

**An Exploration of Barriers Associated with Low Voluntary
Counselling and Testing Uptake by Adult Tuberculosis
Patients Attending Primary Health Care Clinics, Buffalo
City Municipality, Eastern Cape.**



ZUKISWA JAFTA

**A Mini-Thesis submitted in fulfilment of the requirements for the Degree of
Masters in Public Health, Faculty of Community and Health Sciences, University
of the Western Cape.**

The logo of the University of the Western Cape, featuring a stylized building facade with columns and a pediment.

2008
UNIVERSITY of the
WESTERN CAPE

Supervisor: Suraya Mohamed

KEY WORDS:

Tuberculosis (TB)

HIV

TB and HIV co-infection

TB and HIV dual treatment

Voluntary Counselling and Testing (VCT)

VCT uptake among TB patients

Primary Health care clinics

Barriers

Eastern Cape

South Africa



TABLE OF CONTENTS**Page Numbers**

Title page	i
Keywords	ii
Abbreviations	vi
Abstract	vii
Declaration	ix
Acknowledgements	X

CHAPTER ONE: INTRODUCTION

1.1	Background	1
1.2	Study setting	6
1.3	Problem statement	8
1.4	Researcher's experience and evolution of HIV/AIDS services in the E.C	9
1.5	Aims	10
1.6	Objectives	11

CHAPTER TWO: LITERATURE REVIEW

2.1	Magnitude of HIV/AIDS epidemic	12
2.2	TB and HIV epidemiology	14
2.3	Advantages of VCT	15
2.4	VCT strategies	16
2.5	VCT in South Africa	19
2.6	Barriers to VCT uptake and how are they addressed	22
2.6.1	Health – services barriers	22
2.6.1.1	Lack of access to VCT services	23
2.6.1.2	Compromised quality of service	24
2.6.1.3	Lack of confidentiality	24
2.6.2	Patient related barriers	25
2.6.2.1	Lack of knowledge on HIV	25
2.6.2.2	Partner violence	26
2.6.2.3	Fear of dual diagnosis	26
2.6.2.4	Attitude towards and misconceptions of VCT and HIV	27
2.6.3	Community related barriers	29

CHAPTER THREE: RESEARCH METHODOLOGY

3.1	Research Study Design	32
3.2	Study population	33
3.3	Sampling procedure	33
3.4	Data collection	34
3.5	Strategies to ensure rigour	35
3.6	Data analysis	36
3.7	Ethics	37

CHAPTER FOUR: RESULTS

4.1	Demographic profile of participants	38
4.2	Reasons for accepting VCT	41
4.3	Barriers to VCT	43
4.3.1	Health service related barriers	44
4.3.1.1	Lack of accessibility and awareness of VCT service	44
4.3.1.2	Selective offering of VCT service	45
4.3.1.3	Attitude of nurses towards VCT	46
4.3.1.4	Quality of VCT services offered	46
4.3.1.5	Shortage of nursing staff	47
4.3.2	Patient related barriers	48
4.3.2.1	Dual treatment for HIV and TB patients	48
4.3.2.2	Lack of understanding of VCT	48
4.3.2.3	Fear of HIV positive result and its implication	49
4.3.2.4	Lack of perceived support from partner and lack of perceived risk	50
4.3.3	Community related barriers	50
4.3.3.1	Stigma and discrimination	50
4.3.3.2	Community perception	50

CHAPTER FIVE: DISCUSSION

5.1	Barriers to VCT uptake	52
5.1.1	Health service related barriers	53
5.1.2	Patient related barriers	56
5.1.3	Community – related barriers	58
5.2	Factors promoting access to VCT uptake	59
5.3	Interventions to increase uptake to VCT	61
5.4	Limitations of the study	61

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1	Conclusion	63
6.2	Recommendations	64

REFERENCES		66
-------------------	--	----

TABLES

Table 1	Demographic profile of study participants	39
Table 2	Themes identified as barriers to VCT uptake	49

APPENDICES

APPENDIX A	Participant information sheet	83
APPENDIX B	Participant Consent form	86
APPENDIX C	In – depth interview guide	87

ABBREVIATIONS

AIDS Acquired Immune Deficiency Syndrome

HIV Human Immunodeficiency syndrome

PHC Primary Health Care

PLWA People Living with AIDS

TB Tuberculosis

VCT Voluntary Counselling and Testing



ABSTRACT

Background: Voluntary Counselling and Testing (VCT) is a central component of the South African government's strategy to prevent the spread of HIV and to provide care and support to those living with HIV/AIDS. VCT also represents a mechanism for referral into care, treatment for opportunistic infections, prevention of mother to child transmission of HIV, post-exposure prophylaxis, access to antiretroviral treatment (ARV), as well as longer-term counselling and support for positive living (UNAIDS, 2001a).

The importance of VCT has brought about the wider promotion and development of VCT services (UNAIDS, 2001b). However, since the majority of countries where HIV has a major impact are also the poorest, the lack of resources has meant that VCT is often still not widely available (2001b).

In South Africa about 60% of tuberculosis (TB) patients have HIV co-infection (WHO, 2004). VCT is critical to effective HIV prevention and TB facilities are optimal venues for delivery of these services. VCT services are free of charge for all through the Department of Health.

Aim: The aim of the study is to explore the barriers associated with low VCT uptake by the TB patients attending primary health care clinics within the Buffalo City municipality.

Study population and sample: The study population was drawn from TB patients attending the primary health care facilities in Buffalo city municipality in the Eastern Cape Province. Eight participants were purposively selected to include those who had accepted VCT as well as those who did not.

Study design and methodology: This was a qualitative exploratory descriptive study using in-depth interviews.

Results: Barriers were grouped into three broad themes namely; the health service barriers, patient – based barriers and community based barriers. The health service barriers are not different to those found in the literature as challenges to implementation of VCT. These are lack of accessibility to VCT service, poor quality service, logistical barriers, negative attitudes experienced. Community–based barriers are misconceptions, stigma, and discrimination. Client–based barriers include lack of knowledge about HIV and TB co-infection, fear of positive result, fear of AIDS related stigma, and uncertainty about subsequent eligibility for antiretroviral treatment while still receiving TB treatment were identified as other potential barriers to the uptake of VCT.

Conclusions: This study aimed to examine the barriers to VCT uptake by the TB patients. Three broad themes emerged from the barriers to VCT: health system based, client based barriers as well as community based barriers. It is clear from this study that the barriers to VCT uptake that TB patients experience is similar to that of a person who does not have TB. There were however some barriers identified that were unique to TB patients alone.

DECLARATION

I declare that “An exploration of barriers associated with low Voluntary Counselling and Testing uptake by adult tuberculosis patients attending primary health care clinics, Buffalo City municipality, Eastern Cape’ is my own work, and that all the sources that I used have been indicated and acknowledged by means of complete references

Signed by: -----

On this ----- day of ----- 2008

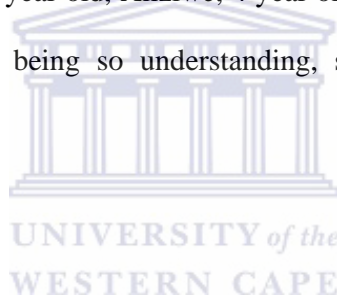


ACKNOWLEDGEMENTS

I would like to thank my supervisor Suraya Mohamed for all her guidance, her patience and consistent support throughout my study.

I thank the participants of the study for being cooperative, understanding – without them this study would not have been realized.

I wish to extend a special appreciation and love to my husband Gcina Madasa and my lovely daughters Yeyethu, 6 year old, Aliziwe, 4 year old, and Lilitha 16 months old, as well as my mother for being so understanding, supportive, and encouraging throughout the study period.



CHAPTER ONE

INTRODUCTION

The aim of this chapter is to give an insight into the state of the human immunodeficiency virus (HIV), tuberculosis (TB) epidemic and HIV and TB co- infection. Of importance is that the researcher gives an account of her involvement in the Eastern Cape with HIV/AIDS and TB which adds to the rationale of the study. Voluntary counselling and testing (VCT) as a strategy to combat HIV/AIDS is also discussed as well as the importance and advantages of VCT. The chapter starts with the background, and covers the study setting, the problem statement, aims and objectives of this study.

1.1 Background

Globally it is estimated that 33 million people are living with HIV, and approximately 67% are from sub-Saharan Africa. Women account for half of all people living with HIV worldwide (UNAIDS/WHO, 2008). The HIV/AIDS epidemic is one of the main challenges facing South Africa today. About 5.54 million people were estimated to be living with HIV in South Africa in 2005, with 18.8% of the adult population (15-49) affected, and a total of 294 000 were children aged 0-14 (Dorrington, Bradshaw, Johnson and Daniel, 2006). The HIV prevalence in South Africa has increased from less than 5% in 1990 to 30% in 2005 (Department of Health, 2006). The HIV prevalence varies according to province with the highest antenatal prevalence in 2005 being in KwaZulu-Natal (39.1%) and the lowest in the

Western Cape (15.7%), with the Eastern Cape ranking fourth having a prevalence of 30,1% (Shisana, Zungu-Dirwayi and Louw, 2005).

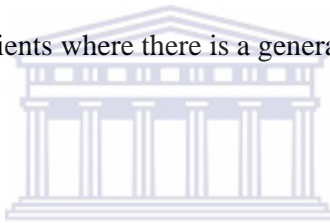
Closely linked to HIV/AIDS is the TB epidemic. TB in high HIV prevalence populations is a leading cause of morbidity and mortality, and HIV is driving the TB epidemic in many countries (WHO, 2003). It is well established that infection with HIV is one of the most important factors promoting the development of TB in persons infected with Mycobacterium Tuberculosis (Elizabeth, Watt and Walker, 2003). HIV infected individuals co-infected with TB have an annual risk of 5-15% of developing active TB (Elizabeth, Watt and Walker, 2003). TB rates have grown dramatically in sub-Saharan Africa driven in large by the expanding HIV epidemic (UNAIDS/WHO, 2008). The strong association of HIV and TB in sub-Saharan Africa is reflected in high seropositivity rates among patients with all types of TB (Harries, 2004). Recent estimates from the World Health Organisation (WHO) suggest that the rate of co-infection in South Africa is approximately 44% (Shisana et al, 2005; UNAIDS/WHO, 2008).

South Africa being one of the twenty two High Burden countries for TB contributes to approximately 80% of the total global burden of all TB cases (Department of Health, 2007a). The country ranks seventh in the world for TB incidence (Department of Health, 2007a). During the past ten years the incidence of TB has increased, parallel to the increase in the estimated prevalence of HIV in the adult population (Department of Health, 2007a).

In the Tuberculosis Strategic Plan for South Africa, 2007 – 2011, management of both TB and HIV infections is amongst the top ten priorities for the health system in South Africa. The TB cure rates and treatment success has gradually increased over the last five years with

66% in 2000 to 70% in 2004 (Department of Health, 2007a). However, the defaulter rate remains high creating a barrier to achieving the targets for treatment success and cure and increasing the potential for drug resistance (Department of Health, 2007a). In the Amathole district, the smear conversion rate was initially 53% in 2004, 34, 4% in 2005 and 41% in 2006 (Department of Health, 2005a). The cure rates have remained low at 34, % in 2005 and 41% in 2006 below the set target of 65% for Amathole District (Department of Health, 2005a)

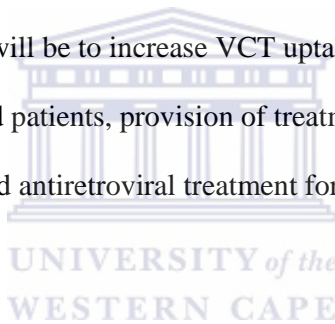
The WHO interim policy on HIV and TB recommends HIV testing for TB patients as an entry point for integrated HIV and TB care and surveillance (WHO, 2004a). The WHO recommends VCT for all TB patients where there is a generalized HIV epidemic (WHO, 2005).



The National Strategic Plan (NSP) for HIV for South Africa launched in 2007, with its primary focus that of HIV prevention, is aiming to reduce the rate of new infection by 50% by 2011, thereby reducing the impact of HIV and AIDS on individuals, families, communities (Department of Health, 2007). Part of the NSP priority on treatment care and support is to increase coverage and access to VCT and promote regular testing (Department of Health, 2007b). VCT is a critical component of the South African national strategy to limit transmission of HIV (Forsythe, Arthur, Ngatia, Mutemi, Odhiambo and Gilks, 2002). As a result, the draft National policy on Counselling and Testing, also recommends universal access of the service to all (Department of Health, 2005b). VCT plays a pivotal role in the public health response to the HIV epidemic and serves as a vital point of entry to HIV/AIDS services including primary prevention, prevention of mother to child transmission, antiretroviral therapy, management of HIV-related illnesses (Hogan and Salmon, 2005), TB

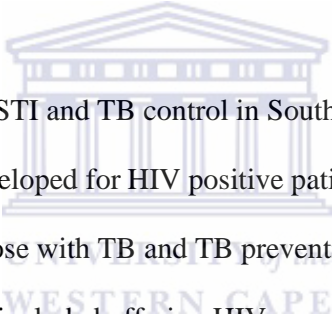
control and psychosocial support (Sherr , Hackmana, Mfenyana, Chandia and Yogeswaran, 2003). The decision must be entirely the choice of the individual and he or she must be assured that the process will be confidential (Department of Health, 2005b).

In the VCT model in South Africa, health care workers offer patients VCT, which includes counselling (pre and post –test) as well as HIV testing, and consent is sought prior to the process. VCT is offered free of charge in all public sector facilities including other non – medical sites for VCT, supported by the Department of Health. In order to address TB and HIV co-infection, the Tuberculosis Strategic Plan for SA, acknowledges that functional integration of TB and HIV activities at facility level is key to providing patient centred comprehensive care. The focus will be to increase VCT uptake by TB patients, CD4 testing and assessment of all co-infected patients, provision of treatment and preventive therapy for other opportunistic infections and antiretroviral treatment for all co-infected patients (Department of Health, 2005b).



South Africa has one of the largest antiretroviral therapy (ART) programmes in the world that was launched in November 2006. By September 2006, there was an increasing number of patients on (ART) at 213 828, and 21 550 were children less than 14 years. A further 80000 people commenced ART in the private sector (Department of Health, 2007). According to the National Antiretroviral Treatment guidelines, TB patients are eligible for ART, and those on ART who develop TB are able to continue ART (Department of Health, 2004). For the patient who presents with TB before commencing ART, and has no history of WHO Stage IV illness, and with a CD4 count of more than 200 cells/mm³, ART is not yet needed (Department of Health, 2004).

The National Department of Health and Provincial departments integrated efforts in HIV and TB activities in order to mitigate the increasing co-infection and developed a TB Crisis Management Plan in response to the WHO Afro Regional Committee's decision on the 25 August 2005 to declare TB as an emergency in the AFRO Region (Department of Health, 2007a). The aim of the TB crisis management plan was to intensify the efforts to improve the TB programme, by increasing the smear conversion and the cure rates by more than 10% within a period of a year. Sites with a high burden of TB were selected for the implementation of this plan, namely, Amathole District & Nelson Mandela Metro in the Eastern Cape, Johannesburg Metro in Gauteng, Bohlabela in Limpopo and Ugu in KwaZulu Natal (Department of Health, 2007a).



A Joint Strategy for HIV/AIDS, STI and TB control in South Africa was then developed in 2005, with a package of care developed for HIV positive patient's i.e. routine screening for TB and offering treatment for those with TB and TB preventive therapy for those found not to have TB. For TB patients this included offering HIV counselling and testing to all TB patients, offering cotrimoxazole routinely to those who test HIV positive and antiretroviral treatment (ART) to those who are eligible for ART, as well as ongoing psychosocial support and early diagnosis and treatment of other opportunistic infections (Department of Health, 2005a). By the end of the 2006/7, 211 sub-districts were implementing TB and HIV activities (87%), with 58% of TB patients offered HIV counselling and testing, and the VCT uptake was 68% (Department of Health, 2005b). Systematic TB screening amongst people living with HIV had been low, but 29% of the patients screened were found to have TB disease (Department of Health, 2005a).

