HIV –ve (28), 11/12/06)

Husband: “Because I know my status, I have been telling my friends that it’s important to know their status also. I tell them I am HIV +ve but they don’t believe me at all. They think I’m joking. I have only told my age-mates, those who I am free with but they don’t believe me. Not like my father, who I am not free with. (dc 32, monogamous discordant couple, wife HIV-ve (25), husband HIV +ve (29), 27/11/06)

ii. Trust and household dis-harmony

Respondents reported that trust and mis-trust within a relationship often caused barriers to uptake of VCT. On the one hand people argued that “If there is trust in the relationship, then there is no need for CVCT” (179, woman, married monogamous, 29, never tested) and that suggesting to the partner that they should attend CVCT would cause unnecessary tension and mistrust in an otherwise stable relationship. On the other hand, mistrust, suspicion of infidelity and suspicion that the partner may be HIV infected was mentioned much more often as a barrier for CVCT with 32% of the women surveyed expressing these barriers. The following quotes summarises this:

Some men have many roads of love (multiple partners), a man will fear to be tested because he does not want it to be known (137, woman, married monogamous, 22, tested)

Maybe he has his own problems [the husband] because of the things he does and he doesn't want it to be known. Maybe he already knows his status and if you ask him [about testing] he says "what's your problem?" other husbands don't like to walk with their wives because they don't want it to be known that they are married. (299, woman, married monogamous, 28, tested)

Another view was that "people who do not go are people who don't talk to each other and there is misunderstanding in the household." (395, woman, married monogamous, 28, tested)

iii. Logistical barriers

Similar to the logistical barriers mentioned in the literature review, Kilifi residents raised similar questions about hours of service and waiting time. A few expressed concerns that time spent at the clinic would mean loss of earnings with one woman saying that "For us we run small businesses and we cant afford to leave the work." (305, woman, married monogamous, 27, tested). This was supported by a male CORP who suggested that couples would be free to access the service at weekends but not during the weekday opening

hours of the CVCT site when most men are at work. In the survey however, only 4% of respondents mentioned that time lost and other logistical issues prevented them from utilising the CVCT service.

iv. Community knowledge about KEMRI, HIV and CVCT

Discussions with community members revealed many misconceptions, and social/cultural beliefs surrounding KEMRI, HIV and CVCT. This community knowledge, whether accurate or constructed contributed to prevention of people accessing CVCT. I have broken down these informational issues into misconceptions and cultural beliefs.

CORPs revealed many misconceptions about HIV/AIDS held by community members. Questions like “Why are there people who spread HIV yet they don’t turn positive? Is the immunity of carriers is stronger than those who have already turned positive.” (Female CORP, 30, 04/08/06) and “Why are people of blood group O always negative?” (Male CORP, 29, 04/08/06) illustrate misconceptions the community has about HIV.

CORPs were all in favour of increased HIV awareness activities; “Invite the women elders to these seminars for them to believe that there is HIV/AIDS.” (Female CORP, 44).

A male partner of a discordant couple described how misconceptions about HIV testing and the service led to people refusing to come to the site:

After the blood has been drawn, will it be injected back into the person? And also, it should not be used in treating another person. You can draw the blood from me but it should not be used to treat another person. Others think VCT costs a lot money like 3,000/= but I tell them its free. I tell them about the benefits when they know their status they can improve their marital relationship. (dc 147, monogamous discordant couple - separated, husband HIV -ve (33), 30/11/06)

Another commonly heard misconception during community meetings is the assumption that both partner's status, whether positive or negative must be the same. In other words, testing by proxy was a reason preventing couples from attending CVCT.

Most couples rely on one persons' HIV results. If one is negative, then the other partner says definitely she/he is negative, therefore there is no need to test. (Male CORP, 30, 06/07/06)

Some husbands are cowards – they fear drawing blood and so if the wife is already tested and she doesn't have the virus they will say that their HIV status must be the same. (163, married monogamous, 28, tested)

As can be seen in the last comment, often, women were perceived to be the first to be tested with men reluctant to come for CVCT. This could be accurate given that nearly a quarter of the women surveyed had been tested at ANC and 47% had ever been tested compared to the 12% of women in relationships who had attended CVCT.

v. Social and cultural norms, beliefs and rumours

Cultural beliefs surrounding the KEMRI research unit are not uncommon in Kilifi district. The following quotes show how rumours and misinformation are passed through the community:

Some people instil fear in others and discourage couples after we created the awareness. They will say that “when you go to KEMRI you will be infected with the virus.” (Male CORP, 30, 28/7/2006)

They hear this [rumours] from neighbours. My neighbour has a child who was fine but is now epileptic. She says that KEMRI people caused this. (Female CORP, 30, 4/7/2006)

The SBR (socio-behavioural research group) at KEMRI often describe rumours about KEMRI being devil-worshippers in relation to other research projects. Contributors to these rumours are:

- The logo on all KEMRI vehicles bearing two coiled snakes

- Many research projects involve blood-drawing
- The DSS system of random sampling and peoples information being held on computers

Rumours and concerns are evident in the following barriers mentioned by a discordant couple:

Some people fear to give blood saying that they are not sure where it is sent. Others say their blood is given to “shetani” (demons). Some say blood that we give is too much. I overheard one man saying that his child gave a lot of blood resulting in his health deteriorating. I myself was fearful but I would not understand how I would recover the blood I had given. When bed nets (treated mosquito nets) were given some of the community said that those nets were dancing, had demons, but I told them that these bed nets have medicine and we have been advised to wash our hands after using them. Since I joined the study I have not seen any bad thing for example anything devilish that might make me fear. (dc 18, Polygamous discordant couple, wife HIV +ve (26), husband HIV –ve (28), 11/12/06)

A few participants mentioned that they did not want to attend HIV testing because they thought that practitioners kept lists of people who were HIV positive for posting in public places. This may well be related to the fear of public disclosure mentioned in the Barriers section, and perhaps a lack of faith in the site at keeping test results confidential.

Husband: This disease of AIDS – many people don't know the difference between HIV and AIDS and its better not to know their status at all since there is no cure. Others think that their names will be announced on a notice board. Others told me that KEMRI had many gadgets so that they can take pictures without their knowledge". (dc 32, monogamous discordant couple, wife HIV-ve (25), husband HIV +ve (29), 27/11/06)

Although the above reports are common, community members also held positive views and expressed faith in the work of KEMRI in the Kilifi community. People would often respond to negative rumours by relating to their own positive experiences.

I am a preacher and always try to explain ways to be in control of life. People told me, when my child died in KEMRI, that they are devil worshippers. I told them that those are just lies, and I asked them "how come thieves do not advertise themselves on the doors of their houses" (reference to KEMRI logo of coiled snakes). (dc 147, monogamous discordant couple - separated, husband HIV -ve (33), 30/11/06)

We had heard about the Community HIV Centre and I felt it would be good to come there. This is because I believe KEMRI has the best experts and I would get the best explanation of what was causing my wife's sickness. (dc 104, polygamous discordant couple, wife HIV +ve (36), husband HIV -ve (45), 7/12/06)

Other factors which motivate couples to attend CVCT will be presented in the next sections.

8.2.2 Real and perceived benefits of CVCT

The data presented in this section was collected in two ways: through the survey where women reported perceived benefits, and through the reported experiences of discordant couples. The table below gives a summary of participant responses to question 24 of the survey: “Can you tell me any benefits of CVCT?” Responses often contained multiple codes which were not mutually exclusive.

Table 15: Reported benefits to CVCT

Response group	% giving response
Knowing partners/own/ both status	42%
You'll find ways of avoiding infection if your partner is infected Learn about risk reduction (extreme – splitting up	18%
If you're infected you'll get treatment / advice /counselling	14%
It brings harmony to the marriage	12%
To find a way of staying well	6%
Relieve stress	1%

The qualitative data revolving around benefits of CVCT have been divided into four themes:

- i. Knowledge of status to plan for the future and accessing care and prevention
 - ii. Improved self efficacy
 - Using newly learned skills
 - Improved communication skills
 - iii. Increased perception of support in the family
 - iv. Benefits becoming motivators – Improved knowledge motivating people to advocate for CVCT strengthening social support
- i. Knowledge of status to plan for the future and accessing care and prevention

The most common benefit given for attending CVCT was that couples got to know their HIV status during the session. 42% of respondents in the survey reported that knowledge of their own, their partner or both status was a benefit to attending. The most frequent reason given was "... to plan for your own life and to plan for children in the future."(99, married polygamous, woman,27, tested). Planning for the future was also interpreted as accessing treatment and prevention methods. This extended beyond horizontal transmission to prevention of mother to child transmission.

