CHAPTER 1: INTRODUCTION

The advent of HIV/AIDS in the early 1980ǿs has placed a burden on the health, social and economic sectors of nations at global and regional levels. Sub-Saharan Africa has been hardest hit.

The economic divide that exists between the developed and developing countries has seen significant differences in health service provision for those affected by HIV/AIDS. Developed countries that have made good living conditions for their citizens have also made great strides in improving their lifestyles. By developing and supplying Anti-Retro-Viral drugs (ARVs) to people living with HIV/AIDS (PLWHA) at affordable prices, the prevalence of the disease in developed countries has declined easing its burden while only a proportion of the affected in Zimbabwe is on ARVs. Despite the decline of the HIV prevalence in Zimbabwe to 18.1% in 2005-06 according to the Zimbabwe Demographic and Health Survey (ZDHS) of 2005-06 [1] from 24.6% in 2006, the epidemic remains generalized. [2]

The fight against HIV/AIDS as a public health issue requires the participation of the health sector (private and public) in the leading role, all individuals, communities, NGOs and international organizations. To this end, Zimbabwe is in partnership for health promotion with other organizations in its effort to mitigate the effects of HIV.

As an initiative for investment for health, the partnership for health promotion between the Ministry of Health and Child Welfare (MoH&CW) with organizations such as the

National AIDS Council (NAC), UNAIDS, WHO and many others, New Start Centres for HIV Voluntary Counseling and Testing (VCT) have been established. In terms of human capacity, more staff is being trained in counseling and testing according to National AIDS Council unpublished figures. Such efforts create an enabling environment for people to be tested for HIV.

In an effort to prevent the vertical transmission of HIV from mother to child, the Ministry of Health and Child Welfare is running the Prevention of Mother to Child Transmission (PMTCT) programme at antenatal care (ANC) clinics. Some of the ANC clinics have been selected to be sentinel sites for HIV surveillance, thereby providing HIV-status data of mothers and infants attending the clinic. While the HIV-status of individuals attending ANC clinics is obtained on a regular basis, it is confined only to a restricted population.

As a social responsibility for health, Zimbabwe has put in place opportunistic infection (OI) clinics at major hospitals where individuals who test HIV positive are put on Anti-Retroviral Therapy (ART).

Success of the initiatives mentioned can only be fully realised if people take up HIV tests on their volition. In order to solicit information from people on their intentions towards HIV test, this study was carried out in two high-density suburbs of Harare namely Glen View and Kuwadzana. Glen View lies about 20km southwest of Harare City Centre and had a population of 109,250 people according to the population Census 2002 [3]. With a

population of 90,936 people in 2002, Kuwadzana lies along the Harare ï Bulawayo highway about 25km west of the city centre. Two other suburbs that have a mixture of high and medium-density composition, Budiriro and Mufakose are situated between Glen View and Kuwadzana.

1.1 Statement of the problem

There are challenges in compiling accurate statistics for HIV prevalence in Zimbabwe because people are not voluntarily going for HIV testing. According to the population-based ZDHS of 2005-06, the HIV-status was determined by taking dried blood spot (DBS) samples of participants who consented [1]. Of the 18,631 participants interviewed, about 15% (2795) people refused to provide blood for HIV testing [1]. Of those having their DBS tested, only a few took results of the test. There is a likelihood of further spread of the virus by HIV positive people if they do not know their HIV status unless they take an initiative to make their status known.

There is a low uptake of HIV test in Zimbabwe despite the populationôs knowledge about HIV/AIDS as shown in studies on knowledge, attitudes and practices (KAP).

Having a voluntary HIV test by individuals has remained low despite the initiatives partnership for health promotion initiatives such as availability of facilities and affordable health services to encourage people to have voluntary HIV counseling and testing; public awareness campaigns and advertisements for VCT promoted through print and electronic media, banners and t-shirts and a supportive social environment that accommodates PLWA [4].

Fear of being stigmatized and discriminated against by society as a result of being HIV positive could be a possible inhibiting factor for having an HIV test [4]. About 54% and 51% of men and women respectively would want to keep it a secret that a family member got infected with HIV and only 11% of men and 17% of women interviewed expressed acceptance attitude towards PLWHA [1].

CHAPTER 2: LITERATURE REVIEW

A comprehensive review of behavioural change by NAC in 2006 [4] noted a number of points with regards to VCT such as that HIV-infected persons who are aware of their HIV sero-status tend to reduce behaviours that might transmit HIV to others. Sero-negative people are more likely to continue to engage in unsafe sexual practices after they discover their status and that VCT for couples is more effective at altering risk behaviour, than is individual testing and counseling. Without knowing why people go for VCT, there are limitations in understanding the potential impacts of programme expansion.

There are no definitive Zimbabwean studies considering such aspects, although it is important to better understand the profile of people seeking services at the stand-alone in particular. The prevention outcomes of VCT may largely depend on what people bring to the experience of VCT by way of pre-existing prevention resolve and their expectations regarding the outcomes of VCT.

The review[4] noted that it is important that the outcomes of VCT be tracked for HIV positive and negative results and different ways of providing services. This is an under-researched area that is important for the optimization of VCT as a preventive tool.

Of stigmatization, the review[4] noted that the fear of stigma may result in people avoiding VCT, and hence perpetuate the situation of not knowing their HIV status and possibly not taking steps to avoid infecting others.

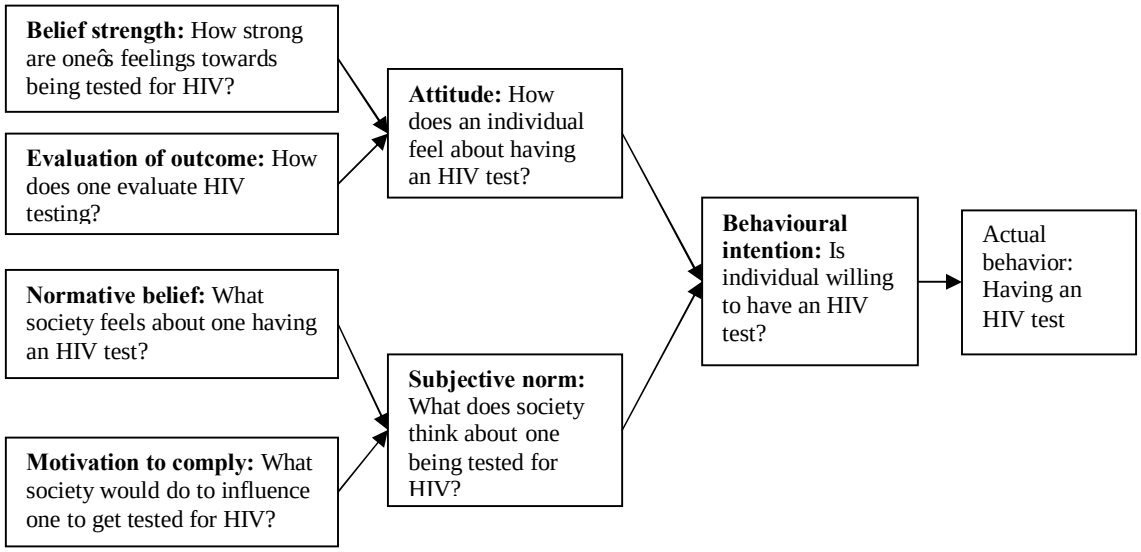
2.1 Theory of Reasoned Action (TRA)

In view of the points raised above, Theory of Reasoned Action (TRA), that has found its origins in the field of social psychology, and developed by Ajzen, was used in this study [5]. It is a multiple-faceted model that can be used to find out the determinants of peopleôs intentions to have an HIV test within the next 3 months by measuring items based on the following main constructs: [6]

- ***Behavioural intentions:*** Perceived likelihood of performing the behaviour
- ***Attitudes:*** Overall evaluation the behavior ï a direct measure
- ***Behavioural beliefs:*** Belief that behavioral performance is associated with certain attributes or outcomes
- ***Evaluation:*** Value attached to a behavioral outcome or attribute
- ***Subjective norm:*** As a direct measure, belief about whether most people approve or disapprove of their behavior
- ***Normative belief:*** Belief about whether each referent approves or disapproves of their behavior
- ***Motivation to comply:*** Motivation to do what each referent thinks

Although each of the constructs has its own characteristics, they are linked. The model is expressed diagrammatically in Fig 1 below.

Fig 1: Theoretical framework for Theory of Reasoned Action



TRA states that having the actual HIV test depends on the individualôs intention to have the test. Behavioural intention in turn depends on the individualôs attitude towards that behaviour and the subjective norms. In our case, while an individual can have a highly positive attitude towards the test, lack of enabling factors such as access to a VCT centre, money to pay for the medical test can be inhibitors. If society in which the individual lives is not supportive, the individualôs intention to go for a test would also be inhibited. The individualôs attitude towards the HIV test depends on the strength of his/her belief and the individualôs evaluation of the outcome. The subjective norm depends on the normative belief, that is what society expects him/her to do and the motivation to comply.

Francis et al, 2004 [7] proposes to conduct an item analysis on the items relating to the direct measures, to establish internal consistency. They further proposed that if all

internal consistency coefficients are acceptable (>0.6 as a rough guide), it is appropriate to include all the items in the composite variables.

From another angle, Montano & Kasprzyk stated that the direct measures are more strongly associated with intention and behaviour than the indirect measures and that indirect measures are strongly associated with direct measures, to have confidence that the appropriate beliefs were measured and that the composite beliefs (behavioural and normative) are adequate measures of the respective TRA constructs [6].

According to Taylor, 2006, the TRA and the TPB are better specified than the HBM and the TTM, and more parsimonious in design [8]. That is, they have fewer, more precisely defined, components. This may enhance their efficiency and consistency in their use [6].

According to a study by Kakoko, et al, (2003) prediction on intended use of voluntary HIV counseling and testing services among Tanzanian teachers using the theory of planned behaviour, results of the hierarchical regression analysis used indicated that perceived behaviour control and attitudes toward using VCT services were significant predictors of intention to use VCT services [9].

A population-based study in Botswana in 2004 by Weiser et al, [10] to assess among other things attitudes toward routine testing and correlates of HIV testing, 43% of the participants believed that routine testing would lead people to avoid going to the doctor for fear of testing. Despite such a negative attitude toward routine HIV testing the

majority agreed that it would result in decreased discrimination of HIV-positive people (60%), makes it easier for people to get tested (89%) and gain access to ART (93%). For their study, the researchers used multivariate logistic regression but a theoretical framework was not specified.

According to a review of belief models by Taylor, et al, noted that there is a large volume of research indicating that both the Theory of Reasoned Action and the Theory of Planned Behaviour have utility in predicting health behaviours, and that observed statistical relationships between their internal constructs based on behavioural, normative and control beliefs have significance across a wide range of contexts [8].

The TRA has fewer, more precisely defined components: intentions, attitudes, belief strengths, outcome evaluation, subjective norms, normative beliefs and motivation to comply. In their review, Taylor et al, 2006 identified that the TRA has mainly been applied in exercise intentions & behaviour, weight gain prevention & eating behaviour, addiction related behaviour such as smoking and alcohol abuse and HIV prevention & condom use[8].

