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Research Report

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Changes in sexual behaviour during a period of increasing of HIV infection, in a group of South Af

A Research Report submitted to the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, in partial fulfilment of the degree of Master of Family Medicine (M Fam Med)

Johannesburg, 2012

Declaration

I, Ezio Baraldi, declare that this thesis is my own work. It is being submitted for the degree of Master of Family Medicine in the University of Witwatersrand. It has not been submitted before for any examination at this or any other University

_____ (signature of candidate)

_____ day of _____ 2012

Dedication

This work is dedicated to the memory of my father

Benedino Baraldi

1932-2003

He shaped the world he lived in.

And

To the inspiration of all my HIV patients

who refuse to be shaped by the world they live in.

Publication and presentations resulting from Research Report.

The current Research Report has not resulted in any publication or presentations as of early 2012.

.

Abstract

Background: The inexorable spread of HIV infection in sub-Saharan Africa and other continents is attributable to many factors, including individual behaviour. Sexual behaviour is often considered central to transmission and change.

Aim: The purpose of this study was to determine if sexual behaviour does not change after the diagnosis of HIV infection and to elucidate some of the psychosocial factors that may be operant in this context.

Materials and Method: The research consisted of a self-administered questionnaire designed to measure psychosexual and socio-sexual parameters in a group of HIV positive men. The questionnaire evaluated parameters at three different points: before HIV diagnosis, one year after HIV diagnosis and at the present time (2002). Participants were recruited from patients attending a private HIV treatment centre, in Pretoria, South Africa.

Results: 153 participants completed the questionnaire. Descriptive statistics were used to elucidate trends. Statistically significant changes were seen in most studied domains, suggesting that beneficial sexual behaviour change is possible after a diagnosis of HIV. These changes were seen, over time, in all the measured psychosexual domains, as well as both possible sustainable. This change was often detrimental in that participants negatively on some aspects of their personal and sexual functioning. Safe sex knowledge was weak in the studied group.

Conclusion: The data indicate that change in behaviour is possible after diagnosis of HIV and that it occurred in the studied population. Some of the changes were good for public health initiatives; many were detrimental to psychosexual functioning of participants. Public health officials and medical practitioners should include interventions aimed at reducing the negative psychosocial impact of HIV diagnosis at every patient encounter. If these changes do not resolve by themselves they need intervention in order to improve the quality of life of patients.

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Nomenclature

Abbreviations used in this publication are in common us Medicine.

Abbreviati	Full Termin/ology explanation
HIV	Human Immune Deficiency Virus
AIDS	Acquired Immune Deficiency Syndrome
CD4	A subset of T cell lymphocyte which in CD4 Rece mostly affected by the HIV virus. The cell population is used to determine patients infected with HIV.
KAP	Knowledge, Attitude and Practices/ Perceptions
MSM	Men who have sex with m
MSW	Men who have sex with women
M2M	Male-to-male A method of HIV transmissio
F2M	Female-to-male A method of HIV transmiss
Statistical significant	P value less than 0.5
Highly statistical significant	P value less than 0.01

Chapter 1 Introduction

1.1 Need for research

One of the great debates in HIV medicine currently is the
cannot, or will not, change their sexual behaviour to meet
reduction that are the corner stone of interventions in the
spread of HIV/AIDS. This questions the perception, that
sexual behaviour change take place after a diagnosis of H
such a change does occur, is it sustained over

A multitude of different approaches and interventions have been utilis
effort to bring about such a change, it is important to determ
such changes do occur, irrespective of the type of interven

Such a change of behaviour was accomplished in the early
epidemic, when educational interventions were aimed prim
the United States the epidemic became a heterosexual
achieving visible behaviour change in men is thought to
achieve at a national level.

Campaigns to empower women to take the lead in safer s
were undertaken. After a few years, it was felt that for mo
possible to take the lead in matters sexual while having t
societies. These campaigns have, in some instances, led to a power s
relationships and consequently, the impetus of these campaign
has been diminished.

Subsequent campaigns launched by WHO and UNAIDS, ha
including the male partner in the prevention efforts and making
responsible for prevention efforts and to stimulate the ca
aspects of men.

While the global statistics show a decline in the incidence of H parts of the world, smaller studies have shown changes of be in certain studied populations. Sexual behaviour established are very difficult to change and are dependent on a numbe of which are independent of gender.

The study was undertaken to evaluate if a change of behaviour h occurred in a group of HIV positive South African men follo HIV infection. The men had all undergone treatment and or over a period of time, in a specialised HIV tre

1.2 Historical Perspective

Since the emergence of the HIV epidemic in the middle 80 s, men seen as the drivers of the epidemic. Initially the disease US) to the gay population and thus men were therefore the logi intervention. A great number of intervention programs were init the aim of either reducing exposure to the virus by means safer sex procedures, or by reducing the number of sexual

Already in 1988, Siegel[1] et al reported the effects of these campaigns time. Siegel reported that while there was a measurable reduc partners in his New York cohort, there was not a commens risky sexual practices, despite high levels of knowledge of procedures.

In 1989 Johnson[2] and Carlin reported behaviour changes in gay and bisexual men in England and Wales, with some changes in behaviour had occurred but many men were still engaging behaviour despite a reduction in sexual partners.

By 1990, reports from Ekstrand et al[3] in San Francisco and Hakansson[4] in Sweden indicated that the only risk taking behaviour was sa

reductions in sexual partners, in their respective sexual acts of ga
behaviour change were possible in gay men. The challeng
sustain this behaviour change was confirmed by Stall et a[5]
who in 1990 published a review of prospective data on the
changes in sexual practices in a high HIV incidence area (San Francisco).

In 1990, Kelly et al[6] studied the psychological factors that had an
initiation and maintenance of safer sex behaviour in a gro
their work, risky sexual behaviour was positively associate
peer norms concerning the (1) acceptability of, (2) safer sex prac
health locus of control, (3) risk behaviour, (4) knowledge and (5)
accuracy of personal risk assessment but not personal HIV sero
knowledge.

These are some of the key determinants of a person s abil
behaviour change. In a South African heterosexual setting
added, in particular cultural dependency, as well as, partn
acceptability of safer sex practices.

Since the 1990 s, the spread of HIV infection has been
heterosexual phenomenon worldwide. The entry of heterosexual men in
HIV risk group required that educational activities aimed at risk reduction h
be initiated in a risk group. Prior experience with the des
implementation of interventions aimed at gay men was use
interventions for heterosexual males. The addition of a
sexual activities substantially broadened the discourse. The
female partner often brought to the debate, a differen
sexuality, which required a different approach to the educa

By the mid 90 s[7,8] there was a clear understanding that safer sex m
to be tailored to the specific populations for which they we
articles were written to address for the first time the needs
women were factored into these prevention strategies.

In 1992, Holland et al[9] explored safer sex options in a group of wo
London and Manchester in the UK, within a context of fe
methodology. They explored risk and trust' and 'power an
empowerment. The lack of women empowerment worldwide bec
element in HIV prevention strategies. Much work was do
women to take a more active role in safer sex decisions.[10,11,12,13,14,15]

The empowerment of women to make sexual decisions is
dominated societies. In many communities, women are
financially vulnerable and at considerable risk of retrib
when challenging the authority of their male partners in ma[15,16,17]

This empowerment of women is often seen as disempowe
leading to a potential shift in the power balance in relation
consequences. Any destabilizing influence can lead to pow
relationships. In a male dominated society, women are u
better off than before, or in some cases. Fortunately, in the last few years,
this power debate has subsided, reducing the potential le
interventions are now no longer at the forefront of the s
equality, although this remains as far from being achieved. Interventions have now become focused
on factors that can be modified, within the context of ind
and their belief systems.

The focus is on those aspects that can reasonably be modified
cultural context and where possible, in terms of the
target community, the intervention efforts.[18,19]

A realisation is beginning to emerge that in order to chang
one needs to change behaviour at an early age, as these are primary determinants
behaviour in later life.[20]

Chapter 2 Literature review

The literature review for this study was conducted using the search engine Mendeley. Databases searched were Medline and Pubmed.

Mendeley was used as the citation manager. Search terms included HIV, AIDS, Men, behaviour change, safe sex, abstinence, monogamy, condoms, attitudes, self-esteem, barrier contraception, religion, microbicides, seroconversion, serosorting, circumcision, polygamy, HIV and revenge, concatenated with HIV status and behaviour change by others.

2.1 Introduction

From the inception of the epidemic, once it became clear that HIV was the causative agent and that it was transmitted sexually, efforts have been sought to limit the spread of the virus by various interventions. These interventions focused on two primary interventions.

a) Physical and chemical barriers to the spread of the virus
b) Behavioural interventions aimed at changing people's behaviour in order to minimize spread.

2.2 Physical and Chemical Barriers

Physical barriers to the HIV virus were the first logical way of reducing the spread of the virus. The wide spread use of condoms, which fell out of favour in the 1960's due to the introduction of the contraceptive pill, revived. The revival was not without resistance from some quarters to the use of condoms. This was well documented in 1987 by Wigersma[21] who commented that although the thickest condoms should be used for the population he studied did not take kindly to them.

On a cultural basis many barriers to condom usage were identified by Short in 1989[22] who looked at global condom usage and found that in

most third world countries. The highest usage in Japan, Sw
Finland, Denmark, Singapore, Trinidad and Tobago and the
in poor third world countries would by driven by cost. He
funding to increase distribution and availability.

A more recent development is the research into chemical
the spread of HIV. In the early years of the epidemic, sp
particular nonoxynol-9 was mooted as being very effective
emerged showing the in vitro consistent ability of the com
HIV virions. This was quickly followed by reports of toxicity and
ulceration of vaginal and rectal epithelium with repea
compound. This ulceration is now believed to increase susce
and other STIs. The use of nonoxynol-9 and other similar spermicid
compounds is currently strongly discouraged.

Research on chemical barriers that can prevent the en
continued, and has focused on microbicides, as opposed to
spermicides, chemical entities designed to inactivate HIV without
necessarily killing it. While some significant progress is being
the field, there is no viable entity that can be used on a
Progress in this field of research has been slow but steady
Tenofovir seems to be yielding encouraging results in its l
a microbicide. The CAPRISA study, which tested a 1% tenofov
moderate effectiveness in (using and retaining 80% of the time)
with a 54% reduction in incidence of new infections.

2.3 Behavioural changes

Behavioural changes to bring about a reduction in transmission of HIV vir
have, from the earliest days of the epidemic, been promoted
combating the epidemic. Behavioural change is seen as achieving cost
immediately applicable (as opposed to waiting many year
produce a viable candidate microbicide), tasbe cheap

In the context of HIV epidemic interventions have focused on ab monogamy and fidelity as well as the consistent applicat safer sex practices, which go beyond the ABC approach. This has led to the so-called ABC programme, combining an approach much favoured by the funding commitments of administration and fully supported by religious groupings.[30]

The required behavioural changes can be divided into:

1. Changes in sexual activities and
2. Changes in partnering.

Measurement of the effectiveness of these interventions has focused o reported evaluations of knowledge, attitudes and perceptions (the KAP surveys). Real evaluation of the changes in sexual practic level is virtually impossible to do and such changes must b from epidemiological data

2.4 Changes in partnering

Required changes in partnering (1) or abstinence from sexual contact until a permanent relationship has been established, (2) reduction in the number of sexual partners while searching for a re and (3) maintaining monogamous relationships once permanent term partnering has occurred.