Both partners will know their status and if it is good they will take care to protect themselves. A benefit is that if you are infected you will get

medicine early and will be shown how to prevent the other partner from being infected. (227, woman, married monogamous, 28, not tested)

You will know if you are infected or not and if you have the illness then you will be given medicine. If you are pregnant you will be explained about a way of preventing your child from being infected. (32, woman, married monogamous, 28, tested)

Others mentioned psychological support in times of stress:

You will learn your results together and if you don't have the virus your heart will be happy and if you have the virus you will learn how to live with it, how to get medicine and be counselled to relieve your stress. (201, woman, married monogamous, 28, tested)

Often these benefits were not just perceived but actually experienced by discordant couples who had come to know their HIV status:

Wife: Had I not known my status, I would be dead by now but now I can access care in time when I need it. (dc 76, monogamous discordant couple, wife HIV +ve (24), husband HIV -ve (28), 1/12/06)

Wife: We have been helped with medicine and with food and with very caring doctors through the hospital. We get food assistance from red

cross. (dc 18, Polygamous discordant couple, wife HIV+ve (26), husband HIV –ve (28), 11/12/06)

ii. Improved self efficacy

18% of survey respondents perceived that attending CVCT would impart clients with knowledge and skills to avoid infection if the partner is infected. Again, this is a benefit experienced by the discordant couples interviewed in the form of improved confidence in accessing care. But perhaps the most important benefit for couples is that it enabled many to openly communicate about the discordant status and discuss prevention strategies such as condom use, not sharing razors and feeding options for mothers.

Husband: “There has been no difference between us and we are still together. Our sex life has not changed, we were given condoms. We didn’t use them when I was negative but now we have found that I am positive we will protect ourselves. (dc 32, monogamous discordant couple, wife HIV-ve (25), husband HIV +ve (29), 27/11/06)

It’s very good to know your status. The anxiety decreases. My children are happy. The whole household now takes care to protect themselves (from infection) e.g. with (sharing) razor blades. I have also been able to educate others about CVCT. (dc 79, polygamous discordant couple, wife HIV -ve (45) widow, 24/11/06)

Wife: “ I am now able to know my status. I am able to breastfeed any child without worry of infecting her. Also we are able to protect ourselves from infection of HIV (dc 32, monogamous discordant couple, wife HIV-ve (25), husband HIV +ve (29), 27/11/06)

iii. Increased perception of support, harmony and trust in the family

Contrary to the barriers section earlier, many women were of the opinion that CVCT had the potential to increase trust within a relationship. Several women were also optimistic that CVCT could reduce infidelity:

Each one will know their partner’s HIV status. This will allow trust to continue – it will relieve stress and people will be happy to know their status. (64, woman, monogamous, 27, tested)

If we are tested and we find that we have the virus we will protect our health, we will be counselled on how to live well. If we get a good result [HIV negative] we will stop having sex outside [the marriage]. (65, woman, married monogamous, 22, tested)

After counselling and being told that they don’t have the virus, those behaviours of going outside [infidelity] will be abandoned (207, woman, married monogamous, 23, tested)

Actual experiences of discordant couples varied. For some couples, respondents claimed that knowing their status had brought them closer together because they had to find solutions to family problems as a couple:

My husband was troubled. I kept telling him its just bad luck but me and the children still loved him. My husband said we should stay together without sex. If he had wanted sex, I wouldn't have refused because we were shown how to use these condoms to protect. Most of my children are still small. I told my oldest daughter when the father was still around. Counsellor: How did she react?

She didn't have a problem with it and it didn't affect the relationship with the father. I have not told others. (dc 79, polygamous discordant couple, wife HIV -ve (45) widow, 24/11/06)

When we left here after testing we were referred to the CCRC and as we went alone my wife said that she had suffered for nine years and when she died I should look after the children. I asked her why she was saying that and I told her that's not the end of life and that she can still live even more than ten years. I encouraged her more and I told her if she follows the doctors advice all will be well. Up to now there is a lot of change. She has gained weight and she believes that the drugs are really working because she follows the daughter's instructions to the full. She still lives upcountry but I send the drugs to Kisumu every month. Her treatment is different because its free no matter what type of drug she needs – this has made her access to care easier and that's why her

health has improved. Other times when she used to get sick, she would miss treatment because of lack of money but now she gets treatment on time. (dc 104, polygamous discordant couple, wife HIV +ve (36), husband HIV -ve (45), 7/12/06)

The latter quote illustrates improvements in self-efficacy in terms of enhanced communication, improved communication within the family and support. For some already troubled relationships however, knowledge of status gave a very different outcome:

My wife wanted another child, I told her it's impossible but she didn't agree. She got advice from other people but I refused to have sex with her. Her health started changing and I realized that she was pregnant and that's when I knew that she had another man. I decided that we should live separately. I left her the house with every thing, the cows, and forty goats. I even told her that she could rent out the other rooms to get income. We are not together because she is pregnant and it's not mine. I didn't expect my marriage to end, although I can see that I've moved forward because I have been able to escape from many issues. (dc 147, monogamous discordant couple - separated, husband HIV -ve (33), 30/11/06)

(At the end of this interview, the client felt very relieved and offloaded. Both counsellors felt that the session was very therapeutic for him.)

- iv. Benefits becoming motivators – Improved knowledge motivating people to advocate for CVCT strengthening social support

This section gives an overlap of themes in that it illustrates how the experience of attending CVCT has equipped people with skills and knowledge to advocate for CVCT and the benefits of HIV testing in their communities. This often manifested itself in responses to negative attitudes about HIV from fellow community members:

Many people tell me that they will die instantly if they know they were infected so then I ask them; “why is it that I haven’t died then?” (dc 79, polygamous discordant couple, wife HIV -ve (45) widow, 24/11/06)

We are trying very much to advise them especially women in women groups. We direct them to counsellors and those who are ready to know their status receive assistance. Men are a bit reluctant and different when to go for testing but we are politely talking to them. (dc 18, Polygamous discordant couple, wife HIV+ve (26), husband HIV –ve (28), 11/12/06)

The next section will look at what motivates people to test in the first place

8.2.3 Reasons for testing – Motivators

“Kila mtu ana roho yake. Ni uamuzi wake.”

Husband: Everyone has his own heart and has to decide for himself.

Others don’t bother and its not compulsory – its voluntary. A person has

to decide just the way we decided ourselves. (dc 83, monogamous discordant couple, wife HIV +ve (34), husband HIV -ve (31), 30/11/06)

Data for this section was collected from the interviews with discordant couples. Respondents were asked two questions in order to elicit motivators which triggered couples to know their HIV status in the first place:

1. How did you find out your status as a couple
2. How did you come to decide to go for HIV testing?

Analysis of the data revealed four factors which have influenced and motivated couples to know their status:

- i. Sickness: self /partner/child
 - ii. Spouse's behaviour
 - iii. Perceived social support
 - iv. Dropping institutional barriers
-
- i. Sickness: self /partner/child

This study does not allow for an estimate of the proportion of couples who found out their status through the hospital compared to CVCT, however it does allow us to find out more about what motivated couples to learn their status. Half the discordant couples were selected because they first found out their

status through HIV testing at the hospital either when they, their partner or their child was sick and diagnosed with HIV. According to a CORP people often "...test to confirm their positive status rather than to find out about risk reduction." (Male CORP, 30, 06/07/06) This is certainly evident in the testimony of discordant couples:

Wife: It is me who was unwell and we went to a private clinic for treatment where I learnt that I had syphilis. We were treated and also advised that it is important to know our HIV status. On 8th December 2003 we came together to the Hospital VCT. (dc 18, Polygamous discordant couple, wife HIV+ve (26), husband HIV -ve (28), 11/12/06)

My husband came to know his status first then me. He was sick with TB and he was tested, from there we were directed to the Community HIV Centre. I decided to get tested because my husband knew his status and I wanted to know as well. He told me that his condition was not good, he said: "I have the virus so let's go to get tested so that you know your status." So we came here. (dc 79, polygamous discordant couple, wife HIV -ve (45) widow, 24/11/06)

Out of an average of 200 diagnostic HIV tests conducted per month at the paediatric ward of Kilifi District Hospital, about 8% of children admitted are HIV infected (Ward 1 DTC Data, Nov 2006 – Jan 2007). Counsellors on the ward are trained to offer counselling and testing for the biological parents. Many

parents find out their status through this mechanism. This was also captured in the discordant couple interviews:

Wife: We know through our child who was tested first. That is when we were tested. The child was in good health. As the mother of the child, I prepared myself and got to know my status first after knowing my child 's status. Then after knowing my status, I told my husband and we decided to come together for testing.

