Knowledge, Attitudes, and Sexual Behaviour Among the Nigerian Military Concerning HIV/AIDS and STDs

Armed Forces Programme
on AIDS Control (AFPAC)

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List of Abbreviations

AFPAC	Armed Forces Programme on AIDS Control
AIDS	Acquired Immune Deficiency Syndrome
BCC	Behaviour change and communication
BSS	Behavioural Surveillance Survey
CDC	Centers for Disease Control and Prevention
CO	Commissioned officer
CSW	Commercial sex worker
DHQ	Defence Headquarters
DPKO	United Nations Department of Peace-keeping Operations
ECOMOG	The Economic Community of West African States Monitoring Group
FMOH	Federal Ministry of Health
HIV	Human Immunodeficiency Virus
HQ	Headquarters
IEC	Information, education, and communication
JCO	Junior commissioned officer
KAP	Knowledge, attitudes, and behaviour (survey)
NA	Nigerian Army
NAF	Nigerian Air Force
NASCAP	National AIDS/STD Control Programme
NCO	Non-commissioned officer
NDHS	Nigeria Demographic and Health Survey
NN	Nigerian Navy
PLWHA	People living with HIV/AIDS
SCO	Senior commissioned officer
SD	Standard deviation
STD	Sexually transmitted disease
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNFPA	United Nations Population Fund
VCT	Voluntary testing and counselling
WHO	World Health Organisation

1. Executive Summary

The first behavioural survey conducted in the Nigerian Armed Forces to elicit behavioural information that would contribute to a better understanding of the dynamics and underlying factors of the spread of sexually transmitted diseases (STDs) and HIV/AIDS in the military was carried out between May and August 2001.

The nationally representative survey was conducted amongst nearly 1,600 military personnel randomly selected from the three service arms of the Nigerian Armed Forces. Detailed information on the knowledge and attitudes regarding STDs and HIV/AIDS and on risky behaviour patterns was elicited. Also, information on some socio-demographic factors that could have possible explanatory value or confounding effects was obtained.

The survey reveals that Nigerian military personnel are very educated and dedicated, with long-term career investments in the military that imply personal and professional hardships and risks. Of concern is that Nigerian military personnel find themselves in professional and personal situations that lead to engaging in high-risk behaviours that could put them at risk of contracting STDs, including HIV. Furthermore, in view of the fact that military personnel live with and interact freely with the civilian population, they could serve as a potential core transmission group for these infections to the larger population. This is of great concern and calls for prompt interventions. Whilst military personnel are more aware of HIV/AIDS than the general population, more could be done by the Nigerian military to protect their dedicated officers and men to the extent possible from the risks to which they are exposed.

Some of the risky behaviours engaged in by military personnel that were identified include **multiple partnering,** with 15.3 percent of the respondents reporting having had at least two sexual partners over the last 12 months. Of these partners, one-third were non-regular sexual partners comprising casual acquaintances, girl/boyfriends, and paid sex partnerships. Although less than 5 percent of the study population admitted having paid for sex, only slightly more than half used a condom on that occasion.

A large proportion of respondents were aware that condoms could be used as protection against HIV/AIDS and other STDs, and most of the respondents (98%) knew where to acquire one. However, **only half of the respondents claimed to use a condom regularly with their non-regular partners**. In addition, **only one-quarter of all respondents had ever received supplies of condoms from the Armed Forces**, and of those who did, two thirds thought the supply inadequate.

Two-thirds of the respondents were married, but **17 percent did not cohabit with their partners** because they were either on peace-keeping missions or had to leave for training, sometimes **for periods in excess of six months, as was reported by 31.7 percent of the respondents**. **Almost half of the respondents who participated in the various peace-keeping operations admitted having sexual partners during the period away**. The longer the time spent away, the higher the chances that they had sexual partners. With

these sexual partners, only half of the respondents protected themselves by using a condom.