Abstinence has been widely advocated especially thr groupings. Results worldwide have been measured at diff and geographical locations.[31,32] Results are unpredictable and dependent on a number of factors including double sexual practices. As sexual practices are culturally dete and subject to change it follows that global results will be variable[33]

Monogamy and the reduction in sexual partners has also been widely advocated as intervention strategies. A review of meta data found[34] that although such interventions were effective to some de

small and in general has sustained over time. The outcome of interventions was susceptible to factors such as ethnicity, locality culture etc.

A recent change in behaviour predicated on a rejection of the intervention has become apparent in the way HIV antibody testing has become more commonplace in the community and many more people know their status, the phenomenon of serosorting has emerged.

Serosorting involves a stratification of risk taking behaviour partners known to have HIV. In its basic form, serosorting involves sex procedures only with partners of discordant serostatus. Thus well-informed patients are determining for themselves, the risk they are willing to take in sexual encounters.[35] In more advanced forms, serosorting introduces HIV status and prior treatment modalities into the equation leading to a large number of a permutations. This intervention is risky and prone to failure[36,37] but it is an intervention that takes cognizance of the polygamous and offers the possibility of sustained risk reduction as opposed to approaches where behaviour change fades quickly after an intervention. A variant of serosorting is currently employed by monogamous African men in Africa, where condoms are used with casual partners but not with spouses in the belief that the wife is monogamous.

25 Changes in Sexual Activities

Advocated changes in sexual activity, normally referred to as more appropriately safer sex), form the cornerstone of the ABC intervention and focus on the consistent use of condoms as a small component of the safer sex intervention.[38] In a recent article in AIDS Action (one of the authors is the author), writing approximately 10 years after the emergence of the epidemic, acknowledges that changes in behaviour are difficult to achieve and goes to some lengths in safer sex actually is. Some options for safer sex include

non-penetrative sex or penetrative sex with a condom is risky. Oral than unprotected penetrative vaginal or anal sex, but this there are sores on the genitals, mouth, or lips. When a co oral sex, or a piece of latex is placed over a woman's ger reduced. Safer sex is an activity that prevents semen, v blood from entering another person's body or coming into c skin. Safe sex options should be presented in a positiv encourages people to explore those that they would be comfortable use with their partners.

The operative component is that safer sex is any activity that p sexual fluids and blood from entering another person's bo contact with broken skin. To an extent this applies the applicatio techniques to reduce contamination such as a one would use in outpatient surgical procedures (not sterile but surgically detail and instruction is hardly a ground breaking view of safer sex interventions, which concentrate, in the main, on using penetrative activities. After a counselling session the patient therefore is only empowered with a small piece of the puzzle.

As the thrust of these interventions is the amount of unprotect penetrative events, evaluations of these interventions have tabulating reduction in these activities reported from self [39,40,41]

The latest intervention for the reduction of HIV (after the early is mass circumcision of the male. In 1986 Hunter published his findings of a study of transmission rates for STDs in Kenya [42] women who had circumcised partners were likely to be HIV positive when compared to women whose partners were not circumcised. Two years later Cameron et al. concluded circumcision as an intervention to stem the spread of HIV [43]. Research proceeded to large scale studies to

verify the findings of these three large scale randomized studies, one[44-46] conducted in Orange farm in South Africa, showed a reduction of HIV from women to circumcised men and a delay in HIV acquisition of 3.5 years. This would lead to a 25% reduction in HIV incidence in the epidemiological time frame. The findings from these trials[47] formed the basis on which the United Nations Joint Programme on HIV/AIDS (UNAIDS) recommended scaling of circumcision programmes in sub-Saharan Africa.[48]

This intervention is greatly contested and a number of authors against it for a variety of reasons, from the basis of weak evidence, through public health concerns that this would undermine established interventions and lead to an increase in new concerns about human rights violations.[49]

The debate rages on.

26 Barriers to Change

Barriers to change in practice can be divided into three main categories: personal, cultural and structural. While these are interrelated and it is worth exploring them individually, such an exercise is outside the scope of this document.

27 Sexual Behaviour changes

Given the number of interventions that have been implemented[50] and the barriers to change that have been described, the final question that needs to be answered: Is a positive behaviour change possible and sustainable after a diagnosis of HIV infection? In other words, what is the collective effect on behaviour of all these interventions?

In 2006 Bunnell[51] explored this question from May 2003 to D
2004 in a prospective group (male and female participants) initiating
antiretroviral treatment in Uganda. Received standard H
counselling on risk reduction methods and PCT. Counselling was provided to
partners as well. Results of this intervention showed that
initiation of ARV treatment, behavioural counselling and PCT led to a
remains to be determined this change is sustained over longer p
time, but for the six months after the intervention, chang
was documented.

Similar Venkatesh et al[52] evaluated the reduction in risky sexual b
in a group of Southern African women after diagnosis of
which they reported in 2011. HIV was performed by three mo
questionnaires in the context of a clinical trial. They repor
sexual behaviour [reduction in partners, reduction in sexual a
reduction in sexual activity, such as oral sex [not mentioned in text]. The y re
reduction in sexual behaviours modest and that more intervention
required.

In 2002 Colfax et al[53] reported changes in sexual behaviour in a gr
Men who have sex with Men (MSM). The study was pro
evaluated risky behaviour before, immediately after and
seroconversion. They concluded that a substantial pote
secondary HIV transmission for one year after HIV seroconve
despite the fact that receipt of an HIV positive test result
a significant reduction in some risky sexual behaviour.

A study conducted in northern Vietnam between 2010 and 2016
by Camo[54] aimed to discover changes in risky sexual behaviours in HIV
positive patients over the age of 18 enrolled in the treatme
majority of participants were male (65% of 497 participan
that although condom use increased after diagnosis of HIV and the
number of stable partners, unsafe sexual practices con

recommended specific interventions aimed at this population. Other
confirms these sexual changes[5,55,65,75,85,96,06,16,26,3].

Recent literature, therefore, seems to confirm earlier findings that although changes in sexual behaviour after a diagnosis of HIV infection occur, the degree to which this happens and the sustainability of these changes, is not in keeping with the requirements and public health interventions. These findings appear consistent across population groups and geographic locations.

The current study was undertaken to determine if similar trends in the study population.

Chapter 3 Aims and Objectives

3.1 Aim of study

The aim of the study was to determine if there is a chan
behaviour after the HIV infection.

3.2 Objectives

Objective 1

To define and describe the demographic characteristic
participants including age, ethnic group

Objective 2

To describe psychosocial factors associated with sexual
functioning of HIV positive men and the impact of
transmission self esteem and identity, drive and enjoyment, anger and
revenge, accessibility; knowledge of safer sex and skills
social functioning at time points before HIV diagnosis, one year after H
diagnosis and the present (i.e. 2002).

Objective 3

To look for relationships and associations between the above factor

Chapter 4 Design and Methodology

The research project is a descriptive cross sectional study to assess the psychosocial factors involved in the sexual functioning of HIV positive men, by means of a structured anonymous questionnaire. The study reported, cross sectional, retrospective (targeting different time points in the past, and one time point in the present) and self administered questionnaire methodology was adopted.

4.1 Site of study

The research was conducted at Embassy Drive Medical Centre, a private treatment and research centre situated in a suburb of Pretoria. The centre applies internationally accepted treatment methodologies based on current best practice principles and is owned and operated by the researcher.

4.2 Study Population

The study population consisted of known HIV positive patients attending the Embassy Drive Medical Centre in Pretoria. The centre serves mainly middle class and upper class employed patients who are part of some medical insurance programme. All potential subjects were existing patients at the centre and no recruitment outside the practice was conducted.

4.2.1 Socio Political Context

The study was conducted during the HIV/AIDS denialist era in South Africa. At the time messages in the mainstream media and from politicians conflicted strongly with the medical consensus on HIV/AIDS and many HIV positive individuals. These pseudo science messages were countered by Embassy Drive Medical Centre at the time. Patients participating in the study were well informed and on ARV treatment for several years (either privately funded or as participants in clinical trials) and were well aware of the benefits of treatment.

possible but unlikely, that Mbeki AIDS denialism had a
Knowledge Attitudes and Perceptions of the study parti

4.3 Sampling

4.3.1 Sample size

A desired recruitment target of 100 evaluable patients
expected maximum number of potential participants from
males that could realistically be enrolled from which the study
not statistically powered to show differences between s
populations. Regretfully the intended sample size was not rea
described in section 4.13. Statistical Limitations.

4.3.2 Sampling time

Data was collected from 2001 to December 2002.

4.4 Sample Population

The sample population consisted of patients attending
Embassy Drive Medical Centre. The majority of patients w
age group with some. The majority of these were on Anti
Retroviral Treatment at the time of the study. Although such
detail was not collected by the questionnaire, it is know
existing patients) that most patients were employed and
judged by the investigator to possess sufficient skills for
comprehending study. This was further determined during th
consent procedure once patients accepted to participate in

Some of the patients had been participants in other studies
and were well versed with trial related procedures and
informed consent and confidentiality.

4.5 Inclusion criteria:

1. Serostatus: Confirmed HIV positivity;
2. Gender: Male only;
3. Age: 18 years of age or older.

4.6 Exclusion Criteria

1. Patients unwilling or unable to give consent;
2. Patients who have already completed the study;
3. Patients who fail to meet inclusion criteria.

4.7 Measuring Instrument

Participants were asked to complete a self-administered questionnaire which included one open ended question, a number of yes/no questions, a number of questions where participants were asked to grade on a supplied scale as well as to score such responses on a time line. The time-line points were defined as

1) Before HIV diagnosis;
   Participants were asked to answer questions evaluating subjective and KAP before their HIV diagnosis, whenever that was i
2) One year after diagnosis;
   Participants were required to subjectively evaluate and KAP one year after their HIV diagnosis.
3) Present i.e. at the time of taking the questionnaire (2002
   Participants were asked to evaluate the same parameters in t i.e. 2002

Section two of the questionnaire consisted of statements to be graded as agree/disagree answers designed to measure the subjective and KAP in the present time, time of taking the questionnaire.

4.7.1. Questionnaire development

The questionnaire was designed by the investigator as validated that measured the parameters that the researched wished to inv not found.

4.7.1.1 Purpose

Based on the Aims and objectives of the study and the studied, and especially due to the intimate nature of fi researcher decided that the correct instrument to use would anonymous, self administered questionnaire as opposed to a struc interview method (see social acceptability bias)

4.7.1.2 Conceptualisation

The researcher decided to analyse data over time in order to be able to investigate changes in KAP and behaviour over time, into 10 different domains (Table 4.1) that would inform the observed changes if any were to be measured over different times. This data pooling was part of the protocol approved by the Wits Research committee.

4.7.1.3 Question construction.

After deciding on which domains were to be investigated constructed which either directly or indirectly informed the For each domain a large number of questions were generated These questions were then scrambled and placed in a ma domains. The investigator then marked questions informed, directl indirectly which domain. The assistance of a clinical psychology colleagu was requested to do the same exercise. The resulting tab merged.

Questions which informed more than one domain were pref (for the sake of questionnaire brevity and to avoid respond inclusion in the final questionnaire. Some duplicate questions were for internal congruency and some were reworded.