The National Department of Health has responded to the two epidemics by developing several guidelines, plans and policies including drafting a policy on Counselling and Testing, the establishment of the National TB Strategic Plan, the National Strategic Plan for HIV and AIDS (NSP), and the National Treatment guidelines on ART. Of concern is the fact that even though these efforts made by the government in South Africa in integrating TB and HIV treatment and care exist, there is still a low uptake among TB patients of the VCT programme (Hausler, 2002). There is however limited data available on potential barriers to VCT uptake among this TB patient group, despite documented vulnerability of HIV patients to TB, and vulnerability of TB patients to HIV, as well as free availability of ART in public sector. This study therefore aims to explore such barriers encountered by TB patients in the uptake of VCT services.



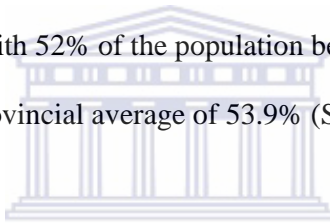
1.2 Study Setting

This study was conducted in Buffalo City Municipality, based in East London, Eastern Cape Province. The Eastern Cape Province is one of the nine provinces of South Africa, with a population of approximately 6 970 000 and constituting 13.9% of the total land area of the country, making it in surface area the second largest province of the country (Statistics South Africa, 2003).

According to the 2001 Census, 23% of the population in the Eastern Cape aged 20 years or older had no formal school education, and 55% of those in the age group 15-64 years were unemployed (Statistics South Africa, 2003). In 2002, a large proportion of the population (68%) lived below the national poverty line (United Nations Development Programme, 2004). The Eastern Cape has the second highest poverty levels in South Africa (47% of households are below the poverty line, which is based on imputed monthly expenditure of

R800 or less) (Statistics South Africa, 2003). About 80% of the households in Buffalo City Municipality fall into this category. About 63% of the province's population live in rural areas with less than half of the households (47%) lived in formal housing, and 11% and 38% in informal and traditional structures respectively (Bradshaw et al, 2003).

The Eastern Cape Province is further divided into district municipalities. Buffalo city is one of the Municipal areas in the greater Amathole District Municipality which comprises of a densely populated black community of approximately 935,249 inhabitants, residing along the coastal town of East London and Mdantsane suburb (Bradshaw et al, 2003). The population distribution is shaped along the pattern of a developing country, characteristic of a large population of younger people, with 52% of the population being females without showing any major deviation from the provincial average of 53.9% (Statistics South Africa, 2003).



In the Eastern Cape, introduction of programmes for HIV care has been vertical and not integrated. This is partly due to the fact that, different budgets are allocated for the TB directorate and HIV budget with different programme managers. VCT was introduced in 2000, and Prevention of Mother To Child Transmission of HIV (PMCT) in 2001. TB screening in the clinics have been part of the duties of the nurse. But with the introduction of VCT, some nurses were appointed and trained for VCT, as well as PMTCT. There has been no standardised format of reporting progress on these programmes, as well as indicators to compare sites. Training of all nurses at Primary Health Care (PHC) followed long after the programme was introduced and as a result TB patients have been missed for VCT.

With the introduction of ART in 2004, VCT access was noted to increase slightly compared to 2001, due to the availability of the ART. Patients who tested began not to fear the

consequences of the HIV result if positive as they knew that they would be eligible for treatment. However, TB patient's reluctance to accept VCT still exists because of the fear that they might not be eligible for treatment. Part of their fear is related to limited access to HIV education. It has been observed that most TB patients in high HIV-prevalent countries who have not tested for HIV do not have easy access to HIV education and services to help them manage HIV-related illnesses as a result show low uptake to VCT (Family Health International, 2001)

The primary health care clinics selected for the study were the NU2, NU8, NU13 as well as the Gompo health clinics. At the time of the study these clinics were ART sites providing TB screening, STI management, VCT as well as ART adherence programme.

1.3 Problem Statement

There is increasing mortality and morbidity due to HIV/TB co-infection worldwide, as well as in South Africa. Although there is implementation of VCT as a prevention programme and entry point to HIV care and free provision of ART in the public sector to all those eligible since 2004, there is very little uptake to the VCT programme especially among the TB patients who are at risk for HIV. According to the draft National Policy on Counselling and Testing (Department of Health, 2005a), VCT services are offered at all primary health care clinics with VCT coverage of 100%, but VCT uptake remains poor at 43%.

The Eastern Cape has an increasing HIV prevalence rate, and has been declared a national TB crisis province because of low cure rates. However, VCT uptake in the Eastern Cape is low especially among the TB patients attending primary health care clinics. There is therefore a need to identify and understand the barriers to VCT uptake amongst these patients.

1.4 Researcher's experience and involvement in evolution of HIV /AIDS services in the Eastern Cape.

The researcher has been working in a hospital-based adult ART clinic in East London for the past 5 years. This is an accredited ART site, and a referral site for the clinics, where initiation and adherence of ART, TB screening, management of opportunistic infections, as well as monitoring patients on ART is undertaken. In 2001, the researcher worked in the maternity section, starting women on Nevirapine at the time and was also involved in HIV/AIDS training of both staff members as well as patients on the prevention of mother to child transmission of HIV. In the researcher's experience, challenges of VCT in 2001 were related to non availability of treatment for the mother as well as the partner. Most women were refusing VCT because of a range of reasons namely: there was no treatment provided for the mother; women who sought permission from their partners were not given permission because no treatment was available to them. Most would accept VCT, but did not want to know their results, because knowing their status would not be beneficial to them, and therefore the advantages of VCT were not considered in the absence of ART treatment.

The environment in which the researcher is working has exposed her to working with HIV positive immunocompromised patients who subsequently develop TB and also TB patients who are diagnosed with HIV infection. Some develop TB while receiving ART, which then drops their CD4 count and increases their viral load to excessive levels leading to illness. The concerning thing is whether TB patients are aware of the increasing TB /HIV co-infection, as well as that they are at risk for acquiring both. If so, are they fully knowledgeable to seek HIV services when diagnosed with TB, or seek TB screening when diagnosed with HIV? The research has therefore focused on the perspectives of patients to

explain what challenges or barriers they encounter in accessing VCT, which is considered as a gold standard and an entry to HIV care by the Department of Health.

The experience of the researcher at the site with TB patients is that they accept VCT late at the hospital when they are already symptomatically ill. At that stage they have a CD4 count usually below 50, and too low to mount any immune response. On initiation of ART, they suffer from Immune Reconstitution Syndrome, a paradoxical response characterised by fever, chills, sweating, as the immune system recovers. The problem is that most patients with such low immunity end up with a fatal outcome.

Because the site is a referral site from the named clinics of the study, if TB clients tested early for HIV, through provision of quality VCT service, many of them would know of their dual diagnosis while their immune system is still high. This would allow treatment of TB successfully for a 2 month intensive phase with Rifaprim and then be changed after two months to Rifampin so as to start ART treatment. This is the best way to manage the drug interaction of TB and ART therapy successfully. Unfortunately, if TB patients are not aware of their co - infection and are discovered late, they are unlikely to benefit from the ART. With this research, the researcher would firstly like to sensitise patients themselves to be fully aware of the risk of acquiring both diseases and secondly to access VCT early so as to manage both diseases simultaneously.

1.6 Aim

To explore the barriers associated with low VCT uptake by the TB patients attending PHC clinics within the Buffalo City municipality.

1.7 Objectives

1. To explore the perceptions about VCT uptake among TB patients attending PHC clinics within the Buffalo City municipality.
2. To describe barriers to VCT uptake encountered by these patients.



CHAPTER TWO

LITERATURE REVIEW

This chapter outlines the epidemiology of both HIV/AIDS and that of TB. It also focuses on VCT, its advantages, strategies for implementation, and the barriers for VCT. TB and HIV co-infection, as well as efforts of TB/HIV collaborating activities are discussed.

2.1 Magnitude of HIV/AIDS epidemic

Unknown 27 years ago, HIV has already caused 25 million deaths and has generated profound demographic changes in most heavily affected countries (UNAIDS/WHO, 2008). In 2007 there were 2.7 million new HIV infections (UNAIDS/WHO, 2008). According to the same report, the number of people living with HIV has risen from around 8 million in 1990 to 33 million today, and is still growing, and more than 25 million people have died of AIDS since 1981. Overall, 2 million people died due to AIDS in 2007, compared with an estimated 1.7 million in 2001. However, the report states that the percentage of adults living with HIV globally has levelled off since 2000. The annual number of new HIV infections declined from 3 million in 2001 to 2.7 million in 2007. (UNAIDS/WHO, 2008).

Sub-Saharan Africa remains the region that is most heavily affected by HIV accounting for 67% of all people living with HIV and 75% of AIDS deaths in 2007 (UNAIDS/WHO, 2008). At the end of 2007, women accounted for 50% of all adults living with HIV worldwide, but

59% in sub-Saharan Africa (UNAIDS/WHO, 2008). Africa has 11.6 million AIDS orphans. (UNAIDS/WHO, 2008).

Mozambique, in sub – Saharan Africa ranks among the top ten nations in the world in terms of the number of people living with HIV/AIDS, with an estimated 1,300,000 people infected with HIV in 2003 (UNAIDS, 2004). The overall estimated sero-prevalence of HIV among adults aged 15–29 years was estimated at 12% (UNAIDS, 2004). Mozambique also ranks among the 20 highest TB burden countries in the world, with an estimated 81,000 cases and an incidence rate of 436 per 100,000 people in 2002 (WHO, 2004). The incidence of TB has been steadily growing over the last 10 years largely due to the high prevalence of HIV with an estimated 47% of adult TB cases estimated to be HIV-positive (WHO, 2004).

Zambia has almost one million people estimated to be living with HIV/AIDS (UNAIDS, 2004). Zambia’s HIV prevalence rate of 16.5% is twice the rate in sub-Saharan Africa of 7.5% and the epidemic continues to pose one of the most significant development challenges to this low-income country (UNAIDS, 2004).

South Africa has more people living with HIV/AIDS than any other country worldwide and faces enormous challenges in scaling up its response to the now-mature and generalized HIV/AIDS epidemic (WHO, 2004). The national HIV infection rate among pregnant women in antenatal clinics has shown dramatic growth: from less than 1% in 1990 to 27.9% in 2003 (WHO, 2004b). It has however shown a decrease in HIV prevalence from 30.2% in 2005, to 29.1 in 2006 (Department of Health, 2006).

2.2 TB and HIV epidemiology

Globally it is estimated that there were 30.4 million people infected with TB in 2004 and almost 12% of these became newly infected in 2004. According to WHO (2004a), each year globally, 8 million people develop active TB and nearly 2 million die of TB. About 95% of all TB cases and 99% of deaths due to TB occur in developing countries (WHO, 2001). TB accounts for about 2.5% of the burden of disease and 26% of preventable deaths globally (WHO, 2004a).

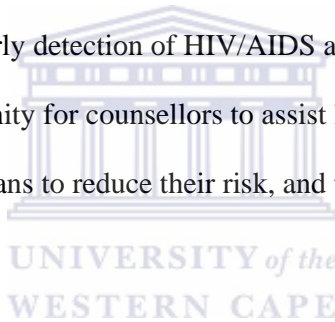
The immune stimulation caused by TB may also increase the HIV viral load, rate of HIV disease progression, and mortality, particularly among those with lower CD4 counts (van der Sande, Schim van der Loeff, Bennett, 2004). HIV accelerates progression to active TB both in people with recently acquired and those with latent tuberculosis infections (Steinberg and Johnson, 2003). The WHO estimates that approximately 20 million people globally are estimated to be co-infected with TB and HIV with over 90% of these dual infected individuals residing in the developing nations (Gooze and Daley, 2003). In sub-Saharan Africa, the rates of TB/HIV co-infection exceed 1,000 per 100,000 population (UNAIDS, 2004a) and TB is the most frequent cause of death among those infected with HIV (van der Sande et al, 2004). According to the latest UNAIDS HIV/AIDS report the HIV prevalence among TB patients in South Africa is estimated to be 68, 5% (UNAIDS/WHO, 2008).

In a hospital – based adult HIV clinic in Cape Town, South Africa, active TB was found in 8, 5% of adults with clinically advanced HIV disease (Mohammed, Ehrlich, Wood, Cilliers and Maartens, 2004). Studies in areas with high rates of TB and HIV infection have shown that among TB persons accessing VCT, about 11% tested positive for HIV (Burgess and Fitzgerald, 2001). In addition several reports state that the incidence of TB remains high even

after HIV infected patients receive ART. For example, in Abidjan, 129 patients receiving highly active ART (HAART) had an overall incidence of TB of 4.8 cases/100 person-years (Seyler, Toure, Messou, Bonard, Gabillard and Anglaret, 2005). In rural Uganda, an incidence of 13.6 cases/100 person-years was documented among almost 1000 persons receiving HAART (Moore, Edwaru and Liechty, 2006).

2.3 Advantages of VCT

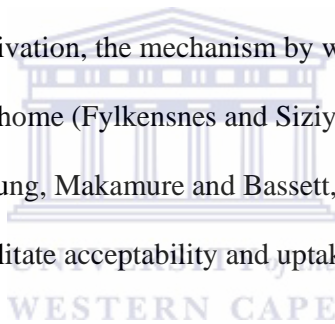
There is evidence that when HIV testing is offered together with high quality counselling people are able to make changes in their sexual behaviour to prevent HIV transmission to partners if they test seropositive, and those who test negative remain negative (UNAIDS, 2001a). The advantage of the early detection of HIV/AIDS and of being aware of one's HIV-serostatus, provides the opportunity for counsellors to assist high-risk individuals assess their level of risk, develop realistic plans to reduce their risk, and to increase safer sex practices (Cautoux, 1998).



Another advantage of VCT is that people who test positive for HIV/AIDS can have early access to a wide range of services including medical care, ongoing emotional support and social support (Department of Health, 2005b). People who have been tested seropositive can benefit from early appropriate medical care and interventions to treat HIV/AIDS - related diseases. Pregnant women who are aware of their seropositive status can prevent transmission to their infants (UNAIDS, 2001b; Department of Health, 2005b). Knowledge of HIV serostatus can also help people make decisions about how to protect themselves and their sexual partners from infection.

VCT is offered free in the public sector in South Africa. The cost of providing VCT has been estimated between 4 and 29 US dollars, and in low prevalence settings such as the USA where more than 99.5% of samples are non-reactive, the cost per test is estimated at less than 2.5 US dollars (UNAIDS 2001a). The benefits to an individual in South Africa, of knowing their status have oscillated over time and place, depending on a number of factors such as discrimination and stigma (Kalichman and Simbayi, 2003), availability of social support (Stein and Nyamathi, 2000), availability of interventions including prevention of infant infection in pregnancy (Sherr et al, 2003) and access to ART (Day, Miyamura, Grant, Leeuw, Munsammy and Baggaley, 2003).

However beyond individual motivation, the mechanism by which VCT is provided may also be important. Providing VCT at home (Fylkensnes and Siziya, 2004), in the workplace (Corbett, Dauya, Matabmo, Cheung, Makamure and Bassett, 2006), or in other convenient locations has been shown to facilitate acceptability and uptake.

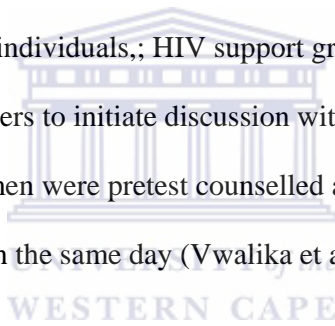


2.4 VCT strategies

Mozambique has successfully implemented a strategy to increase VCT uptake among TB patients (Health Alliance International, 2005). In 2003 the Mozambican government defined the policy of recommending HIV testing for all patients in treatment for TB. Because the prevalence of HIV among TB patients in Mozambique was almost 50%, HIV testing of TB patients was seen as an efficient method to identify HIV-positive patients, and particularly those who could benefit from specific interventions such as co-trimoxazole prophylaxis and HAART (WHO, 2004a). During this period of time, the process of HIV testing in Mozambique was confined to specific centres where the training of the counsellors could be assured and the quality of counselling controlled. For this reason, the strategy for HIV testing

among TB patients was through referral to local VCT centres, rather than performing the VCT on site (WHO, 2004b). Referral sites included local home-based care groups, local HIV support groups. This strategy was the most rational in the context of the significant human resource constraints existing in Mozambique, and allowed TB staff to maintain their focus on TB treatment, rather than on the time consuming and delicate process of VCT (Health Alliance International, 2005).