According to the review[8], Kashima and Gallois 1993, Ajzen 1998, the general theoretical framework offered by the TRA and TPB have allowed them to be applied in the analysis of virtually all significant health behaviour. To a lesser extend the theoretical framework is applied in predictive investigation and the design of health interventions (Hardeman et al 2002).

Among the key areas where TRA and TPB have been applied, the review[8] indicated that a study on HIV prevention and condom use was done by Sheeran and Taylor 1999, Albarracin 2001. There is no indication to suggest that any studies have been carried out on intentions to have voluntary HIV testing.

The predictive performance of both the TRA and TPB is superior to that of the HBM. Hardeman et al 2002 noted the practical limitations of the TRA and TPB in their application and are rarely used proactively to develop health promotion and other interventions and when used the effect size is very small[8]. Other limitations are that they are not able to address how beliefs, attitudes, intentions can be changed or what cost effective strategies can be employed.

According to Hausenblas et al 1997, the TRA was valid and there were large effect sizes between intention & exercise; attitude & intention; attitude & exercise and on the other hand zero to moderate correlations between subjective norms, intention and behaviour[8].

2.2 Factor analysis

There are several items to measure the same construct. Kleinbaum and Kupper 1978 discuss four steps to be followed in performing a factor analysis namely; (i) preparation of the correlation matrix, which involves communalities, (ii) determining initial factors by principal ï component analysis, (iii) rotation of initial factors and (iv) determination of factor scores[14].

In the first step of preparation of the correlation matrix, a factor loading matrix that is obtained as a product of the correlation matrix of the observed variables and weight matrix. The factor loadings should show parsimony, (representing information contained in several original variables in terms of a much smaller number of factors), approximate independence (the factors are constructed in such a way that they are statistically independent) and conceptual meaningfulness (easy to interpret). A choice has to be made as to whether the correlation matrix with ones ñ1ô on the main diagonal has to be used or one with communalities. The communality of a variable is a quantity that measures information in terms of variance that the variable has in common, through the common factors with all other variables. The authors suggest use of two methods for estimating communalities that replace the ñonesò in the main diagonal of the correlation matrix namely: (i) the squared multiple correlation coefficient R^2 of each variable in relation to other variables and (ii) for each variable the largest correlation coefficient i.e. the off-diagonal element in absolute terms associated with that variable.

Ideally, correlations among items of the same construct, for example the attitudes should be high, while correlations between an item of a particular construct (eg attitudes) with items of other constructs (eg social norms) should be low or zero.

The second step of determining initial factors by principalï component (PC) analysis involves determining factors that explains as much of the total variation in the data as possible with as few of the factors as possible. Each principal-component is unique, the first having the largest proportion of variation, the second PC has the second largest

proportion of variation and so on. The first PC involves mostly high loadings. However, principal components are not easy to interpret and become so when they as initial factors are rotated.

The third step of rotating the factors would result in each rotated factor achieving more interpretability by way of simple structure. The simple structure is achieved when for each factor, the factor loadings for most variables are near zero while the remaining factor loadings are relatively high. Two main methods of rotation are suggested: (i) orthogonal rotation and (ii) oblique rotation.

Orthogonal rotation would result with factors that remain statistically uncorrelated while factors from oblique rotation would be correlated to some extent. Apart from parsimony achieved from orthogonal the total variation accounted for by the factors under consideration is not affected by the rotated. The main disadvantage of orthogonal rotation is that factors so produced are not sufficient to determine the desired attributes.

On the other hand, oblique rotation mainly results in much more interpretable factors. The authors suggest considering both orthogonal and oblique rotation and also looking at the data graphically.

The fourth step is determination of the factor scores to be applied as weights to the observed variables [14].

2.3 Justification

HIV positive individuals who do not know their sero-status have higher chances of spreading HIV through engaging in risky sexual behavior. Sero-status of individuals can only be determined if one is HIV tested. No study on HIV test intentions using Theory of Reasoned Action (TRA) has been carried out in Zimbabwe. It is therefore through this study that factors that motivate or inhibit individuals to get tested for HIV were investigated.

Having established the characteristics of individuals, especially those with no intention to have an HIV test, interventions directed at promoting positive attitudes towards HIV testing will be specifically designed to target both the individuals with no intention and society.

2.4 Research question

The research question for the study is: What are the determinants of intention to have an HIV test using Theory of Reasoned Action?

2.5 Objectives of the study

The main objective of the study is to model determinants of intention to have an HIV test using the theory of reasoned action framework.

Specific objectives are:

- To assess the relationship between intention as outcome variable and attitudes and subjective norms based on factor scores as predictors
- To assess the relationship between intention as outcome variable and belief-based attitudes and belief-based subjective norms
- To compare the relationship between linear regression models for intention on belief-based attitudes and subjective norms with the discriminant model for intention on belief-based attitudes and subjective norms

2.6 Hypotheses

Hypotheses to be tested are:

- Attitudes and subjective norms are statistically significant in predicting intention to have an HIV test
- Belief-based attitudes and subjective norms are statistically significant in discriminating into intention to have an HIV test groups

CHAPTER 3: METHODOLOGY

3.1 Study site

The analytic cross sectional study was conducted in Hararecs high-density suburbs of Glen-View and Kuwadzana. Harare is a metropolitan area that has four (4) districts namely Chitungwiza, Epworth, Harare Urban and Harare Rural according to the Census 2002 Master Sample.

3.2 The sample

A sample of size 90 men and women aged 15-49 years was determined to be drawn from randomly selected clusters in Harare. To determine the sample size, the formula

$n = (1.96^2 \times 0.369 \times 0.631)/0.1^2$ where 1.96 the z-score associated with the 95% confidence interval, 0.369 the proportion of participants who reported an intention to have an HIV test within the next six months, 0.631 the complement of the proportion and 0.1 is an error margin allowed to be within the true proportion of individuals with an intention to have an HIV test [10]. The initial sample size was estimated at 89.4 rounded up to 90 persons. Anticipating a 60% response rate, a total of 150 questionnaires were distributed to participants.

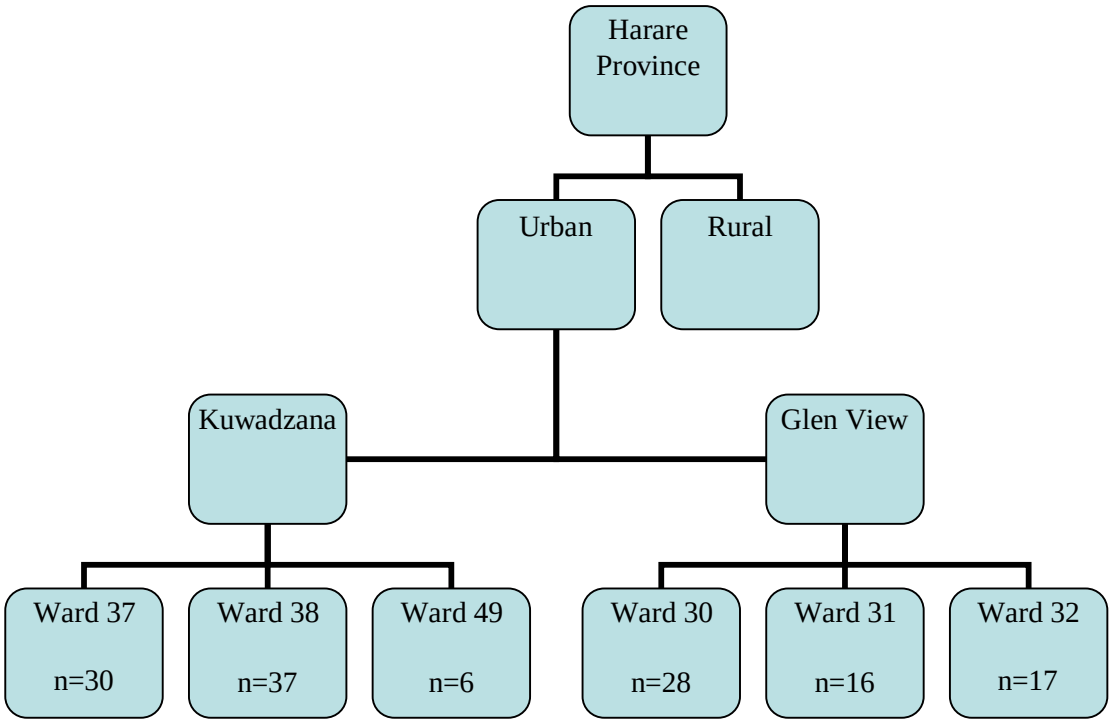
3.3 Sample design

Each district is divided into wards which in turn are divided into enumeration areas (EA) that form clusters. Within each cluster/EA are households. A group of one or more

individuals living together forms a household. Thus an EA is defined as the smallest geographical unit from which individuals belonging to households were randomly selected. The EAs in each ward are unique and non-overlapping each consisting of 85 to 120 households.

Glen View was conveniently selected from the municipal districts of Harare in order to mitigate travel cost and data collection time for the student. Kuwadzana was randomly selected from the remaining municipal districts. At household level, participants were selected using quota sampling from 8 randomly selected clusters, 4 in Glen View and 4 in Kuwadzana. From each of the wards in Glen View and Kuwadzana, EAs were randomly selected and the results of the selection are depicted in Fig 2 below.

Fig 2: Stages followed in selecting enumeration areas for drawing study participants



3.4 Study population

Our target population was all men and women in the selected EAs of Glen View and Kuwadzana aged 15-49 years, who had never been tested for HIV. Excluded were all persons below 15 years and above 49 years. Also excluded from the study were men and women aged 15-49 years who had had an HIV test in the past.

At each household in the selected cluster, the data collector screened for eligible participants by verbally asking individuals their age and whether they had ever been tested for HIV. For those aged 15-49 years, who had never been tested for HIV, informed consent was sought by explaining the contents of the consent letter in either English or Shona. The participant was requested to sign the consent form to show voluntary participation. The questionnaire was then left with the consenting participant for completion. The completed questionnaire was collected within about one hour of being left with the participant.

A listing of all households and individuals within each household would have produced a sampling frame. Such a listing requires substantial resources in terms of time, finance and human. In the absence of such a sampling frame, randomization was only restricted to the selection of enumeration areas as clusters.

3.5 Questionnaire design

The questionnaire was designed on the basis of the theory of reasoned action constructs using guidelines in a manual for health services researchers [7]. To accommodate participants who are not well conversant in the English language, the questionnaire was also translated into Shona, the local language, which is understood by the majority of participants in the areas of Glen View and Kuwadzana. As a result, the questionnaire was bi-lingual.

A pre-test was initially done in Glen View on 15 participants. The results of the pretest allowed splitting the ñsiblingò to ñbrotherò and ñsisterò categories in Question 11. Two more categories, ñtesting was not necessaryò and ñreligious reasonsò were added to Question 12. Through the pretest, there was great improvement in the translation of the questionnaire to Shona language.

The self-administered questionnaire, (Appendix 1) with a section on socio-demographic characteristics (Questions 1 to 12) was used to measure intentions, attitudes, subjective norms and beliefs towards voluntary HIV testing and counseling.