4.7.1.4 Measurement scales

The questions were divided into two sections. Section one measure changes in sexual behaviour at three different times: (1) Before HIV diagnosis, (2) One year after HIV diagnosis (i.e. For 2002) and (3) Now (i.e. at the present). For each of these time points a four point scale was used and asked to rank their responses as: 1 = Almost never, 2 = Sometimes, 3 = Most of the time and 4 = Almost always

The second part of the questionnaire was constructed a questionnaire to collect data in the present (Now, i.e. at the time the questionnaire was administered in 2002). A three point scale was used to grade responses as: (1) Agree, (2) Don t agree, and (3) Don t know: In order to minimise the know option, this choice was disallowed in most questions. However, in question 5.3 made sense as a legitimate answer. Sex with someone who is a criminal, offence the don t know answer would constitute an answer.

4.7.1.5 Validity

The questionnaire was tested amongst colleagues and people to determine the acceptability of the questionnaire. Particular attention to discovering incongruence in the questionnaire and the emotional acceptability of the questions, as intimate issues were addressed in the questionnaire.

Readability was determined on the basis of the responses of this group using a particular readability index. Certain terms, such as casual and anonymous sex, that were used in the questionnaire, were well understood in the test group and were deemed to be equally understood by the envisaged test population.

As a result of this testing some of the words in the questionnaire were simplified and changed in order to increase understandability and readability. Some

removed and new ones added to achieve a better fit wi
domains.

4.7.1 Reliability

The reliability of the questionnaire was established by me
study. After obtaining ethical approval, which is in the practice
were asked to volunteer to test the instrument. Five pa
inclusion and exclusion criteria) completed the questionna
were manually evaluated. These responses

Their perception of the questionnaire and particularly
responses to the questionnaire were evaluated by means o
the investigator. As a result of the findings, in this pilot study
that the emotional impact on participants induced by comple
questionnaire, could be significant. It was decided to offer two free coun
sessions to participants who suffered adverse effects. Results from this pilot study
were not included in the study itself.

Questions were designed for the following domains:

Table 1: Domains

	Domains	Questions
1	Demographics	Questions in demograp
2	Adjustment time	Date of first diagnosi 2002)
3	Mode of transmissi	In demographics section
4	Self-esteem and identity	1,22,24,26,29,30,34,4
5	Issues of drive and	1,2,3,12,15,20,21,31,3
6	Issues of anger and	8,14,33,35,40,41,47,5
7	Accessibility to sex	5,6,7,11,16,
8	Knowledge of safe sex	23,28,42,43,49,52,53,55
9	Negotiation skills	4,10,13,27,37,50,
10	Social functioning	22,24,26,29,30,36,39,

4.7.2 Social Acceptability Bias

As this questionnaire was thought to be particularly susce of Social Acceptability Bias[64], the following measures were used to re impact: Voluntary participation, anonymous data collectio completion and anonymous submission.

4.8 Pilot study

See 4.7.1.6 Reliability.

4.9 Data collection and study specific procedures

The protocol required that 1 in 3 eligible patients who pre (i.e. who met inclusion and exclusion criteria) be entered i eligibility was determined by the nurse who made the ap centre. (Note: These were known patients in an HIV treatment C patient confidentiality is guaranteed. Each staff member is

to the Doctor must maintain the same standards of confidentiali
required of the practitioner under the Code of Ethics. This confidentiality duty is applied
medical information and is communicated to patients wh
treatment centre.)

The nurse placed a blank record card in the file of each 1st patient seen on
successive patient who had a blank record card in the file of e
successive eligible patient. The nurse did not discuss the
related procedures to the participants.

This procedure was deemed essential as it allowed the nu
consultation time and appointments to include the extra ti
doctor to complete the informed consent procedures.

After completing the normal consultation process (for whi
made an appointment), the researcher offered the study to all the
participant

The informed consent document was explained to the
investigator and potential participants were given the o
questions about the study. Patients were particularly alerted to the possibility
that completing the questionnaire may cause them to thi
which they may not have considered previously that this might prove
distressing. Should this eventuality occur, free counselling sessions wer
offered to the participant either with the investigator, or with th
psychologist, depending on the nature of the problem.

Patients who refused to participate (for whatever reason)
this decision would not have any impact on their future medical
reasons were not collected.

Once the patient had indicated his willingness to participa
informed consent document were signed by the partic
researcher. The attending physician reminded the patient of what h

latest CD4 count was (as this data was collected). Then the que
participant was then handed one signed copy of the in
document for his own information (informed consent document, Appendix 2
as well as the questionnaire to be completed. The participant was shown
to a private room where he could complete the questionnai

On completion of the questionnaire, the patient was instr
the appropriate box. This box was located in the same room. The b
designed as a closed entity with a slot for introduction
questionnaire. This impeded retrieval of already completed documents

A notice placed on the results box reminded participan
counselling consultation should they need one. No Partici
the offer.

Although participation in the study was entirely anonymou
had indicated his willingness to take part in the project, his fil
marked (by leaving the white blank record card in the file)
physician to indicate that the study had been offered to this pers
The file was not marked to indicate if the patient complete
or not. This was to avoid offering the study to the same patient tw
maintain the ratio 1:3 as required by the protocol.

An evaluable patient was defined as one who agreed to participate in the
study and had answered at least one question in the questi

4.1.0 Bias and Validity

The possibility exists that patients may have answered th
selecting the answers that they thought the researcher wa
acceptability bias see section 4.7.1). This was seen and no internal co
questions were included to minimise this effect.

Researcher originates from preconceived ideas based on pre
experience. To minimise this effect, the questionnaire w
evaluation by outside parties in order to ensure that the q
required aspects. Similarly, the inferences from the observ
subjected to external review for validity in deductions.

4.11 Ethical considerations

The Human Research Ethics Committee (HREC) number (05/01
supplied with required material, including the informed consent/ i
document. The study was commenced only after approval from appropriate
been obtained and no study related procedures were initi
event

The study was conducted in accordance with the Declaration of Hels
amended in October 2000.

4.12 Statistical Methods

The study was conducted (during March 2005 to December 2006) at Embassy
Drive Medical Centre. A total of 69 patients were approached to pa
the study. Sixteen patients refused, a refusal rate of 23.2%. A total of 53
participants were finally enrolled in the study.

The study design required 13 patients per practice, this resulted
in a situation where only one patient attended one of the operatories
could be offered participation in the study. As all files w
patient had attended, the study could not be offered to the
was not offered to patients a second time.

This patient selection process inevitably limited the number of pat
that could be enrolled in the study within the preset enrolment period (
to December 2006). The end of enrolment date for recruitment was

necessary in order to maintain the category within the calendar year of 2002. Without this restriction, they would have spread over two different years, thus increasing adjustment for participants to remain lost to follow-up.

4.13 Statistical limitation of the results

The study was not powered to show differences between groups, but was designed to show trends over time. The study generated statistical comparisons, not all of which are explored in the document. Where statistical differences between groups, or time points, are explored, and are included in the numerator. The number of evaluable patients was 53.

The raw data contains missing values, for instance where a question was not answered by the responder. This missing data was treated as an unknown data point. An intention to treat approach was used, and unknown data was removed from the denominator.

The questionnaire produced a large number of results. In the questionnaire participants were requested to note their response on a 5-point scale [almost never, sometimes, most times, almost always] for different time points [diagnosis of HIV, 1 year after a diagnosis of HIV, and now in 2002]. For the statistical evaluation, responses in the almost never and sometimes categories, were combined into a category called less often, while the categories most times and almost always were combined into a new category called often.

Section 3 of the questionnaire tested attitudes and perceptions about taking the question in 2002. Results are reported by domain and question. Statistical significance was calculated using the Pearson Chi-square test and is reported. Statistical significance is indicated by a P value less than 0,05

a less than a 5% chance of a Type 1 error (unlikely outcome when it is true). P-values < 0.001 are considered to be extremely signif

Statistical evaluation was performed by running SAS 9.2 under Microsoft Windows for a personal computer. Frequency co and MacNemar tests were performed using PROC FREQ.

Chapter 5 Results

5.1 Demographics

5.1.1 Ethnicity

The majority of participants were either of Caucasian descent (29 participants, 73%) or African descent (6 participants, 15%). One participant was of Asian descent and one (2%) of mixed ethnic descent. Two participants (4%) did not disclose their ethnic descent.

5.1.2 Age

The average age of participants was 37.8 years (mean) with a range of 25 to 60 years.

5.1.3 Year of Testing

The majority of respondents had been tested for HIV in 1998. However the average time for Caucasian patients was in 1998 (the date range 1985 to 2001) average time for African patients was in 1998 (the date range 1995 to 2001)

5.1.4 CD4 Values (cells/ml)

The average latest CD4 value for Caucasians was 344, with a range of 3 to 1359. The average latest CD4 value for African patients was 419 (Range of 13 to 1359) The average CD4 value for this group was 319 with a range of 3 to 1359.

5.1.5 Method of HIV Transmission

This question was answered by 40 (75.5%) respondents. The majority (71.7%) signified a sexual mode of transmission. Two (3.8%) respondents indicated a blood transmission. Thirteen

(24.5%) respondents failed to answer this question. Of those who answered this question, 19 (47.5%) indicated a male-to-male (M2M) route of infection while 19 (47.5%) indicated a female-to-male (F2M) route of infection.

51.6 Partner profile

Participants were asked to indicate what their source was of HIV infection. Ten (18.9%) respondents indicated that they had acquired their infection from their usual/regular partners, 13 (24.5%) from casual partners, 5 (9.4%) from sex workers and 23 (43.4%) indicated that they did not know where their infection came from. Four (7.5%) respondents failed to answer the question.

51.7 Reason for testing

Participants were asked to disclose their reason for taking an HIV test. Ten (37.7%) respondents reported that they wanted to know their status and an equal number (37.7%) reported that they were sick at the time of testing. Only 7 (13.2%) respondents underwent an HIV test as a result of their partner being diagnosed with HIV. Two (3.8%) respondents, 1 (1.9%), were tested for insurance purposes.

There was no difference in the reasons for undergoing HIV testing between males and females.

51.8 Place of testing

Participants were asked to indicate the place where they were tested. The majority of participants (41) were tested at private hospitals (77.4%) while a smaller number, seven (13.2%) reported being tested directly by a laboratory, three (5.7%) were tested at a government hospital and two (3.8%) reported being tested at a government clinic.

5.1.9 Counselling

Participants were requested to indicate if they had received any cou as part of their testing process. Of 83 (52.8%) respondents, 2 receiving no counselling (12.8%) reported receiving pre and post counselling, a further 38 (13.9%) respondents reported receiving post counselling only.

5.2 Results by Domain

This section of the questionnaire contains questions relating to sexual functioning of patie before a diagnosis of HIV infection, within the first year their functioning in 2002 (See appendix One for full set of questions)

Questions in the questionnaire were designed to measure changes in sexual activity before and after a diagnosis of HIV infec 5, 6, 7, 8, 10, 11, 12, 14, 16, 18, 20, 21 and 22 were designed to measure sexual activities that should either be actively encouraged (Table 5.1) or avoided (Table 5.2) order to decrease risky sexual behaviour. Overall changes for these two factors, are therefore, presented in two separate tables.