In Zambia, to improve the low VCT uptake, multiple interventions were implemented including: community outreach with drama groups; church/workplace/school discussions; communication material printed in local language distributed door to door; involvement of publicly disclosed HIV positive individuals; HIV support groups; Saturday couples counselling; male outreach workers to initiate discussion with male partners (Vwalika et al, 2002). Over 7 months 3401 women were pretest counselled and 1895 (62%) accepted VCT and 99% received their results on the same day (Vwalika et al, 2002).



Key milestones in the global response to the HIV and TB epidemic was the start of the ProTEST project in 1989, the implementation of the Isoniazid Preventative Treatment policy in 1989, the HIV/TB working group in 2001, and the 2004 WHO interim policy on collaborative TB/HIV (WHO, 2005). One of the collaborative activities was to decrease the burden of HIV among TB patients by increasing VCT, cotrimaxazole preventative therapy, antiretroviral treatment for TB patients. The second activity was to decrease the burden of TB among People Living with Aids (PLWA) by intensifying TB case finding, isoniazid preventative therapy, TB infection control in health care (Department of Health, 2007a).

Globally, there has been poor response to offering VCT as well as uptake of VCT. The number of countries offering VCT to TB patients has been low with only 62/199 countries in 2003, 69/199 in 2004, and 92/199 countries in 2005 (WHO, 2006). Globally only 7% of TB patients tested for HIV in 2005, and only 14% of patients diagnosed with both HIV and TB were detected in 2005 (WHO, 2005). Only 0,5% of PLWA screened for TB in 2005 and only 26,000 PLWA were put on Isoniazid Prevention Therapy in 2005 (WHO, 2005).

However there have been success stories within African countries where VCT uptake had increased over time. VCT uptake and treatment in Rwanda has been done successfully, where there has been an increase in TB patients accepting VCT from 69% in 2005 to 75% in 2006 (UNAIDS, 2004). HIV positive patients received co-trimoxazole, as well as ART. This has been due to active TB screening at enrolment at 27 ART sites and those HIV positive were offered ART immediately (UNAIDS, 2004).

VCT uptake increased among TB patients in Malawi in 2003, where 41% of TB patients tested for HIV by the end of 2002. This increased to 67% by end of 2003, due to increasing access to co-trimoxazole therapy as well as ART to TB patients which promoted uptake of VCT among this group of patients (Zachariah et al, 2003). At Khayelitsha clinics in Cape Town, South Africa, VCT was promoted, for all new TB cases which had not been recently tested (Coetzee, 2004). The rationale was to make TB an entry point to HIV care given the high level of HIV and TB co-infection (Coetzee et al, 2004).

2.5 VCT in South Africa

The benefits to an individual in South Africa, of knowing their status have oscillated over time and place, depending on a number of factors such as discrimination and stigma (Kalichman and Simbayi, 2003), availability of social support (Stein and Nyamathi 2000), availability of interventions including prevention of infant infection in pregnancy (Sherr, Hackmana, Mfenyana, Chandia and Yogeswaran, 2003) and access to ART (Day, Miyamura, Grant, Leeuw, Munsammy and Baggaley, 2003).

In South Africa, the policy on VCT is informed by two legal frameworks of the country namely: the Constitution of the Republic of South Africa 1996 (Act 108 of 1996), and the National Health Act 6 of 2003. The Constitution of the Republic of South Africa stipulates in section 7, 9, 10 and 27 that the rights accorded to people living in the country should include the right to equality, human dignity and health care. The National Health Act 6 of 2003 regulates national health services provision and provides uniformity in respect of health services across the nation. This Act 6 of 2003 deals with rights and duties for users and care providers (National Department of Health, 2005a).

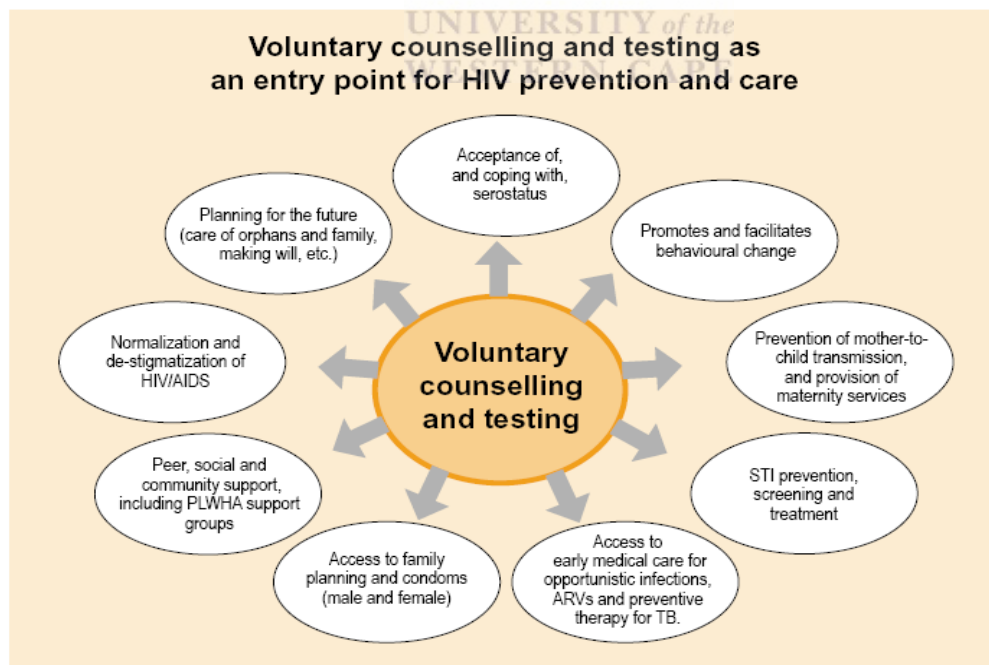
VCT as defined by the draft National Policy on Counselling and Testing in South Africa is a HIV prevention and care intervention which gives the client the opportunity to confidentially explore his or her HIV risk and learn his or her HIV status (Department of Health 2005a). In this way, VCT offers an important entry point to early prevention, care, and support (WHO 2004). According to this draft policy on Counselling and Testing in South Africa, those diagnosed with or at risk of TB, those with sexually transmitted infections (STIs) and clients attending family planning services or any PHC service should be routinely offered VCT (Department of Health, 2005a). With VCT being an entry point to the implementation of the

Comprehensive plan for HIV and AIDS (Department of Health, 2007), the South African government has established more than 950 VCT centres with more than 1800 counsellors around the country, and introduced provision of ART to the public sector.

For TB patients, ideally the introduction of VCT should take place soon after the initiation of TB treatment, as the morbidity and mortality of co-infected clients is highest in the first 2 months of treatment (Department of Health, 2007a). The National guidelines on TB state the benefits of counselling and testing for TB clients to include:

- The opportunity for clients to know their HIV status and prognosis.
- Early diagnosis and management of other HIV-related illnesses.
- Opportunities for prevention of other infections (e.g. using co-trimoxazole).
- Access to HIV care (psychosocial, nutritional, medical)
- Decreased HIV transmission through condom use.

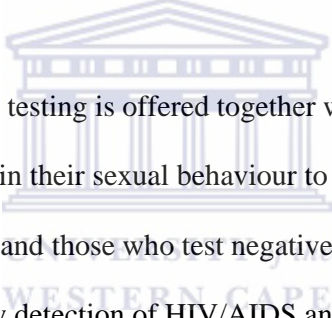
Below is the diagram illustrating that VCT is an entry point to all other HIV related services.



Source: UNAIDS (2002)

Fig 1: VCT as an entry point to HIV and care

VCT is viewed by the National Department of Health as a “gold standard”, allowing the person attending VCT to have individual counselling to help him/her make an informed decision about whether to test and make a personal risk assessment and risk reduction plan (Department of Health 2005b). The advantage of this model is that it allows all people being offered an HIV test to have an in-depth individual discussion of their personal risks of HIV infection and to explore the benefits and cautions associated with HIV testing (Pettifor et al 2004). However, the disadvantage of this model is that it is time consuming, requiring a minimum of 15 minutes (and often longer) for pre-testing and 15 minutes (and usually 30 minutes or longer) for post-test counselling (Pettifor et al 2004).



There is evidence that when HIV testing is offered together with high quality counselling people are able to make changes in their sexual behaviour to prevent HIV transmission to partners if they test seropositive, and those who test negative remain negative (UNAIDS, 2001). The advantage of the early detection of HIV/AIDS and of being aware of one's HIV-serostatus, provides the opportunity for counsellors to assist high-risk individuals assess their level of risk, develop realistic plans to reduce their risk, and to increase safer sex practices (Department of Health, 2005a).

The uptake of VCT has been low in South Africa with an estimated 18, 4 % - 19% of the population having tested for HIV, and knowing their serostatus (Pettifor et al. 2004; Shisana and Simbayi 2002). Only half a million people in South Africa know their status, while an estimated five million people are infected with HIV (HSRC, 2002). This has some dire consequences for the public health effort to address the HIV/AIDS epidemic in South Africa

as there are high-risk individuals that are not aware of their HIV-status who continue unsafe sex practices which could result in new infections.

Research indicates that despite the low uptake of VCT, a large section of the South African population think that an individual should know his or her HIV-serostatus (Pettifor et al 2004; Shisana and Simbayi, 2002; Van Dyk and Van Dyk 2003). The concerning issue is therefore why those at high risk of HIV/AIDS do not present themselves for VCT.

2.6 Barriers to VCT uptake and how are they addressed

Even though VCT is an effective method of promoting prevention, and an entry point to all HIV services, in Sub-Saharan Africa utilization of VCT is still low in African communities with a high prevalence of HIV (Swanepoel, 2003). Offering routine HIV testing to any patients, in particular TB patients without consent or without access to counselling is, however, an unacceptable practice and the disadvantages may negate any benefit obtained from knowing the HIV status of these patients (UNAIDS, 2005). The disadvantages of VCT among others include fear of stigma and discrimination and fear of rumours spreading if one is seen at the testing site (Gilly, Ngatia, Rachier, Mutemi, Odhiambo, and Gilks, 2005).

There are many barriers to the uptake of VCT which can be divided into health systems related barriers, client based barriers and community based barriers. Health service barriers relate to the implementation of VCT and to the service delivery of VCT. Client based barriers, on the other hand, stem from the potential service user and are linked to knowledge attitudes and perceptions relating to the disease. Community based barriers are related mainly to stigma and misconceptions.

2.6.1 Health services barriers

2.6.1.1 Lack of access to VCT services

From the findings of a Health Science Research Council (HSRC) study done in 2002, it is clear that VCT services are available in South Africa and people generally know about such services. However, the HSRC study done in Northern province, South Africa mentions that only 19.8% of people who knew about VCT services actually made use of them (HSRC, 2002). Findings from the study suggest that this might be due to the fact that people lack the understanding of the importance of using these services.

Barriers to HIV testing in Sub-Saharan Africa are often logistical. Swanepoel (2003) notes that there is weak infrastructure regarding testing facilities where there is often lack of the counselling space for VCT. There is a shortage of funds to upgrade these facilities as well as shortage health personnel (Swanepoel, 2003), which all impact on clients' access to VCT services. A study conducted in Harare by Sherr et al, 2007, cited barriers to VCT included limited VCT centre hours of operation (53% vs. 16%, $p < .01$) which was from 10h00 to 13h00 daily. The recommendations from the study suggest that logistical barriers can be removed through community outreach programs such as mobile VCT as well as extension of working hours. In another study done in Chiang Mai, northern Thailand, rural residents came for VCT and the uptake was increased when barriers such as cost and distance were removed (Kawichai, Celentano and Chariyalertsak, 2004). Many desired to know their HIV status. Among factors that motivated them to get tested for HIV were that the service is 'free' and/or 'convenient' were the most cited as factors to motivate them to promote VCT (72%) (Kawichai et al, 2004).

Lack of access to ART may pose as a barrier to testing. There was low VCT access in Zambia prior to introduction of ART before 2005 (WHO, 2004). However, with increased

access to ART an estimated 26,000 – 33,000 people were receiving ART in Zambia subsequent to VCT uptake. The Government of Zambia continued to expand access, providing ART free of charge through public clinics since October 2004.

2.6.1.2 Compromised quality of service

The number of VCT sites in South Africa has increased significantly in recent years, with 4,172 operational by November 2006. Despite this progress, there are concerns about the quality of VCT services in some areas. Lack of resources like the counselling room, the test kits, to perform the service impact directly on the quality of service provided as well as the VCT uptake (Van Dyk and Van Dyk, 2001; Solomon et al, 2004). Often use is made of untrained counsellors, which then compromise quality of counselling service offered. (Solomon et al, 2004).



2.6.1.3 Lack of confidentiality

Lack of confidentiality is a huge stumbling block in the provision of comprehensive VCT services in South Africa. Black communities have a closely-knitted community life and extended family systems. The counsellors come from these families and work within the clinics in the community. Consequently, it is often inevitable for health care workers as well as the counsellors to be familiar with most of the clients that come for counselling, and their roles as counsellors, friends and family often become blurred (Van Dyk, 2001). The barriers described can only be overcome by ameliorating testing facilities, appointing enough skilled counsellors, establishing trust in counselling (Van Dyk, 2001). Van Dyk and Van Dyk (2003) found fear of breach of confidentiality by health care workers and fear of discrimination from health care workers as significant barriers. Some people believe that health care workers will disclose their status to their family after accepting VCT. Participants in Van Dyk and Van

Dyk's (2003) study feared rejection by family and community members if their results were disclosed. The fact that people with HIV/AIDS are discriminated and ostracised in South Africa means that at the family and community level, people are not supporting people who went for VCT. Of those who would report for VCT, many would go to a clinic where nobody knows them, so that their family and friends would not find out about it (Van Dyk & Van Dyk, 2003).

2.6.2 Patient related barriers

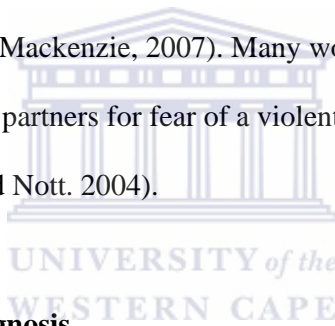
2.6.2.1 Lack of knowledge on HIV

In a study done in Harare by Sherr et al (2007), certain factors associated with non-acceptance of VCT included lack of knowledge as the most important predictor for refusal to participate in VCT. Knowledge of one's HIV status plays a critical role in modifying behaviour either to remain uninfected or to prevent infecting current or future partners. Although knowledge does not necessarily lead to behaviour change, information can still be successfully communicated (Bartholomew, 2000). In Zambia, the Henry Kaiser Foundation (2005) found that there was increased knowledge of HIV/AIDS and good general awareness of HIV/AIDS in Zambia. For example, among young people ages 15-24, 74% of young women and 73% of young men knew that a healthy looking person could be infected with HIV. Community awareness and participation about HIV and AIDS has been shown to increase level of knowledge and awareness, thus eradicating this barrier to VCT. In a study done to increase uptake of a VCT after community awareness in Nairobi, Kenya targeted specific villages and the uptake of VCT was increased in these villages (UNAIDS, 2004).

2.6.2.2 Partner violence

Intimate partner violence (IPV) is any behaviour within a relationship that causes physical, Psychological or sexual harm to those in the relationship (Kiragu and Mackenzie, 2007).