3.5.1 Intentions

Intention, the main dependent variable with dichotomous response categories was measured by asking the participants (Question 13): *Do you intent to attend an HIV voluntary counseling and testing at a VCT centre within 3 months?* The responses from

this question provided an estimate of the proportion of individuals who intent to have an HIV test. It was also used as a classifying or grouping variable in discrimination analysis.

The indirect measure of intention to have an HIV test was assessed by three items (Questions 14, 16 and 18) on 5-point unipolar scale ranging from strongly disagreeing to strongly agreeing to the intention. Items with high loadings were used in the analysis.

3.5.2 Attitudes

Direct and indirect measures were used for assessing attitudes as predictors towards intention to having an HIV test.

The direct measure consisted of a question (Question 20) that required four semantic differential responses each on a 5-point unipolar scale. The semantic differentials were in the form useful-harmful, good-bad, not beneficial-beneficial and enjoyable-unenjoyable.

Four items (Questions 15, 17, 19 and 21) were used to measure the participantôs belief strengths on HIV testing each on a 5-point unipolar scale ranging from extremely unlikely to extremely likely. Similarly each item (Questions 23 to 25) was used to measure an individualôs evaluation of taking an HIV test. The evaluation was also on a 5-point bipolar scale of -2 to +2 for extremely undesirable/unlikely to extremely desirable to likely respectively.

3.5.3 Subjective norms

Subjective norms towards HIV testing, also as predictors were also measured directly and indirectly.

The direct measure of subjective norms consisted of questions (Questions 26 to 29) that required four semantic differential responses each on a 5-point unipolar scale. The semantic differentials were in the form should-should not and strongly disagree- strongly agree.

As with attitudes, normative belief strengths and motivation to comply were used as indirect measure of subjective norms for HIV testing. Three items (Questions 30 to 32) were used to assess the normative beliefs on HIV testing each on a 5-point unipolar scale ranging from extremely unlikely to extremely likely. Corresponding to each belief statement was an item (Questions 33 to 35) to assess what other people close to the participant felt about the individual taking an HIV test. The evaluation was on a 5-point bipolar scale of -2 to +2 for extremely undesirable to unlikely to extremely desirable to likely respectively.

3.6 Data collection procedures and quality control

During data collection, each questionnaire collected was checked to ensure that all sections were correctly completed. Questionnaire that were found with errors were referred back to the respondent by the data collector for correction.

A unique alpha-numeric identification number was assigned to each questionnaire for ease of reference in case of queries during data entry and/or analysis. All Glen View identification numbers were prefixed with ñgvò followed by a number in numeric order. Kuwadzana identification was prefixed by ñkò and also followed by a number. The questionnaires were filed in numeric order each area having its own files.

3.7 Ethical considerations

Permission to carry out the study was sought from and granted by the Harare City Health Department.

3.8 Data management

Each questionnaire was checked for completeness and consistency in order to ensure that respondents aged 18 years and above who had never tested for HIV were covered. Microsoft Excel spreadsheet was used for data entry. Stata 10.0 Special Edition was used for data analysis and drawing of graphs.

3.9 Statistical analysis

Factor analysis was used on the items within the intentions, attitudes, belief strengths, outcome evaluation, subjective norms, normative beliefs and motivation to comply constructs as a data reduction tool. Items with high factor loadings were then used to perform simple, multiple regression analyses and discriminant analysis in the case of dichotomous intentions variable.

3.9.1 Analysis of direct measures of intention, attitude and subjective norm constructs

Inter-item correlations and Cronbachôs alpha were employed for checking of internal consistency reliability of constructs in order to ascertain that items within a construct measured what they are intended to measure by identifying items that are not correlated with others. Another item analysis using the same methods was done on direct measure of intention as a dependent variable, and attitudes and subjective norms as predictors to check if there is internal consistency between the constructs [7]

A multiple regression model of intention to have an HIV test on attitude towards and subjective norm for having an HIV test was built to estimate and test for the statistical significance of the estimated parameters [8]

3.9.2 Analysis of direct versus indirect measure of the same predictor constructs (attitude and subjective norm)

Cronbachôs alpha of 0.7 was also employed for checking of internal consistency reliability by ascertaining that the validity of indirect measure of attitudes and social norms are respectively correlated with the direct measure of the same construct [7].

Multiple regression analysis of intention to have an HIV test on the indirect measures of attitudes and subjective norms was also used. Correlation coefficients for various pairs of variables were assessed in order to ascertain that assumptions for regression and the linear discriminant function such as constant variance, normality, linearity are not violated. Normal probability plots were developed in the same vain to check against violation of assumptions.

3.10 Discrimination analysis

The grouping variable in the discriminant analysis was based on the yes/no response to the question ñDo you intent to attend HIV voluntary counseling and testing at a VCT centre within the next 3 months?ò The independent variables were the belief-based attitudes scale: the sum of belief strength and outcome evaluation product; and subjective norm scale: the sum of normative belief and motivation to comply product for each individual.

To check whether the normality assumptions of the independent variables were not violated, normal probability plots were used. Using Stata output, statistical significance

of the model was assessed by Wilkôs lambda, and ANOVA. Standardized canonical discriminant coefficients were used to assess the relative importance of the independent variables. Classification of individuals into their respective groups was done using classification functions. To assess the ability of the model to classify individuals, a classification table was used.

CHAPTER 4: RESULTS

A total of 150 questionnaires were administered to 75 participants in Glen View and 75 in Kuwadzana. On the overall, 136 questionnaires, 61 and 72 from Glen View and Kuwadzana respectively were completed and recovered from participants representing a response rate of 90%. Among the questionnaires recovered, one had been completed by a participant who did not meet all the inclusion criteria and the other had more than one response on each question rendering the two questionnaires unsuitable for analysis.

The remaining sample size 134 resulted in a slight improvement in precision of estimates to a margin of error of 8% down from the initial 10%.

There was reluctance by participants in responding to questions concerning salaries, occupation and other sources of income with these variables having response rates as low as 19%, 21% and 53% respectively. As a result, they were not included in the analysis.

4.1 Demographic characteristics of participants

Table 1 below shows demographic and social characteristics of participants in percentages. The number of participants responding to question on each of the characteristic is indicated by N.

Table 1: Number and percentages for demographic and social characteristics of participants

Characteristic	Frequency	%
Area (N=134)		
Glen View	61	45.5
Kuwadzana	73	54.5
Gender (N=133)		
Male	47	35.3
Female	86	64.7
Age group in completed years (N=128)		
15 ï 24	59	46.1
25 ï 34	40	31.3
35 ï 44	25	19.5
Ó45	4	3.1
Marital status (N =132)		
Married/living together	69	52.3
Divorced/separated	7	5.3
Widowed	3	2.3
Single/Never married	53	40.2
Employment status (N = 130)		
Employed	31	23.8
Not employed	99	76.2
Relationship to person nearest to respondent (N =132)		
Parent	33	25.0
Child	4	3.0
Brother/Sister	45	34.1
Grand parent	2	1.5
Cousin/Nephew/Niece/ Uncle/Aunt	8	6.1
In-law	2	1.5
Friend	12	9.1
Other (Specify)	26	19.7

Out of the 134 participants responding to the questionnaire, 73 (55 percent) of them were from Kuwadzana versus 61 (45 percent) from Glen View. Females constituted 65 percent of the 133 participants who responded to the question on gender.

The proportion of participants according to age distribution was high in the young adults group (46.1 percent for the 15 - 24 years group). The proportion declined as age increased with the 45 ï 49 year age group having the lowest proportion of 3 percent.

In terms of marital status, couples married and/or living together constituted the largest group with 52 percent followed by those single with a proportion of 40 percent of the 132 participants responding.

Of the 130 participants who responded to the employment question, 99 (76 percent) were not employed.

4.2 Characteristics of participants with an intention to get an HIV test

A frequency distribution for the intention to have an HIV test classified by area, marital status, employment status and relationship is given in Table 2 below.

All the 134 participants responded to the question on intention to have an HIV test of which 49% indicated an intention to have the test. Of the 66 reporting an intention to having an HIV test Glen View had a higher proportion of 59% compared to Kuwadzana. Of the 65 participants with an intention to have an HIV test, 69% were females.

A total of 128 participants provided their ages at last birthday from which an age distribution participants who intent to have an HIV test is shown. Among the 63 who intent to have an HIV test, the young adults in the 15 - 24 age group were 30 representing

48% followed by the 25 ï 34 age group with a proportion of 33%. The 45 years and above age group with 3% was the least represented and not statistically significant.

Table 2: Proportion of participants with intention to have an HIV test classified by socio-demographic characteristics

Characteristic	Proportion with intention to have an HIV test (%)	95% Confidence Interval for proportion
Area	**N=66**	
Glen View	59.1	(46.9 - 71.3)
Kuwadzana	40.9	(28.7 - 53.1)
Gender	**N=65**	
Male	30.8	(19.2 - 42.3)
Female	69.2	(57.7 - 80.8)
Age group in completed years	**N=63**	
15 ï 24	47.6	(34.9 - 60.3)
25 ï 34	33.3	(21.4 - 45.3)
35 ï 44	15.9	(6.6 - 25.2)
Ó45	3.2	(-1.3 - 7.6)
Marital status	**N=65**	
Married/living together	56.9	(44.6 - 69.3)
Divorced/separated/widowed	9.2	(2.0 - 16.5)
Single/never married	33.8	(22.0 - 45.7)
Employment status	**N=64**	
Employed	18.8	(8.9 - 28.6)
Not employed	81.2	(71.4 - 91.1)
Reason for not testing HIV	**N=59**	
Just do not like	18.6	(8.4 - 28.9)
Testing not necessary	16.9	(7.1 - 26.8)
Donôt know where to be tested	15.3	(5.8 - 24.7)
Cannot afford fees	20.3	(9.8 - 30.9)
Afraid of testing positive	25.4	(14.0 - 36.9)
Spouse/partner did not want me to be tested	3.3	(-1.4 - 8.1)

The question on marital status was responded to by 132 participants. Of the 65 with an intention to have an HIV test, 57% were married/living together. The divorced/separated group combined with the widowed was the least constituting only 9% and statistically significant.

A total of 130 participants responded to the employment question of which 64 had an intention to HIV test. Out of the 64 with intention to test, only 19% were employed.

Among the 65 participants with the intention, siblings and parents were reported to be the relations closest to the participants with proportion of 40 and 20 percent respectively.

On why people did not go for HIV testing, fear of testing positive constituted 25% followed by inability to afford fees with 20%. Only 3%, not statistically indicated that their spouse/partner did not want them to be tested.

4.3 Assessing validity of constructs using Cronbach's alpha

Table 3 below gives inter-item correlations and the Cronbachôs alpha for each of the constructs: (a) intentions to HIV testing, (b) attitudes and (c) subjective norms. The Cronbachôs alpha for intentions was 0.89, attitudes 0.74 and for subjective norms was 0.56.