Table 5.1: Changes in Safe Behaviour

Response	Number (%) of participants		
	Before HIV	1 year After HIV	Present 2002
All responses: Questions 8, 10, 11, 14, 20 a			
Less often	183 (70.4)	116 (45.7)	100 (38.5)
More often	77 (29.6)	138 (54.3)	160 (61.5)
Total	260 (100)	254 (100)	260 (100)
Non-responder	58	64	58
P value relative to Before		< 0.001*	< 0.001*

* Statistically significant change from Before to 1 year After and Before to Present 2002 (McNemar tes

Q8: I use condoms with my steady partner
Q10: I am comfortable suggesting a condom before sex
Q11: How frequently do you have safe sex
Q14: I use condoms with my casual partner
Q20: I prefer masturbation
Q21: I prefer not to have sex

Table 5.1 shows a decrease over time in the less often cate increase in the more often category. This is statistically at time point one year after HIV diagnosis as the present in 200 Therefore, the number of participants who had practiced r behaviours before is as big after HIV diagnosis decreased and the numbe participants already practised safer sex behaviours prior to diagnosis HIV infection, increased. This over time is extremely statisti significant at both time points.

Table 5.2: Decrease sexual risk activities

Response	Number (%) of participants		
	Before HIV	1 year After HIV	Present 2002
All responses: Questions 5, 6, 7, 12, 16 and			
Less often	166 (64.1)	200 (78.1)	215 (82.1)
More often	93 (35.9)	56 (21.9)	47 (17.9)
Total	259 (100)	256 (100)	262 (100)
Non-responder	59	62	56
P value relative to Before		< 0.001*	< 0.001*

* Statistically significant change from Before to Less often percentages (McNemar tes

Q5: How frequently do you have sex with steady
Q6: How frequently do you have sex with casual
Q7: How frequently do you have sex with anonymous
Q12: I use alcohol before sex
Q16: I prefer sex with casual partners
Q18: I prefer oral sex

Table 5.2 shows increase in the less often category and decrease in the more often category from baseline. This means more likely to engage in safer sex and less likely to have sexual activities one year after a diagnosis of HIV as well as at the time questionnaire in 2002, irrespective of whether they had e or less often in these activities before the diagnosis of H changes in sexual behaviour were statistically at both time points.

Table 5.3 Domain 4 Self-esteem and Identity

Response	Number (%) of participants		
	Before HIV	1 year After HIV	Present 2002
Q1: Do you think you are sexually attrac			
Less often	17 (37.8)	21 (46.7)	28 (62.2)
More often	28 (62.2)	24 (53.3)	17 (37.8)
Total	45 (100)	45 (100)	45 (100)
Non-responder	8	8	8
P value relative to Before		0.206	< 0.001*

* Statistically significant change from Before in Less often / More often p

Table 5.3 shows a self-perceived change over the studied time period. The number of participants who had a low perception of their increased over time and the number of participants wh perception of their own attractiveness decreased over time trends reached extreme statistical significance at the 2002 time point.

Table 5.4 Domain 4 Self-esteem and Identity KAP questions

Number (%) of participants				Non-responder
Agree	Disagree	Do not kn	Total	
Q22: If I don t have children my wife/family will				
10 (20.0	34 (68.0	6 (12.0)	50 (100	3
Q24: I am not the man I used to be				
27 (51.9	21 (40.4	4 (7.7)	52 (100	1
Q26: HIV has made me loose my status in my				
10 (19.6	37 (72.6	4 (7.8)	51 (100	2
Q29: If I use a condom my girlfriend/people will				
5 (9.8)	44 (86.3	2 (3.9)	51 (100	2
Q30: If I use a condom there will be a fight w				
1 (1.9)	49 (94.2	2 (3.9)	52 (100	1
Q34: Real men don t use condoms				
7 (13.7)	42 (82.4	2 (3.9)	51 (100	2
Q45: It is not in my culture/tradition to use condom				
6 (12.0)	43 (86.0	1 (2.0)	50 (100	3
Q46: I am often sad				
26 (50.0	24 (46.2	2 (3.8)	52 (100	1
All responses (n=409)				
All PH answers: 294 (71.9%)				

Table 5.4 shows results from KAP questions of the time of completing the questionnaire in 2002. Answers show that the majority of respondents for the (71.9%) questions listed PH answers (in bold in the table) showed a good self-esteem. However,

individual answers to question 46 (I am not the matter being asked in question 46 I am often sad indicative of a defective mind). The majority of respondents to question 46 agreed that they were often sad

Note: Investigator defined as those answers were participants that comply with rules or which are conducive to attainment of public health goals

Table 5.5: Domain 5 : Drive and enjoyment.

Response	Number (%) of participants		
	Before HIV	1 year after HIV	Present 2002
Q1: Do you think you are sexually attrac			
Less often	17 (37.8)	21 (46.7)	28 (62.2)
More often	28 (62.2)	24 (53.3)	17 (37.8)
Total	45 (100)	45 (100)	45 (100)
Non-responder	8	8	8
Q2: Are you satisfied with your sex lif			
Less often	13 (28.3)	22 (47.8)	28 (60.9)
More often	33 (71.7)	24 (52.2)	183(9.1)
Total	46 (100)	46 (100)	46 (100)
Non-responder	7	7	7
Q3: Do you have a high sex drive			
Less often	10 (21.7)	23 (50.0)	24 (51.1)
More often	36 (78.3)	23 (50.0)	23 (48.9)
Total	46 (100)	46 (100)	47 (100)
Non-responder	7	7	6
Q12: I use a lubricant before sex			
Less often	31 (67.4)	38 (84.4)	43 (93.5)
More often	15 (32.6)	7(15.6)	3 (6.5)
Total	46 (100)	45 (100)	46 (100)
Non-responder	7	8	7
Q15: I am satisfied with the sex I get from m			
Less often	8 (19.5)	15 (38.5)	16 (39.0)
More often	33 (80.5)	24 (61.5)	25 (61.0)
Total	41 (100)	39 (100)	41 (100)
Non-responder	12	14	12
Q20: I prefer masturbation			
Less often	35 (81.4)	30 (71.4)	32 (74.4)
More often	8 (18.6)	12 (28.6)	11 (25.6)
Total	43 (100)	42 (100)	43 (100)
Non-responder	10	11	10
Q21: I prefer not to have sex			
Less often	43 (97.7)	35 (81.4)	35 (79.6)
More often	1 (2.3)	8 (18.6)	9 (20.4)
Total	44 (100)	43 (100)	44 (100)
Non-responder	9	10	9
All responses			
Less often	157 (50.5	184 (60.1	206 (66.0
More often	154 (49.5	122 (39.9	106 (34.0
Total	311 (100)	306 (100)	312 (100)
Non-responder	60	65	59
P value relative to Before		< 0.001*	< 0.001*

* Statistically significant change from Before HIV in Less often percentages (McNemar tes

Table 5.5. This domain is used to attribute to participants general drive and enjoyment. The descriptive statistics for these question

show a statistically significant decline in this parameter a
investigated time points in the post-test (2002) present

Table 5.6: Domain 5 : Drive KAP questionnaires

Number (%) of participants				Non-responders
Agree	Disagree	Do not know	Total	
Q31: Condoms reduce pleasure				
22 (43.1)	27 (53.0)	2 (3.9)	51 (100)	2
Q32: Using a condom is unromantic				
15 (28.8)	34 (65.4)	3 (5.8)	52 (100)	1
Q44: I am too ashamed of HIV to use a co				
3 (5.8)	47 (90.4)	2 (3.8)	52 (100)	1
All responses (n=155)				
All PLHA answers		10.8 (6%)		9.7

Table 5.6 collective results from KAP section of the questionnaire sh
that current (in 2002) attitudes most by and large are favorable for public
health intervention. Almost 90% of respondents showed attitudes tha
negate the use of condoms.

Table 5.7: Domain 6: Issues of anger and revenge

Response	Number (%) of participants		
	Before HIV	1 year After HIV	Present 2002
Q8: I use condoms with my steady partn			
Less often	32 (72.7)	16 (38.1)	11 (25.6)
More often	12 (27.3)	26 (61.9)	32 (74.4)
Total	44 (100)	42 (100)	43 (100)
Non-responders	9	11	10
Q14: I use condoms with my casual part			
Less often	22 (55.0)	8 (20.0)	6 (14.6)
More often	18 (45.0)	32 (80.0)	35 (85.4)
Total	40 (100)	40 (100)	41 (100)
Non-responders	13	13	12
All responses			
Less often	54 (64.3)	24 (29.3)	17 (20.2)
More often	30 (35.7)	58 (70.7)	67 (79.8)
Total	84 (100)	82 (100)	84 (100)
Non-responders	22	24	22
P value relative to Before		< 0.001*	< 0.001*

* Statistically significant change from Before to 1 year After (McNemar test)

Table 5.7 show an increase in condom use with casual an
since diagnosis of HIV. This change remains significant by both

at one year after HIV and (2002). This is related to issues o
anger and revenge explained in the discussion section.

Table 85. Domain 6: Issues of anger and revenge KAP Questions

Number (%) of participants				Non-respondents
Agree	Disagree	Do not know	Total	
Q33: I use condoms only with my casual p				
9 (18.7)	37 (77.1)	2 (4.2)	48 (100)	5
Q35: When I drink alcohol I don t think abo				
13 (26.0)	35 (70.0)	2 (4.0)	50 (100)	3
Q40: My partner must be faithful to me				
48 (92.3)	4 (7.7)	-	52 (100)	1
Q41: It s my job to protect my partner from				
49 (94.2)	3 (5.8)	-	52 (100)	1
Q47: I don t care if I give HIV to my life pa				
-	48 (92.3)	3 (5.7)	51 (100)	1
Q53 Sex without a condom is a criminal off				
19 (36.5)	25 (48.1)	8 (15.4)	52 (100)	1
Q54 I must be faithful to my partner				
46 (90.2)	4 (78)	1 (2.0)	51 (100)	2
All responses (n=356)				
All PH answers: 288 (80.9%)				

Table 5.8 shows the PK Questions related to anger and revenge
are further explored in the discussion section. It is important
80.9 % of respondents PH answers for this domain

Note: PH answers were investigated and defined as those answers given
participants which comply with social norms or which are
attainment of public health goals.