Many military personnel have little knowledge of STDs/HIV and poor understanding and low risk perception of HIV/AIDS. **Less than 50 percent of male respondents knew at least two accurate male-specific symptoms of STDs and only 21.5 percent of male respondents knew at least two female-specific symptoms of STDs**. Nearly 4 percent of those surveyed reported STD symptoms in the previous 12 months, and 10 percent of those did not seek modern health care treatment. Whilst nearly 40 percent of respondents had good HIV/AIDS transmission and prevention knowledge, **one-quarter of those surveyed had poor knowledge of HIV/AIDS**. Respondents' perception of their risk of contracting HIV was poor, as 41 percent felt they faced no risk of contracting HIV and 22 percent felt they had only a small risk. **Respondents' condom use does not vary with the level of perceived risk**.

Steps taken by respondents to reduce risky behaviours were few. Only 40 percent of the respondents had been tested for HIV, out of which 35 percent voluntarily took the test. However, 89 percent will take the HIV screening test if it were to be provided free of charge.

The facts emerging from this survey have revealed that the Nigerian military personnel indulge in high-risk sexual behaviours, which puts them at high risk of contracting STDs, including HIV. The implications of this are two-fold. Firstly, the risk of contracting HIV may threaten the preparedness of the military to carry out its functions. Secondly, since military personnel live amongst the civilian population, they can serve as a potential core transmission group of these infections to the larger civilian population.

These findings highlight an **urgent need for proper planning and execution of targeted prevention strategies** in order to prevent undesirable consequences. There is also a need for biological sentinel surveillance in the military in order to track HIV and STDs so that resources can be re-directed to areas where they are most needed. Military personnel living with HIV/AIDS should be assured of the confidentiality of their HIV test results and protection of job security, employment, and the possibility of advancement in rank at least until medical discharge from the service.

It is also recommended that the Nigerian military formulate policies addressing whether or not condoms should be distributed freely and how regular the supply should be. Further studies are needed to determine the ideal duration of time military personnel can spend away from their base and avoid unhealthy sexual relationships.

2. Introduction

HIV/AIDS has continued to be a critical public health issue particularly in Africa, which is currently facing the worst effects of the epidemic. It is now the leading cause of death in Africa and the fourth most common cause of death worldwide.[1] Unfortunately, this may remain so until such time that prevention efforts become effective and a vaccine is developed.

At the end of 2000, over 36.1 million men, women, and children in the world were living with HIV/AIDS, out of which 21.8 million died from the disease. In the same year, 5.3 million new infections occurred worldwide, of which more than 4 million were in sub-Saharan Africa.[1,2] Currently, sub-Saharan Africa remains the region with the fastest growing epidemic and, unfortunately, the most underestimated epidemic in previous years. The region is reported to contribute two-thirds of the total number of people living with HIV in the world.[1] Nigeria, which represents the most populous country in Africa, contributes approximately 8 percent of the global burden of HIV/AIDS with an estimated 3.47 million people reported to be infected in 2000. The median prevalence is 5.8 percent, although it ranges between 0.5–21.0 percent in different parts of the country.[2]

As HIV continues to spread through the world, it has become increasingly obvious that the epidemic does not follow a set course in all societies. Rather, it affects different geographical areas and population sub-groups in different ways and at different times.[3]

This variation further complicates the task of monitoring the course of the HIV epidemic and hence, in providing appropriate interventions. Therefore, the benefits to be derived from a better understanding of the trends over time and of the behaviours of persons in the country during the epidemic cannot be over-emphasised. Such an understanding can only be achieved through surveillance, which provides much needed information about who is most at risk and which behaviours put them at risk.

The purpose of biological sentinel surveillance is to track HIV infection levels in populations that are of particular interest in the epidemic or representative of a larger population. However, one of the biggest difficulties encountered in tracking the spread of HIV is determining the extent to which the population tested is representative of any larger population. Behavioural surveys of HIV-related behaviour help to identify sub-populations at risk, which will help focus scarce resources on areas where more useful information and benefits can be derived.