Table 3: Average inter-item correlation and Cronbach's alpha for constructs

Item	Number of observa-tions	Sign	Average inter-item correlation	Alpha
1. Intentions				
1: I expect to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months	134	+	0.78	0.88
2: I want to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months	134	+	0.74	0.85
3: I intent to attend an HIV voluntary counseling and testing session at a VCT centre within the next three months	134	+	0.69	0.82
Test scale			0.74	0.89
2. Attitudes				
1: For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (useful - harmful)	106	+	0.30	0.57
2: For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (good - bad)	98	+	0.29	0.55
3: For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (not beneficial-beneficial)	117	-	0.72	0.88
4: For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (enjoyable-not enjoyable)	99	+	0.33	0.60
Test scale			0.41	0.74

Item	Number of observa-tions	Sign	Average inter-item correlation	Alpha
3. Subjective norm				
1: People who are closest to me think that I (should-should not) attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months	133	+	0.47	0.73
2: It is expected of me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months strongly (disagree-agree)	133	+	0.11	0.28
3: I feel under pressure from the people whose opinions to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months strongly (disagree-agree)	133	+	0.30	0.56
4: People who are closest to me want me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months (disagree-agree)	133	+	0.07	0.19
Test scale			0.24	0.56

A visual inspection of the normal probability plot for intention based on the Cronbachôs alpha is illustrated in Fig 3 below. Another plot for intention based on factor analysis is illustrated in Fig 4. They both indicate some near normality in the variable as some of the points are falling on the line.

Fig 3: Normal probability plot for intention based on scores using Cronbach's alpha

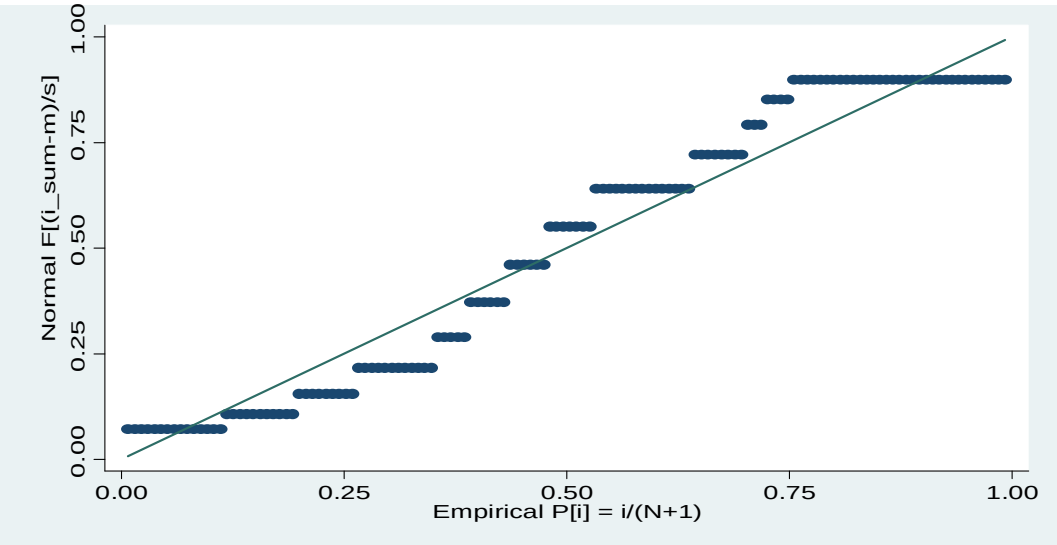


Fig 4: Normal probability plot for intention based on factor scores

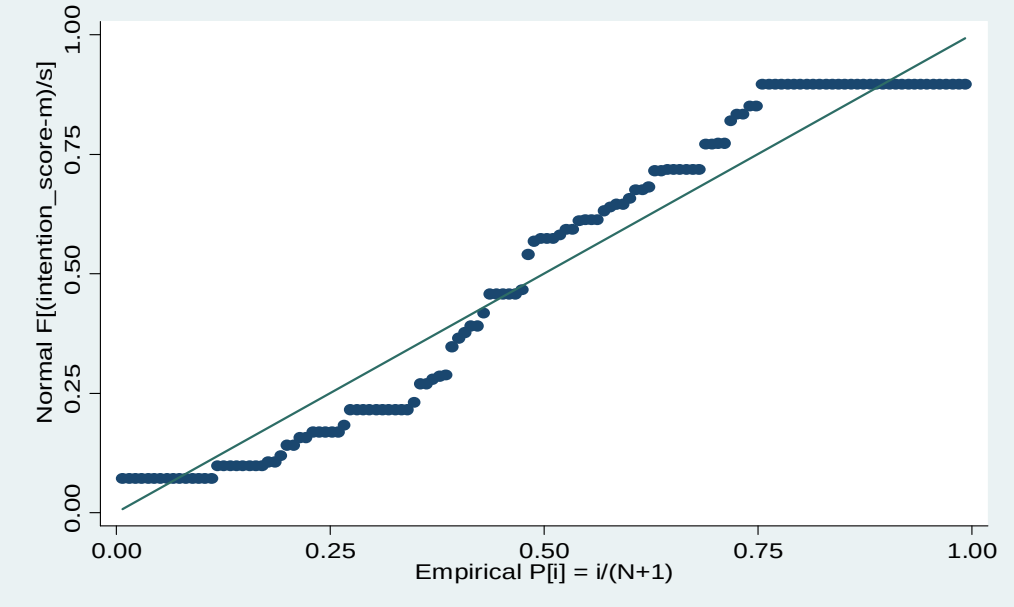


Table 4 below also gives inter-item correlations and the Cronbachôs alpha for each of the constructs: intentions to HIV testing, attitudes and subjective norms with the Cronbachôs alpha 0.66.

Table 4: Average inter-item correlation and Cronbach's alpha for direct measures of intention, attitudes and subject norms constructs

Item	Number of observations	Sign	Average inter-item correlation	Alpha
Total for the intentions	134	+	0.24	0.39
Total for attitudes	94	+	0.54	0.70
Total for subjective norms	132	+	0.34	0.51
Test scale			0.39	0.66

4.4 Pearson's correlation coefficients for the constructs

Table 5 below shows the Pearsonôs correlation coefficients for each of the items within the constructs: intention, attitudes and subjective norms. Correlation coefficients for all items in the intention construct were statistically significant. The third item in the attitudes constructs which states: ôFor me to attend an HIV voluntary counseling and testing session within the next 3 months is (not beneficial-beneficial), was not correlated with other items. Its correlations with the 1st, 3rd and 4th attitudes were -0.04, -0.13 and -0.15 respectively. The correlations were also not statistically significant.

The first item in the subjective norms construct: People who are closest to me think that I (should-should not) attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months was also not correlated with the 2nd, 3rd and 4th item with respective correlations 0.05, -0.17 and 0.14.

The number of participants who responded to the attitudes questions was low ranging from 98 to 117 and only one participant did not respond to the subjective norms.

Table 5: Pearson's correlation coefficient for items within the intention, attitude and subjective norm constructs

Construct and item	Correlation coefficient	Statistical significance
(a) Intentions		
1: I expect to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months and 2: I want to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months	0.69	p<0.01
1: I expect to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months and 3: I intent to attend an HIV voluntary counseling and testing session at a VCT centre within the next three months	0.74	p<0.01
2: I want to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months and 3: I intent to attend an HIV voluntary counseling and testing session at a VCT centre within the next three months	0.78	p<0.01
(b) Attitudes		
1: For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (useful - harmful) and 2: For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (good - bad)	0.79	p<0.01
1: For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (useful - harmful) and 3: For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (not beneficial-beneficial)	-0.04	
1: For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (useful - harmful) and 4: For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (enjoyable-not enjoyable)	0.71	p<0.01

2: For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (good - bad) and 3: For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (not beneficial-beneficial)	-0.15	
2: For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (good - bad) and 4: For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (enjoyable-not enjoyable)	0.64	p<0.01
3: For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (not beneficial-beneficial) and 4: For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (enjoyable-not enjoyable)	-0.13	
(c) Subjective norms		
1: People who are closest to me think that I (should-should not) attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months and 2: It is expected of me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months strongly (disagree-agree)	0.05	
1: People who are closest to me think that I (should-should not) attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months and 3: I feel under pressure from the people whose opinions to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months strongly (disagree-agree)	-0.17	
1: People who are closest to me think that I (should-should not) attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months and 4: People who are closest to me want me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months (disagree-agree)	0.14	

2: It is expected of me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months strongly (disagree-agree) and 3: I feel under pressure from the people whose opinions to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months strongly (disagree-agree)	0.33	p<0.01
2: It is expected of me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months strongly (disagree-agree) and 4: People who are closest to me want me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months (disagree-agree)	0.71	p<0.01
3: I feel under pressure from the people whose opinions to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months strongly (disagree-agree) and 4: People who are closest to me want me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months (disagree-agree)	0.37	p<0.01

Table 6 below shows inter-item correlations and the Cronbachôs alpha for attitudes and subjective norms after removing each of items that were not correlated with other items in each of the two constructs. The within-construct Cronbachôs alpha for attitudes changed to 0.88 up from 0.74 and subjective norms 0.73 up from 0.56.

Table 6: Average inter-item correlation and Cronbach's alpha for attitudes and subject norms constructs

Item	Number of observations	Sign	Inter-item correlation	Alpha
(a) Attitudes				
1: For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (useful - harmful)	106	+	0.64	0.78
2: For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (good - bad)	98	+	0.71	0.83
4: For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (enjoyable-not enjoyable)	99	+	0.79	0.88
Test scale			0.72	0.88
(b) Subjective norms				
2: It is expected of me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months strongly (disagree-agree)	133	+	0.37	0.54
3: I feel under pressure from the people whose opinions to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months strongly (disagree-agree)	133	+	0.71	0.83
4: People who are closest to me want me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months (disagree-agree)	133	+	0.33	0.50
Test scale			0.47	0.73

Normal probability plots for belief-based attitudes and subjective norms obtained from scores using the Cronbachôs alpha after removing uncorrelated items are presented

respectively in Figs 5 and 6 below. The points for both belief-based attitudes and subjective norms as predictors were lying along and close to the straight line suggesting that variable approximated normality.