Table 5.9 Domain 7: Accessibility to sex

Response	Number (%) of participants		
	Before HIV	1 year After HIV	Present 2002
Q5: How frequently do you have sex with st			
Less often	14 (33.3)	23 (54.8)	26 (60.5)
More often	28 (66.7)	19 (45.2)	17 (39.5)
Total	42 (100)	42 (100)	43 (100)
Non-responder	11	11	10
Q6: How frequently do you have sex with ca			
Less often	32 (74.4)	36 (83.7)	40 (90.9)
More often	11 (25.6)	7 (16.3)	4 (9.1)
Total	43 (100)	43 (100)	44 (100)
Non-responder	10	10	9
Q7: How frequently do you sex with anonymous part			
Less often	36 (83.7)	40 (93.0)	42 (95.4)
More often	7 (16.3)	3 (7.0)	2 (4.6)
Total	43 (100)	43 (100)	44 (100)
Non-responder	10	10	9
Q11: How frequently do you have safe s			
Less often	26 (60.5)	15 (34.9)	9 (20.4)
More often	17 (39.5)	28 (65.1)	35 (79.6)
Total	43 (100)	43 (100)	44 (100)
Non-responder	10	10	9
Q16: I prefer sex with casual partners			
Less often	27 (64.3)	36 (87.8)	37 (88.1)
More often	15 (35.7)	5 (12.2)	5 (11.9)
Total	42 (100)	41 (100)	42 (100)
Non-responder	11	12	11
All responses			
Less often	135 (63.4	150 (70.8	154 (71.0
More often	78 (36.6)	62 (29.2)	63 (29.0)
Total	213 (100)	212 (100)	217 (100)
Non-responder	52	53	48
P value relative Before		0.063	0.053

No statistically significant changes from Before were found in the Less often/More often percentages (McNemar test)

Table 5.9 shows statistically significant changes in the participants accessibility to sex during the years of HIV after detection of the studied time points

Table 5.10 Domain Knowledge of safer sex

Number (%) of participants				Non-respondents
Agree	Disagree	Do not know	Total	
Q23: Kissing is safe sex				
39 (76.5)	9 (17.6)	3 (5.9)	51 (100)	1
Q39: My society will discriminate against a person with HIV				
28 (53.8)	18 (34.6)	6 (11.6)	52 (100)	1
Q42: Oral sex (mouth to vagina) is safe				
10 (19.6)	27 (52.9)	14 (27.5)	51 (100)	2
Q43: Oral sex (mouth to penis) is not safe				
25 (49.0)	16(31.4)	10 (19.6)	51(100)	2
Q49: With a condom only lubricant is ok				
10(20.4)	29 (59.2)	10(20.4)	49(100)	4
Q52 I have been counselled about safe sex				
36 (69.2)	14(26.9)	2 (3.9)	52 (100)	1
Q53 Sex without a condom is a criminal offence				
19(36.5)	25 (48.1)	8 (15.4)	52 (100)	1
Q55 Sex with dry vagina is safe sex				
5(10.0)	32 (64.0)	13 (26.0)	50(100)	3
All responses (n=408)				
All Answers			231(56.6)%	

Table 5.10 shows participants responses to questions about safer sex. Both responses and non-responses are presented. 56.6% of respondents were supplied by 56.6% of respon

Table 5.11 Domain: Negotiation skills

Response	Number (%) of participants		
	Before HIV	1 year after HIV	Present 2002
Q4: Can you freely express your sexual des			
Less often	13 (28.3)	25 (54.4)	22 (47.8)
More often	33 (71.7)	21 (45.6)	24 (52.2)
Total	46 (100)	46 (100)	46 (100)
Non-responder	7	7	7
Q10: I am comfortable suggesting a condom			
Less often	25 (54.3)	12 (27.3)	7 (15.6)
More often	21 (45.7)	32 (72.7)	38 (84.4)
Total	46 (100)	44 (100)	45 (100)
Non-responder	7	9	8
Q13: I find it difficult to tell my partner what			
Less often	33 (73.3)	34 (77.3)	29 (64.4)
More often	12 (26.7)	10 (22.7)	16 (35.6)
Total	45 (100)	44 (100)	45 (100)
Non-responder	8	9	8
All responses			
Less often	71 (51.8)	71 (53.0)	58 (42.6)
More often	66 (48.2)	63 (47.0)	78 (57.4)
Total	137 (100)	134 (100)	136 (100)
Non-responder	22	25	23
P value relative to Before		0.862	0.077

No statistically significant change was found in the Less often/More often percentages (McNemar test)

Table 5.11 shows an increasing ability of participants to negotiate needs with their partners since HIV (2002) time. This trend does not reach statistical significance.

Table 5.12 Domain: Negotiation skills KAP questions.

Number (%) of participants				Non-responder
Agree	Disagree	Do not kn	Total	
Q27: If I use a condom my partner will know I				
5 (9.6)	44 (84.6)	3 (5.8)	52 (100)	1
Q37: I don t know how to talk to my partner abo				
3 (5.8)	46 (88.4)	3 (5.8)	52 (100)	1
Q50: I discuss condoms with my partner befo				
39 (78.0)	8 (16.0)	3 (6.0)	50 (100)	3
All responses (n = 154)				
All PHA answers: (813.8)%				

Table 5.12 Shows results from otfhlee KoAuPesstieonnimnatihree for domaiamnd83.8% of respondenPtsHrseuspppdinesde s

Table 5.13: Domain 10 Social Functioning.

Number (%) of participants				Non-responde
Agree	Disagree	Do not kn	Total	
Q22: If I don t have children my family will rep				
10 (20.0	346(8.0)	6 (12.0)	50 (100)	3
Q24: I am not the man I used to be				
27 (51.9	21 (40.4	4 (7.7)	52 (100)	1
Q26: HIV has made me loose my status in my c				
10 (19.6	37 (72.6	4 (7.8)	51 (100)	2
Q29: If I use a condom, people will gossip				
5 (9.8)	448(6.3)	2 (3.9)	51 (100)	2
Q30: If I use a condom there will be a fight wit				
1 (1.9)	49 (94.2	2 (3.9)	52 (100)	1
Q36: My normal partner will think I am unfaithful				
8 (15.4)	42 (80.7	2 (3.9)	52 (100)	1
Q39: My society will discriminate against me if they know				
28 (53.8	18 (34.6	6 (11.6)	52 (100)	1
Q45: It s not in my culture to use a condor				
6 (12.0)	43 (86.0	1 (2.0)	50 (100)	3
Q46: I am often sad				
26 (50.0	24 (46.1	2 (3.9)	52 (100)	1
Q51: I have to tell my children that I am HIV positive				
10 (22.2	19 (42.2	16 (35.6	45 (100)	5
Q54: I must be faithful to my partner				
46 (90.2	4 (7.8)	1 (2.0)	51 (100)	2
All responses (n= 558)				
All PLHA answers: 368 (65.9%)				

Table 5.13 shows KAP responses to questions on social functioning and 65.9% of respondents PLHA supplied answers to these questions.

5.5 Cross tabular statistics

Domain data was analysed against demographic data of age, mode of transmission and gender. Age was divided into two groups separated by 35 years i.e. 35 years and above 35 years. This cut-off was decided based on the median age, which was 37 years. Mode of transmission was divided into heterosexual and homosexual. The results are reported below.

Table 5.14: Domain 4 Self-esteem and identity by age

Response	Number (%) of participants		
	Before HIV	1 year After HIV	Present 2002
All responses: "Past 5 years" Patients < 35 years			
Less often	9 (50.0)	10 (55.6)	12 (66.7)
More often	9 (50.0)	8 (44.4)	6 (33.3)
Total	18 (100)	18 (100)	18 (100)
Non-responders	2	2	2
P value relative to Before		0.564	0.046*
All responses: Patients > 35 years			
Less often	6 (25.0)	10 (41.7)	14 (58.3)
More often	18 (75.0)	14 (58.3)	10 (41.7)
Total	24 (100)	24 (100)	24 (100)
Non-responders	5	5	5
P value relative to Before		0.103	0.005*

* Statistically significant change from/ Before time point Less often (McNemar test)

Table 5.14 shows a decline in self-esteem and identity over time in both the under 35 and the over 35 age groups. The changes reached statistical significance in both age groups at the present (2002) time point

Table 5.15: Domain 4 Self-esteem and identity by modes of transmission

Response	Number (%) of participants		
	Before HIV	1 year After HIV	Present 2002
All responses: Male-to-male patients			
Less often	7 (36.8)	9 (47.4)	10 (55.6)
More often	12 (63.2)	10 (52.6)	8(44.4)
Total	19 (100)	19 (100)	18 (100)
Non-responders	-	-	1
P value relative to Before		0.317	0.046*
All responses: Male-to-female patients			
Less often	5 (33.3)	6 (40.0)	11 (68.7)
More often	10 (66.7)	9 (60.0)	5 (31.3)
Total	15 (100)	15 (100)	16(100)
Non-responders	4	4	3
P value relative to Before		0.564	0.014*

* Statistically significant change from/ Before time point Less often (McNemar test)

Table 5.15 shows a decline in self-esteem and identify over time in both male-to-male and male-to-female modes of transmission. The changes reached statistical significance in the present (2002) time

Table 5.16 Domain 4 Self-esteem and identity by ethnicity

Response	Number (%) of participants		
	Before HIV	1 year after HIV	Present 2002
All responses: African participants			
Less often	93 (36.0)	114 (44.0)	161 (61.5)
More often	166 (64.0)	145 (56.0)	101 (38.5)
Total	259 (100)	259 (100)	262 (100)
Non-responders	7	7	6
P value relative to Before		0.414	0.008*
All responses: Caucasian participants			
Less often	7 (41.2)	8 (47.1)	10 (62.5)
More often	10 (58.8)	9 (52.9)	6 (37.5)
Total	17 (100)	17 (100)	16 (100)
Non-responders	-	-	1
P value relative to Before		0.564	0.046*

* Statistically significant changes from Before to Present percentages (McNemar test)

Table 5.16 shows a decline in self-esteem and identity in both African and Caucasian patients over the time periods. This trend reaches statistical significance in both groups in the present [2002] time point.

Table 5.17 Domain 5 Issues of drive and enjoyment by age

Response	Number (%) of participants		
	Before HIV	1 year after HIV	Present 2002
All responses: Patients aged 35 years and less			
Less often	62 (51.2)	77 (63.6)	90 (71.4)
More often	59 (48.8)	44 (36.4)	36 (28.6)
Total	121 (100)	121 (100)	126 (100)
Non-responders	19	19	14
P value relative to Before		0.011*	<0.001*
All responses: Patients aged > 35 years			
Less often	85 (50.3)	96 (58.4)	102 (61.8)
More often	84 (49.7)	68 (41.5)	63 (38.2)
Total	169 (100)	164 (100)	165 (100)
Non-responders	34	39	38
P value relative to Before		0.014*	0.003*

* Statistically significant changes from Before to Present percentages (McNemar test)

Table 5.17 Demonstrates issues of drive and enjoyment were collectively analysed against the age of participants. Age of participants below or equal the age of 35 and above the age of 35 before. Results show a statistically significant downward trend in both age groups points, only reaching statistical significance in the present category in the age group equal to 35 and below.

Table 5.18: Main 5: Issues of drive and enjoyment by transmission mode

Response	Number (%) of participants		
	Before HIV	1 year After HIV	Present 2002
All responses: Male-to-male patients			
Less often	68 (53.1)	77 (62.6)	82 (67.2)
More often	60 (46.9)	46 (37.4)	40 (32.8)
Total	128 (100)	123 (100)	122 (100)
Non-responders	5	10	11
P value relative to Before		0.024*	0.001*
All responses: Heterosexual patients			
Less often	47 (46.1)	62 (60.8)	73 (67.0)
More often	55 (53.9)	40 (39.2)	36 (33.0)
Total	102 (100)	102 (100)	109 (100)
Non-responders	31	31	24
P value relative to Before		0.004*	<0.001*

* Statistically significant change from 'Before HIV' time point (McNemar test of Less often / More often percentages)

In Table 5.18 drive and enjoyment was analysed against transmission. There is a statistically significant decline in from base line to the 1 year after HIV time point. This change is extremely significant in the time point between 1 year after HIV and the present [2002]' in transmission.