IPV is a serious public health problem with physical, mental, sexual and reproductive health consequences. IPV is directly or indirectly linked to HIV acquisition, and alcohol use has been identified as a risk factor (Kiragu and Mackenzie, 2007). A study done in Kenya to assess the feasibility of integrating alcohol risk reduction counselling into VCT provision, showed that many clients that refused testing had partners who were physically violent towards them when under the influence of alcohol. Partner alcohol use perpetuates partner violence especially when they seek permission for VCT; as a result women refuse VCT under such circumstances (Kiragu and Mackenzie, 2007). Many women are also reluctant to reveal their HIV positive status to their partners for fear of a violent reaction. (Solomon, van Rooyen, Griesel, Gray, Stein and Nott. 2004).



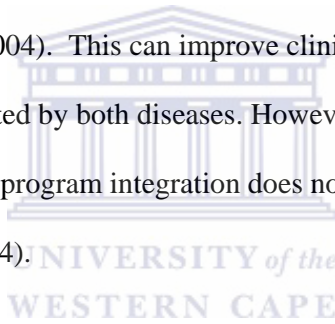
2.6.2.3 Fear of dual diagnosis

Mostly TB patients in Durban, KwaZulu Natal are not aware of their HIV status, because they prefer to concentrate on their TB treatment. This was shown in a study conducted in a TB clinic in Durban in 2005, where only 57.4% of TB patients reported having a HIV test. However less than 10% of them were aware of their current HIV status (Gebrekristos et.al 2005). Participants in the study were found to be willing to test for HIV when linked to HIV treatment services (ART).

On the other hand, uptake of VCT in patients with TB may remain poor even with availability of ART due to the difficulties surrounding acceptance of this dual diagnosis (Grimwade, Sturm, Nuun, Mbatha, Zungu, and Gilks, 2005). Despite the fact that the link

between HIV and TB is well known, health care workers are often reluctant to discuss HIV related issues to TB patients, which may be a significant barrier in VCT uptake (Maher, Borgdorff and Boerma, 2005). In South Africa, a study done on VCT among TB patients revealed fear of AIDS related stigma the stress of being diagnosed with TB infection, the uncertainty about eligibility for ART while receiving TB treatment, the absence of partner's consent and the asymptomatic and incurable AIDS disease (Daftary, Padayatchi and Padilla, 2007).

It is because of the dual morbidity of TB and HIV infection that some programs are attempting to provide TB and HIV care in one clinical setting (Coetzee, Hilderbrand, Goemaere, Matthys, Boelaert, 2004). This can improve clinical management and is convenient for the patients affected by both diseases. However, careful attention to infection control will be necessary so that program integration does not increase the risk TB transmission (Coetzee et, al. 2004).



2.6.2.4 Attitude towards and misconceptions of VCT and HIV

The perceived risk of reporting for VCT refers to the risk of what will happen whether a test is taken and not. Literature shows that some people think it is not necessary at all to know the results of an HIV test, because they believed that they had not indulged in any high risk behaviour regarding HIV/AIDS. For example, the previously mentioned HSRC study (2002), shows that with South Africans aged 15 years, 62% of those who tested were unaware of their status, even though they admitted to having had high risk behaviour in the past. They mentioned they had no reason to believe that they were at risk for having HIV/AIDS. The consequence for these people is that they believe knowing your HIV status is not necessary at all, hence their attitude toward VCT is negative.

There are many misconceptions highlighted in literature regarding HIV and AIDS. For example, in Zambia, in 2005, although almost all adult Zambians knew that HIV/AIDS exists, 8.8% of the population did not know that it could be avoided. Over a quarter of adults thought that mosquitoes could transmit HIV; 22% thought that they could be infected by witchcraft; and 15% believed that sharing a meal with an infected person puts them at risk. The level of understanding was lower in rural areas than in towns, and women were less knowledgeable than men (UNAIDS, 2004).

Another issue is that of men's reluctance to become involved. Finding men who are willing to undergo VCT, and support their HIV-positive pregnant partners in the prevention of mother-to-child transmission, is very hard to date. According to a community-based survey conducted by Population Council in Soweto in 2005, on barriers to men's low VCT intake, it was found that men accounted for only 21 % of all clients receiving VCT in South Africa. Women were more likely to access health care services and get tested, particularly during pregnancy from antenatal clinics, where most of the HIV testing takes place, because these healthcare facilities were perceived as unfriendly to men (Population Council, 2005). It was difficult enough to find men who would agree to be tested, but getting hold of a supportive man to accompany his partner on her antenatal visits during pregnancy or agrees to be tested as a couple, was almost impossible (Population Council, 2005).

2.6.3 Community based barriers

2.6.3.1 Stigma and discrimination

Stigma and discrimination may be important factors in the uptake of VCT in different communities. Van Dyk and Van Dyk (2003) and the Kaiser Family Foundation study (KFF 1999) concluded that stigma is a major barrier for people to report for VCT. Stigma can be

described as a quality that ‘significantly discredits’ an individual in the eyes of others (UNAIDS 2002). UNAIDS (2002) further describes stigma as a process of devaluation and frequently related to HIV/AIDS and builds upon and reinforces earlier negative thoughts.

People with HIV/AIDS are often believed to have done something wrong and therefore deserved the consequences. Mostly, these ‘wrong behaviours’ have to do with sex or illegal activities such as drug use (HSRC 2002). Men with HIV/AIDS could be seen as homosexual, bisexual or as having had sex with prostitutes, whereas women could be seen as having been adulterous or as having been sex workers (UNAIDS, 2002).

In some cases, discrimination against people living with HIV is enshrined in national and local laws. According to the European AIDS Treatment Group, 74 countries restrict the entry or stay of people based on their HIV status, including 12 countries that ban people living with HIV from entering for any reason or for any length of time (UNAIDS, 2001a).

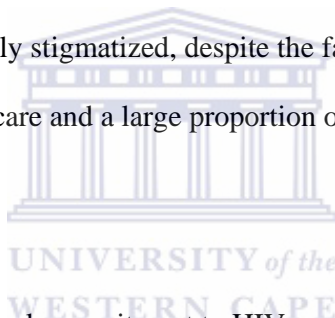
In a study done among women in the USA, the most common barrier to accepting VCT was lack of perceived need for the test and fear of potential negative outcomes from testing and disclosure, including stigmatization and discrimination (Fylenkenes et al, 2004).

In Zambia, only 13% of Zambian adults have volunteered to be tested for HIV and know their status (WHO, 2004). Many people were reluctant to come forward to be tested because they feared stigma, or because they thought that knowing their status is of no advantage – especially if they are unlikely to receive ART (UNAIDS 2004).

In a study by Parra (2001) of 413 pregnant women in Texas, USA, 15% of participants who had not previously been tested indicated they would refuse testing. Barriers to testing were

fear of being stigmatised, denial, fatalism, fear of rejection, as well as fear of being viewed as having had many sexual partners (Parra, 2001).

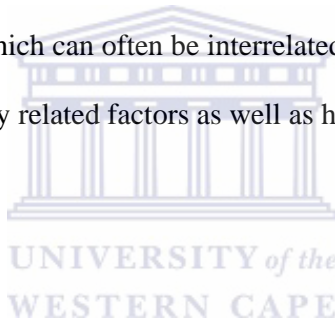
The stigma associated with HIV is the biggest challenge to its prevention and care. It has been proposed that wider access to VCT and a larger number of people's greater awareness of their HIV status within a community are important elements in challenging stigma (Kalichman and Simbayi, 2003). Countries where VCT is well established, such as Uganda, have a less stigmatizing attitude to HIV. However, for it to be effective in challenging stigma, HIV testing has to be a voluntary process associated with counselling that helps people understand and accept their status (UNAIDS, 2000). For example, there are countries such as Russia, where HIV remains highly stigmatized, despite the fact that all women have routine testing as part of their antenatal care and a large proportion of the population has been tested routinely for HIV.



It has been postulated that political commitment to HIV prevention and care have led to less discrimination and, hence, higher demand for VCT in Uganda when compared to neighbouring countries (Kaleeba and Kalibala 2001). It has also been argued that, conversely, it is the large number of people who have been tested that is a major factor in promoting normalization and reducing stigma and discrimination associated with HIV. It has been shown that a role model or valued member of the community declaring that he or she has been tested is important in reducing stigma and increasing the uptake of HIV testing. For example, when Magic Johnson (a famous basket ball player) announced that he had been tested and was seropositive there was a significant rise in people requesting VCT in the United States (UNAIDS, 2001a).

In a study in rural Haiti, AIDS – related stigma was analysed in the context of political, social and economic situation in the country and assessed its relationship to comprehensive AIDS prevention and care. Through a review of the social science literature, the reviewers suggested that transformation of AIDS from an inevitably fatal disease to a chronic and manageable one has decreased stigma dramatically and has raised the quality of prevention efforts. The Haiti project demonstrated that individuals who could access effective care are the most likely to get an HIV test, which supported social theories on the social course of illness (Castro, Leandre, Raymonville and Farmer, 2004).

It is obvious that there are various factors that lead to barriers for the uptake of VCT. There are different levels of barriers which can often be interrelated and includes not only client-based factors but also community related factors as well as health services related factors.



CHAPTER THREE

RESEARCH METHODOLOGY

This chapter describes, and justifies the research design and methodology to answer the research questions of this study. It begins with the study design, the data collection, data analysis procedures, strategies to improve rigour and finally the ethical issues involved in the study are addressed and chapter conclusion presented.

3.1 Research Study design

The study design is the overall structure and strategy of the research study (Coolican, 2004).

The design of this study was a descriptive exploratory qualitative one using in-depth interviews for collecting data. Qualitative research methodology was used for this study because of its usefulness in exploring people's views, knowledge and experiences (Kitzinger, 1994). It has special value in describing complex and sensitive issue such as HIV/AIDS. The chosen methodology is important because the quality of research findings is directly dependent on the accountability of the research methodology (Kitzinger, 1994).

The choice of research methodology was consistent with the research problem that aimed to explore some barriers to VCT uptake that participants needed to explore. This method gave a rich and in-depth understanding of the perceptions of the participants and made exploration of barriers for VCT uptake possible which would have been more difficult using quantitative methods (Coolican, 2004).

3.2 Study population

A study population is the entire accessible group of persons that is of interest to the researcher or that meets the criteria the researcher is interested in studying (Brink, 1999). The study population was all the TB patients attending and receiving treatment at four facilities in the Buffalo City municipality mentioned in the study setting.

3.3 Sampling procedure

Sampling is defined by Bless and Higson-Smith (1995) as an investigation of a small but well-chosen group of objects or persons representing a much wider group (the study population). Sampling in qualitative research, aims to describe the process involved in a phenomenon rather than its distribution, and is not concerned with ensuring that the findings can be statistically generalised to the whole population, like in quantitative research (Liamputtong, & Ezzy, (2005). The chosen sample could potentially provide a full understanding of the phenomenon under study. Purposive sampling was used to select the participants for this study because it aimed to select information rich cases for in-depth study to examine meanings, interpretations, processes, and theory (Liamputtong, & Ezzy, (2005). The nurse in charge at the clinic assisted in identification of TB patients attending the clinic at the time of the researcher's visit. TB patients were approached to participate, and those willing were asked to choose a convenient venue where we could continue with the study. The participants receiving TB treatment would have been offered VCT regardless of whether they accepted or not. All the participants were offered VCT. After introductions, the researcher briefly explained the research to them and they were then asked to volunteer to participate in the study.

The researcher continued to interview participants until she was satisfied that the data was rich enough, (Liamputtong et. al. 2005), and data saturation was reached (Creswell, 2000), which could support the desired analysis, Saturation was reached at eight participants.

The sample included three participants in NU2, one in NU8, two in NU13, and two in Gompo health clinic.

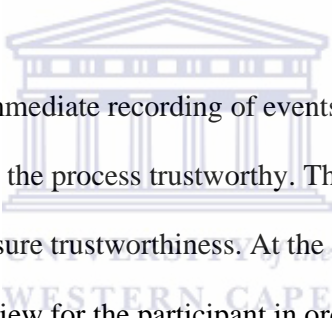
3.4 Data collection

Data was collected using in-depth interviews which are an effective way of obtaining depth in the data (De Vos et. al, 1998). The interviews were semi-structured and face to face. They were also tape recorded with the permission of the participant. A tape recorded interview allows a much fuller record than notes taken during the interview, as well as ensuring that the interviewer can concentrate on the proceedings of the interview (Smith, Harre, Van Langenhoven, 1995). The semi-structured interview guide was informed by literature and the researchers own experiences in working with TB patients. The researcher probed participants with further questions for clarity when it was necessary. (See Appendix B for interview guide). Observations of non-verbal cues were documented by the researcher during the interview.

The interviews were conducted in a venue preferred by the patient. Six participants preferred their interviews to be conducted at their homes that were not far from their clinics, while two participants preferred their interviews to be conducted while attending the clinic. Each interview was approximately an hour to an hour and a half.

3.5 Strategies to ensure rigour

Maximum variation was used as a strategy to select the cases that provided wide variation in the experiences being examined (Liamputtong and Ezzy, 2005). Maximum variation was in terms of age, gender, those who accepted VCT and those who did not accept VCT. The interview schedule was structured in such a way that easier and more comfortable questions were asked first to make them feel at ease before asking the more difficult or uncomfortable questions. The interviews were all conducted by the researcher in Xhosa as she is also Xhosa speaking. This assisted in making the participants feel more comfortable and responsive as they could express themselves freely in their own language. For purposes of the thesis, the researcher translated the direct quotes in the thesis into English.



The use of a tape recorder and immediate recording of events and perceptions after the discussion contributed to making the process trustworthy. The researcher made notes in a diary during the interviews to ensure trustworthiness. At the end of each interview, the researcher summarised the interview for the participant in order to confirm the credibility of the information. This is defined as member checking which is ‘the most crucial technique for establishing credibility’, and a validity procedure that shifts from the researcher to participants (Lincoln and Guba, 1985; Creswell and Miller, 2000). The researcher listened to the tape recorder, reflected on how she responded to participants and compared notes to those transcribed for validity purposes. In order to decrease threats to validity, the method of data collection in qualitative research is important, In-depth interviews were used as an appropriate method to answer the research question, since HIV/AIDS is a sensitive topic and participants needed to reflect on their personal lives and experiences that influenced their decision to take VCT or not.

A thick description of the data was collated from the individual interviews. According to Denzin, Lincoln (1989), thick descriptions are deep, dense, detailed accounts, whose purpose is to create statements that produce for the readers the feeling that they have experienced the events being described in the study.

Reliability refers to the degree of accuracy with which an instrument measures the attribute it is designed to measure (Brink, 1999) and therefore is thought to add to the trustworthiness of the procedures and data generated (Stile 1993). Notes were taken throughout the process which added to the project's auditability and therefore reliability of the study.

Credibility is concerned with the extent to which the results of the study are repeatable in different circumstances (Brink, 1999). This was achieved by giving detailed descriptions of the setting, the participants and the research process. Inter-coder reliability was used to avoid the researcher bias, whereby the researcher made use of another analyst to improve the consistency of study (Pope, Ziebland and Mays, 2000).

3.6 Data analysis

Data analysis in qualitative research starts with data collection. This research used an inductive method of data analyses where categories, patterns and themes were explored to uncover meanings from within the transcribed data gathered (Denzin and Lincoln, 1994).

Specific codes were created to describe the data, such as statements from the interview transcripts which were confirmed by revisiting previously coded data periodically to check the stability over time (Denzin and Lincoln, 1994). The data consisted of transcript notes of the interview, and the researcher's reflective notes made during the research. Transcripts

notes are the raw data of the research and provide a descriptive record of the research, but cannot provide explanations (Pope, Ziebland and Mays,2000). The researcher read over the transcripts several times, analysed the content and elicited recurring themes related to the perceptions of VCT and associated barriers. Different categories of data were highlighted using colour – coded highlighters to differentiate between each other. The categories were then grouped into different emerging themes that were compared to available literature. A process of coding and categorising the content of the data assisted in bringing meaning to the responses and basis for further analysis of the content (Pope, et. al. 2000). The final write-up consisted of summaries, interpretations and textual excerpts which represented the themes.