Fig 5: Normal probability plot for belief-based attitudes based on total scores from Cronbach's alpha after removing uncorrelated items

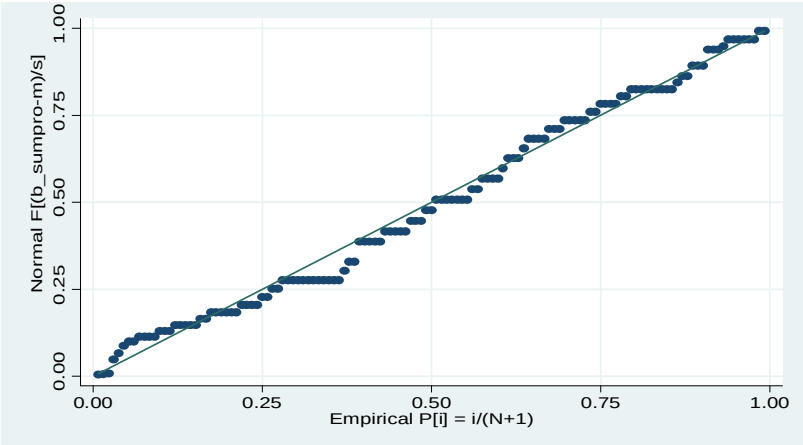
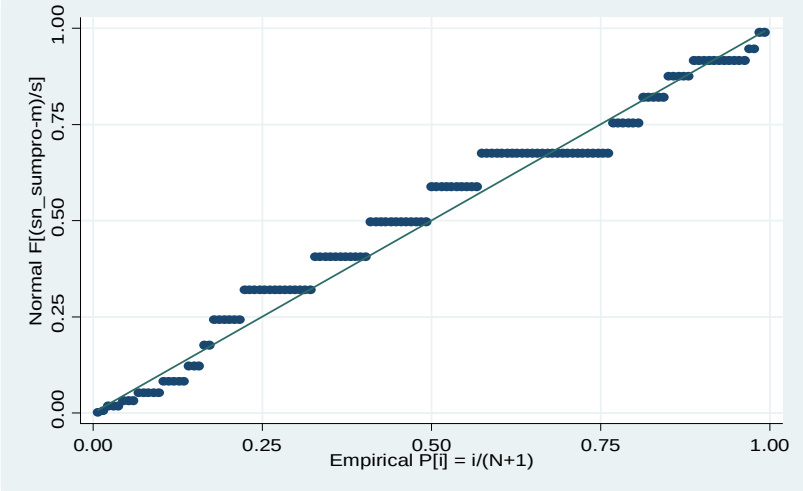


Fig 6: Normal probability plot for belief-based subjective norms based on total scores from Cronbach's alpha after removing uncorrelated items



The normal probability plot for the variable age did not show normality and therefore not included in the analysis. A discriminant function based on the factor loadings was also not considered since the attitudes construct was not statistically significant.

4.5 Assessing validity of constructs using factor analysis

Two factors were obtained for each of the two constructs, attitudes and subjective norms as shown in Table 7 below. Based on Factor 1, the 3rd item in the attitudes construct did not load highly with as evidenced by a low factor loading of 0.14.

Table 7: Factor loadings for attitudes and subjective norms

Item in the construct	Factor1	Factor2	Uniqueness
(a) Attitudes			
1: For me to attend an HIV voluntary counseling and testing session within the next 3 months is (useful - harmful)	0.88	-0.11	0.21
2: For me to attend an HIV voluntary counseling and testing session within the next 3 months is (good - bad)	0.84	0.04	0.29
3: For me to attend an HIV voluntary counseling and testing session within the next 3 months is (not beneficial-beneficial)	0.14	0.25	0.92
4: For me to attend an HIV voluntary counseling and testing session within the next 3 months is (enjoyable-not enjoyable)	0.76	0.03	0.42
(b) Subjective norms			
1: People who are closest to me think that I (should-should not) attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months	-0.06	0.38	0.85
2: It is expected of me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months strongly (disagree-agree)	0.78	-0.04	0.40

3: I feel under pressure from the people whose opinions to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months strongly (disagree-agree)	0.43	0.30	0.72
4: People who are closest to me want me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months (disagree-agree)	0.80	-0.10	0.35

With a factor loading of -0.07, the 1st item in the intention construct also did not load highly. Table 8 shows that all items in the intention construct loaded highly.

Table 8: Factor loadings for intentions

Item in the intention construct	**Factor1**	**Uniqueness**
1: I expect to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months	0.80	0.36
2: I want to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months	0.84	0.29
3: I intent to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months	0.87	0.24

Factor scores for intention, attitudes and subjective norms obtained by regression methods based on varimax rotated factors are shown in Table 9 below. The 3rd item in the intention construct had the highest score of 0.43. The 1st item for attitudes had the highest score of 0.48.

Table 9: Factor scores for intention, attitudes and subjective norms

Variable	Factor score
(a) Intention	
1: I expect to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months	0.26
2: I want to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months	0.33
3: I intent to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months	0.43
(b) Attitudes	
1: For me to attend an HIV voluntary counseling and testing session within the next 3 months is (useful - harmful)	0.48
2: For me to attend an HIV voluntary counseling and testing session within the next 3 months is (good - bad)	0.32
4: For me to attend an HIV voluntary counseling and testing session within the next 3 months is (enjoyable-not enjoyable)	0.21
(c) Subjective norms	
2: It is expected of me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months strongly (disagree-agree	0.41
3: I feel under pressure from the people whose opinions to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months strongly (disagree-agree)	0.13
4: People who are closest to me want me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months (disagree-agree)	0.45

Based on the factor scores, intention was regressed on attitudes and subjective norms and the coefficients obtained are given in Table 10 below.

Table 10: Linear regression model for intention on attitudes and subjective norms based on factor scores

Intention	Coefficient	p-value	[95% Confidence Interval]
Attitudes	0.13	0.143	-0.05 - 0.31
Subjective norms	0.67	0.000	0.50 - 0.84
Constant	0.74	0.088	-0.11 - 1.58

The coefficient for attitudes was 0.13 and the constant was 0.74 and both were not statistically significant. However, the overall model was statistically significant with a coefficient of determination of R^2 of 0.43.

Table 11 shows estimates of a regression model of intentions on attitudes and subjective norms. The belief-based attitudes were derived from the sum of products for belief strengths and outcome evaluation. Similarly, belief-based subjective norms were also derived from sum of products for normative beliefs and motivation to comply. All the independent variables including the constant were statistically significant.

Table 11: Linear regression model for intention on belief-based attitudes and belief-based subjective norms based

Intention	Coefficient	[95% Confidence Interval]
Belief-based attitudes	0.14	0.09 ï 0.20
Belief-based subjective norms	0.21	0.05 ï 0.37
Constant	6.00	4.22 ï 7.79

The standardized coefficients for a discriminant function obtained using dichotomous responses from Question 13: *Do you intent to attend HIV voluntary counseling and testing at a VCT centre within 3 months?* were: belief-based attitudes 0.88 and subjective norms 0.30. About 68.5% of the participants were correctly classified by discriminant function.

CHAPTER 5: DISCUSSION

5.1 Comparison of the Cronbach's alpha and factor loadings on intention

The Cronbachôs alpha for intention of 0.89 suggests that all the items in that construct were highly correlated. The high alpha of that magnitude could likely have been attributed to 100% response rate achieved by the intention construct.

Factor loadings for each of the items in the intention construct were also high such that none on the items was excluded from analysis. A comparison of the two approaches is worthwhile.

5.2 Comparison of the Cronbach's alpha and factor loadings on intention, attitudes and subjective norms

Removal of the item that was not correlated with other attitude construct increased reliability from 0.74 to 0.88. This improvement in reliability gave confidence in deriving a summated scale of attitudes based on the remaining three items. This also made the attitude construct more reliable as a predictor for intentions.

Montano & Kasprzyk stated that direct measures are more strongly associated with intention and behaviour than the indirect measures[6]. Results of this study were consistent with this assertion when correlations between the sums for intention, attitudes and subjective norms were produced.

Montano & Kasprzyk further stated that indirect measures are strongly associated with direct measures, to have confidence that the appropriate beliefs were measured and that the composite beliefs (behavioural and normative) are adequate measures of the respective TRA constructs [6]. Results of this study were also consistent with this assertion.

However there is no explanation as to why a regression model of intention on attitudes and subjective norms based on factor scores (Table 10) had a statistically non-significant coefficient for attitudes when compared with one based on the Cronbachôs alpha (Table 11)

As with attitudes, removal of the 1st item on subjective norms that was not correlated with others increased the Cronbachôs alpha from 0.56 to 0.73 supporting the assertion that the subjective norms construct is a good predictor for intentions.

The low value of the Cronbachôs alpha observed in the subjective norm that rose up to acceptable level of 0.73 after removing the uncorrelated item supports the assertion that a construct with internal consistency predicts well. However there is no explanation as to why attitudes lost statistically significant correlation with intention after improving internal consistency.

Having excluded each of the two items from the attitudes and subjective norms constructs, correlation coefficients for the remaining items were all statistically

significant at 1% level. Again there is no explanation as to why the attitude ï intention correction dropped from 0.35 being statistically significance to 0.24 non-significant.

The direct measure of attitudes towards having an HIV test was significantly associated with its in indirect measure with correlation coefficient 0.44 ($p<0.01$). Similarly the association between the direct and indirect measures of subjective norms was statistically significant with a correlation coefficient of 0.42 ($p<0.01$).

5.3 Discriminant analysis

Discriminant analysis can best be applied when the independent variables: attitudes and subjective norms are normally distributed. An additional variable age was also considered as an independent variable. The predictor variable was based on the dichotomous variable: *Do you intent to attend HIV voluntary counseling and testing at a VCT centre within the next 3 months?*

The standardized coefficients for the belief-based attitudes and belief-based subjective norms in the discriminant function were 0.88 and 0.30 respectively. The greater of the two coefficients, which in our case is 0.88, imply that attitudes had a greater contribution in discriminating individuals into intentions and non-intention groups.

The group means on canonical variables of 0.61 for intentions group and -0.60 for non-intenders are far apart suggesting that few errors will be made by the model in

discrimination. The Wilkôs lambda F (3, 120) = 14.85 and (p=0.00) supports the above discrimination capability of the model.

5.4 Comparison between linear regression models of intention on belief-based (attitudes and subjective norms) and the discriminant function

In linear regression model (Table 11) effect of attitudes (coefficient=0.14) on intentions is lower than that of the subjective norms (coefficient=0.21) though both statistically significant. In the discriminant function, the opposite is realized where attitudes (coefficient=0.880) and subjective norm (coefficient=0.30). There is no explanation as to why such a conflict exists.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The results of the study have shown that using factor analysis, the direct measure of the subjective norms construct is the main determinant of intention to have an HIV test as compared to attitudes.

On the other hand, the study has shown that both belief-based subjective norms and belief-based attitudes are determinants of intentions.

Attitudes and subjective norms obtained from scores based on Cronbachôs alpha predict intentions to HIV better than those based on factor analysis.

Using discriminant analysis, the study has shown that the attitudes construct is better the subjective norms construct in the discriminating participants into the groups with intention to test and with no intention.

6.2 Recommendations

To identify individuals who have never had an HIV test from the population requires huge amounts of resources. Costs would be reduced if questions based on TRA can be incorporated in the questionnaires for major surveys such as the populationï based ZDHS. However a balance should be struck between administering a very long questionnaire that caters for these additional questions and having a specific TRA survey.

6.3 Limitations

The study could not assess the actual testing of HIV testing by participants three months after the survey due to time constraints. Had time and resources been available, a follow up same participants could have been made to assess if indeed they had had an HIV test within the three months specified. Thus the behaviour construct is missing in the framework.

The sample size of 134 participants used in this study was small with an error margin of 9%. A 5% error margin could have been estimated by a minimum sample size 358. In factor analyses samples greater than 300 are considered good, greater than 500 very good and above 1000 are excellent [18]. The small sample size could be likely to explain why attitudes were not statistically significant when factor scores were used.

The weakness of this sampling scheme was that results cannot be generalized to the national population owing to the fact that individuals were selected using quota sampling, a non-probability sampling technique. Had a sampling frame of households been available, some probability sampling schemes such as simple random sample or systematic sampling could have been applied.