Husband: To me it didn't seem a problem because our child's status made us see the need to test. (dc 06, Polygamous discordant couple, wife HIV+ve (37), husband HIV -ve (39), 27/11/06)

We came here because our child was not feeling well. He was tested at the CCRC and was positive. That afternoon at 2.00p.m, I came with my partner for testing and she was found to be positive. So we knew our status together. We knew the child was positive, we knew it came from the parents and we decided to know our status as well. Also the wife was sick on and off. (dc 107, monogamous discordant couple, husband HIV -ve widower (52), 4/12/06)

In other cases, the welfare of the child was stated as the motivation for consenting to test as a couple:

Wife: I was the one who decided first because I was breastfeeding.

Husband: My wife had delivered at home and so we didn't know our risk of infection. So I agreed to be tested with CVCT because of the importance of counselling together. (dc 32, monogamous discordant couple, wife HIV-ve (25), husband HIV +ve (29), 27/11/06).

Perhaps one of the most successful HIV prevention interventions in Kilifi district for the number of women who annually get to know their status, is the Prevention of Mother to Child Transmission service at the district hospital. In this intervention between four and five thousand women are counselled and tested by ANC nurses each year. Over the last two years the prevalence of HIV among women has been in the range of 4 – 5% (data given by Kilifi District QAIDS and STI Coordinator). Again here is another opportunity for prevention of new infections through invitation of husbands to CVCT. Although counsellors report challenges that women have in disclosing their status to men, a few couples find out their HIV status through this gateway:

My wife had gone to ANC. She was tested and found to be positive. She was advised to inform me so that I could also know my status. That is when we were invited here [to the Community HIV Centre]. She didn't explain anything to me because she feared to disclose her status. That evening, as we were bathing, I joked with her that she was found to be positive at the clinic, she said "yes" but I thought she was joking. I didn't believe her. When we arrived at the CCRC, I was asked if she had informed me about her status – I said 'no'⁴, that's when I was tested and

⁴ Illustrates that data cannot always be taken at face value

I was negative. I tried to console her and give her support. (dc 147, monogamous discordant couple - separated, husband HIV -ve (33), 30/11/06)

ii. Spouse's behaviour

For two of the discordant couples interviewed where the husband was HIV uninfected, it was suspicion of an unfaithful spouse that motivated the husband to suggest preventative strategies such as condom use and CVCT. In these quotes a weighing up of risks against benefits of suggesting and attending CVCT can be interpreted – the risks being the unpredictability of what would happen in the case of HIV infection.

One day I talked with my wife because I had seen that her lifestyle was not good. I asked her if we should use condoms but she refused. The reason I suggested condoms was that sometimes she would go to work and not come back for three days. I didn't have information about CVCT and then there was the fear of not knowing what will happen if we are found be positive. (dc 147, monogamous discordant couple - separated, husband HIV -ve (33), 30/11/06)

I was not staying with my wife because she stays upcountry while I work here. We used to meet twice or three times in a year. I used to think that it was possible she may be infected during that time because I started protecting myself. I was a bit worried but not much. I tried to find

ways to tell her (about testing) and in the end she agreed because she was really sick. This is because I was suspecting that she might have been infected. Many times I listen to the radio and understand that there is confidentiality in results. I believe that KEMRI have the expertise and that I would benefit more. My wife did not know where KEMRI was and when I told her we go to KEMRI, she agreed and that's why we are right here. (dc 104, polygamous discordant couple, wife HIV +ve (36), husband HIV -ve (45), 7/12/06)

The above quote illustrates multiple factors of influence in persuading the couple to attend HIV counselling and testing.

iii. Perceived social support

Social support from couples' family friends, and neighbours have already been described as benefits of knowing ones' status. Although it could be argued that social support is a motivator for attending CVCT, at the decision-making point, often couples are uncertain of the support they will get, if any, if they are found to be HIV infected. The barriers section points to a fairly widespread fear of social isolation and for this reason I have not included social support from friends and families as a motivator. CORPS however did point out the potential of religious institutions and leaders in advocating and promoting CVCT to the community:

Outreaches in churches may be the best solution especially for the saved couples. Churches should be mobilised to sustain action towards CVCT. In Mtaani⁵, any seminar when a Muslim speaks they find it okay because they believe in clergymen. We should include Imams and preachers in information seminars. (Male CORP, 40, 04/08/06)

iv. Dropping institutional barriers

In the background section, a brief description was given of a cross-sectional prevalence survey where randomly selected participants were asked if they would be willing to undergo a VCT session in their homes. If the selected participant was married and the spouse was present, a CVCT session was offered. If the spouse was absent and both partners were willing, an appointment was given where the counsellor could visit the couple at home at their convenience to give a CVCT session to the couple. Many couples took this spontaneous opportunity to be tested and counselled together.

Husband: We came to know that I was “good” and she was “bad”. We were tested at home. When the counsellor came we decided to test on the same day.

Wife: We had not talked about it but we understood and made a decision. (dc 76, monogamous discordant couple, wife HIV +ve (24), husband HIV -ve (28), 1/12/06)

⁵ Mtaani is an area in Kilifi town which is predominantly inhabited by Muslims.

According to the CORPs, home testing was very popular for couples in the community because "... people don't like coming to the centre." (Male CORP, 30, 14/7/06). The many barriers preventing couples coming to the centre have been discussed in the previous sections.

9. Discussion

This study aimed to investigate the factors which influence couple's decision to attend or not attend CVCT in Kilifi Township and to evaluate the effectiveness of CVCT mobilisation and uptake. I will firstly discuss the findings of the survey to assess the Kilifi community's knowledge and acceptance of the CVCT. I will then identify factors which may influence a couples decision-making process whether to utilize CVCT. These factors will be categorized in terms of the Information Motivation Behaviour change model. Within these factors, several themes have emerged from the data with perhaps "trust" having the greatest influence on the uptake of healthcare services. I will attempt to show how trust within couples and the community's trust in the KEMRI/KDH institute influences their knowledge and motivation to utilize the CVCT service. Finally I will give implications for future HIV prevention strategies based on the analysis of the data presented.

Respondents of the survey displayed a good knowledge of CVCT with the vast majority (85%) having heard of the service and nearly half spontaneously mentioning KEMRI in relation to mobilization. 37% of respondents expressed a willingness to test said they would go to the Community HIV Centre. As mentioned in the literature review, one must be cautious when interpreting responses to 'willingness to test' because respondents were informed at the outset that the data collectors were counsellors from the Community HIV Centre. This may have swayed respondents to answer in the affirmative. Nevertheless, that 21% of respondents reported having been tested and 12%

of couples having attended the CHIVC suggests that promotion of CVCT has penetrated into the Kilifi community and that some couples have taken advantage of the service. It must also be acknowledged that absenteeism and refusal may have biased the findings and that women who avoid CVCT may also have actively avoided participation in the survey.

Including men in the survey, although challenging, may have given a grasp on the acceptance of CVCT in Kilifi. Molyneux, Murira, Masha and Snow (2002) describe how important it is to target men, as well as women, in health promotion in African societies. This is because men are often the family decision-makers and hold authority over health seeking decisions.