3.7 Ethics

The proposal for this study was submitted for approval to the Ethics Committee of the University of the Western Cape. Once approved, permission was sought and granted by the Eastern Cape Department of Health to conduct the study. Permission was also sought from clinic managers in the clinics visited.

The participants were made aware that participation in the study was voluntary for all the participants. They were provided with the information brochure explaining the research process which was also done verbally in Xhosa requesting their participation (See Appendix A). Their written consent was sought once they agreed to participate by signing a supplied consent form (See Appendix B). They were also made aware that refusal to participate would in no way compromise their treatment and that withdrawal at any stage of the study was permitted.

CHAPTER FOUR

RESULTS

This chapter presents the results of the study. It starts with the demographic profile of the participants, presents factors influencing VCT uptake. The barriers to VCT uptake as experienced by the participants are also presented.

4.1 Demographic profile

The in-depth interviews were conducted within a period of 3 weeks, from 28 June 2008 to 22 July 2008. The demographic information of the patients was based on self report. All 8 participants were black and Xhosa speaking. There were 3 females and 5 males. The median age was 39 years, ranging from (28 to 62) years.

It can be seen from Table 1 below, that half of the participants were in the 25 – 45 age range, 3 out of 8 participants were in the age category of 36 – 46 years and 1 was between 58 - 68 years. Half the participants were single, 3 were married, and 1 was widowed. All participants had some form of education, with 3 who had reached Grade 12 and higher education, 2 had passed Grade 10 and another 3 had reached grade 7 or below. Only half of the participants were employed. The oldest participant was receiving a disability grant. 5 out of 8 participants lived in the semi –urban township while 3 lived in the informal settlement.

Table1: Demographic profile of the study participants

Age	Male	Female	Total number of participants
25 – 35 yrs	2	2	4
36 – 46 yrs	2	1	3
47 – 57yrs	0	0	0
58 – 68 yrs	1	0	1
Marital Status			
Single	2	2	4
Married	2	1	3
Widowed	1	0	1
<u>Highest level of education</u>			
Std 10 (Grade 12) and higher	2	1	3
Std 8 (Grade 10)	1	1	2
Std 5 (Grade 7) and below	2	1	3
Employment Status			
Employed	2	2	4
Unemployed	2	2	4
Area of residence			
Township	3	2	5
Informal settlement	2	1	3

Four of the participants were HIV positive and subsequently were tested positive for TB, whereas 2 participants developed TB first and subsequently accepted VCT. Two participants

in the study refused VCT. The participants were not asked their HIV status; however each disclosed his/her real or perceived HIV status to the interviewer during the interview without any probing. Six participants had recently started TB medication, and also disclosed their HIV status to be positive. Of note is that of 2 of the 6 participants who were living positively with HIV, one was a counsellor receiving a monthly stipend from the Eastern Cape provincial government of one thousand rands. The other was a peer educator appointed by one of the PEPFAR funded non-governmental organisation assisting the Department of Health in the antiretroviral treatment roll –out program. They are receiving one thousand five hundred rands monthly.

For the study it was advantageous to have counsellors amongst the participants who were working in the clinic and who openly disclosed their status. This helped the research in that they were reflecting on their own experiences prior to testing and the barriers they encountered, their experience of the service received compared to the service they offered to the clients.

4.2 Reasons for accepting VCT

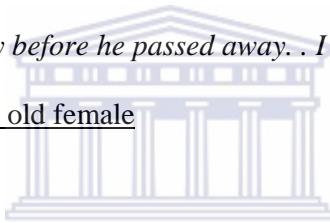
In this study, reasons that made TB patients in the community decide to accept VCT and test for HIV, were first explored, before analysing the barriers to VCT uptake.

4.2.1 Death of a partner

There were several reasons that made the participants decide to accept VCT. One reason that came out strongly from 3 of the participants was the death of a partner or a loved one which prompted them to eventually go for HIV testing.

I first decided to test for HIV after my wife died and buried 2 weeks ago after a very short illness, and on day after she passed away the doctor told me that she was HIV positive. 41 year old male

My boyfriend died in 2001 because of ulcers that were in the mouth. He got tested for HIV at the hospital, a day before he passed away. . I only knew then that he had HIV and I was at risk. 32 year old female



4.2.2 Decision of a sexual partner

There were certain instances where the participant mentioned that it was not his/her own decision to accept VCT but rather the decision of a sexual partner. The decision to test for HIV was therefore imposed on the participant by the partner.

That was not my own decision, it came from my girlfriend, she had a sexually transmitted infection problems, when she came back from the clinic for back she asked me to go for treatment and HIV testing. It was not easy for me to go for HIV testing. 38 year old male.

4.2.3 Community perceptions

There was one participant whose main reason for accepting VCT was to try and dispel community misconceptions. The community had already diagnosed her through her boyfriend's death due to AIDS. She then decided to test in order to disprove these perceptions that she was also HIV positive.

I only decided after a year that I should go and test because I was tired of what was said about me already in the community that I was HIV positive, since they all know that my boyfriend died of AIDS. I wanted to prove them wrong, as I was telling myself it cannot happen to me. 32 year old female

4.2.4 Tested during investigation for ill health at hospital

There were instances where some participants who were treated in a hospital for ill health were tested for HIV without consent. Blood tests for HIV were done as part of the investigations for the illness that they presented with. There was no counselling done.

I did not know that I was being tested. I never knew that I was being tested for HIV, no one asked me or anything like that. I was told the results while I was lying in the hospital that I was HIV positive. 38year old male.

4.2.5 To protect unborn child from HIV

Another reason for testing was as a result of the prevention of mother to child transmission of HIV program. One participant was offered and accepted VCT while attending antenatal visits at the clinic because she saw the benefit of knowing her status for the health of her baby.

I was offered VCT, when I went to the clinic when I was pregnant. I was taken lots of blood and one of them was for HIV. I was offered VCT and accepted immediately since I wanted anything to protect my baby from being infected with the disease and also for myself too to get the ARV treatment and live longer. 28year old female

4.2.6 Availability of antiretroviral drugs

The introduction of the ART's seen as a motivator to testing for HIV.

At least it is better now to test for HIV because you know something will be done, ART is there if you are found to be positive. Otherwise before there were ART's I never thought of accepting VCT, because I was just going to die with no treatment. Today there is hope. 38 year old male.

4.3 Barriers to VCT

The barriers to VCT uptake is summarised in Table 2.

Table 2: Themes identified as Barriers to VCT uptake

THEMES	BARRIERS
1. Health services – related	<p>Lack of accessibility and awareness of service</p> <p>Selective offering of VCT service to patients</p> <p>Attitude of nurses towards VCT</p> <p>Quality of VCT offered</p> <p>Shortage of staff</p>
2. Patient –related	<p>Lack of understanding of VCT</p> <p>Dual treatment for TB and HIV</p> <p>Fear of HIV positive result and its implication</p> <p>Lack of perceived support from partner and lack of perceived risk</p>
3. Community – related	<p>Stigma and discrimination</p> <p>Community perceptions</p>

4.3.1 Health service related barriers

4.3.1.1 Lack of accessibility and awareness of VCT service

The factor mentioned was lack of VCT centres at the clinics. One barrier to accessing VCT mentioned was the distance that had to be travelled by participants to reach the hospitals where VCT was offered. As a result, participants did not consider going for testing. Issues of socio-economic conditions were found to be contributing to barriers accessing the service. For example, lack of money to travel by taxi or bus in order to reach these hospitals to undergo VCT.

However, there was lack of awareness on availability of VCT service within their own clinics that provide TB treatment. Their understanding was that the VCT was offered in the hospital only and not in the clinics where they collected their medication because the nurses in some clinics did not offer the service to the clients

I am not sure where VCT is offered I have no idea. I am not aware of VCT in my clinic where I take my tablets monthly. 62 year old male.

I have never been to the hospital for any sickness, where the HIV test is done. I know that here in the clinics nurses are not talking about VCT, I don't think it is offered. 34 year old female

4.3.1.2 Selective offering of VCT service

Other participants mentioned that nurses offered VCT only to the “sick” patients and not to everybody. They therefore thought that they did not need the service because they were not regarded as “sick”.

There was a very sick old man attended before me at the clinic by a nurse who could hardly walk. I heard the nurse asking him about whether he had done HIV test, but when it was one my]turn to be served, she did not ask me about HIV test, or VCT. 42 year old female

Another observation from the participant was that when patients were sick they would accept VCT, but when they felt better and healthy, they would reject the service.

I feel it is not worthwhile to know now that I have nothing to complain about and my TB is under control. I shall be putting myself into a strain. I cannot accept VCT. 34 year old female



4.3.1.3 Attitude of nurses towards VCT

One of the objectives of VCT is to ensure counselling of clients for HIV testing. It was interesting to note that one of the reasons for not accepting VCT was the negative attitudes displayed by the nursing staff. The problem was the rude manner in which they were addressed. This was highlighted as a huge barrier by those who did not accept VCT.

Nurses in the clinic are tired of us as TB patients as we are sick of this today and complain of that tomorrow when you[we] have just started TB treatment. They are so rude when they told us we are going to infect them with TB, so let us not stand next to the desk. As a result you are afraid of asking anything. You just get your tablets and go. 41 year old male

4.3.1.4 Quality of VCT services offered

Some participants had bad experiences of the VCT service such as: lack of pretest counselling for the individuals; lack of post test counselling; lack of confidentiality about their counselling session and results; asked to sign the consent forms without reading the content of the consent form. These bad experiences had been communicated to those who had not tested and may contribute to the barriers to VCT.

They tell you here are your results, as you are HIV positive. The nurse would tell you are going to die. There was very poor counselling around 1996, as they told me after 5 days I was to die. It affected me and I started drinking a lot. You were to counsel yourself outside. 38 year old male

She then tested me and told me my results were positive and a few minutes later she was packing her bags and saying she was late for her transport, she has to go home. She asked a counsellor who was there at the time to do post test counselling and the counsellor also said was also going. I was asked to come back the following day. On my way back [home] I had feelings of disbelief about the results and I told myself I would not come back. 36 year old female

The quality of the counselling received in the clinics was mentioned as below standard. The problems were the lack of privacy and no counselling rooms. The poor quality of services served as a deterrent to seeking VCT.

With such a poor service I received at the clinic, I would not recommend VCT service at the clinics to anyone. 32 year old, female

4.3.1.5 Shortage of nursing staff

The shortage of nursing staff was mentioned as a reason for not having their post test counselling done, even though they were offered VCT by the TB sister.

I went to the clinic for my TB results and I was asked whether I would like to have an HIV test. I then said yes, but later the sister was alone and there were no counsellors to counsel me and was asked to come back the following day. 32 year old female

4.3.2 Patient related barriers

4.3.2.1 Dual treatment for TB and HIV

The participants who accepted VCT mentioned that in the clinic where they were receiving their TB medication, they were checked for TB only and not for HIV. Whereas in the hospital where they eventually tested they were offered VCT as well as were managed for TB.

It was interesting to note that two participants mentioned the reason for not wanting to test as adding an extra load of tablets to an already heavy burden of tablets. Many clients are already on medication for example for chronic diseases and TB.

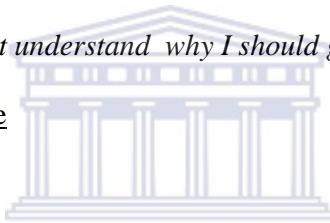
They started me on the TB treatment, on top of the high blood pressure tablets that I am taking. I cannot cope with other tablets for HIV to add on the list. 42 year old male.

If I test for HIV, I cannot afford to take other tablets on top of the ones I am taking; I hear that there are also lots of tablets to be taken for HIV. I also have arthritis, high blood pressure, sugar diabetes, and cannot take anymore. 42 year old male

4.3.2.2 Lack of understanding of VCT

The participants who refused VCT, displayed a lack of understanding of VCT and did not seem to understand the advantages. One of those who did not accept VCT, knew that VCT was offered in the clinic, but was not ready to know her status.

I know that I can go to the clinic and request for HIV test, where I take my tablets every month', but I do not understand why I should go and test [when I] am not ready to test. 34 year old female



The lack of understanding and knowledge of VCT may hinder an individual from taking effective action. However, one cannot expect the TB patients to accept the test if they are not aware of the VCT programme at all.

4.3.2.3 Fear of HIV positive result and its implication

The participants living with HIV mentioned fear of the positive results, fear of the unknown and implications thereof as barriers before they tested for HIV. One of the participants who had accepted VCT and now living with AIDS highlighted these reasons mentioned by those who do not want to test for HIV:

They are afraid to know the results, as they think that if they test positive while not sick, they will start getting sick. Others worry that if they are positive they will never have children, so it is better not to know and test when they are pregnant. 32 year old female

The participants who tested felt that a lot of people still have a problem in accepting VCT because of the fear of a positive HIV test and its consequences.

Most people fear to get a positive result. To them they think it is the end of the world. They say that if they know that they are HIV positive, they will become sick and die early. They also mention that they will not have children. They cannot face that kind of life, and be seen with HIV symptoms. 32 year old female

4.3.2.4 Lack of perceived support from partner and lack of perceived risk

One of the participants who refused VCT did not consider himself as high risk for HIV as he had only one sexual partner. Lack of perceived support from the partner was mentioned as a barrier by the pregnant participant who was attending antenatal care. She had perceived herself as high risk to HIV and accepted VCT. She was asked whether she consulted with her partner before accepting VCT and she said:

I think he would not be supportive of the idea, he does not want anyone talking about HIV. I feel this is my life and I need to know for me. I would never tell him because he may chase me out of the house. 32 year old female.

4.3.3 Community related barriers

4.3.3.1 Stigma and discrimination

Participants mentioned feelings of fear, abandonment, being stigmatised and discriminated by family members after taking the HIV test, if they test positive.

I was worried about the reaction of my family members when I decided to take VCT after death of my wife. 41 year old male

I certainly do not want to have VCT in our community close to where I live, because everyone will know my results, and am not sure who will support me. I'd rather stay not knowing. 34 year old female

After hearing about the news I got worried because the community thinks of you as someone who sleeps around, who cannot control himself, then I started having low self esteem, you know that there is something waiting for you, death is nearby. 38 year old male

4.3.3.2 Community perceptions

Diagnosis of TB in the community seems to be known to be associated with HIV.

I am already sick and thin with TB. I am now receiving disability grant for the TB. I do not think I can go and test because in our area they say I have HIV but I know it is TB. They deny when I say I have TB and show them the tablets; they do not believe me, saying that I cannot be this thin. 62 year old male

This chapter outlined the factors promoting acceptance of VCT as well as barriers to its uptake. The barriers had a strong emphasis on stigma and discrimination especially within the community, as well as personal factors especially fear of results. The quality of services was another issue relating to barriers to VCT.



CHAPTER FIVE

DISCUSSION

This chapter discusses the key findings of the research study which are mainly the barriers to VCT uptake, the factors increasing uptake and interventions to increase VCT uptake.

The aim of this research was to determine and explore barriers associated with low VCT uptake by TB patients attending primary health care clinics in Buffalo city municipality.

Most previous studies examining the factors influencing acceptability of VCT and barriers to VCT have been carried out mainly among groups other than TB patients, i.e. pregnant women, poor populations (Kalichman and Simbayi, 2003), and multiple risk groups (Stein and Nyamathi 2004). These studies contribute to the evolving body of evidence on specific factors that influence the uptake of VCT among TB patients. Issues that were identified by patients were categorised into emerging themes.

5.1 Barriers to VCT uptake

The study broadly shows that there is still a problem in achieving universal access to VCT in the Eastern Cape, despite its advantages. Three broad themes emerged from the study as follows: health service related factors, patient related factors and community related factors.