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APPENDIX 1: THEORY

3.1 Theory of Reasoned Action framework

Let i_sum=× i_i be the total score for the intentions (direct measure) construct, where

i_1 = I expect to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months

i_2 = I want to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months

i_3 = I intent to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months

Let a_sum=× ai be the total score for the attitudes (direct measure) construct where

a_1 = For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (useful - harmful)

a_2 = For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (good - bad)

a_3 = For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (not beneficial-beneficial)

a_4 = For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (enjoyable-not enjoyable)

Let b_sum = × bi be the total score for the behaviour strength construct where

b_1 = Attending an HIV voluntary counseling and testing session at a VCT centre within the next 3 months will make me feel I have done the right thing

b_2 = Attending an HIV voluntary counseling and testing session at a VCT centre within the next 3 months will make me encourage others to get tested

b_3 = Attending an HIV voluntary counseling and testing session at a VCT centre within the next 3 months will adversely affect me psychologically

b_4 = Attending an HIV voluntary counseling and testing session at a VCT centre within the next 3 months will make me lose my relationship with people closest to me

Let e_sum = $\times e_i$ be the total score for the outcome evaluation where

e_1 = Knowing my HIV status is extremely (undesirable-desirable)

e_2 = Encouraging others to get tested for HIV is extremely (undesirable-desirable)

e3 = Being adversely affected psychologically is extremely (unlikely-likely)

e4 = Losing my relationship with people closest to me is (unlikely-likely)

Let sn_sum = $\times (sn)_i$ be the total score for the subjective norm construct where

sn_1 = People who are closest to me think that I (should-should not) attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months

sn_2 = It is expected of me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months strongly (disagree-agree)

sn_3 = I feel under pressure from the people whose opinions to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months strongly (disagree-agree)

sn_4 = People who are closest to me want me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months (disagree-agree)

Let nb_sum = $\times (nb)_i$ be the total score for the normative belief construct where

nb_1 = People closest to me think that I (should-should not) attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months

nb_2 = The people who live with in my household would (disapprove-approve) my attending an HIV voluntary counseling and testing session at a VCT centre within the next 3 months

nb_3 = Most people who are closest to me (do-do not) attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months

Let mc_sum = $\times (mc)_i$ be the total score for the motivation to comply construct where

mc_1 = Approval of the people closest to me to attend an HIV voluntary counseling and testing session at a VCT centre is important to me (not at all-very much)

mc_2 = People who live in my household think I should do what matters to me

mc_3 = Doing what other people closest to me is important to me (not at all-very much)

We use the average inter-item correlation, which is the average of the Pearson correlation coefficients and the Cronbachôs Alpha to test for internal consistency of items within a construct and between constructs. A Cronbachôs Alpha of at least 0.7 suggests internal consistency [11].

All items in the direct intent construct are in the 0.7 range meaning that all items will be used in the summated scale. In the subjective norm construct, sn4 and sn2 have low Cronbachôs alpha of 0.19 and 0.28 respectively. Removing them from the construct as an attempt to improve reliability of the questionnaire resulted in even lower alphas.

Tables A2 to A5 below give the Pearsonôs correlation coefficients for the constructs.

Table A2: Correlation coefficients for intention

	i1	i2	i3
i1	1		
i2	0.69*	1	
i3	0.74*	0.78*	1

Table A3: Correlation coefficients for attitudes

	newa1	newa2	a3	newa4
newa1	1			
newa2	0.79*	1		
a3	-0.04	-0.15	1	
newa4	0.71*	0.64*	-0.13	1

Table A4: Correlation coefficients for subjective norms

	newsn1	sn2	sn3	sn4
newsn1	1			
sn2	0.05	1		
sn3	-0.17	0.33*	1	
sn4	0.14	0.71*	0.37*	1

Table A5: Correlation coefficients for intentions, attitudes and subjective norms

	i_sum	a_sum	sn_sum
i_sum	1		
a_sum	0.35*	1	
sn_sum	0.54*	0.24	1

All correlations marked with an asterisk (*) are statistically significant with p-value<0.01. In Table A3, the variables labeled newa1, newa2 and newa4 originally a1, a2 and a3 had negative end-points reversed. For instance, a response of 5 in the original variable was reverse coded to 1. The same applies to sn1 reverse coded and changed to newsn1.

An examination of the correlation coefficients in Table A3 shows that a3 is not significantly correlated with other items and its removal from the construct improved correlation among the remaining items. Similarly, newsn1 in Table A4 is not correlated with other items of the same construct and its removal from the summated scale resulted in improvement in the correlation with intentions [12].

After removal of a3 and newsn1 from their respective constructs, we have new variables in place of the original defined as:

a_sum1 = newa1 +newa2 +newa4

sn_sum1 = sn2 + sn3 + sn4

The output tables with the new variables are given below

Table A7: Correlation coefficients for intentions, attitudes and subjective norms based on scales that exclude a3 and newsn1

	i_sum	a_sum1	sn_sum1
i_sum	1		
a_sum1	0.24	1	
sn_sum1	0.60*	0.13	1

Indirect measures for attitudes and subjective norms

Let A_B = b_sum = $\times(b_i)(e_i)$ the sum of products for belief strengths and outcome evaluation for the ith item define A_B as a belief-based measure of attitude where b_i and e_i are defined above. According to Ajzen 1991, if the model specified above is valid, the belief-based measure of attitude should correspond well with a standard measure of the same attitude [13]. The A_B ï b_sum correlation coefficient is 0.439*.

Also let SN = sn_sumpro = $\times(nb_i)(mc_i)$ the sum of products for normative beliefs and motivation to comply for the ith item define SN as the indirect measure for subjective norms where nb_i and mc_i are defined above. The SN ï sn_sum correlation coefficient is 0.422*.

Mathematically, the Theory of Reasoned Action model is represented by

BI = ß$_0$ + ß$_1$(A_B) + ß $_2$(SN), where BI is intention to have an HIV test and ß $_1$ and ß $_2$ are empirical weights to be determined by regressing BI on A_B and SN. The regression coefficients are given in the Table A8 below.

Table A8: Coefficient estimates for regression of intention on belief-based measurement of attitude and subjective norms

Intention	Coefficient	t	P>t	[95% Confidence Interval]
Attitude (A_B)	.144	5.49	0.000	0.092 ï 0.196
Subjective norm (SN	.209	2.60	0.010	0.050 ï 0.368
Constant	6.00	6.66	0.000	4.219 ï 7.786

3.2 Discriminant Analysis (DA)

Discriminant Analysis (DA) is a multivariate statistical tool used to classify individuals or cases into their respective groups. In the case of two-group discrimination analysis, a linear model or combination called a discriminant function, as in regression analysis is built using a set of inter-correlated independent random variables whose values are obtained from each individual participating in a study. The dependant variable is categorical or nominal and in most cases a dichotomy. The linear combination of the (independent) discriminating variables is in the form $L=b_1X_1+b_2X_2+é é .+b_pX_p$ where $b_i$ôs are the discriminant coefficients estimated and $X_i$ôs are the discriminating variables. Based on this function, a new individual with a set measurement of the X_i ós will be classified as belonging to either group 1 or group 2. The groups must be defined in

advance before data gathering without regard to the variables being studied. Thus DA is used for discrimination and prediction.

If the function L is going to discriminate between the two groups, we would hope that the variation in the values of L between the two groups would be much greater than the variation in the values of L within the two groups [14].

Assumptions

The dependent variable must be truly categorical and the groups into which individuals fall must be mutually exclusive. All individuals or cases must be independent. Thus one cannot have correlated data (not before-after, panel, or matched pairs data, for instance).

The independent variables must be continuous. However, dummy variables and ordinal with at list 5 categories can be used. Random errors are randomly distributed. Variance should homogeneous within each group formed by the dependent variable.

It does not take into account interaction terms unless new cross-product terms are added as additional independent variables and the predictor variables must follow multivariate normal distributions [15]

Theory

Let Y be the dependent dichotomous variable on intention to attend HIV voluntary counseling and testing at a VCT centre within the next 3 months. Y is the grouping variable for the discriminant model.

Y=1 if ñyesò to intention and

Y=2 if ñnoò to intention

Let $X_1 = A_B$ be the belief-based attitude scale defined above

X_2 = SN be the subjective norm scale

Also let n_1 and n_2 be the number of participants that did have and did not have an intention to have an HIV test respectively. For our study, n_1 is 65 and n_2 is 68. Then the discriminant model based on the main predictor constructs of the TRA is estimated by:

$$L = b_1X_1 + b_2X_2$$

Normal probability plots were used to check for violation of normality assumptions for each of the predictor variables. The plots are given in the figures below.

Fig A1: Normal probability plot for attitudes

Fig A2: Normal probability plot for subjective norms

Estimation of the discriminant function coefficients

The discriminant function is built using standardized canonical discriminant function coefficients which are used to compare the relative importance of the independent variables much as the beta weights in regression. Importance is assessed relative to the model being analysed. Variables with the largest standardized regression coefficients are the ones that contribute most to the prediction [15].

The larger the coefficient the greater is the contribution of the associated variable to the discrimination [16]. Table A9 below gives the estimated coefficients of the model.

Table A9: Discriminant function

Independent variable	Coefficient
X_1	0.880
X_2	0.299

Hence the discriminant function is estimated by $L = 0.880X_1 + 0.299X_2$.

Group means on canonical variables otherwise known as functions at group centroids [15] are the mean discriminant scores for each of the dependent variable categories for each of the discriminant functions in multiple discriminant analysis. On our case we are performing a two-group DA where group 1 is for individuals with an intention to HIV test and group 2 for those with no intention and hence two centroids for one discriminant function. For the function to be more discriminating, the means must be far apart and the closer the means, the more the errors in classification [15]. Table A10 below shows the centroids for the two groups

Table A10: Group means on canonical variables

Intention to HIV test	Function1
1: Yes	0.614
2: No	-0.595

An ANOVA is used to test for the statistical significance of the discriminant function. Table A11 below shows the ANOVA table.

Table A11: Univariate ANOVA summaries

Variable	Model MS	Residual MS	Total MS	R^2	Adjusted R^2	F	Pr > F
b_sumpro	5203.5	16914.6	16823.8	0.235	0.229	39.4	0.000
sn_sumpro	202.5	2163.5	2148.3	0.086	0.079	12.0	0.001

Number of obs = 130 Model df = 1 Residual df = 128

The significance of the model can tested using the Wilkôs lambda. The same lambda statistic can also be used to test the significance of the independent variables in the discriminant function. The Wilkôs lambda assumes values that lie between 0 and 1 inclusive. A value close to 0 means that the groups differ resulting in the rejection of the null hypothesis of ñno differences between the groupsò. A Wilkôs Lambda close to 1 indicates the groups are not different and thus no discrimination. It follows an F distribution with (p, n1+n2-p-1) degrees of freedom where

p = number of variables in the model

n1 = numbers of participants with intention to an HIV test

n2 = are the and without intention to have an HIV test

Thus the Wilkôs Lambda was F(3, 120) = 14.85 with (p = 0.00)

Classification function

Classification functions are used to determine to which group each case most likely belongs [17] In the case of two groups there are two classification functions for scores in the form:

$S_1 = c_1 + b_{11}X_1 + b_{12}X_2$

$S_2 = c_2 + b_{21}X_1 + b_{22}X_2$ where

b_{ij} is the classification function coefficients for the j^{th} variable (j=1 belief-based attitude scale, j=2: subjective norms scale) in the computation of the classification score for the i^{th} group (i=1: intention, 2: no intention); Xj is the observed value for the respective case for

the jth variable and Si is the resultant classification score [16]. The classification functions obtained from our data are given below:

$S_1 = -4.646 + 0.703X_1 + 0.041X_2$

$S_2 = -3.031$ ï $0.047X_1 + 0.620X_2$

Alternatively, Kleinbaum describes cut-off points as being used as assignment rule:

Let $lbar_1 = b_1Xbar_{11} + b_2Xbar_{12}$ and

$Lbar_2 = b_1Xbar_{21} + b_2Xbar_{22}$ be the mean linear combinations for the two groups respectively where $Xbar_{11}$ and $Xbar_{12}$ are arithmetic means for the belief-based attitude scale and subjective norms for the intentions group and $Xbar_{21}$ and $Xbar_{22}$ are the means for the same variables in the non-intention group.