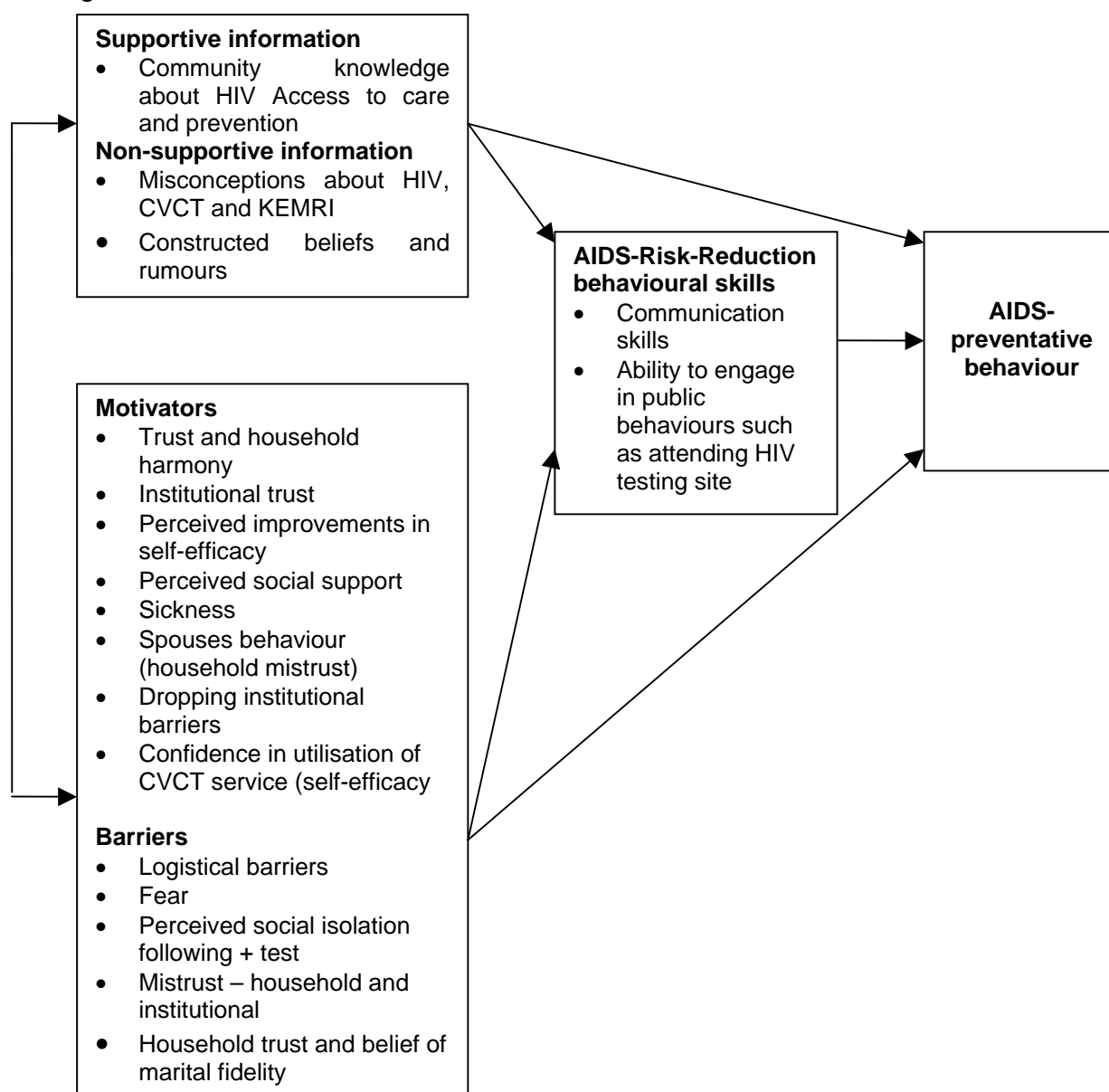
Another aspect of CVCT, which proved to be successful, was the door-to-door CVCT service. Many couples were willing to test in this way and gave positive feedback to counsellors, CORPs and other community members. Bringing the services to couple's homes perhaps reduced many institutional and logistical barriers. Perhaps more importantly, it gave couples an easy way to discuss CVCT without arousing suspicions of mistrust within the relationship.

9.1 Factors which influence couple's decisions to attend or not attend CVCT

The IMB describes three elements necessary to initiate HIV risk reduction behaviour change – Information, Motivation and Risk reduction behavioural skills. Within this study I have expanded the information element to include misconceptions or misinterpretations held by the community and constructed

information in the form of rumours about KEMRI. Various factors have been identified which influence individuals' and couples' motivation to test. The desired behaviour change relevant to this study has been defined as attending CVCT. The diagram below attempts to map out the range of factors identified in my study within the IMB model.

Figure 6: Barriers, Benefits and Motivators within IMB



What is perhaps interesting about the diagram is that some of the themes mentioned within the motivation and information elements of the IMB model appear to have contradictory effects on couples' decisions to adopt the desired behavioural change. This leads to a hypothesis that the decision making process must involve a weighing up of the perceived benefits of testing as a couple against the perceived risks. One example of this is the role social norms play in the decision making process. Influencing potential testers to test, would be a faith in their family's, friend's or social network's support regardless of the outcome of the test. Conversely, a belief that not only testing HIV+, but also merely being seen entering the CVCT site would result in isolation from the community.

Information can also work both ways in influencing decision-making. Information about how CVCT can improve a couples' communication, prevent infections and lead to PLWHA accessing treatment may motivate couples, whereas inadequate knowledge have the potential to give rise to misconceptions and rumours which discourage CVCT utilisation.

A third factor, having both positive and negative motivational effects on CVCT uptake, is suspicion of partner's infidelity. In the survey, women strongly suggested that men would refuse to test with them because a positive result for the husband would be proof of infidelity. Many other women reported that men would not accompany their spouses to the CVCT site because they wished their marriages to remain secret. This alludes to a vulnerability or potential desire in men to be unfaithful. On the other hand, a few women said that they

would not benefit from CVCT since they fully trusted their partners. HIV uninfected men within discordant couples were motivated to attend CVCT because they suspected that their spouses were unfaithful and that they desired to remain uninfected. One cannot come to a conclusion on such a small sample. However it does raise the issue that trust within a marriage, one way or another, is an important factor in influencing the decision to test or not to test.

Lucy Gilson argues that trust plays a very significant role in the public's decision to utilise health care services (Gilson 2003). In her literature review she describes voluntary trust between two people or groups, as ranging from "... a strategic behaviour rooted in risk and expectations about how another person will behave" to "... an altruistic behaviour rooted in expectations about how people should behave." (Gilson 2003). Trust, she continues, is essential for successful relationships. Another form of trust required for confidence in utilising health care services is an "institution-based trust." This, according to Gilson, depends on communicational and transactional interactions between health care provider and client and within the health care system itself. In relation to CVCT, three levels of trust are prerequisites to uptake; trust within couples, trust between couples and the CVCT staff, and trust within the KDH/KEMRI health care system.