5.1.1 Health service – related barriers

5.1.1.1 Accessibility of the VCT service

The draft National Policy on Counselling and Testing (Department of Health, 2005a), emphasises accessibility of the VCT services across all provinces. In this study, 5 out of 8 participants lived within the catchment area of their clinics, and therefore travelled less than 5 km from home to the clinic and were able to access the clinic, but the participants who lived in informal settlements had to travel more than 15 km to their clinics. For this group access to the VCT service was limited by their poor socioeconomic status resulting in not affording the transport to the clinic. The literature highlights the barriers to access to VCT as being due to logistical problems such as inability to afford transport to the service sites because of the long distances that needed to be travelled. This was also found in China where transportation difficulties were mentioned as one of the barriers to VCT in a study done among adults (Ma Wei, et al, 2007). Barriers to VCT in literature highlight access to VCT as being challenged was hampered by logistical problems like inability to afford transportation to the sites, due to long distance (Sherr et al, 2007).

5.1.1.2 Selective offering of VCT

According to the draft National Policy on Counselling and Testing, VCT should be offered to all individuals who want to know their status (Department of Health, 2005a). This was not echoed in this study whereby counselling and testing for HIV was only offered to the sick patients. Furthermore the Tuberculosis Strategic Plan for South Africa 2007 – 2011 states that implementation of collaborative TB/HIV activities which has a package of care for TB patients should include offering HIV counselling and testing to all TB patients, offering cotrimaxazole routinely to those who test HIV positive and to offer ART to those who are

eligible for it, as well as ongoing psychosocial support and early diagnosis and treatment of other opportunistic infections (Department of Health, 2005b).

In this study, perceptions of three TB patients were that some nurses were selectively offering VCT to 'sick' patients only. This reflects two issues; one that the nurse is not aware of the advantages of the VCT service, due to lack of training on the implementation of the National Policy on Counselling and Testing; and secondly that this may be a reflection of shortage of staff in the clinic where one nurse is not able to offer the service to everyone as stipulated in the policy.

Offering VCT to any patients in particular to TB patients without consent or without access to counselling is, however an unacceptable practice and the disadvantages may negate any benefit obtained from knowing the HIV status of the patients (UNAIDS, 2005). In this study it was reported that one of the participants was unaware he was being tested for HIV while being in the hospital for ill health. He further reported he was told of his HIV positive result just prior to his discharge from the hospital and no post-test counselling was done. This is more of the violation of the patient's right. This practice is against what is stipulated in the draft National Policy on Counselling and Testing (2005a) which states that for counselling to be ethical and beneficial, it must always precede and follow HIV testing, i.e. all clients should be afforded counselling before and after testing for HIV. Secondly, with informed consent, all clients should be given a choice to test or not to test, for the HIV testing to be truly voluntary and free of coercion (Department of Health, 2005a).

5.1.1.3 Lack of integrated HIV/TB service

Integrated care acknowledges the links between HIV and TB and implies a strong emphasis on prevention since one of the most powerful interventions for HIV patients is to prevent TB, and the most powerful intervention to reduce TB is to prevent new HIV infections (WHO, 2007). Appropriate HIV care of the co-infected client is essential to help reduce morbidity and mortality of TB clients (Department of Health, 2007). The perceptions of two participants were that TB nurses at primary health care clinics did not offer VCT to TB patients who have to wait for a VCT nurse to provide the service. According to the National Guidelines on TB, whilst an HIV positive client is on TB treatment, it is the responsibility of the TB staff to ensure that the client accesses appropriate HIV care (Department of Health, 2007). Where possible, these services should be provided to the client at the same time as clinical visits for TB (Department of Health, 2007). This is to ensure that all TB patients who are found to be HIV positive would be offered a baseline HIV assessment soon after confirmation of diagnosis to help determine the extent of progression of their HIV and their HV treatment plan (Department of Health, 2007).

5.1.1.4 Poor quality counselling service

Most participants indicated poor quality counselling as a barrier to accepting VCT at the level of the clinic. Pre-test counselling was criticised as poor if offered and most of the times omitted. There have been instances where the participants were offered an incomplete VCT service, asked to come at different times for the pre-test counselling and HIV testing and left without post test counselling. This meant that their needs were not met. This was also the case in some other countries where VCT services are under-utilized because the services are inadequate and do not meet client needs. A study from Thailand found that some clients who had tested at hospital sites were found to be unaware of their HIV status and had not received

any follow up (Kawichai, Celentano and Chariyalertsak, 2004). In Kinshasa (DRC) counsellors noted that in clinical settings pre-test counselling was not often done. Consequently, results were often not relayed to the client. Medical staff themselves often had an unhelpful attitude to VCT and were reluctant to give positive results to clients (Denolf et al., 2000).

5.1.1.5 Confidentiality

It was important to note that in our study participants confirmed lack of confidentiality as a barrier raised by the participants. Since there was no proper infrastructure with rooms to ensure privacy, confidentiality was compromised. They mentioned this as a key factor when attending a counselling session.



5.1.2 Patient related barriers

5.1.2.1 Perceived benefit and risk

The perceived benefit and risk showed considerable influence on VCT interest among participants in this study. This was also shown in a study by Page-Shipp, Charalambous, Roux, Dias, Sefuti, Chrchyard and Grant (2007), where mineworkers in South Africa perceive HIV testing to be more acceptable if ART becomes available. In the current, study some participants perceived themselves to be at high risk only when their sexual partner died, and HIV/AIDS was revealed as the cause of death. However all along they never perceived themselves at high risk for HIV even though they were admitting to unprotected sex.

Therefore, the most worrying VCT barrier is that people do not perceive themselves to be at risk (Vermund and Wilson, 2002). This was also found in a study done in Guizhou province in China with an adult population where one barrier to VCT uptake in this group was the perception that they were low risk for HIV (MaWei et al, 2007). Perception of not being at

risk persists as a barrier to testing among women in the adult population in South Africa, despite self – report of high risk behaviours (Fylenkenes and Siziya, 2004). However, in contrast, a survey conducted in Welkom among the goldminers to investigate attitudes toward VCT and factors which influence uptake, showed that 69% considered themselves to be at risk of HIV infection, and 20% had previously used the VCT service, and an additional 11% had been tested for HIV elsewhere (Day, et al, 2002).

5.1.2.2 Lack of knowledge and misconceptions

Knowledge of the participants about VCT was poor with misconceptions, particularly regarding its definition, advantages and where its services were offered. This is in keeping with the findings elsewhere. Pregnant women in Hong Kong and China reportedly had inadequate knowledge regarding what VCT was and the availability of services (Heskeht, Duo, Li, Tomkins, 2005). Poor knowledge of HIV among the general population in Zimbabwe and pregnant women in Cape Town, South Africa is associated with poor uptake of VCT (Corbett et al, 2006; Kalichman and Simbayi, 2003).

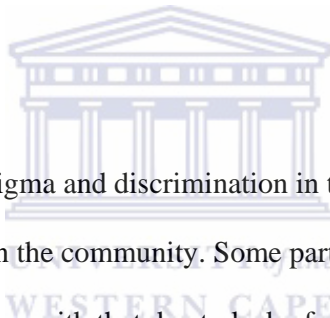
5.1.2.3 Fear of knowing positive results

Findings of this study indicate that fear of knowing their test result plays a role in influencing uptake of VCT. Such fear has been documented as a barrier among a risk population in Durban (Gebrekristos et al, 2003), and in the US (Kellerman et al, 2002). In a study done in Dar es Salaam in Tanzania, barriers to HIV testing and disclosure for women were fear of knowing the HIV positive result as they feared the reactions of their partners (Maman, Mbwambo, Hogan, Kilonzo and Sweat, 2002).

5.1.3 Community related barriers

5.1.3.1 Stigma and discrimination

The findings from this study suggests that stigmatization of HIV is still present in the Eastern Cape. HIV/AIDS has been the most stigmatised disease in the last 20 years (Jarlais, Galea, Tracy, Tross, 2006). For example, HIV-associated stigma has remained a barrier to testing among pregnant women in Cape Town (Kalichman and Simbayi, 2000); in a study by Parra (2001), on 413 pregnant women in Texas, USA, 15% of participants who had not previously been tested indicated they would refuse testing because of fear of being stigmatised, and being viewed as having had many sexual partners (Parra 2001); perceived stigmatization among mineworkers in South Africa reportedly deterred them from seeking VCT (Day et al, 2003).



Participants were aware of the stigma and discrimination in the community and the lack of support of HIV positive people in the community. Some participants mentioned fear of positive result and inability to cope with that due to lack of support systems. This was further explained as the inability to deal with bad consequences of being stigmatized and discriminated against in the community. This is in line with a study done in a TB clinic in Durban in 2005, where 57% of TB patients accepted VCT, but less than 10% came for their results because the rest feared a positive result and its consequences as alluded to above (Gebrekristos, et al, 2005).

5.1.3.2 Community perceptions

Some participants had the misconception that if they seek VCT when they are not ill, and the result of VCT is found to be positive, that may cause them to become ill ((Deacon, Stephney and Prosalendis, 2004). Other misconceptions were the fact that they feared and worried

about not able to have a child when they found out about their HIV positive status, prior to being pregnant. Misconceptions in the community were that TB patients were HIV positive even without them seeking VCT due to signs of weight loss, and dysmorphic changes caused by the disease. These misconceptions mentioned in the study are factors that delay the acceptability of VCT amongst the community.

It came out strongly that the community continues to diagnose and label people as HIV positive due to any ill health. Any person diagnosed with TB is also labelled as HIV positive. This community perception has been mentioned as a barrier due to the fact that TB patients felt that they were already diagnosed and known in the community to be HIV positive because of TB and its related symptoms. In contrast, one participant viewed this community perception differently, in that community perceptions instead encouraged her to go for VCT to dispel such misconceptions. The implication of this is that there is lack of community support for those who test HIV positive. This would discourage those that have not accepted VCT from accepting.

5.2 Factors promoting access to VCT uptake

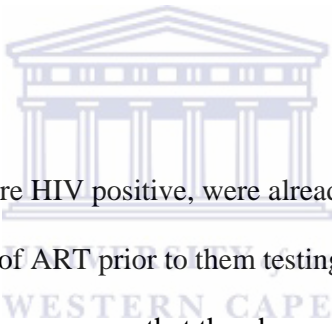
5.2.1 Availability of ART

The introduction of ART has had a profound and positive impact on the demand for VCT. This was noticed in Cange, rural Haiti in 2002 after introduction of ART where VCT sessions per month increased from 0 to an average of 208 in 3 months, to 509 within one month (Castro, Leandre, Raymonville, Farmer, 2004). However, from the current study it is shown that even though ART is available and there is increasing VCT uptake, there is still reluctance among the TB patients to take up VCT due to fear of whether they will be eligible for ART or

not. According to the National TB guidelines (2007), clients on TB medication and ART should be counselled about specific problems they are likely to encounter which are:

- They will be taking a large number of tablets and may struggle with adherence
- When ART is commenced, the client's TB symptoms may transiently worsen as part of immune reconstitution
- High rates of drug intolerance and drug interactions may occur between TB and ARV drugs

Ongoing counselling is important, and adequate preparation and support will help improve adherence to both regimens. Given the high levels of TB and HIV co – infection, access to appropriate care for both infections, with access to ART, plays a critical role in containing both epidemics (Hausler, 2002).



Participants in this study who were HIV positive, were already on ART. As they reflected back, they said that the presence of ART prior to them testing for HIV would have encouraged them to test for HIV sooner now that they have experienced the benefits of ART. Furthermore as they counsel other clients, they reported that being on ART themselves was motivating other participants because they were witnessing someone on ART who was well. The pregnant participant stated her reason for accepting VCT to be related to prevention infection to her unborn child as well gaining access to ART. Advantages of this are that an HIV positive mother who delivers an HIV negative baby encourages more pregnant women to undergo VCT early, and be able to enroll on the PMTCT program.

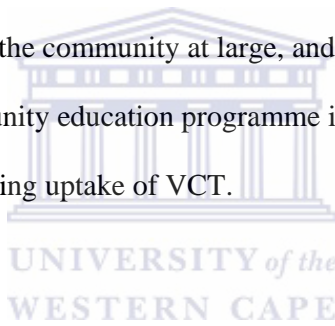
5.2.2 Death of a partner and decision of partner

From this study it came strongly that one of the reasons for the participants decision on VCT uptake has been the death of a sexual partner. This has encouraged most of the participants to

seek VCT which meant that they are fully aware of the risk of infection, defined themselves as at risk. Interestingly however, some participants were forced by their girlfriends to accept VCT which then resulted in them supporting each other. This was also found to be the case in a study by the HSRC (2002) which found men were being tested, usually because they had been influenced by partners and friends.

5.3 Interventions to increase uptake to VCT

Service-related barriers can be removed by provision of adequate staffing of primary care clinics and rooms for counselling, as well as the motivation and development of the skills and competencies of the lay counsellors. These will positively impact on the uptake of VCT among TB patients as well as to the community at large, and further increase its cost-effectiveness. A vigorous community education programme is essential if the introduction of ART is to be effective in promoting uptake of VCT.



5.4 Limitations of the study

The small purposive sample in this study places a limitation on the external validity, in that it may not be an accurate representation of all TB patients, and also not representative of the TB clients who are offered VCT.

The interview process has limitations as it involves personal interaction, and cooperation is therefore essential. Participants found the interview emotionally troubling as it was asking participants to reflect on their personal journey about HIV and AIDS, therefore time consuming allowing time for the participants to narrate their stories.

Although the findings are context bound, generalization can only be considered in other areas within the Eastern Cape with similar socio-economic context, HIV/TB epidemiology and health system characteristics. However the results can assist in highlighting the barriers for VCT.

In summary: This chapter emphasises that barriers to VCT uptake among the TB patients limit their access to HIV care. The results of the study confirm that the existing draft National policy on Voluntary Counselling and Testing is not universally implemented at all clinics in the Eastern Cape especially in the newly accredited sites for ART. Further findings of the study confirm the vertical nature in which TB and HIV are managed at a clinic level, even though there are national efforts towards integrating the TB and HIV, hence the low VCT uptake.



CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

This study aimed to examine the barriers to VCT uptake by the TB patients. Three broad themes emerged from the barriers to VCT: client based barriers, health system based, as well as community based barriers. Most of the barriers to VCT uptake found in the TB patients in this study was in line with the barriers to VCT uptake found amongst non TB people generally such as stigma and discrimination in the community, misconceptions, and especially the health related barriers seemed to dominate. However, the lack of integration of HIV and TB has posed challenges specifically for the TB patient who is not offered VCT while attending the clinic for TB treatment. The negative attitudes of nurses seemed to be directed at the TB patient and this reflects their inability to manage TB and HIV co-infection. Another barrier is the fact that the TB patient did not perceive themselves at risk of HIV. Their lack of perceived risk was found to be similar to other studies in the literature. It was only due to special circumstances such as the death of a partner, that they were obliged to accept VCT. Another reason for not taking up VCT by the TB patients seemed to be the added pill burden. They seemed to feel overwhelmed by all the medication that they would have to adhere to.

Continuous awareness about the risk of the TB co-infection will sensitise the TB patients into perceiving themselves at risk of HIV, which will then make them accept VCT service. Awareness campaign targeting TB patients in primary health care clinics and the community will contribute to sustained VCT uptake among the TB patients.

6.2 Recommendations

The following recommendations can be made based on the findings of this study:

- The result of the study should contribute to the formation of an official policy on VCT among TB patients for the Department of Health since there is no policy in existence. This formulation of the policy will use the existing draft National Policy on Counselling and Testing, as well as the existing National TB guidelines with special emphasis placed on HIV and TB management.

Most TB patients in high HIV-prevalent countries are HIV-infected and do not have easy access to HIV education, VCT and services to help them manage HIV-related illnesses (Family Health International, 2001). The recommendation is to:

- Establishing HIV services within TB service points will address the needs of most TB patients where VCT will help alleviate the anxiety of most TB patients and motivate HIV-negative patients to adopt life-saving skills (Family Health International, 2001).