The cut-off point is determined by $½(lbar_1 + lbar_2)$. For an individual with observed variable values x1 and x2, we use the decision rule:

Assign to ñintentionsò group if $L > ½(lbar_1 + lbar_2)$ and

Assign to ñno intentionò group if $L < -½(lbar_1 + lbar_2)$

allocating individuals to one of the two groups, we would need to specify a critical score or cut-off point such that an individual is assigned to one group if his/her score exceeds the cut-off point and to another if it does not [14].

Misclassification

Having classified individuals into their respective groups a measure of goodness of the function called the error rate or misclassification rate defined as the probability of assigning an individual to a wrong group can be used to check if the discriminant

function can correctly classify cases. Table A12 below shows a summary of classification of individuals. Individuals with intention to have an HIV who were correctly classified were 41 and 48 of those with no intention were also correctly classified.

Table A12: Misclassification table

	Intention classified as: n(%)		
True intention	Yes	No	Total
Yes	41 (64.1)	23 (35.9)	64 (100)
No	18 (27.3)	48 (72.7)	66 (100)
Total	59 (45.4)	71 (54.6)	130 (100)
Priors	0.5	0.5	

APPENDIX 2: INFORMED CONSENT FORM

Informed consent form

Dear Participant

We are carrying out a study to find out your opinions about intentions, attitudes and beliefs of having an HIV test through answering questions on a form attached to this letter. We anticipate the form will take you no more than one hour to complete.

The findings of this study will assist planners in the health sector to design and improve on interventions that are used in the prevention and control of HIV and AIDS.

Your names will not be published but only used for follow ups should any queries arise during data processing. The information you provide will be treated as confidential and used only for this study. It will not be used in any way against you to cause you any harm.

Participation in this study is voluntary and you are free to withdraw from the study at any time.

I voluntarily consent to participate in the study: Signature:é é é é é é é é é é é é é Date:é é é é é é é é é .

Tsamba yekubvuma kuva muongororo

Wadiwa

Tiri kuita zvidzidzo zvekuwana mafungiro enyu pamusoro zvinodiwa kuitwa, zvamunofarira kana kusafarira nezvamunotenda pazviri pamusoro pekuongororwa HIV kubudikidza nekupindura mibvunzo iri pafomu rakabatana netsamba ino. Tino tarisira kuti zvingakutotrerai nguva isinga pfuuri awa (hour) imwe chete kuti mupindure fomu iri.

Zvichabuda muzvidzidzo izvi chichabatsira vanamazvikokota vanoshanda muchikamu chevezveutano kuti vagadzire nekugadzirisa zvirongwa zvinoshandiswa pakudzivirira kuparariira kweutachiona nechirwere che HIV ne AIDS.

Mazita enyu achangoshandiswa bedzi pakukubvunzisai ndokunge pane mibvunzo isina kupindurwa zvakanaka uye haazoshambadzirwi. Mashoko amuchatipa achachengetedzwa zvakasimba uye achangoshandiswa chete muzvidzidzo zvino. Haazomboshandiswi kana neimwe nzira ingakukanganisai.

Kupinda mudzidzo ino hakumanikidzwi uye makasununguka kubuda mairi chero nguva yamunganzwa kuda kubuda.

Ndinobvuma kuva muchikamu chezvidzidzo zvino: Signature:é é é é é é é é é é é é é Date:é é é é é é é é é .

APPENDIX 3: QUESTIONNAIRE: Intention to have an HIV test

Please complete all sections of the questionnaire. For all questions whose responses are numbered, please put a circle around the appropriate number.

Tapota pindurai zvikamu zvose zvemibvunzo. Pamibvunzo yose ine nhamba pamhinduro, makai pamhinduro yakakodzera.

Section A: Demographic characteristics

Question No	**Question** ***Mubvunzo***	**Response** ***Mhinduro***
1	What is your name? *Zita renyu ndiani?*	Surname *(Zita remhuri)* é é é é é . é é é é é é é é é é é é é é é First name *(Zita rekutanga)* …….. é é é é é é é é é é é é é é é
2	Gender (Please tick) *Muri munhurume kana munhukadzi?*	1 Male 2 Female *Murume Mukadzi*
3	Age at last birthday (in years) *Mave nemakore mangani ekuberekwa?*	é é é é é é é é ..
4	Marital status *(Please tick)* *Wanano (*	1 Married/living together (*Ndakaroora kana kuroorwa kana ndine wandiri kugara naye)* 2 Divorced/separated *(Takarambana kana kusiyana nemurume/mudzimai)* 3 Widowed *(Ndakafirwa nemurume kana mudzimai)* 4 Single/never married *(Handina kuroora kana kuroorwa)*
5	Are you employed *(Please tick) (If "No", skip Q6 and Q7)* *Munosevenza here?Kana misingasevenzi, musapindura zvenyu mibvunzo 6 na 7*	1 Yes *(Hongu)* 2 No *(Kwete)*
6	What is your occupation? *Munoita basa rei?*	é é é é é é é é é é é é é
7	Monthly salary *Munotambira marii pamwedzi?*	US$é é é é é é é é é ..
8	If óNoô to Q5, what is your source of income? *Kana musingasevenzi, ndedzipi nzira dzamunowana nadzo mari?*	é é

9	Where do you live? *(Address)* *Mungarepi?(Kero yekwamunogara)*	é é
10	Name of person closest to you. (One whom you confide with) *Zita remunhu ari pedyo newe. Munhu wauno taura naye zviri pasi pemoyo wako.*	é é
11	In what way are you related to the closest person in your life? *Ndiani wako paukama nemunhu uyu wauri pedyo naye?*	1 Parent *(Mubereki)* 2 Child *(Mwana wekubereka)* 3 Brother *(Mukoma/Munin'ina)* 4 Sister *(Hanzvadzi)* 5 Grand parent *(Sekuru/Ambuya)* 6 Grand child *(Muzukuru-Mwana wemwana wako)* 7 Cousin/Nephew/Niece *(Mwana: wehanzvadzi; wamukoma wemuni'nina; watete)* 8 Uncle/Aunt *(Babamukuru/mudiki; maiguru/mainini, tete, hanzvadzi yamai)* 9 In-law *(Tezvara, Ambuya, Tsano, Muroora, Mukuwasha* 10 Friend *(Shamwari)* 11 Other *(Umwewo)*
12	Why have you never been tested for HIV? *Sei usina kumboongororwa utachiona we HIV?*	1 Just do not like to be tested *Handingodi kuoongororwa* 2 Testing not necessary *Hapana chikonzero chekuongororwa* 3 Do not know where to be tested *Handizivi kwekuongoroprwa* 4 Cannot afford the fees *Handina mari yekubhadhara kuongororwa* 5 Afraid of testing positive *Ndinotya kuonekwa ndine utachiona* 6 Religious reasons *Chitendero changu hachindibvumidzi* 7 Spouse/partner does not want me to be tested *Murume/Mudzimai wangu haandibvumidzi kuongororwa HIV*

SECTION B

Each question in this section refers to your intention to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months.

Mubvunzo wese uri muchikamu chino uri maererano nekunzwa nekuda kwenyu kuenda kunopiwha dzidziso/zano pamwe nekuongororwa utachiona hwe HIV kunzvimbo inoongororwa HIV mumwedzi mitatu inotevera

Please circle the number that closely describes your response to each of the following questions.

Tapota isai denderedzwa pa nhamba inowirirana ne mhinduro iri pane umwe neumwe wemibvunzo inotevera

13. Do you intent to attend HIV voluntary counseling and testing at a VCT centre within the next 3 months? 1 *Yes / 2 No*

    Mune hurongwa hwekunopiwa dzidziso/zano pamwe nekuongororwa utachiona hweHIV kunvimbo inoongororwa HIV mumwedzi mitatu inotevera
    [1 Hongu / 2 Kwete]

14. I expect to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months

    Ndinotarisira kuenda kunopiwa dzidziso/zano pamwe nekuongororwa utachiona hweHIV kunvimbo inoongororwa HIV mumwedzi mitatu inotevera

    strongly disagree |_1_|_2_|_3_|_4_|_5_| strongly agree
    ndinobvumirani nazvo *handibvumirani nazvo*

15 Attending an HIV voluntary counseling and testing session at a VCT centre within the next 3 months will make me feel I have done the right thing whether my HIV results come out positive or negative

    Kuenda kunopiwa dzidziso/zano pamwe nekuongororwa utachiona hweHIV kunvimbo inoongororwa HIV mumwedzi mitatu inotevera kunoita kuti ndinzwe kuti ndaita chinhu chakanaka kunyangwe ongororo ikabuda ichiti ndine utachiona kana kuti handina utachiona

    extremely unlikely |_1_|_2_|_3_|_4_|_5_| extremely likely
    hazvingaitiki *zvingaitita*

16. I intent to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months

Ndine hurongwa hwekunopiwa dzidziso/zano pamwe nekuongororwa utachiona hweHIV kunvimbo inoongororwa HIV mumwedzi mitatu inotevera

strongly disagree |_1_|_2_|_3_|_4_|_5_| strongly agree
handibvumirani nazvo *ndinobvumirani nazvo*

17. Attending an HIV voluntary counseling and testing session at a VCT centre within the next 3 months will make me encourage others to get tested whether my HIV results come out positive or negative

Kuenda kunopiwa dzidziso/zano pamwe nekuongororwa utachiona hweHIV kunvimbo inoongororwa HIV mumwedzi mitatu inotevera kunondiita kuti ndikurudzire vamwe kuti vanoongororwawo kunyangwe ongororo yangu yabuda ichiti ndine utachiona kana kuti handina utachiona

extremely unlikely |_1_|_2_|_3_|_4_|_5_| extremely likely
hazvingaitiki *zvingaitita*

18. I want to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months

Ndinoda kunopiwa dzidziso/zano pamwe nekuongororwa utachiona hweHIV kunvimbo inoongororwa HIV mumwedzi mitatu inotevera

strongly disagree |_1_|_2_|_3_|_4_|_5_| strongly agree
handibvumirani nazvo *ndinobvumirani nazvo*

19. Attending an HIV voluntary counseling and testing session at a VCT centre within the next 3 months will adversely affect me psychologically