At the couple level, trust nurtures cooperation and enhances relationships by reducing the need to monitor partner's performance. By trusting, a partner makes himself/herself vulnerable to exploitation, but benefits through reduced need to monitor the partner's performance (Gilson 2003). Thus, in trusting a

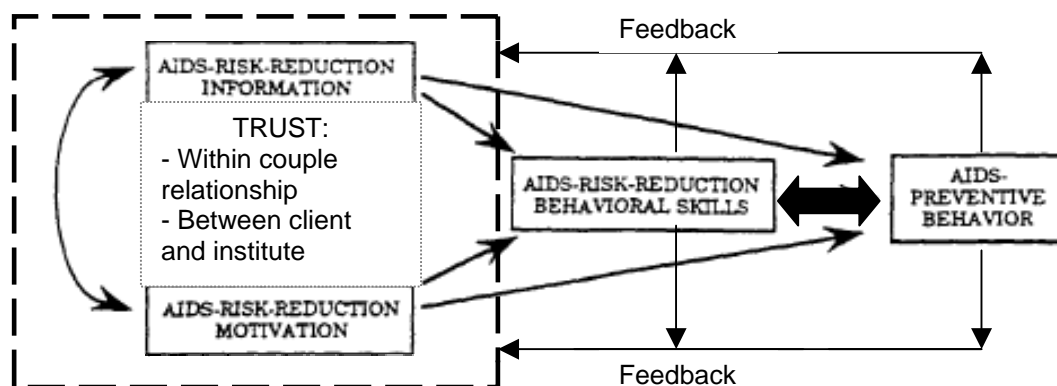
partner, individuals weigh the benefits of trust and the benefits of the relationship itself, with the risk of exploitation. The decision to attend CVCT often depends on trust by an individual that the partner and the community will not abandon or stigmatise them if they test positive. This is undoubtedly a difficult decision to make given that HIV/AIDS remains to be a highly stigmatised disease in Kenya. When there is distrust in the relationship or suspected infidelity, the decision becomes even more complex and the motives for testing varied. For the uninfected partner of one of the discordant couples interviewed, suspicion of infidelity led to the couple attending CVCT. This was motivated by the husband's sense of self-preservation and the fear that his wife may have been infected through an extra-marital affair. The power dynamics of a relationship play a significant role in the decision to test or not where there is mistrust in the relationship. The patriarchal nature of society in Kenya may therefore dictate that in many cases, the male partner has the final say in decision-making. A consequence of this is that when a wife suspects the husband of infidelity, she may have less power in suggesting CVCT to reduce her own, and her children's risk of infection. Trust within a couple can be seen to have a significant influence on adoption CVCT as a risk reduction strategy.

On a broader scale, Gilson (2003) argues that the community's trust in an institute depends very much on the intra-institutional trust and the relationships between managers and health care workers. This in turn affects how much respect health care workers give to patients and the quality of the communication. This may well be true in cities where the community may seem far removed from health care institutes. In Kilifi however, the situation is a little

more complex. KEMRI is the biggest employer in Kilifi town with a workforce of over 400 people. Over 70% of the workforce originates from Kilifi district and so there is a strong likelihood that care-seekers will be known by some of the staff. KEMRI salaries are high in comparison to other local employers; this can lead to tough competition for jobs and much tension and jealousy in the community. In addition to this, biomedical explanations for disease and research concepts and procedures such as placebo, random sampling and blood drawing seem alien to a community with low literacy levels. Jealousies, miscommunications and misinterpretations must therefore lead to communities combining new knowledge with traditional beliefs in the construction of beliefs and rumours. This constructed knowledge may discourage the uptake of health services. The information the community has or constructs emerged as an influential theme from the data. Damaging rumours and misconceptions were fairly common, affecting the community's trust in KEMRI and the uptake of CVCT. It must be acknowledged that rumours around health facilities are not unique to Kilifi and are prevalent in many settings (Geissler and Pool 2006).

The above argument suggests that the community's trust in the institute and the trust within couple relationships strongly influences both information and attitudes to the behaviour of attending CVCT. Consequently, in the context of couple decision-making, there may be a case for its addition to the IMB model as a cross-cutting determinant of AIDS preventative behaviour. In the diagram below I have specified trust as an element of the IMB model influencing both the community's construction of information about CVCT and motivation to utilise the service.

Figure 7: Emphasising Trust within IMB model



In addition to incorporating trust in the model, I have included a feedback mechanism. Behaviour change models frequently include information as a prerequisite to adoption of new behaviours. In this context however, the reverse is also possible. Evidence of individual's improved self-efficacy in giving positive feedback of information to the community following CVCT shows that this may be possible. Applying Everett Rogers' diffusion of new ideas model, the early innovator's experience of CVCT dictates whether the feedback they give to their community supports or discourages the adoption of the new idea (Rogers 2004). A poor quality service and a low perception of benefits gained would give negative feedback to the community, which in turn would adversely affect information, motivation and trust in the service. Positive feedback depends on the perceived benefit gained from the service, the quality of service given and the way in which the couple reacted to finding out their HIV status. Positive feedback resulting from a good experience of CVCT could bring about a virtuous cycle giving rise to the characteristic increase of gradient seen in the Everett Rogers diffusion curve.

9.2 Implications

Interviews with discordant couples have given valuable insights into the barriers, benefits and motivators for CVCT experienced by people who attend regular counselling. Given the time and resource constraints on the study, the point of data saturation was not attainable for the in-depth interviews. A more thorough description may have been given through interviewing CVCT refusers, concordant negative and concordant positive couples. Some of these views were captured, to a limited extent, through the survey and focus group discussions with CORPS. However, the views of CVCT refusers, albeit difficult to collect, would give valuable information regarding dominant barriers responsible for their decision to refuse the service.

Since many couples find out their HIV status through Hospital testing, a strong case could be put forward for channelling resources towards supporting DTC in preference of VCT and CVCT. In Kenya, many hospitals are adopting a policy of universal DTC for all inpatients meaning that an increased allocation of funds towards hospital testing has already been implemented. However, the advantage that CVCT and VCT have over hospital testing is that people are admitted to hospital at the last clinical stage of AIDS and are often very sick. Patients may have already infected their spouse during the early asymptomatic stages where the couple were unaware that one partner may be infected. CVCT has a greater potential to prevent these new infections, assisting discordant couples to remain discordant. Many couples have benefited from a combination of DTC and CVCT. This has been the case for many women who

found their HIV status at ANC. This combination offers the infected spouse an opportunity for partner disclosure in the presence of a counsellor.

As alluded to previously, CVCT may be most efficient in preventing new infections when couples are unaware of their status. So, for CVCT to be an effective public health HIV prevention tool in Kilifi, efforts must be made to remove social and logistical barriers. CVCT promotion and community mobilisation must give clear, culturally appropriate and accurate information about HIV, CVCT and the service provider. Trust in the service provider can be enhanced through mass media promotion as well as opening the doors of testing sites and providing information sessions to community groups such as schools, peer educators, the police and many more. Encouraging dialogue between community members and site staff must be integrated into the day-to-day running of HIV testing sites. This study revealed many perceptions, both positive and negative about KEMRI. The presence of the institute clearly influences many people's decision attend CVCT in both directions. A consequence of this is that the study findings may not be applicable to CVCT promotions elsewhere, although similar issues may crop up in different settings (Geissler et al. 2006; Gilson 2003). To guide CVCT promotion as a national public health tool, studies involving a more representative sample of the population must be conducted incorporating regions which are not influenced by the presence of a large medical research institution.

In addition to enhancing trust in the service provider, efforts can be made to remove logistical barriers which prevent couples from utilizing HIV testing

facilities. Services should be made available for couples during the evenings and weekends where both partners are free from work obligations. Incorporating play areas for children would contribute to making testing sites a more attractive proposition for families. Making waiting areas comfortable and enjoyable places for clients can relieve the burden of lengthy waiting times. Providing a TV or radio for people to listen to as they wait can do this relatively easily. In resource poor settings, donated newspapers, magazines and books could be made available for clients to read. Waiting times are dependent on the demand for the service, the number of counsellors on duty, the efficiency of client flow organisation and the rooms available for counselling. Funding and resources may constrain the sites ability to employ additional counsellors or to build more counselling rooms however relatively simple steps can be taken to make waiting time as comfortable as possible.

As has been discussed earlier, a partner suggesting to their spouse that they should attend CVCT may arouse suspicions of infidelity within the relationship. An approach which may help to overcome this barrier is door-to-door counselling and testing. This was implemented successfully in Kilifi during the KEMRI-HIV cross-sectional prevalence survey where many couples opted to be tested together in their own homes. Couples may find this approach attractive because broaching the subject of CVCT comes from a third party to the couple. A counsellor suggesting CVCT may arouse less suspicion of infidelity than if the suggestion came from within the couple.