Table 5.19: Main 5: Issues of drive and enjoyment by ethnicity

Response	Number (%) of participants		
	Before HIV	1 year After HIV	Present 2002
All responses: African patients			
Less often	85 (48.3)	104 (59.1)	120 (65.6)
More often	91 (51.7)	72 (40.9)	63 (34.4)
Total	176 (100)	176 (100)	183 (100)
Non-responders	48	48	41
P value relative to Before		0.005*	<0.001*
All responses: Caucasian patients			
Less often	61 (53.0)	65 (59.1)	70 (64.2)
More often	54 (47.0)	45 (40.9)	39 (35.8)
Total	115 (100)	110 (100)	109 (100)
Non-responders	4	9	10
P value relative to Before		0.117	0.011*

* Statistically significant change from 'Before HIV' time point (McNemar test of Less often / More often percentages)

In Table 5.19 drive and enjoyment was analysed against ethnicity. African patients decline in drive and enjoyment is statistically the time point and years are highly significant at the Present (2002) point from base line. Caucasian group shows statistically significant decline in the Present (2002) time point

Table 5.20: Domain 6: Issues of anger and revenge by Age

Response	Number (%) of participants		
	Before HIV	1 year After HIV	Present 2002
All responses: Patients <= 35 years			
Less often	20 (62.5)	6 (19.3)	5 (15.1)
More often	12 (37.5)	25 (80.7)	28 (84.9)
Total	32 (100)	31 (100)	33 (100)
Non-responders	8	9	7
P value relative to Before		<0.001*	<0.001*
All responses: Patients > 35 years			
Less often	30 (63.8)	16 (34.8)	11 (23.9)
More often	17 (36.2)	30 (65.2)	35 (76.1)
Total	47 (100)	46 (100)	46 (100)
Non-responders	11	12	12
P value relative to Before		<0.001*	<0.001*

* Statistically significant change from Before to Present (McNemar test) in Less often / More often percentages

In Table 5.20, issues of anger and revenge (defined as wilful transmission of the virus to another party and indirectly assessed by a reduction in unsafe sex practices over time) were assessed in patients aged above and below 35 years. The categories less often and more often are mutually exclusive categories and pertain to safer practices. The results show extremely significant increase in the more often (safer sex) category in both age groups evaluated.

Table 5.21: Domain 6: Issues of anger and revenge by mode of transmission

Response	Number (%) of participants		
	Before HIV	1 year After HIV	Present 2002
All responses: Male-to-female patients			
Less often	22 (62.9)	12 (36.4)	8 (24.2)
More often	13 (37.1)	21 (63.6)	25 (75.8)
Total	35 (100)	33 (100)	33 (100)
Non-responders	3	5	5
P value relative to Before		0.007*	<0.001*
All responses: Female-to-male patients			
Less often	22 (73.3)	8 (26.7)	6 (18.7)
More often	8 (26.7)	22 (73.3)	26 (81.3)
Total	30 (100)	30 (100)	32 (100)
Non-responders	8	8	6
P value relative to Before		<0.001*	<0.001*

* Statistically significant change from Before to Present (McNemar test) in Less often / More often percentages

Table 5.21 describes issues of anger and revenge by mode of transmission and reveals a statistically significant increase in safe sex practices in both male-to-female and female-to-male mode of transmission in the Present (2002) category.

Table 5.22: Domain 6: Issues of anger and revenge by ethnicity

Response	Number (%) of participants		
	Before HIV	1 year After HIV	Present 2002
All responses: African patients			
Less often	33 (70.2)	102 (1.7)	7 (14.6)
More often	14 (29.8)	36 (78.3)	41 (85.4)
Total	47 (100)	46 (100)	48 (100)
Non-responders	17	18	16
P value relative to Before		<0.001*	<0.001*
All responses: Caucasian patients			
Less often	16 (50.0)	12 (38.7)	9 (29.0)
More often	16 (500)	19 (61.3)	22 (71.0)
Total	32 (100)	31 (100)	31 (100)
Non-responders	2	3	3
P value relative to Before		0.02	0.07

*Statistically significant change from Before / More often / Less often (McNemar test

In Table 5.22 issues of anger and revenge were evaluated by ethnicity. The categories less often and more often pertain to safer sex reduction in the less often category and an increase in category collectively indicating an increase in practices of safer sex. This decline in unsafe sexual practices reaches statistical significance in both groups but remains extremely statistically significant in the Present (2002) time point for patients.

Table 5.23: Domain 7: Accessibility to sex by age

Response	Number (%) of participants		
	Before HIV	1 year After HIV	Present 2002
All responses: "Patients < 35 years			
Less often	52 (62.6)	58 (69.9)	67 (76.1)
More often	31 (37.4)	25 (30.1)	21 (23.9)
Total	83 (100)	83 (100)	88 (100)
Non-responders	17	17	12
P value relative to Before		0.289	0.040*
All responses: Patients > 35 years			
Less often	72 (62.1)	82 (71.3)	77 (67.0)
More often	44 (37.9)	33 (28.7)	38 (33.0)
Total	116 (100)	115 (100)	115 (100)
Non-responders	29	30	30
P value relative to Before		0.077	0.354

* Statistically significant change from Before / More often / Less often (McNemar test

Table 5.23 shows a decline in accessibility to sex in the <35 year group, with an increase in those who responded less often and those who responded more often. This decline in access is statistically significant at the present [2002] time point. In the

35 years of age there was no significant difference to a
before a diagnosis of HIV or in the present [2002] time poi

Table 5.24 Domain 7: Accessibility to sex by mode of transmission

Response	Number (%) of participants		
	Before HIV	1 year After HIV	Present 2002
All responses: Male-to-male patients			
Less often	57 (64.0)	63 (71.6)	60 (68.2)
More often	32 (36.0)	25 (28.4)	28 (31.8)
Total	89 (100)	88 (100)	88 (100)
Non-responders	6	7	7
P value relative to Before		0.273	0.516
All responses: male-to-female patients			
Less often	46 (63.0)	50 (68.5)	57 (73.1)
More often	27 (37.0)	23 (31.5)	21 (26.9)
Total	73 (100)	73 (100)	78 (100)
Non-responders	22	22	17
P value relative to Before		0.433	0.144

No statistically significant change were found in the Less often/More often percentages (McNemar test)

Table 5.24 shows participants accessibility to sex to male and female transmission. There is no difference in male-to-male mode of transmission or female-to-male mode of transmission at any of the time points.

Table 5.25 Domain 7: Accessibility to sex by ethnicity

Response	Number (%) of participants		
	Before HIV	1 year After HIV	Present 2002
All responses: African patients			
Less often	73 (61.3)	87 (73.1)	92 (74.2)
More often	46 (38.7)	32 (26.9)	32 (25.8)
Total	119 (100)	119 (100)	124 (100)
Non-responders	41	41	36
P value relative to Before		0.023*	0.011*
All responses: Caucasian patients			
Less often	52 (65.8)	55 (70.5)	54 (69.2)
More often	27 (34.2)	23 (29.5)	24 (30.8)
Total	79 (100)	78 (100)	78 (100)
Non-responders	6	7	7
P value relative to Before		0.439	0.548

* Statistically significant change from Before to Less often percentages (McNemar tes

Table 5.25 shows a statistically significant decline in accessib
all time points in the African group as compared to Caucasian patients. However a
trend in this parameter was
5

Table 5.26: Main 8: Knowledge of safer sex by age

Aged 35 years: All responses (n=158)
All Answers (59.45%)
Age > 35 years: All responses (n=92)
All Answers: (52.20%)

Table 5.26 Shows knowledge of safer sex by age. Age is divided into age groups less or equal to 35 and above 35 years of age. Both age groups provided marginally more than 50%. The correct answer was lower than expected.

Table 5.27: Main 8: Knowledge of safer sex by mode of transmission

Male-to-male: All responses (n=150)
All Answers (67.3%)
Female-to-male: All responses (n=150)
All Answers (48.20%)

Table 5.27 shows knowledge of safe sex by mode of transmission. The male-to-male mode of transmission group significantly more correct answers (67.3%) than the male-to-male group (48%). The male-to-male group provided less than 50% correct answers.

Table 5.28: Main 8: Knowledge of safer sex by ethnicity

African: All responses (n=244)
All Answers: (52.70%)
Caucasian: All responses (n=134)
All Answers (56.95%)

Table 5.28 shows knowledge of safer sex by ethnicity. There is a difference between African patients and Caucasian patients.

Table 5.29: Negotiation skills by age

Response	Number (%) of participants		
	Before HIV	1 year After HIV	Present 2002
All responses: Patients ≤ 35 years			
Less often	28 (51.8)	28 (51.8)	26 (46.4)
More often	26 (48.2)	26 (48.2)	30 (53.6)
Total	54 (100)	54 (100)	56 (100)
Non-responders	6	6	4
P value relative to Before		1.000	0.655
All responses: Patients > 35 years			
Less often	41 (54.7)	41 (56.9)	31 (43.1)
More often	34 (45.3)	31 (43.1)	41 (56.9)
Total	75 (100)	72 (100)	72 (100)
Non-responders	12	15	15
P value relative to Before		0.796	0.027

No statistically significant changes were found in the Less often/More often percentages (McNemar test)

Table 5.29 shows negotiation skills by age groups, and sh statistical differences between positive responses of those over 35 years at any of the studied time points.

Table 5.30: Negotiation skills by mode of transmission

Response	Number (%) of participants		
	Before HIV	1 year After HIV	Present 2002
All responses: Male-to-female patients			
Less often	32 (56.1)	32 (59.3)	24 (45.3)
More often	25 (43.9)	22 (40.7)	29 (54.7)
Total	57 (100)	54 (100)	53 (100)
Non-responders	-	3	4
P value relative to Before		0.796	0.201
All responses: Male-to-male patients			
Less often	23 (52.3)	20 (45.4)	20 (42.6)
More often	21 (47.7)	24 (54.6)	27 (57.4)
Total	44 (100)	44 (100)	47 (100)
Non-responders	13	13	10
P value relative to Before		0.405	0.317

No statistically significant changes were found in the Less often/More often percentages (McNemar test)

Table 5.30 shows negotiation skills by mode of transmiss differences between male-to-female mode of transmission and male-to-male mode of transmission over any of the studied time points

Table 5.31 Domain 9: Negotiation skills by ethnicity

Response	Number (%) of participants		
	Before HIV	1 year after HIV	Present 2002
All responses: African patients			
Less often	37 (48.0)	38 (49.3)	33 (41.2)
More often	40 (52.0)	39 (50.7)	47 (58.8)
Total	77 (100)	77 (100)	80 (100)
Non-responders	19	19	16
P value relative to Before		0827	0336
All responses: Caucasian patients			
Less often	30 (58.8)	28 (58.3)	21 (44.7)
More often	21 (412)	20 (41.7)	26 (55.3)
Total	51 (100)	48 (100)	47 (100)
Non-responders	-	3	4
P value relative to Before		0739	0071

No statistically significant changes were found in the Less often / More often percentages (McNemar test)

Table 5.31 shows negotiation skills by ethnicity. There are no differences between Caucasian and African patients at any of the study points.

Table 5.32 Domain 10: Social functioning by age

Aged 35 years: All responses (n=215)	
All PH answers: (71.2%)	
Age > 35 years: All responses (n=304)	
All PH answers: (61.5%)	

Table 5.32 shows social functioning stratified by age. The participants years or less have the social functioning influenced by 71.2% respondents PH having negative Infra)

Table 5.33 Domain 10: Social functioning by mode of transmission

Male-to-male: All responses (n=208)	
All PH answers: (61.9%)	
Female-to-male: All responses (n=203)	
All PH answers: (62.1%)	

Table 5.33 shows social functioning by mode of transmission. There is no difference in social functioning between male-to-male and the female-to-male modes of transmission.

Table 5.34: Social functioning by ethnicity

African	All responses (n=336)
	All Answers: (625.0%)
Caucasian	All responses (n=184)
	All Answers: (614.1%)

Table 5.34 shows social functioning by ethnicity. There is no difference between the responses from African and Caucasian participants.