Kuenda kunopiwa dzidziso/zano pamwe nekuongororwa utachiona hweHIV kunvimbo inoongororwa HIV mumwedzi mitatu inotevera kunondikanganisa mupfungwa

extremely unlikely |_1_|_2_|_3_|_4_|_5_| extremely likely
hazvingaitiki *zvingaitita*

20. For me to attend a an HIV voluntary counseling and testing session within the next 3 months is

Kwandiri kunopiwa dzidziso/zano pamwe nekuongororwa utachiona hweHIV kunvimbo inoongororwa HIV mumwedzi mitatu inotevera

20.1	useful *kunondi batsira*	|_1_|_2_|_3_|_4_|_5_|	harmful *kunondi kuvadza*
20.2	good k*wakanaka*	|_1_|_2_|_3_|_4_|_5_|	bad *kwakaipa*
20.3	not beneficial h*akundibatsire*	|_1_|_2_|_3_|_4_|_5_|	beneficial *kunondibatsira*
20.4	enjoyable *kunondinakidza*	|_1_|_2_|_3_|_4_|_5_|	unenjoyable *hakundinakidze*

21. Attending an HIV voluntary counseling and testing session at a VCT centre within the next 3 months will make me lose my relationship with people closest to me

Kunopiwa dzidziso/zano pamwe nekuongororwa utachiona hweHIV kunvimbo inoongororwa HIV mumwedzi mitatu inotevera kuchandiita kuti ndirasikirwe neukama hwangu nevanhu vari pedyo neni

extremely unlikely *hazvingaitiki*	|_1_|_2_|_3_|_4_|_5_|	extremely likely *zvingaitita*

22. Knowing my HIV status is

Kuziva pandimire nekuda kweutachiona

extremely undesirable *hakushuvirwe*	|_-2_|_-1_|_0_|_1_|_2_|	extremely desirable *kunoshuvirwa*

23. Encouraging others to get tested for HIV is

Kukurudzira vamwe kunoongorwa HIV

extremely undesirable *hakushuvirwe*	|_-2_|_-1_|_0_|_1_|_2_|	extremely desirable *kunoshuvirwa*

24. Being adversely affected psychologically by being tested for HIV is

Kukanganisika mupfungwa nekuda kwekuongorwa utachiona hwe HIV

extremely unlikely |_-2_|_-1_|_0_|_1_|_2_| extremely likely
kungaitika *hakungaitiki*

25. Losing my relationship with people closest to me due to testing for HIV is

Kurasikirwa neukama hwevanhu vari pedyo neni

extremely unlikely |_-2_|_-1_|_0_|_1_|_2_| extremely likely
kungaitika *hakungaitiki*

26. The people who are closest to me think that

Vanhu vari pedyo neni pamoyo vanofunga kuti

I should |_1_|_2_|_3_|_4_|_5_| I should not
n*dinofanira* *handifaniri*

attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months

kuongororwa utachiona hweHIV kunvimbo inoongororwa HIV mumwedzi mitatu inotevera

27. It is expected of me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months

Zvinotarisirwa kwandiri kuti ndinoongororwa utachiona hweHIV kunvimbo inoongororwa HIV mumwedzi mitatu inotevera

*s*trongly disagree |_1_|_2_|_3_|_4_|_5_| *s*trongly agree
handibvumirani nazvo *ndinobvumirana nazvo*

28. I feel under pressure from the people whose opinions are for me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months

Ndinonzwa kumanikidzirwa kubva kune vanhu vane kufunga kwekuti ndinoongororwa utachiona hweHIV kunvimbo inoongororwa HIV mumwedzi mitatu inotevera

*s*trongly disagree |_1_|_2_|_3_|_4_|_5_| *s*trongly agree
handibvumirani nazvo *ndinobvumirana nazvo*

29. People who are closest to me want me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months

Vanhu vari pedyo neni pamoyo vanoda kuti ndinoongororwa utachiona hweHIV kunvimbo inoongororwa HIV mumwedzi mitatu inotevera

*s*trongly disagree |_1_|_2_|_3_|_4_|_5_| *s*trongly agree
handibvumirani nazvo *ndinobvumirana nazvo*

30. The people closest to me think that

Vanhu vari pedyo neni pamoyo vanofunga kuti

I should |_-2_|_-1_|_0_|_+1_|_+2_| I should not
ndinofanira *handifaniri*

attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months

kunoongororwa utachiona hweHIV kunvimbo inoongororwa HIV mumwedzi mitatu inotevera

31. The people who live with me in my household would

Vanhu vandinogara navo

disapprove |_-2_|_-1_|_0_|_+1_|_+2_| approve
vanga ramba *vanga bvuma*

my attending an HIV voluntary counseling and testing session at a VCT centre within the next 3 months

nezve kunoongororwa kwangu utachiona hweHIV kunvimbo inoongororwa HIV mumwedzi mitatu inotevera

32. Most people who are closest to me

Vanhu vari pedyo neni pamoyo

do |_-2_|_-1_|_0_|_+1_|_+2_| do not
vanoenda *havaende*

attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months

kunoongororwa utachiona hweHIV kunvimbo inoongororwa HIV mumwedzi mitatu inotevera

33. Approval of the people closest to me to attend an HIV voluntary counseling and testing session at a VCT centre is important to me

Kubvumidzwa nevanhu vari pedyo neni pamoyo kunoongororwa utachiona hweHIV kunvimbo inoongororwa HIV zvinondikoshera

not at all |_1_|_2_|_3_|_4_|_5_| very much
handizvibvumi *ndinozvibvuma zvikuru*

34. People who live with me think I should do what matters to me

Vanhu vanogara neni vanofunga kuti ndinofanira kuita zvandine hanya nazvo

not at all |_1_|_2_|_3_|_4_|_5_| very much
handizvibvumi *ndinozvibvuma zvikuru*

35. Doing what other people closest to me like is important to me

Kuita zvinodiwa nevanhu vari pedyo neni pamoyo zvinondikoshera

not at all |_1_|_2_|_3_|_4_|_5_| very much
handizvibvumi *ndinozvibvuma zvikuru*

APPENDIX 4: VARIABLE LIST

Question number	Variable name	Description	Variable type	Response category
1	q1	What is your name?	Text	
2	q2	Gender (Please tick)	Coded	1=Male
				2=Female
3	q3	Age at last birthday (in years)	Numeric	
4	q4	Marital status (Please tick)	Coded	1=Married/living together
				2=Divorced/separated
				3=Widowed
				4=Single/Never married
5	q5	Are you employed (Please tick) (If ñNoò, skip Q6 and Q7)	Coded	1=Yes
				2=No
6	q6	What is your occupation	Text	
7	q7	Monthly salary	Numeric	
8	q8	If ónoô to Q5, what is your source of income?	Text	
9	q9	Where do you live? (Address)	Text	
10	q10	Name of person closest to you. (One whom you confide with)	Text	
11	q11	In what way are you related to the closest person in your life? (Please tick)	Coded	1=Parent
				2=Child
				3=Brother
				4=Sister
				5=Grand parent
				6=Grand child
				7=Cousin/Nephew/Niece
				8=Uncle/Aunt
				9=Friend
				10=Other (Specify)
12	q12	Why have you never been tested for HIV? (Please tick)	Coded	1=Just do not like to be tested
				2=Testing not necessary
				3=Do not know where to be tested
				4=Cannot afford the fees
				5=Afraid of testing positive
				6=Religious reasons
				7=Spouse/partner does not want me to be tested
				8=Other
13	q1_1	Do you intent to attend HIV voluntary counseling and testing at a VCT centre within the next 3 months? 1 Yes / 2 No	Coded	1=Yes
				2=No
14	i1	I expect to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months	Coded scale	Strongly disagree-Strongly agree (1-5)

15	b1	Attending an HIV voluntary counseling and testing session at a VCT centre within the next 3 months will make me feel I have done the right thing	Coded scale	Extremely: (Unlikely - Likely) (1-5)
16	i3	I intent to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months	Coded scale	Strongly disagree-Strongly agree (1-5)
17	b2	Attending an HIV voluntary counseling and testing session at a VCT centre within the next 3 months will make me encourage others to get tested	Coded scale	Extremely: (Unlikely - Likely) (1-5)
18	i2	I want to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months	Coded scale	Strongly disagree-Strongly agree (1-5)
19	b3	Attending an HIV voluntary counseling and testing session at a VCT centre within the next 3 months will adversely affect me psychologically	Coded scale	Extremely: (Unlikely - Likely) (1-5)
20.1	a1	For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (useful - harmful)	Coded scale	Useful - Harmful (1-5)
20.2	a2	For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (good - bad)	Coded scale	Good - Bad (1-5)
20.3	a3	For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (not beneficial-beneficial)	Coded scale	Not beneficial - Beneficial (1-5)
20.4	a4	For me to attend a an HIV voluntary counseling and testing session within the next 3 months is (enjoyable-not enjoyable)	Coded scale	Enjoyable - Not enjoyable (1-5)
21	b4	Attending an HIV voluntary counseling and testing session at a VCT centre within the next 3 months will make me lose my relationship with people closest to me	Coded scale	Extremely: (Unlikely - Likely) (1-5)
22	e1	Knowing my HIV status is extremely (undesirable-desirable)	Coded scale	Extremely: (Undesirable - Desirable) (-2 to +2)
23	e2	Encouraging others to get tested for HIV is extremely (undesirable-desirable)	Coded scale	Extremely: (Undesirable - Desirable) (-2 to +2)
24	e3	Being adversely affected psychologically is extremely (unlikely-likely)	Coded scale	Extremely: (Unlikely - Likely) (-2 to +2)
25	e4	Losing my relationship with people closest to me is (unlikely-likely)	Coded scale	Extremely: (Unlikely - Likely) (-2 to +2)
26	sn1	The people who are closest to me think that I (should-should not) attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months	Coded scale	Should - Should not (1-7)
27	sn2	It is expected of me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months strongly (disagree-agree)	Coded scale	Strongly: (Disagree - Agree) (1-5)

28	sn3	I feel under pressure from the people whose opinions to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months strongly (disagree-agree)	Coded scale	Strongly: (Disagree - Agree) (1-5)
29	sn4	People who are closest to me want me to attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months (disagree-agree)	Coded scale	Strongly: (Disagree - Agree) (1-5)
30	nb1	The people closest to me think that I (should-should not) attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months	Coded scale	Should - Should not (-2 to +2)
31	nb2	The people who live with in my household would (disapprove-approve) my attending an HIV voluntary counseling and testing session at a VCT centre within the next 3 months	Coded scale	Disapprove - Approve (-2 to +2)
32	nb3	Most people who are closest to me (do-do not) attend an HIV voluntary counseling and testing session at a VCT centre within the next 3 months	Coded scale	Do - Do not (-2 to +3)
33	mc1	Approval of the people closest to me to attend an HIV voluntary counseling and testing session at a VCT centre is important to me (not at all-very much)	Coded scale	Not at all - Very much (-2 to +2)
34	mc2	What people who live in my household think I should do matters to me	Coded scale	Not at all - Very much (-2 to +2)
35	mc3	Doing what other people closest to me is important to me (not at all-very much)	Coded scale	Not at all - Very much (-2 to +2)