By far the most frequently mentioned barrier to CVCT uptake was fear of knowing one's status and fear of social isolation. In Kilifi an attempt has been made to tackle this barrier by assisting community members to create support groups. In four locations in Kilifi Township, Couple Social support networks (CSSN) have been formed. These community groups consist of couples, regardless of their status, who have attended CVCT. The CSSNs are independent from KEMRI and meet fortnightly to discuss activities aimed at supporting couples living with HIV/AIDS. They carry out income generating activities and outreaches aimed at overcoming HIV stigma in the community. One such activity was a football tournament⁶ for couples. Increased community support for PLWHA involving both uninfected and infected people working shoulder to shoulder can contribute to a better understanding of HIV and a reduction in fear of testing.

In order to guide further HIV prevention strategies and CVCT promotion in Kilifi, further studies must attain a deeper understanding of men's perspectives on HIV testing. This study is perhaps limited in that the majority of views captured were from women. In a society where the household decision-makers are predominantly men, a deeper understanding of their motivators and barriers would guide improved promotion strategies.

Quality of service for couples in terms of professionalism, confidentiality, communication and respect must be excellent. If high standards of quality are

⁶ A football tournament was held in June 2006 involving teams of couples from six locations in Kilifi Township. The final was held on World AIDS Vaccine day – Over a thousand people came to watch the final where the author scored the opening goal for Mnarani CSSN!

met, behaviour change will result in improved information being fed back into the community. This may catalyse a self-sustaining cycle supporting CVCT.

10. Conclusion

Community mobilisation of CVCT in Kilifi Township has resulted in an increased awareness of the service among women and has motivated many couples to learn their HIV status together. Couples find out their HIV status through a variety of means. Barriers, benefits and motivators have been identified which influence couples decisions to attend CVCT. Trust plays a significant role in the decision-making process and works on different levels; within the couple and between the community and the institute and within the institute. For increased uptake of CVCT in Kilifi, an excellent quality of service must be given to couples so that a virtuous cycle is nurtured, encouraging others to adopt CVCT as an HIV preventative behaviour.

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12. Appendix I: Survey Questionnaires

CVCT Mobilisation Survey

July 2006

We, from KEMRI and the Ministry of Health, are seeking to know the views of 350 women from Kilifi Town and Mnarani about HIV testing, Couples Voluntary Counselling and Testing (CVCT), and Family Planning methods.

Your name has been randomly selected. If you consent to participate, you will be asked questions about HIV testing, family planning, and your relationship. Your responses will remain confidential and will only be known only to the investigators. Blood specimens are not taken in this survey and we will not ask you for you HIV status.

Participation in the study is entirely voluntary, you are free to refuse to participate or stop the interview at any point.

The interview will not take more than twenty minutes of your time.

Participant statement: **I agree to participate in the CVCT- Mobilisation Survey**

Participant signature.....

Date.....

1. Do you have a partner at the moment?
 - La /No.....Go to q. 5
 - Ndiyo / YesGo to q. 2

2. How would you describe your partnership?
 - Married/Co-Habiting Monogamous.....Go to q. 3
 - Married/Co-Habiting Polygamous..... Go to q. 3
 - Regular Sex Partner, Not Co-Habiting Go to q. 3
 - Separated/Divorced..... Go to q. 6
 - Widowed.....Go to q. 6
 - other specify.....Go to q. 3

3. How long have you been in a relationship with this person?
 - ||Years and ||MonthsGo to q. 4

4. Does your partner stay with you:
 - The whole time
 - On weekends
 - One/two weekend per month
 - Doesn't stay with partner
 - Other – specify.....Go to q. 5

5. I'm not interested in the result but have you ever been tested for HIV?
 La /No.....Go to q. 8
 Ndiyo / Yes.....Go to q. 6
refused to answer.....Go to q. 10
6. Where were you last tested?
- KDH**
 Ward 1
 ANC KDH
 Maternity Ward
 CCRC
 KDH VCT
 other wards at KDH
 Blood service
- KEMRI**
 CHIVC (KEMRI-VCT)
 KEMRI-door to door survey
- Other**
 Other VCT outside Kilifi
 Private clinic
 Other – specify
-Go to q. 7
7. When were you last tested?
 / Go to q. 8
(MON/YYYY)
8. ***If tested within in the past year, skip to question 10***
Would you be willing to go for HIV testing?
 La /No.....Go to q. 10
 Ndiyo / Yes.....Go to q. 9
9. Where would you go for testing?Go to q. 10
10. Have you been treated in Kilifi District Hospital in the last year?
 La /No.....Go to q. 13
 Ndiyo / Yes.....Go to q. 11
11. Was an HIV test offered to you?
 La /NoGo to q. 13
 Ndiyo / YesGo to q. 12
12. Where you given information on Couples Voluntary Counselling and Testing (CVCT) at this time?
 La /No.....Go to q. 13
 Ndiyo / Yes.....Go to q. 13
 Sijui /Don't Know.....Go to q. 13

13. Have any of your children been admitted to Kilifi District Hospital in the last year?
 La /No.....Go to q. 16
 Ndiyo / Yes.....Go to q. 14
 I don't have any childrenGo to q. 16
 Sijui /Don't Know.....Go to q. 16
14. Was an HIV test offered to your child
 La /No.....Go to q. 16
 Ndiyo / YesGo to q. 15
 Sijui /Don't Know.....Go to q. 15
15. Were you given information about CVCT at this time?
 La /No
 Ndiyo / Yes
.....Go to q. 16
16. Have you heard of of CVCT *[elsewhere]*?
 La /No.....Go to q. 19
 Ndiyo / YesGo to q. 17
17. How did you hear about CVCT?
.....Go to q. 18
18. Could you describe, in your own words, what happens at a CVCT session?
.....Go to q. 19
19. I do not want to know the results, but has your partner's HIV status ever been made known to you?
 La /No.....Go to q. 20
 Ndiyo / YesGo to q. 20
20. Have you and your partner gone for CVCT?
 La /NoGo to q. 21
 Ndiyo / YesGo to q. 23

21. Would **you** be willing to go for CVCT with your partner?
 La /NoGo to q. 22
 Ndiyo / YesGo to q.22
 Sijui /Don't Know.....Go to q. 22
22. Do you think that **your partner** would be willing to go for CVCT with you?
 La /NoGo to q. 23
 Ndiyo / YesGo to q.23
 Sijui /Don't Know.....Go to q. 23
23. Many couples have come for CVCT, whilst others still have not come. Can you think of any reasons that couples may not come for CVCT together?
Go to q. 24
24. Can you tell me any benefits of CVCT?
Go to q. 25
25. If you were to go for HIV testing, either alone or as a couple, **where** would you go?
Go to q. 26
- Thank you. I will now ask you some questions about family planning.**
26. Are you currently pregnant?
 La /NoGo to q. 27
 Ndiyo / YesGo to q. 28
27. Have you ever been pregnant?
 La /No.....Go to q. 28
 Ndiyo / YesGo to q.28
28. Have you ever used a family planning method?
 La /No.....Go to q.32
 Ndiyo / Yes.....Go to q.29
29. Are you currently using a family planning method?
 La /No.....Go to q. 32
 Ndiyo / Yes.....Go to q. 30

30. If yes, which one?
 Ni njia ipi ya kupanga uzazi unayotumia (onyesha njia zile unazotumia)?
 Tembe / *OCP (pill)*
 Mipira / *Condoms*
 IUD / *Coil*
 hysterectomy / kukatwa mshipa
 BTL / *Kufunga kiasi*
 Mipira ya kike / *Female Condoms*
 Diaphragm
 Kalenda / *Rhythm method*
 Sindano / *Depo Provera (injections)*
 Spermicides
 Sina / *None*
Go to q. 31
31. How did you learn about this method?
Go to q. 32
32. **If participant has not undergone an HIV test go to 30.** When you were tested for HIV, was any family planning method discussed?
 La /No
 Ndiyo / Yes
Go to q. 33
33. ...
 If you were to seek information on Family Planning methods, where would you go?
Go to q. 34
34. We want to know how well our program is serving people who are sexually active. This question may be somewhat personal. Would you be willing to tell me how many times you and your partner have had sex in:
 in the last week (specify number)
 in the last month
 refused to answer
Go
 to q. 35

CVCT Mobilisation Survey

July 2006

Sisi ni watafiti wa KEMRI na Pamoja na wizara ya afya, tungependa kujua maoni ya wanawake 350, juu ya idadi ya upimaji wa virusi vinavyosababisha ukimwi, upimaji na ushauri wa hiari wa bibi na bwana na njia za upangaji uzazi.