Chapter 6 Discussion

6.1 Introduction

The study was designed to evaluate the psychosexual func
of HIV positive men by assessing their knowledge attitude
practices in 2002 as well as subjectively grading changes in th
sexual function in men after HIV infection, and (2) when
compared to the time prior to HIV diagnosis by means of a retrospective self r
questionnaire.

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6.2 Partner profile

Sex with sex workers is the most common method of HIV transmission in So
Africa, with differing degrees of heterosexual trade being preval[65,66]
in areas where travellers (truckers) or migrant groups of
(hostels, army camps, mines).

The percentage of participants attributing their infection
very low and this is corroborated in other parts of the sur
that in this group respondents had sex with commercial sex workers
before the diagnosis of HIV infection.

While public health interventions are often focussed on
studied group might have benefitted more from interven
normal and occasional partners as this was the primary source of infection for
them.

6.3 Reason for testing

When asked to disclose their reason for having undergone an HIV test
that they wanted to know their status and an equal numbe

that they were sick at the time of the test. There was no difference between ethnic groups.

The number of men being tested only when ill is a cause for concern, consistent with the perception that men are slow to take up medical services and present for medical care only if absolutely necessary. Testing of established diagnosis remains a resistance to the HIV testing[67]. The almost equal number of respondents who admit to being tested and who wanted to know their status may be reflective of a changing dynamic in society and increasing acceptance that HIV is a real factor in life.

6.4 Counselling

The data show very low counselling incidence with 52% of respondents receiving no counselling at all and only 21% receiving both pre- and post-test counselling. 19% were only being counselled after the test.

Counselling is widely implemented in medical practice everywhere it is, it is often non-functional (mainly at the time of the test at the time of writing). This could be due to constraints or due to practitioners not appreciating the importance of the intervention, prescribed in treatment guidelines documents.

Pre- and post-test counselling are widely accepted to play a decisive role in the prognosis of the disease. Pre-test counselling is usually the first step in imparting HIV disease knowledge to the patient, where the relationship is established between the healthcare provider and patient, and the healthcare systems should be welcoming and understanding of the patient[68,70].

The patient should emerge from such a process with a clear idea of what the disease is expected to do to them, what management is available and what the prognosis is if intervention is undertaken. The relationship between patient and healthcare provider should

engenders not only a non-judgmental attitude, thus creating a welcoming space for the patient, but also one which instils confidence in the system and in the competency of professionals within the s[71,72]

Without pre- and post-test counselling these goals are very difficult

6.5 Adjustment time

Following a diagnosis of HIV infection, a period of psychological t ensues. Patients require adjustment to the implications and requirem their new health status. Adjustment time is defined as the time perio a diagnosis of HIV infection and the time of study completi questionnaire. Adjustment time was grouped in two-year ranges. Ca participants took many years. African participants. The data does not sh clear differences or trends when analyzed by year of infection, s that, in this population, only years after diagnosis is sufficient to bring about the major changes from before an HIV diagnosis present (2002) that were observed by the end of the study. It therefore be logica to ensure that whatever intervention is in place to assist patients to adjust to their new status, should be continued for up t diagnosis.

6.6 Changes in Sexual Behaviour

Data in this study show a statistically significant increase in the proportion of less risky sexual behaviour and an equally significant decrease in the proportion of risky sexual behaviour at (table 5.1 and 5.2). This represents a sustained change over time spanning four years. African patients took many years in Caucasian patients as much as five years. Many have reported on a reduction in risky behaviour following a diagnosis of HIV, in short term[54,55,47,3]. Few have reported on the long-term sustainability of such changes[54]. Most researchers indicate a need for ongoing sus

counselling their recommendations in order to sustain the measu changes.[74]

The changes in sexual behaviour that are required by public hea interventions in order to curb the spread of HIV in communities achieved, in particular the consistent use of condoms during co et al[75] reported in 2006 that unprotected sexual activity i individuals was directly related to their antiretroviral therapy about reduced infectivity due to a low viral load. However, psychosocial parameters were not examin present research.

The concept of reduced infectivity due to a low viral load was the literature, the present study was completed, however it is u that this would be an operative factor in risky sexual ac African context, even where results are not done routinely in institutions and patients are therefore uninformed of its s consideration would be mandatory if research were to be African private sector today.

Results show that change in sexual behaviour towards less se does occur after a diagnosis of HIV and is sustained over Despite this positive change being statistically significant, there remains a group of participants where this change did not tak 38% of respondents still practice risky sex (Rees, 2002), although less often than before.

Some psychosocial aspects such as knowledge of what constitute sex, might positively or negatively impinge on these resu investigated and some of them

6.7 Self-esteem and identity: Domain 4

Self-esteem, as the opinion one has of oneself, both in the negative realms is a major determinant of behaviour.[76] This study looks at determining changes, if any, in the self-esteem of participants as a correlate of sexual behaviour.

High self-esteem is postulated to induce less risky sexual behaviour as one would place high value on one's own existence and minimise factors to threaten its well-being. Low self-esteem is postulated to result in the opposite behaviour.

A statistically significant decline over time in self-esteem was seen in this study. Data suggests that the longer the gap between the two interviews, the more significant this decline became. The KAP section (Table 5.4) revealed that although 71.9% of participants exhibited attitudes consistent with a positive self-image, 21.8% revealed the opposite. Further, responses showed that 52% of respondent felt they were no longer as attractive as they once were, while 52% admitted that they were ashamed of their appearance. These two factors (or some variable in-between such as self-esteem and feelings of sadness) may independently be associated with clinical depression, which can have an effect on behaviour.

Moskowitz in 2001[77] reported that self-esteem is directly associated with the propensity to disclose one's sero-status to a sexual partner. The higher the self-esteem the greater the propensity. No such correlation was found in HIV negative individuals.

In the present study depression was not measured in any detail (only tendency to feel sad was noted). Much work has been done on depression and high correlation between depression and HIV infection has been found all over the world.[78] Depression has a direct effect on one's belief that one is able to do or accomplish something. Low self-efficacy[79] translates in reduced ability to avoid unhealthy behaviour.[80,81,82,83,84]

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Self-esteem is a known determinant of health behaviour and life development. Both these factors are operands in the psychosocial adjustment to any chronic illness including HIV. The will to live and the feeling of having value for the patient's day to day activity. A positive outlook on life is therefore considered to create the situation where the prognosis of HIV infection

6.8 Drive and enjoyment - Domain 5

Drive and enjoyment were superficially studied and included both sexual and non-sexual questions. The data (Table 5.5) shows a worsening in the parameters for drive and enjoyment over time. While this change is expected in the first year after the diagnosis, the expectation that this improves with time has not confirmed by the data. Unexpectedly, the data shows a progressive decline in this function in the 2 to 5 year time points, which is highly statistically significant

Drive and enjoyment are fundamental qualities of life. The questionnaire participants reflection in drive and enjoyment may be an underlying depression stigma, reduction self-esteem, or, conversely, may be a contributor to depression and reduction in itself

The popular belief that condoms reduce pleasure and are unnatural[85] [88] is confirmed in the KAP section of the questionnaire.

6.9 Anger and Revenge - Domain 6

Anger and revenge are sometimes quoted in the media as [89] [90] spread of HIV infection. A commonly held belief is that individuals that acquired HIV infection and becoming aware of such infection develop anger and wish to take revenge on society by deliberately infecting further by refusing to use condoms in sexual encounters. This attitude is often summarized in the statement I will take as many as I

with m Additionalthere exists uganan Myth that HIV infected person purposefully inject others with HIV a psoyringe in crowded places centres and other public places.

It must be stated that there is a clear difference in intent betwe disclosing HIV status and not using protection during sexual activity with the intent to infect the partner. This avoiding the use of protection with the intent to infect the partner. This intent is left to the courts to determine if the partner is brou about by sexual exposure during unprotected intercourse.

Results from the present study show that that there is an i practices after a diagnosis of HIV infection, but that a (Table 5.8) have not changed their sexual behaviours. In the KAP section of Domain 6 (Table 5.8) show that participants accepted need, not only for HIV, but also to protect their partners from HIV (92.3% and 94.2% respectively). There appears to be a disconnect bet these two results, making the results in the KAP secti Participants may have provided the responses they thought th wanted to hear to Social Acceptability Bias[91]. Participants choose the acceptable socially correct answer for a number of reasons, includ avoiding embarrassment, please the interviewer, obtain praise. The factors may have been operational in Section 1.4.7 Social Acceptability Bias leads to over estimation of socially acceptable responses, should be seen with caution.

In those participants who have not changed to safer sexual behaviou suggests that reasons for ongoing, lie elsewhere with intent to infect another person,

6.10 Accessibility to Sex – Domain 7

The collected data shows no statistically significant change in accessibility to sex at any of the time points, however responses to individual questions show different trends.

Questions 5, 6 and 7 were the appropriate questions for parameter. While question 6: (How frequently do you have sex with casual partner?) and question 7: (How frequently do you have sex with anonymous partner?) measured the frequency of sexual activity with casual partners, question 5: (How frequently do you have sex with your steady partner?) is indicative of sexual activity with one's regular partner. As such we would expect sexual activity overall to increase. Additionally there is an increase in safer behaviours with long-term and short-term partners and a reduction in sex seeking behaviour with casual partners.

The decline in sexual activity however may be attributed to difficulty establishing new permanent relationships or difficulty in established relationships. Participants who are HIV positive and aware of consequences of their condition, find it difficult to establish relationships.[92] Barriers to new relationships include the issue of having children in a relationship, when and how to disclose status,[93,94] and the fear of infecting the partner.[95]

This reduction in sexual activity may, while a positive, ultimately prove to come at a high cost to patients.

6.11 Knowledge of safer sex – Domain 8

Cumulative data on this domain shows that 56.6% of respondents identified the correct answers, however, some 43.4% of respondents exhibited less than acceptable knowledge of safer sex.

Knowledge of safer sex is a crucial element in any HIV int
does it meet the patient s need to understand how he
or his partner at further risk for transmitting the virus,
needs of the primary prevention imperative.

Given the nature of the group studied, the result is an un
and is clinically significant probably indicative of the level of
education currently available to them. However, the discussion on condom
use and penetrative intercourse, that even in this hi
experienced population, attending practice could be done
to equip patients with the requisite skills. While the level of knowledge
knowledge about safer sex practices does not seem to cor
into a reduction of risk behaviour[9,6], other factors may inhibit
implementation intentions, remains a fundamental requirement
informed decision making and consenting.

When analysed by modes of transmission, the male homosexual group (M2M)
performed 19% better than the female (F2M) route of transmission.

Educational interventions for HIV prevention were
started in the 80 s by some NGO s in South Africa and later, in the 90 s
strengthened by some state funded projects. As the epidemic
spread, the shift was made to expand education by government
and MSM interventions were once again left to NGO s.

These prevention messages are targeted at specific risk
populations and, when people do not identify themselves with the
population, do not perceive the message as meant for them. Thus
messages aimed at the gay population are likely to be received by the
heterosexual population.

A disparity in the length of time that the two groups may h
to safer sex messages may account for the discrepancy in re
factor may be the nature of safer sex messages within the

community, and the delay in the health that is traditionally supplied wi
interventions. While the study was done in 2002, at the h
HIV/AIDS denialism which caused great confusion within the pop
and severely hampered HIV prevention efforts, it was unlikely that this would
have impacted participants' knowledge of safer sex practices, as
sex issues were never really part of the denialist

6.12 Negotiating skills: Domain 9

Some elements of negotiating skills were explored in Domain 9.
Data show a trend towards improved negotiation skills over
time period, but this trend does not reach statistical significance
implications are that even with ongoing efforts to promote
participants still find it difficult to negotiate with their sex partners
their requirements for safer sex. These results allude to negative influences
the overall ability of participants to change their sexual
diagnosis of HIV. Evaluation of question 4 ("Can you freely express
your sexual desires?"), as well as this parameter directly, shows a di
decline over time in the participants' ability to discuss their sexu
needs (Table 5.11).