It is generally recognised that certain sub-groups in the general population are more at risk of contracting and transmitting HIV infection than others. Military personnel have been reported to be among the most susceptible populations to HIV.[4] In southern Africa, militaries have recently been reporting HIV sero-positivity rates of 20–40 percent within their ranks, with rates as high as 50–60 percent in some of the countries where the virus has been present for more than 10 years.[4] In 1993, Cameroon reported HIV rates of 6.2 percent in the military compared with 2 percent in the general population. In the Central African Republic, rates as high as 22 percent were reported among recruits.[5] In

Nigeria to date, besides the ad-hoc screening carried out on soldiers who are about to be deployed to peace-keeping missions, there are no national data on HIV sero-prevalence in the military.

It is commonly understood that military personnel are generally young, sexually active people imbued with feelings of invincibility and a greater inclination toward high-risk behaviour compared with the general public. By virtue of the nature of their work, which involves a large degree of mobility and long periods of staying away from their families, they engage in high-risk sexual behaviours that expose them to STDs and HIV/AIDS. Furthermore, aside from having new recruits, who are usually in the 15–24 year-old age group and therefore most at risk of contracting HIV, military camps and barracks often attract commercial sex workers (CSWs), thus increasing vulnerability.

When this health risk is high enough, it can be seen as a significant threat to the preparedness of the military to carry out its functions. The proper planning and formulation of policies by the military to address this threat must be based on accurate and timely information.

This behavioural survey attempts to elicit behavioural information that would contribute to a better understanding of the dynamics and underlying factors of the spread STDs and HIV/AIDS in the military. It will also serve as baseline information that can be linked with future follow-up studies or interventions.

3. Project Objectives

The primary objective of this study is to provide a better understanding of behaviour that puts military personnel in Nigeria at risk of HIV infection.

3.1 Specific Objectives

1. To identify the risky behaviours in which military personnel engage.

2. To investigate the socio-demographic and other factors that may influence these behaviours.

3. To determine the precautionary measures adopted by military personnel to reduce the risks.

4. To assess the level of knowledge of military personnel and their attitudes toward STDs and HIV/AIDS.

5. To ascertain the health-seeking behaviours of military personnel in the treatment of STDs and HIV/AIDS.

6. To determine the prevalence of STDs and HIV among military personnel using proxy data (i.e. pre-employment, pre-operation, and hospital data).

3.2 Research Questions

The above objectives may be re-formulated in terms of the following main study questions:

1. What are the risky behaviours engaged in by military personnel?
2. What do personnel do to reduce these risks?
3. In what situations do personnel find themselves that increase these risks?
4. What knowledge do personnel have regarding STDs and HIV/AIDS?
5. To what extent do personnel seek treatments for STDs and HIV/AIDS?
6. What do available proxy data show about STDs and HIV among military personnel?