Overall, in this study TB patients were not all aware of the link between HIV and TB infection. Knowing their status makes it possible for HIV-positive persons to plan for the future and alter behaviour to protect others (Department of Health, 2005a). The recommendation is to:

- To ensure continuous awareness about HIV /AIDS and the link between HIV and TB

- The existing prevention campaigns should:
 - increase emphasis on the advantages of VCT
 - make VCT sites known
 - Provide continuous communication material
 - Mobilise community for VCT campaigns and advocacy workshops.

These campaigns should aim to address the problem of HIV related stigma and discrimination in our communities through continuous awareness.

To bridge the gap of where VCT services are not being offered, as well as selective offering of VCT to sick clients, the recommendation is:

- To continuously build the capacity of nursing staff on TB and HIV co-infection, VCT and TB management focusing on integration of the services at primary health care level.



To ensure that what this study is recommending is implemented and is improving the service, a recommendation is:

- To develop guidelines and registers for monitoring and evaluating VCT uptake among TB patients annually to measure impact of any intervention made.

REFERENCES

Bartholomew, L.K. (2000). *Intervention Mapping. Designing theory-and evidence-based health promotion programs*. Mountain View, CA: Mayfield.

Birdsall, K., Hajjiannis, H., Nkosi, Z. and Parker, W. (2005). *Voluntary Counselling and Testing (VCT) in South Africa: An analysis of calls to the National AIDS Helpline*. [Online], Available at: from :<http://www.cadre.org.za>. Retrieved 28 July 2008.

Bless, C. and Higson-Smith, C. (1995). *Fundamentals of Social Research methods: An African perspective*, 2nd edition. Philadelphia. London. W.B Saunders.

Bowen, E.F., Rice, P.S., Cooke, N., Whitfield, R.J., and Rayner, C.F.J. (2000). HIV seroprevalence by anonymous testing in patients with Mycobacterium tuberculosis and in tuberculosis contacts. *The Lancet*, 356: 1488-1489.

Bradshaw, D., Groenewald, P., Laubscher, R., Nannan, N., Nojilana, B., Norman, R., Pieterse, D., Schneider, M., Bourne, D., Timæus, M., Dorrington, R.E. and Johnson, L. (2003). Initial burden of disease estimates for South Africa. *South African Medical Journal*, 93(9): 682-688

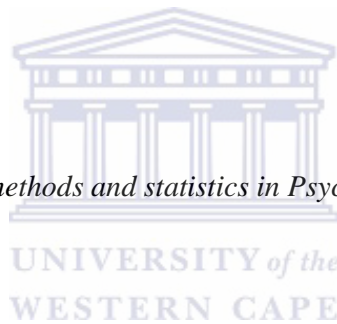
Brink, I. (1999). *Fundamental of Research Methodology for Health Care Professional*. 2nd Edition. Cape Town: Juta and Company Ltd.

Burgess, A.L., Fitzgerald, D.W. and Severe, P. (2001). Introduction of tuberculosis screening at an HIV voluntary counselling and testing centre in Haiti. *AIDS*, 15:1875–9.

Castro, A., Leandre, F., Raymonville, M. and Farmer P,E. (2004). *AIDS-related stigma and access to comprehensive AIDS care: from social theory to clinical practice in rural Haiti*. Conference proceedings of the International AIDS Conference, July, 2004: Bangkok, Thailand

Cartoux, M. (1998). *Acceptability of voluntary counselling and testing (VCT) and interventions to reduce mother-to-child transmission of HIV An international survey*. Presented at the *12th World AIDS Conference*, Geneva, Abstract no. 23310. *AIDS* , 12:2489 – 2493

Coolican, H. (2004). *Research methods and statistics in Psychology* (4th Ed.). London: Hodder & Stoughton.



Coetzee, D., Hilderbrand, K., Goemaere, E., Matthys, F. and Boelaert M.(2004). Integrating tuberculosis and HIV care in the primary care setting in South Africa. *Trop Med Int Health*, 9: A11–5.

Corbett, E.L., Dauya, E., Matabmo. R., Cheung, Y.B., Makamure, B. and Bassett M,T. (2006). *Uptake of workplace HIV counselling and testing: a cluster randomised trial in Zimbabwe*. [Online], Available at: [www. medicine.plosjournals.org](http://www.medicines.plosjournals.org). Retrieved 29 October 2008

Creswell, J.W. and Miller, D., L.,(2000). *Determine Validity in Qualitative Inquiry. Theory into practice*. San Diego, CA: Academic Press.

Daftary, A., Padayatchi, N. and Padilla, M. (2007). HIV testing and disclosure. A qualitative analysis of TB patients in South Africa. *AIDS Care*, 19(4): 572 – 577

Day, J.H., Miyamura, K., Grant, A.D., Leeuw, A., Munsammy, J. and Baggaley R, (2003). Attitudes to HIV voluntary counselling and testing among mineworkers in South Africa: will availability of antiretroviral therapy encourage testing? *AIDS Care*, 15: 665-672

Day, J.H., Miyamura, K., Grant, A.D., Leeuw, A., Magadla, B., Munsamy, J., Baggaley,R. and Churchyard, G.J. (2002). Will antiretroviral therapy affect uptake of VCT? A survey among Southern African gold miners. International Conference on AIDS. *Int Conf AIDS*. 2002 Jul 7-12; 14: abstract no. MoOrF1073. Aurum Health Research, Welkom, South Africa



Deacon, H., Stephney, H., and Prosalendis, S. (2004). Understanding HIV/AIDS Stigma: Theoretical and Methodological analysis. Available at www.wiserweb.wits.ac.za, retrieved on 12 February 2009.

Department of Health (2007a). TB Strategic planning for South Africa 2007 – 2011. Pretoria

Department of Health report. (2007b). HIV, AIDS and STI National strategic Planning for South Africa 2007 – 2011 (Draft 9). Pretoria:

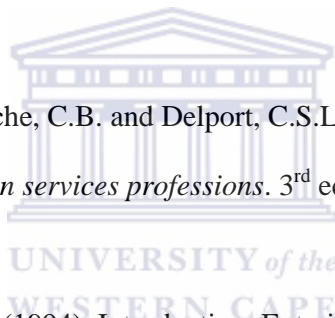
Department of Health. (2006). National HIV and syphilis antenatal sero-prevalence survey in South Africa 2005. Pretoria

Department of Health, (2005a). National Tuberculosis Crisis Management Plan. Pretoria

Department of Health. (2005b). The National draft Policy on Counselling and Testing for HIV in South Africa. Pretoria

Department of Health. (2004). The National Antiretroviral Treatment Guidelines.HIV/AIDS Policy Guideline. Khomanani: Caring for life.

De Vos, A.S., Strydom, H., Fouche, C.B. and Delpont, C.S.L.(1998). *Research at grassroots for the social sciences and human services professions*. 3rd ed. Van schaik publishers. Pretoria



Denzin, N. K. and Lincoln, Y.S. (1994). Introduction. Entering the field of qualitative research. In N.K Denzin & Y.S Lincoln (Eds). *Handbook of qualitative research*. Thousands Oaks, CA, Sage: 1-17

Dorrington, R. E., Bradshaw, D., Johnson, L. and Daniel, T. (2006). *The Demographic Impact of HIV/AIDS in South Africa: National and Provincial Indicators 2006*. Cape Town: Centre for Actuarial Research, South African Medical Research Council, Actuarial Society of South Africa

Elizabeth, L.C., Watt, C.J. and Walker, N. (2003). The growing burden of tuberculosis. *Arch Intern Med*, 163:1009-21

Family Health International (2001). *Tuberculosis control in high HIV prevalent areas: A strategic framework*. June 2001. HIV/AIDS Prevention and Care Department. Arlington, VA 22201

Forsythe, S., Arthur G., Ngatia, G., Mutemi, R., Odhiambo, J. and Gilks, C. (2002). Assessing the cost and willingness to pay for voluntary counselling and testing in Kenya. Health policy and planning, *AIDS*, 17: 187 -195

Fylkensnes, K. and Siziya S. (2004). A randomised trial on acceptability of voluntary counselling and testing. *Trop Med Int Health*, 9: 566 – 572

Gebrekrstos, H.T., Lurie, M.H., Mthethwa, N. and Karim, Q. (2005). Knowledge and acceptability of HAART among TB patients in Durban, South Africa. *AIDS Care* 17 (6): 767-772

Gilly, A., Ngatia, G., Rachier, C., Mutemi, R., Odhiambo, G., and Gilks, C. (2005). The role of government health centers in provision of same – day voluntary counselling and testing in Kenya. *Journal of Acquired Immune Deficiency Syndrome*. 40(3)329 – 335.

Gooze, L. and Daley, C.L. (2003). *Tuberculosis and HIV*. HIV InSite Knowledge base chapter. [Online], Available at: <http://www.hivinsite.ucsf.edu/InSite>. Retrieved 31 July 2008.

Grimwade, K., Sturm, A.W., Nuun, A., Mbatha, D., Zungu, D. and Gilks, C.F. (2005). Effectiveness of cotrimoxazole prophylaxis on mortality of adults with tuberculosis in South Africa. *AIDS*, 19: 163-168

Harries, A.D. (2001). Tuberculosis control in sub-Saharan Africa in the face of HIV and AIDS. Issues facing TB control. *Scott Med J.*, 45: 47–50

Hausler, H. (2002). Lessons learnt in South African TB/HIV districts. *SA Respiratory journal*, 8(1): 17-22

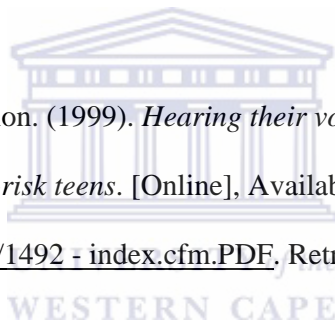
Health International Alliance. (2005). *Integrating TB and HIV care in Mozambique: Lessons from an HIV clinic in Beira*. [Online], Available at:

http://www.coregroup.org/working_groups/HAI_Mozambique_TB-HIV_case_study.

Retrieved 13 August 2008

Henry J. Kaiser Family Foundation. (1999). *Hearing their voices: a qualitative research study on HIV testing and higher-risk teens*. [Online], Available at:

http://www.kff.org/youthhivstds/1492_index.cfm.PDF. Retrieved 8 September 2008



HIV & AIDS and STI National Strategic Plan 2005-2011. (2007). Pretoria: South African National AIDS Council.

Horsburgh, C.R. Jr., Feldman, S. and Ridzon, R. (2000). Practice guidelines for the treatment of tuberculosis. *Clin Infect Dis*, 31:633–639

Hogan, D.R. and Salmon, J.A. (2005). *Prevention and treatment of human immunodeficiency virus/acquired immunodeficiency syndrome in resource limited settings*. *Bull World Health Organisation* 83:135 -143. Epub 2005 Feb 24

HSRC. (Human Sciences Research Council). (2002). *Nelson Mandela/HSRC Study of HIV/AIDS. Household Survey 2002. Cape Town: Human Sciences Research Council Publishers.* [Online], Available at: <http://www.hsrcpublishers.co.za/hiv.html>. Retrieved 15 July 2008

Kalichman, S. and Simbayi, L.(2000). HIV testing attitudes, AIDS stigma, and voluntary counselling and testing in a black township in Cape Town South Africa. *Sexual Transmitted Infections*, 79: 442-447

Kalichman, S.C., DiMarco, M., Austin, J., Luke, W. and DiFonzo, K. (2003). Stress, Social Support, and HIV-Status Disclosure to Family and Friends among HIV-Positive Men and Women. *Journal of Behaviour medicine*, 26 (4): 315-332(18)

Kawichai, S., Celentano, D. and Chariyalertsak, S.(2004). *Reaching out to rural resident for HIV VCT: A pilot study of mobile VCT services in four communities of Chiang Mai province rural areas, northern Thailand. Int Conf AIDS . Jul 11-16; 15: abstract no. ThPeC7495*

Kelly, K. and Parker, W. (2001). *From people to places: Prioritising contextual research for social mobilisation against HIV/AIDS.* [Online], Available at: <http://www.cadre.org.za> . Retrieved 28 July 2008

Kitzinger, J. (1994). The methodology of focus groups: the importance of interactions between research participants. *Sociology of Health and Illness*, 16:103-21

Kiragu, K. and Mackenzie, C. (2007). *Alcohol Related intimate partner violence among VCT clients in Kenya: Results of baseline study*

Laimputtong, P.R. and Ezzy, D. (2005). Chapter 2. Rigour, ethics and Sampling. In *Qualitative Research Methods*. 2nd ed Sydney: Oxford University Press: 44-52

Lincoln, Y.S. and Guba, E.G. (1985). *Naturalistic inquiry*. Beverly Hills: Sage

Ma Wei, A., Detels, C., Roger, B., Feng, Y., Zunyou, A.B., Shen Limei, C., Li Yu, C., Zezhen, D., Chen, F.E., Wang, A.E., and Liu, T.D. (2007). Acceptance of and barriers to voluntary HIV counselling and testing among adults in Guizhou province, China. *AIDS*. 21 Suppl 8:S129-S135

Maher, D., Borgdorff, M. and Boerma, T. (2005). HIV-related Tuberculosis: How well are we doing with current control efforts. *Int J. Tuberc Lung Disease*, 9(1):17-24

Maher, D. Harries, A., and Getahun, H. (2005). Tuberculosis and HIV interaction in sub-Saharan Africa: Impact on patients and programmes; implication of policies. *Trop Med Int Health*, 10 (8): 734-742

Maman, S. and Medley, A. (2004). Gender dimensions of HIV status disclosure to sexual partners: Rates, Barriers and Outcomes: A review paper. WHO. Geneva

MacNeil, J.M., Mberesero, F. and Kilonzo, G. (1999). Is care and support associated with preventative behaviour among people with HIV/AIDS. *AIDS Care*, 11: 537– 46

Maman, S., Mbwambo, J., Hohan, N.M., Kilonzo, G.P. and Sweat, M. (2002). Women's barriers to HIV-1 testing and disclosure: challenges for HIV -1 voluntary counselling and testing. *AIDS CARE*, 13(5) 595-603

Matovu, J., Kigozi, G., Nalugoda, F., Wabwire-mangen, F. and Gray, R. (2002). The Rakai project counselling programme experience. *Tropical Medicine and International Health*, 7: 1064 -1067

Mohammed, A., Ehrlich, R., Wood, R., Cillers, F. and Maartens, G. (2004). Screening for TB in adults with advanced HIV infection prior to preventative therapy. *Int J Tubercul Lung Dis*, 8(6):792-795

Moore, D., Edwaru, P. and Liechty, C. (2006). *Prevalence, incidence and outcomes of tuberculosis treatment in HIV+ individuals initiating home-based antiretroviral therapy in rural Uganda* [abstract 794]. In: Program and abstracts of the 13th Conference on Retroviruses and Opportunistic Infections. Alexandria, VA: CROI

Morse, J. M., and Field, P, A. *Qualitative research methods for health professionals*. 2nd edition. Los Angeles. Sage Publication.

Mugula, F., et al (1995) *A community based counseling service as a potential outlet for condom distribution*. Abstract no. WeD834. IXth International conference of AIDS and STD in Africa. Kampala, Uganda

Mutevedzi, T., Routh, J., Khumalo-Sakutukwa, G., and Fritz, K., and Morin, S. (2002). *Removing barriers to knowing HIV status: A comparison of testers and non-testers in Sub-Saharan Africa*. Int Conf AIDS. 2002 Jul 7-12; 14: Abstract no. LbPeD9042. University of Zimbabwe-University of California San Francisco (UZ-UCSF), Harare, Zimbabwe

Nathan, M., Thielman, H., Chu, Y., Ostermann, J., Dafrosa, K., Itemba, A. M., Mtweve, S., John, A., Bartlett, J.F. and John, A. Crump (2006). Cost-Effectiveness of Free HIV Voluntary Counseling and Testing Through a Community-Based AIDS Service Organization in Northern Tanzania. *Am J Public Health*, 96(1): 114–119

Nuwaha, F., Kabatesi, D., Munganwa, M. and Whalen, C. (2002). Factors influencing acceptability of voluntary counselling and testing in Bushenyi district of Uganda. *East African Medical Journal*, 79: 626 -632

Nyblade, L. (2001). Population– based HIV testing and counselling in rural Uganda: participation and risk characteristics. *Journal of Acquired Immune Deficiency Syndrome*, 28: 463 -470.