6.13 General Social functioning: Domain 10

Some parameters in Domain 10 were described in the KAP section of the
questionnaire.
The majority of respondents exhibited acceptable social
65.9% of respondents providing socially acceptable answers (

It is commonly accepted that African women are socially expected to
children. This is commonly believed to be stronger in African
communities. Results from this questionnaire indicate that
think that if they sired no children, problems would ensue, but
significant 20% did think that it would be the rest undecided. This is

communities this traditional belief still places additional positive pa The re sults obtained in this study may be en of some chang e taking place in society or may be as a result of the the studied group, which was multicultural and where al respondents had sex with men

General social functioning was found to be positive men in a number of settings with a variety of Quality of life standardise including ACTG 21[95], and HRQOL-1 [97] (Health related quality of life). Sa [98] reported a multinational assessment of participants on a clinical study, social functioning was not related to country gender, with men having greater than women.

Cross tabular analysis of this domain of transmission or ethnicity showed no difference between groups, while age showed a trend towards better social functioning of the order of 11.2% in 35 age group. This may be attributable to greater resilience and adaptability to change in this age group.

6.14 Limitations of the study

6.14.1 Population selection

The selected population consisted of unpaid middle class working males, and was not representative of males in the heterogeneity of the South African male population, with r culture, religious and social stratum, it was inevitable that th population in any practical way could be statistically These results are not universally applicable, due to the small number of within the middle and upper middle class of males, as the s representative of all the social strata. A bigger sample socially representative sample would be required in order outcomes generalised to any extent.

614.2 Population Bias

The population selected from this practice consisted of h
patients who had been exposed to best practice manageme
The self-administration of the questionnaire limited participati
literate subjects. While the inclusion criteria did not spec
illiterate patients, it was known from the population profil
all potential patients were sufficiently literate to se
questionnaire.

All patients were on ARV treatment at the time and were well
functioning of ART. Results were obtained in 2002 and may
in the present as perceptions about HIV disease may hav
then. The availability of ART through the public sector has certainly broug
about more familiarity with the disease in the general pop
not necessarily reflective of similar populations in other pr

614.3 Randomisation Process

Randomisation process that was empirically decided upon in
planning of the study, did not lead to the desired result, b
small number of patients enrolled in the study.

614.4 Analytical Limitations

The analysis of the data generated by the study was hampered by
the small sample size and the heterogeneity of the stu
Statistical significance was obtained by pooling results
questions into their respective domains. Questions were included in a dom

if they directly or indirectly informed. No weighting was done these parameters and all questions were assumed to contri outcome.

Weighting of the results may have resulted in different out

614.5 Questionnaire design

The questionnaire was designed by the investigator and validated as no questionnaires were found that addressed the issues that the researcher wanted to investigate. Attention was paid to Social Acceptability Bias and Halo were introduced to partially counteract these phenomena. However, the questionnaire should have been subjected to more rigorous questionnaire design testing and validation before it was implemented in the research program.

Chapter 7 Conclusion

The mean time from the diagnosis of HIV seropositivity to the beginning of this research was eight years for Caucasians and approximately four years for African participants. Results show that reported change in the sexual behaviour of males after diagnosis of HIV seropositivity does occur and is sustained for up to eight years. This change is exemplified by education in risky sexual practices and therefore a potential reduction in transmissibility of the virus.

This change, while required by public health interventions considerations, is predicated upon psychosocial changes, and comes at a considerable cost to patients.

Respondents showed a decrease in self esteem and identity, self image, drive and enjoyment, decline in sexual activity, increase in depression or feeling of being, with reduced social functioning (from almost one third of respondents). On the positive side, participants exhibited negotiation skills with regard to sexual matters. Most of the negatively on the Quality of Life of People Living with HIV.

The majority of participants did not have a clear understanding of safe sex procedures actually is inadequacy is possibly the result of insufficiently detailed information given to patients. The thrust of interventions is on abstinence or the use of condoms with casual partners. While this may be a valuable interventional strategy, it is not sufficient to ensure that people are protected when they do have sex, which is inevitable. To some extent, failure to address this aspect directly may negate any benefits that possibly be derived from the implementation of the first two. This area requires an increase in interventions aimed at education of patients and the medical profession.

Risky sexual behaviour after counselling and knowledge of HIV negative individuals typically reported to occur, but only sustained

period, even after intense interventions. HIV positive individuals on the o
hand are expected to initiate and sustain this behaviour ch

The required change in sexual behaviour in HIV negative
motivated by self-interest (survival benefit, avoidance of disease a
increased potential for long-term well-being). These considerations, for
patients, lack immediacy and therefore are no more effecti
aimed at reducing smoking or exercising. With tangible
reward, such interventions are often effective in the long

Given the paucity of benefit provided to the HIV positive individual by a
shift in sexual practices to less risky sexual behaviour, th
change can only be predicated on altruism. The challenge in maintenance
of such change can be construed to be more challenging.

Public health interventions would do well to consider the c
individuals and provide support to enhance the Quality of Life of
infected individuals, facilitate the maintenance of this behaviour
change

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Appendices

Appendix 1 Questionnaire

HIV Sexuality Questionnaire Male

Thank you for agreeing to take part in this research prog
will be asked certain questions. Please answer them as h When you have co
questionnaire place it in the questionnaire box. Thank you.

Age ☐ Caucasi ☐ Mixed ra ☐ Afric ☐ Asia ☐

What year did you first tes HIV? ☐ Latest count ☐ Date ☐

Please indicated the way you acq Infection

Sexual Contac Female-to-mal ☐ Male-to-male ☐ Blood transfusi ☐ Other ☐
Sex with norma ☐ Sex with casual ☐
Sex with commercial ☐ Don t know ☐

Why were you tested for HIV? Please mark all that apply

I wanted to ☐ My partner positive ☐ I was s ☐ For insur ☐

Where were you first tested for HIV?

Government ho ☐ District cli ☐ Private D ☐ Laborato ☐

Did you receive counselling before and after y Test?

Only Before th ☐ Only after th ☐ Before after ☐ Had counselling ☐

The questions that follow are about your sexuality and you
into the time before you became HIV positive, the first yea

For each question write in a value from 0 to 4 (0 = Never, 1 = Almost never,
Sometimes, 3 = Most of the time 4 = Almost always

		Before H	First yea HIV	Now
	Question			
1	Do you think you are sexuall			
2	Are you satisfied with your s			
3	Do you have a high sex drive			
4	Can you freely express your sexual			
5	How frequently do you have sex with a partner			
6	How frequently do you have sex with a partner			
7	How frequently do you ha anonymous partner			
8	I use condoms with my steady partner			
9	I am a bad person			
10	I am comfortable suggesting sex			
11	How frequently do you have			
12	I use alcohol before sex			
13	I find it difficult to tell my partner about sex			
14	I use condoms with any casual partner			
15	I am satisfied with the sex with my steady partner			
16	I prefer sex with casual part			
17	I prefer vaginal sex			
18	I prefer oral sex			
19	I prefer anal sex			
20	I prefer masturbati			
21	I prefer not to have sex			

HIV Sexuality Questionnaire Male

The following section please indicate if you agree or not
column may only be marked if it is white

	Questions	Agree	Don't agree	Don t k
22	If I don t have children my family			
23	Kissing is safe sex			
24	I am not the man I used to be			
26	HIV has made me loose interest in my sexual			
27	If I use a condom my partner will			
28	Don't need to use a condom as both partner positive			
29	If I use a condom, people will go			
30	If I use a condom there will be no			
31	Condoms reduce pleasure			
32	Using a condom is unromantic			
33	I use condoms only with casual p			
34	Real men don't use condoms			
35	When I drink alcohol I don t think			
36	My normal partner will think I am unfaithful condom			
37	I don t know how to talk to n condoms			
38	Vaginal penetration without a con			
39	My society will discriminate against am HIV			
40	My partner must be faithful to me			
41	Its my job to protect my partner f			
42	Oral sex (mouth to vagina) is saf			
43	Oral sex (mouth to penis) is not s			
44	I am too ashamed of HIV to use a			
45	Its not in my culture to use a condom			
46	I am often sad			

47	I don't care if I give HIV to my li			
48	I must have children			
49	With a condom any lubricant is O			
50	I discuss condoms with my partne			
51	I have told my partner that I am HIV po			Not applica
52	I have been counselled about saf			
53	Sex without a condom is a crimin			
54	I must be faithful to my partner			
55	Sex with dry vagina is safe sex			

56 Please describe the ways that infection changed the way you practice and enjoy your sex life:

Appendix 2: Patient s Informed Consent Documen

Informed consent document.

You may be eligible to participate in this new research program discussed with you by your doctor.

Study title

Psychosocial factors associated with sexual functioning i positive men

Eligibility for the study

You are eligible to participate in the study if you are 18 years or older, are male, HIV positive, able to give consent, and have not parti study before.
Participation in the study is entirely voluntary and will not compromise your ongoing care in any way.
There is no financial reward for participating in the study.

Study rationale

As an HIV positive man, you have often been told to practi Unfortunately, the epidemic continues to grow unabated, and th exists that men do not want to use condoms. Many studies have shown that only a small percentage of HIV positive men practice sa those who do, eventually fail to. Many of our interventions designed to address this problem, unfortunately, have been ineffective. There is a need to look at what are the reasons why men unprotected sex, so

that these problems may be addressed in a way that makes
person with HIV.

Objectives of the study

The objectives of the study are to describe some of the issues mentioned
above. This will be done by means of an anonymous questionn
name will not appear anywhere on the questionnaire. This is because your identity
is not important, what is important is what you think and how you feel about
certain things. For this reason, we would ask you to be very
answering the questionnaire. If your answer is not the one that society
expect you to give, please give us your answer anyway, w
interested in how you feel, not what society thinks you shou
are no right or wrong answers. When you read the questio
box, or enter the number that is closest to what you feel
Further instructions will be given in the questionnaire.

Course of the study.

The study consists of you filling in a questionnaire, in the
room and putting into the appropriate box. The questionn
anonymous and completion should not take longer than 10-15 minutes.

Possible risks to you.

Your participation in the research program may involve ce
you should be aware. Some of the questions in the questi
you think about certain sexual practices, or certain values, a
your life which you may not have thought of before, or
problem to you. Thinking of these things may be painful a
feel upset or unhappy or confused. For this reason, if a
should happen, you will be offered the possibility of having a co
session, either with Dr Baraldi, or with Mr Richard Seleck,
maximum of two free counselling sessions will be offered

dealing with the issues that pass up. For this purpose, you will be supplied with tw
coupons, which you will need to hand in at reception when m
appointment for this.

Possible benefits to you:

Participation in the study has possible benefits to you. You
to explore issues you have concerning your own sexuality and should you find this
growth experience. Additionally at the end of the research, t
will be made known to you. This is an opportunity to evalu
you peers.

Confidentiality:

Since the questionnaire is anonymous and your name does not
any of the documents, your confidentiality is guaranteed

Thank you for agreeing to take part in this project.

Dr. Ezio Baraldi

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