Jina lako limechaguliwa kwa bahati nasibu. Ukikubali kushiriki, utaulizwa maswali juu ya upimaji wa virusi, upangaji wa uzazi na uhusiano wako na mwenzio. Majibu yako yatabaki kuwa siri itakayojulikana tu na watafiti. Utafiti huu, hautahusisha utoaji wa damu.

Kushiriki kwako katika utafiti huu ni hiari na uko huru kushiriki au kutoshiriki au kusimamisha mahojiano wakati wowote.

Mahojiano hayatachukuwa zaidi ya dakika ishirini ya wakati wako.

Taarifa ya mshiriki: Nakubali kushiriki **katika ukaguzi huu wa upimaji na ushauri wa hiari wa wenzi.**

Sahihi ya Mshirika.....

Tarehe.....

1. Je kwa sasa, una bwana/mpenzi?

La /No..... **Enda kwa q.5**

Ndiyo / Yes..... **Enda kwa q.2**

2. Je, Unaweza kuelezea vipi uhusiano wenu?

Nimeolewa na mume mmoja..... **Enda kwa q.3**

Nimeolewa na ana mabibi wengine..... **Enda kwa q.3**

Bwana wa kufanya mapenzi, hatuishi pamoja..... **Enda kwa q.3**

Tumetengana/tumeachana..... **Enda kwa q.5**

Mjane..... **Enda kwa q.5**

Nyingine – kadiria..... **Enda kwa q.3**

3. Je, ni kwa muda gani mumekuwa na uhusiano huo?..... **Enda kwa q.4**

Miezi na Miaka

4. Je mwenzi wako hukaa na wewe:

Kila wakati

Kila Mwisho wa wiki

Moja kila mwezi

Hatukaai pamoja

Nyingine – kadiria.....

Enda kwa q.5

5. Sihitaji kujua majibu yako ya virusi vya HIV, ushawahi kupimwa virusi vya ukimwi?

|

La.....**Nenda**

kwa q. 8

| Ndiyo.....**Nenda kwa q. 6**

| Alikataa kujibu.....**Nenda kwa q.8**

6. Je, ulipimiwa wapi?

KDH

| Ward 1

| ANC KDH

| Maternity Ward

| CCRC

| KDH VCT

| Other wards at KDH

| Blood service

KEMRI

| CHIVC (KEMRI-VCT)

| KEMRI-door to door survey

Other

| Other VCT outside Kilifi

| Private clinic

| Other

Kadiria.....

Nenda kwa q.7

7. Je, ulipimwa lini mwisho?

|_|_|_| / |_|_|_|_|
(MON/YYYY)

Nenda kwa q. 8

8. ***If tested less than 1 year ago skip to question 10***

Je ungependelea kwenda kwa upimaji wa virusi vya HIV?

| La..... **Enda kwa q.9**

| Ndiyo..... **Enda kwa q.10**

9. Je, ungeenda wapi kwa upimaji wa virusi? **Nenda kwa q.10**

10. Katika miezi kumi na miwili iliyopita, ushawahi kutibiwa katika hospitali ya wilaya ya kilifi?

| La..... **Nenda kwa q.13**

| Ndiyo..... **Nenda kwa q.11**

11. Je uliulizwa kupimwa virusi vya HIV?

| La..... **Nenda kwa q.13**

| Ndiyo..... **Nenda kwa q.12**

20. Je ushawahi kuenda na mwenzi wako kwa ushauri na upimaji wa bibi na bwana?
 La..... **Nenda kwa q.21**

 Ndiyo..... -
Nenda kwa q.23
21. Je ungependeleaa kuenda kwa ushauri na upimaji wa pamoja na mwenzi wako?
 La
 Ndiyo
 Sijui**Nenda kwa q.22**
22. Je unafikiri **mpenzi wako** angependelea kwenda kwa ushauri na upimaji wa pamoja pamoja nawe? **Nenda kwa q. 23**
 La.....
 Ndiyo.....
 Sijui.....
23. Mabwana na mabibi wengine wamekuja kwa ushauri na upimaji wa hiari (CVCT) ilihali wengine hawajakuja. Unaweza kufikiria sababu zozote zinazofanya mabibi na mabwana kukosa kuja kwa CVCT?
Nenda kwa q. 24
24. Je unaweza kunielezea faida za upimaji na ushauri wa wenzi kwa pamoja?
Nenda kwa q.25
25. Je, ungeamua kuenda kwa ushauri na upimaji, na bwana ungeenda wapi?
Nenda kwa q. 26

Asante sana kwa ushirikiano wako. Sasa nitakuliza maswali juu ya upangaji uzazi.

26. Je, umja mzito kwa sasa?
 La.....Nenda kwa q.27
 Ndiyo.....Nenda kwa q.28
 sijui.....Nenda kwa q.27
27. Je ushawahi kuwa na mimba?
 LaNenda kwa q.28
 NdiyoNenda kwa q.28
28. Je, ushawahi kutumia njia yoyote ya upangaji uzazi?
 La.....Nenda kwa q. 32
 Ndiyo.....Nenda kwa q. 29
29. Je, unatumia njia yoyote ya kupanga uzazi kwa sasa?
 La.....Nenda kwa q.32
 NdiyoNenda kwa q.30
30. Kama ndiyo, ni njia ipi ya kupanga uzazi unayotumia (onyesha njia zile unazotumia)?
 Tembe / *OCP (pill)*
 Mipira / *Condoms*
 IUD / *Coil*
 Hysterectomy / kukatwa mshipa
 BTL / *Kufunga kizazi*
 Mipira ya kike / *Female Condoms*
 Diaphragm
 Kalenda / *Rhythm method* **Nenda kwa q. 31**
 Sindano / *Depo Provera (injections)*
 Spermicides
 nyengine (other) specify.....
31. Ulijuaje juu ya njia hiyo?
Nenda kwa q.32
32. **Kama hajapimwa virusi, nenda kwa q.33**
 Je, ulipopimwa hali ya virusi, mambo ya njia za upangaji uzazi yalijadiliwa?
 La
 Ndiyo
Nenda kwa q. 33
33. Kwa mfano, kama ungetaka kujua habari za njia za kupanga uzazi, ungeenda kwa kituo gani?
Nenda kwa q.34

34 Tungependa kufahamu zaidi jinsi mradi wetu unavyowahudumia watu wanaofanya mapenzi. Nisamehe, swali hili ni la kibinafsi. Ungeweza kuniambie ni mara ngapi wewe na bwanako mmehusiana kimapenzi (ngono) katika:

|___| Wiki iliyopita (Kadiria namba)

|___| Mwezi uliyopita:

|___| Alikataa kujibu

13. Appendix 2: Survey consent forms

INFORMED CONSENT FOR IN-DEPTH INTERVIEW WITH COUPLES

Rationale for the interview

The purpose of the study is to understand why some couples come forward for couple voluntary Counselling and testing while others don't. We wish to understand more about the barriers and benefits of knowing HIV status as couple. We hope that your participation will help improve the services offered and encourage other couples to seek to know their status.

Selection of participants

The interview will target 10 discordant couples (20 volunteers) randomly selected from the uninfected cohort in follow-up.

Duration of the interview

The interview will last between 45 minutes to 1 hour.

Procedures

If you decide to participate in this interview, after you read, discuss and sign or mark on this form, then:

- You will be asked questions regarding your experiences after knowing your status, the barriers you may have experienced and the benefits of this knowledge among other questions
- 2 counselors will be present during the interview. One will ask you questions while the other writes down your answers to the questions.
- Each partner will be given opportunity to answer questions

Risks and/or discomforts

You may be embarrassed, worried, anxious or angry when discussing your couple and individual experiences after you knew your status.

The counsellor will help you to discuss concerns, issues or questions you may have during the interview.

Benefits.

The interview may bring up issues that might require support counselling to you as a couple or as individuals. The interview will also help improve the service to couples who will seek to know their status now and in future.