Liesl S Page-Shipp, L., Charalambous, S., Roux, S., Dias, B., Sefuti, C., Churchyard, G.J., Grant, A.D. (2007). Attitudes to directly observed antiretroviral treatment in a workplace HIV care programme in South Africa. [Online], Available at: www.sti.bmj.com/cgi/content/full/83/5/383. Retrieved 11 February 2009.

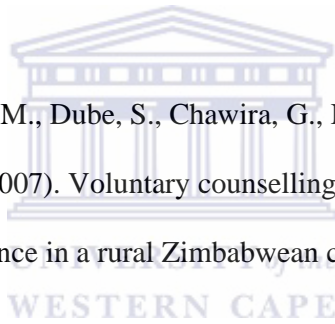
Parra, E.O. (2001). Concerns of pregnant women about being tested for HIV: A study in a predominantly Mexican American population. *AIDS Patient Care STDS*, 15: 83 -93.

Pettifor, A., Rees, H., Stefenson, A., Hlongwa-Madikizela, L., MacPhail, C., Vermaak, K. and Kleinschmidt, I. (2004). *HIV and sexual behaviour among young South Africans: a national survey of 15- 24 year olds*. [Online], Available at :
<http://www.lovelife.org.za>. Retrieved 3 June 2008

Pope, C., Ziebland, S., and Mays, N. (2000). Qualitative research in health care: Analysing qualitative data. *BMJ*, 320: 114-116

Population Council. Annual report (2005). Annual report. [Online], Available at:
www.popcouncil.org/about/ar05/index.html. Retrieved on 11 February 2009

Sherr, L., Lopman, B., Kakowa, M., Dube, S., Chawira, G., Nyamukapa, C., Oberzaucher, N., Cremin, I. and Gregson S. (2007). Voluntary counselling and testing: uptake, impact on sexual behavior, and HIV incidence in a rural Zimbabwean cohort. *AIDS*, 21(7):851-860



Sherr, L., Hackmana, N., Mfenyana, K., Chandia, J., and Yogeswaran, P. (2003). Antenatal HIV testing from the perspective of pregnant women and health clinic staff in South Africa – implications for pre and post test counselling. *Couns Psychology Quart* , 6: 337 -348

Seyler, C., Toure, S., Messou, E., Bonard, D., Gabillard, D. and Anglaret X. (2005). Risk factors for active tuberculosis after antiretroviral treatment initiation in Abidjan. *Am J Respir Crit Care Med*, 172: 123–7

Shisana, O., Peltzer, K., Zungu-Dirwayi, N. and Louw, J. (Eds). (2005). *The health of our educators: A focus on HIV/AIDS in South African public schools, 2004/5 survey*. Cape Town: HSRC Press

Shisana, O. and Simbayi, L. (2002). South African National HIV Prevalence, Behavioural Risks and Mass Media Household Survey. Nelson Mandela/HSRC Study of HIV/AIDS. [Online], Available at: <http://www.cadre.org.za/pdf/HIV%20Report.pdf>. Retrieved 24 May 2008

Smith, J.A., Harre, R. and Van Langenhoven, L.(1995). *Rethinking methods in psychology*. London:Sage

Solomon, V., Van Rooyen, H., Griesel, R., Gray, D., Stein, J. and Nott, V. (2004). Critical Review and Analysis of Voluntary Counselling and Testing Literature in Africa. [Online] Available at: <http://www.hst.org.za>. Retrieved 22 October 2008

Sorin, M.D., Tesoriero, J.M. and La Chance– McCullough, M. (1995). Correlates of acceptance of HIV testing and post test counselling in the obstetrical setting. *AIDS Education and Prevention*, 8: 72-85

Statistics South Africa. (2003). Census of 2001 in Brief. Pretoria: Statistics South Africa

Stein, J.A. and Nyamathi, A. (2000). Gender differences in behavioural and psychosocial predictors of HIV testing and return for test results in a high risk population. *AIDS Care*, 12: 343-356

Steinberg M. and Johnson S. (2002). *Hitting home: how households cope with the HIV/AIDS epidemic*. Henry J. Kaiser Foundation & Health Systems Trust. [Online], Available at: hivaidsclearinghouse.unesco.org/ev.php. Retrieved 30 August 2008

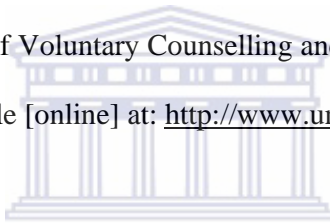
Swanepoel, P. (2003). *Persuading South Africans at risk of HIV/AIDS to voluntarily present themselves for counselling, testing and referral (VCT): Using theory and empirical evidence in formative research for VCT message design.* [Online], Available at:

<http://www.epidasa.org/documents/Swanepoel>

Thiede, M., Palmer, N., and Mbatsha, S.. (2004). South Africa: Who goes to the public sector for Voluntary HIV/AIDS counselling and Testing? *AIDS CARE.* [Online], Available at:

<http://www.siteresources.worldbank.org/HEALTHNUTRITIONANDPOPULATION/Resources/281627-1095698140167/RPP6SAfrica.pdf> . Retrieved 14 August 2008

UNAIDS. (2001a). The impact of Voluntary Counselling and Testing. A global review of the benefits and challenges. Available [online] at: <http://www.unaids.org>. Retrieved 24 July 2008



UNAIDS. (2001b). HIV Voluntary Counselling and Testing: a gateway to prevention and care. Geneva. Switzerland. [Online], Available at: <http://www.unaids.org>. Retrieved 20 June 2008

UNAIDS. (2004). Report on the Global AIDS Epidemic: 4th Global Report. Geneva: Switzerland

UNAIDS. (2008). Report on the global AIDS epidemic. Geneva. Switzerland.

UNAIDS / WHO. (2008). Report on global AIDS epidemic report on HIV. [Online], Available at: www.weforum.org/globalhealth/cases. Retrieved 27 October 2008

UNAIDS/WHO. (2004a). Epidemiological Fact Sheets on HIV/AIDS and Sexually Transmitted Infections: Mozambique. [Online], Available at:
http://www.data.unaids.org/Publications/Fact-Sheets01/mozambique_en.pdf. Retrieved 17 June 2008.

UNAIDS/WHO. (2004b). Zambia: Epidemiological Fact Sheet on HIV/AIDS and Sexually Transmitted Infections –Update [Online], Available at:
www.unaids.org/html/pub/publications/fact-sheets01/zambia_en_pdf.pdf. Retrieved 30 July 2008

United Nations Development Programme (2004). South Africa Human Development Report 2003. Cape Town: Oxford University Press Southern Africa.

Van Dyk, A.C. (2001). Traditional African beliefs and customs: Implications for AIDS education and prevention In Africa. *South African Journal of Psychology*, 31(2): 60-66

Van Dyk, A.C. and Van Dyk, P.J. (2003). “What’s the point of knowing?”. Psycho-social barriers to voluntary counseling and testing programmes in South Africa. *South African Journal of Psychology*, 33(2): 118-125

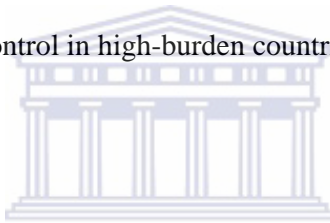
Van der Sande, M.A., Schim van der Loeff, M.F and Bennett, R.C. (2004). Incidence of tuberculosis and survival after its diagnosis in patients infected with HIV-1 and HIV-2. *AIDS*. 18(14):1933–41

Venter, W.F. (2007). The South African National Strategic Plan: What does it mean for our Health System? *Southern African Journal of HIV Medicine*, 7: 8-11

Wandwalo, E., Kapalata, N., Tarimo, E., Corrigan, C.B. and Morkve, O. (2004). Collaboration between the national tuberculosis programme and a non governmental organisation in TB/HIV care at a district level: experience from Tanzania. *Afr Health Sci.*, 4(2): 109-14

WHO. (2005). Summary country profile for HIV/AIDS treatment scale-up. Geneva: WHO

WHO. (2001). Progress in TB control in high-burden countries, WHO Report. WHO/TB/01.4. Geneva: WHO



WHO. (2003). *Expert group stresses that unsafe sex is primary mode of transmission of HIV in Africa*. [Online], Available at: <http://www.who.int/mediacentre/statements/2003/statement5/en/>. Retrieved 12 June 2008

WHO. (2004). Global TB control: surveillance, planning and financing. Global TB database. [Online], Available at: <http://www.who.int/tb/country/en>. Retrieved: 11 July 2008

WHO. (2004). World Health Report. Changing history. [Online], Available at: <http://www.who.int/whr/2004/en>. Retrieved 21 August 2008

WHO. (2004). Voluntary Counselling and Testing. A manual for training of trainers part1 & II. [online], Available at:

http://www.searo/who.int/Linkfiles/Training_material_voluntary_intro.pdf. Retrieved: 13 June 2008

WHO. (2004). *Global Tuberculosis Control: Surveillance, Planning, Financing*. Geneva: [Online], Available at www.who.int/entity/tb/publications/global_report/2004/full.pdf
Retrieved 18 November 2008

WHO. (2005a). *TB/HIV research priorities in resource –limited settings. Report of an expert consultation*. Geneva, Switzerland

WHO/UNAIDS. (2005). *Progress on Global Access to HIV Antiretroviral Therapy: An Update on “3 by 5”*. [Online], Available at:
<http://www.who.int/3by5/fullreportJune2005.pdf>. Retrieved 19 August 2008

Zachariah, R., Spielmann, M.P.L., Chinji, C., Gomani, P., Arendt, V and Hargreaves, N.J. (2003). Voluntary Counselling, HIV testing and adjunctive cotrimoxazole reduces mortality in tuberculosis patients in Thoylo, Malawi. *AIDS*, 17: 1053-1061

Zumla, A., Malon, P., and Henderson, J. (2001). Impact of HIV infection on tuberculosis. *JAMA*, 4:33-40



UNIVERSITY OF THE WESTERN CAPE

School of Public Health

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-9592809, Fax: 27 21-9592872

<http://www.soph.uwc.ac.za>

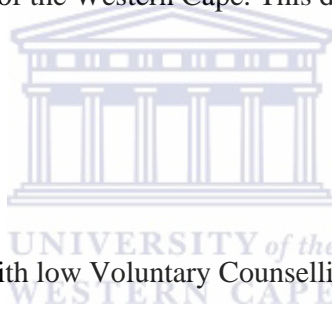


APPENDIX: A

Participant information sheet

Dear Participant

We would like to invite you to participate in the following study that will be conducted for the purpose of a mini thesis, a requirement for the Masters in Public health that I am undertaking with the University of the Western Cape. This document contains information about this research study.



TITLE OF RESEARCH

To explore barriers associated with low Voluntary Counselling and Testing (VCT) uptake by adult TB patients attending primary health care clinics within the Buffalo City municipality, in the Eastern Cape.

PURPOSE OF THE RESEARCH

This research aims to explore the impeding factors that contribute to patients not testing for Voluntary Counselling and Testing (VCT). Although VCT is a free service and remains the cornerstone of HIV infection, there is still low uptake among especially the TB patients in this area with increasing HIV and TB co-infection. As part of the study we will be conducting interviews with TB patients who have been offered VCT in the primary health care centres namely; NU2,8,13, Gompo to express their perceptions and obstacles encountered when offered VCT. The study will include in-depth interviews with eight key identified TB clients

who have been offered VCT. This includes those who accepted and those who refused the test. It is hoped that your participation can assist the study to understand factors associated with taking up VCT after being offered, and also those factors that contribute to refusing VCT. Your responses shall assist in providing strategies to improve the service.

We are asking you for your participation as a patient because you are the best source of information for the study. We would like to learn from your perceptions and experiences about the VCT service offered in the primary health care facilities. If you decide to participate an interviewer shall ask you a series of questions regarding the subject. The interview will take approximately 30 minutes.

CONFIDENTIALITY

The signed consent form as well as the contents of the interview shall be kept confidential at all times. These documents shall be destroyed after the research is completed. There shall be no mention of your name in any document.

VOLUNTARY PARTICIPATION AND WITHDRAWAL

Your participation in the study is entirely voluntary which means you can decide not to participate. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. Likewise if you decide to participate in the study, you may discontinue your participation at anytime without penalty or loss of benefits to which you are otherwise entitled.

INFORMED CONSENT

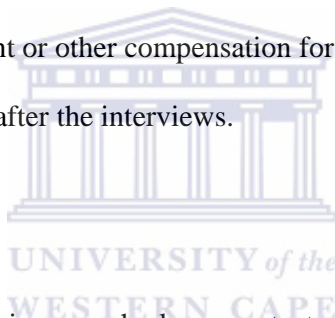
Before you participate in the study, you will need to sign a consent form that proves that permission has been given by yourself after having been informed about the study. This consent form is attached with this document for you to review it and decide whether you would like to participate or not.

BENEFITS AND COSTS

There is no anticipated direct benefit to you from your involvement in the study and no costs shall be incurred by you for this study.

COMPENSATION

You will not receive any payment or other compensation for participation in this study. Refreshments shall be provided after the interviews.



QUESTIONS

For further enquiries regarding this research please contact me through the following contact details:

Zukiswa Jafta

Student number: 2337131

Cellular phone: 0827733173

Telephone work 043 709 2006

Fax number 043 709 2052

My supervisor for the study at UWC is Suraya Mohamed, I am accountable to her. Her contact details are 021- 9592628 or 021 – 9592809; Email address sumohamed@uwc.co.za.



UNIVERSITY OF THE WESTERN CAPE



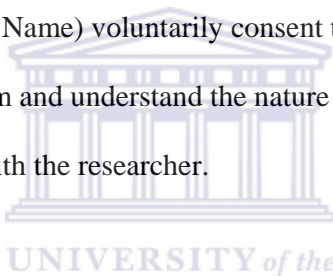
School of Public Health

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-9592809, Fax: 27 21-9592872
<http://www.soph.uwc.ac.za>

APPENDIX: B

CONSENT FORM

I (Surname, Name) voluntarily consent to participate in this study. I have thoroughly read this consent form and understand the nature and the purpose of the study. I have fully discussed the study with the researcher.



I understand that I am free to not participate in the study or to withdraw any time. My decision not to participate in the study will not affect my future care.

I understand that I will receive and may keep a copy of this signed and dated consent form.

Signatures:

Person obtaining consent

Print name Signature Date

Researcher

Print Name Signature Date

APPENDIX C: INTERVIEW GUIDE

TB PATIENTS WHO PARTICIPATED IN THE VOLUNTARY COUNSELLING AND TESTING PROGRAM

A. PERSONAL INFORMATION

- 1.1 Age
- 1.2 Gender
- 1.3 Are you employed? If not what is your source of income?
- 1.4 Where do you stay?
- 1.5 What is your level of education?

B. VOLUNTARY COUNSELLING AND TESTING

1. Have you tested for HIV?
2. What made you decide to test for HIV?
3. Did you tell anyone before taking the HIV test?
4. Were you worried about anything / were you afraid of anything?
5. Tell me what was your overall experience of doing the HIV test like? (to probe about services, whether process explained to client)
6. Please tell me how did you feel after doing an HIV test?
7. How long did it take you to get the result?
8. How did you feel after getting the HIV result?
9. Did you tell anyone at all about your test?
10. Why do you think others refuse testing for HIV?
11. What do you think can encourage people to test for HIV?

If NOT tested for HIV.

1. What made you decide not to test for HIV?
2. Do you know what Voluntary counseling and testing? If yes please explain
3. Do you ever know people in the community who are HIV positive? If so how do you know?/ What makes you decide?(to probe on stigma further)
4. If you decide to take an HIV test, do you know where you would go for that? If not, how would you find out?