Costs to you

There is no cost for you to be in the study. However as this is an extra visit to your scheduled cohort visits, you will receive Ksh 200 to compensate for your time and travel.

Confidentiality

All the information that will be collected from you will be private and not available to other people outside the site staff. Excerpts from the discussion will be used to write a report but we will not disclose your identity.

Participation is voluntary

This form gives you all the information that you need to know to help you make an informed decision to participate in the interview. If for any reason you do not wish to participate in the interview, it is important for you to know that:

- Your participation is voluntary
- You may decide to stop the interview at any time.
- You will not lose any right or benefits if you do not participate.

Who to contact with any questions about the interview

The principal investigator Dr. Eduard Sanders at KEMRI (041-522133)

The Site Manager Alun Davies at KEMRI (041-522133)

Counselors Jennifer Kanungi or Florence Kitsao at KEMRI (041-522133)

Participant's statement

I have read / understood the consent form and I am willing to participate in the interview.

Partner 1

Name.....

Sign..... date.....

Partner 2

Name.....

Sign..... date.....

Counsellor

Name.....

Sign..... date.....

MAKUBALIANO YA MAHOJIANO KWA WENZI

Sababu ya mahojiano

Utafiti huu unatafuta kuelewa sababu zinazowafanya watu wengine kuja kwa ushauri na upimaji wa hiari kwa pamoja ilhali wengine hawaji. Tungependa kujua zaidi kuhusu vikwazo na faida kwa watu kujua hali zao kama mke na mume. Tunatarajia kuwa kuhusika kwako kutatusaidia kuboresha huduma tunazotoa na kuwatia moyo watu wengine kuja kujua hali zao.

Uchaguzi wa wahusika

Mahojiano yatalenga jamii kumi zenye hali tofauti ya virusi ambazo zitachaguliwa kwa njia ya bahati nasibu kutoka kwa watu waliojiunga na utafiti wetu wa watu ambao hawajaambukizwa virusi.

Muda wa mahojiano

Mahojiano yatachukua kati ya dakika arobaini na tano na saa moja

Taratibu

Ikiwa utaamua kujiunga katika mahojiano badaa ya kusoma / kujadili na kutia sahihi fomu hii:

- Utaulizwa maswali kuhusu maoni yako baada ya kufahamu hali yako, vikwazo ulivyopata na faida
- Washauri wawili watahudhuria mahojiano. Mmoja atauliza maswali na mwengine ataandika majibu ya maswali haya.
- Kila mwenzi (ikiwa ni wawili) atapewa nafasi ya kujibu maswali

Hatari na maudhi

Waweza kuudhiwa, kuwa na wasiwasi, shauku au kukasirika wakati wa kujadili jinsi ulivyo / mlivyo jisikia baada ya kujua hali yako / zenu. Mshauri atakusaidia kujadili wasiwasi wako, maoni au maswali utakayo kuwa nayo wakati wa mahojiano.

Faida

Mahojiano yanaweza kuzusha mambo ambayo yangehitaji ushauri wa ziada kwako binafsi au pamoja na mwenzio. Mahojiano pia yataweza kusaidia kuboresha huduma kwa jamii zinazo hitaji kujua hali zao sasa na katika siku zijazo.

Gharama kwako

Hakuna gharama kwako unapojiunga na utafiti huu. Kwa sababu itakulazimu kuja kituoni kwa mara moja zaidi, tutakufidia kwa shilingi mia mbili kwa wakati na usafiri wako.

Siri

Habari zote zitakazokusanywa kutoka kwako zitahifadhiwa kwa siri na hazitakuwa wazi kwa wengine wasiofanya kazi katika kituo hiki. Baadhi ya habari hizi zitatumiwa kuandika ripoti bila ya kukutambulisha.

Kuhusika ni kwa hiari

Fomu hii inakupa maelezo yote ambayo yangekusaidia kufanya uamuzi wa kujiunga na mahojiano. Ikiwa hutataka kujiunga katika mahojiano kwa sababu zo zote ni muhimu kwa wewe kufahamu kuwa:

- Kujiunga kwako ni kwa hiari
- Unaweza kusimamisha mahojiano wakati wowote
- Hutapoteza haki au faida zozote ikiwa hutashiriki

Mtu wa kuwasiliane naye iwapo una maswali kuhusu mahojiano

Mtafiti mkuu – Dr. Eduard Sanders – KEMRI (041-522133)

Msimamizi wa kituo – Alun Davies – KEMRI (041-522133)

Washauri – Jennifer Kanungi, Florence Kitsao au Johnstone Kale – KEMRI (041-522133)

Kauli ya mhusika

Nimeisoma / nimeielewa fomu hii ya makubaliano na ningependa kushiriki katika mahojiano haya.

Mwenzi 1 Jina.....

SahihiTarehe.....

Mwenzi 2 Jina.....

Sahihi

.....**Tarehe**.....

Mshauri Jina.....

SahihiTarehe.....

13. Appendix 3: In-depth interview tool

1. How did you find out your status as a couple
 - a. prompt – did you both come as a couple ? or did one know their status first. How did you learn about the site you went to?

2. How did you come to decide to go for HIV testing?
 - a. prompt – disease, HIV positive child (how did you persuade yourself to be tested – how did you disclose to your husband/wife and persuade them to come for testing.

3. What do you think makes it difficult for other people to come forward for CVCT?
4. Prompt – what are others' attitudes concerning CVCT

5. what made it difficult for you to come forward?
 - a. prompt with – distrust in partner, testing establishment, fear of institute, confidentiality

6. how do you feel about coming to Community HIV centre and the CCRC now?
7. Prompt – compare accessing medical services now to before you joined the study

8. What made you join the research programme?
 - a. prompt – any particular person?

9. How have you benefited by knowing your status? As individuals and couple

10. How have you recommended CVCT to others following your experiences?

11. How has the knowledge that you are discordant affected your married life?
 - a. Prompt – sex life – future family (children)

12. Have you disclosed your status to children or other members of the family, friends? Tell me about this, how did you do it, What happened?

Mahojiano kwa wenzi

1. Nielezee, mlijuaje hali zenu za virusi , mlijua hali zenu kwa pamoja, au mmoja wenu alijua hali yake kwanza?
Mlijuaje kuhusu kituo mlichopimiwa?
2. Ilikuaje mpaka mkaamua kwenda kupimwa virusi
Prompt – ugonjwa, mtoto/mwengine alipatikana na virusi
 - ulijishawishi vipi
 - ulimueleza vipi mwenzio juu ya hali yako
3. Mabwana na mabibi wengine wamekuja kwa ushauri na upimaji wa hiari (CVCT) ilhali wengine hawajakuja. Je ,Unaweza kufikiria sababu zozote zinazowafanya wasije kwa ushauri na upimaji wa pamoja?
Prompt – maoni ya wengine kuhusu CVCT
4. Kulikuwa na ugumu gani kabla ya uamuzi wa kupimwa?
Prompt – Kutoaminiana, hofu ya kujulikana, hofu kuhusu taasisi, usiri
5. Tangu muanze kututembelea hapa katika kituo hiki na kule kwa kiliniki ya jamii, je kuna mabadiliko yo yote katika nia zenu kuhusiana na vikwazo mlivyokuwa navyo hapo awali?
Prompt – Ugumu au urahisi
Prompt – nini kinacho changia
Prompt – linganisha tofauti ya kupata huduma za matibabu sasa na kabla ya jiunga na utafiti
6. Ni nini haswa kilichowafanya mjiunge na utafiti huu?
Prompt – pengine ushawishi wa mtu fulani
7. Mmefaidika vipi baada ya kujua hali zenu?prompt kibinafsi na kwa jumla.
8. kutokana na kujua hali zenu, je mumejanya nini katika hali ya kuwahimiza wenzenu kuhusu ushauri na upimaji wa pamoja?
9. Kujua hali zenu kuwa ni tofauti, kumeathiri vipi maisha yenu?Ya ndoa? Ngono? Jamii, uzazi?
10. Mumewahi kueleza hali zenu kwa watoto wenu, jamii yenu au marafiki? Mliwaelezaje? Na ikawaje?