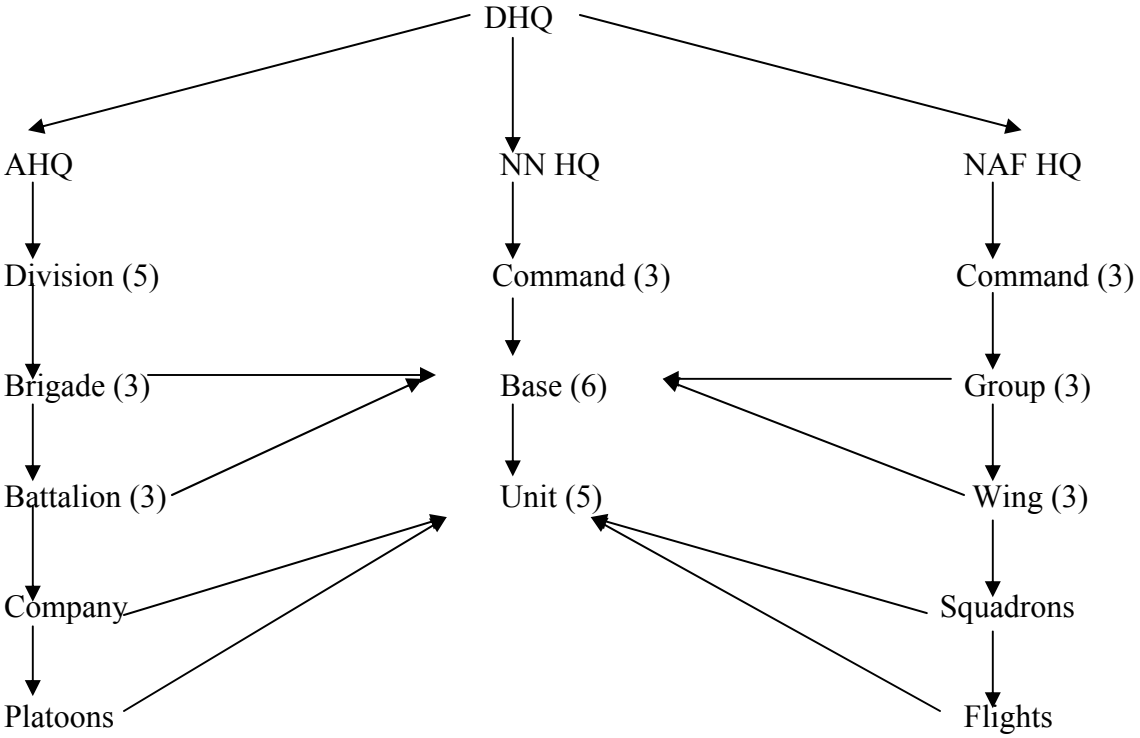
4. Research Methodology

4.1 The Armed Forces Structure

The Defence Headquarters (DHQ) is made up of three service arms—the Nigerian Army (NA), the Nigerian Air Force (NAF), and the Nigerian Navy (NN). These service arms are unevenly distributed in size in six zones—namely Division 1 (Kaduna Zone), Division 2 (Western Zone), Division 3 (Jos Zone), Division 82 (Eastern Zone), Division 81 (Lagos Zone), and Abuja Zone—using the zonal structure of the Nigerian Army.

In each zone, sub-divisions of the service arms (i.e. commands, battalions, wings, etc.) are distributed in various towns/cities of Nigeria, which are referred to as "sites." The NA and the NAF are each divided into five such sub-divisions, whilst the NN has only three (see Figure 1).

Figure 1. Structure of the Defence Headquarters



At each site, there is a wider distribution of the NA divisions compared with the NAF, which is in turn more widely distributed than the NN.

The estimated population size of the NA is 80,000 comprising 8,000 officers and 72,000 "other ranks." The Air Force and Navy have population sizes of 10,000–12,000 personnel comprising 2,000 officers and 8,000 other ranks and 8,000–10,000 personnel comprising 1,500 officers and 7,500 other ranks, respectively.

4.2 Study Population

The study population was made up of officers and other ranks from the three arms of the Armed Forces in Nigeria. In Nigerian military terminology, personnel below the commissioned officer level (other ranks) are known as "men" regardless of their sex. The other ranks are regarded as military personnel who joined the Armed Forces as recruits at the lowest rank to warrant officers at the highest rank. This group can be further subdivided into: 1) non-commissioned officers (NCOs); and 2) ranks and files.

The former are recruits who graduate as privates after an initial period of training. The highest rank to which they can aspire to be promoted is Warrant Officer Class 1. Occasionally, however, because of exceptional service and diligence to duty, they may be commissioned as officers. The latter are juniors ranging from recruits to sergeants.

The officers are also known as commissioned officers (COs). This group can be further subdivided into: 1) junior commissioned officers (JCOs), whose ranks are from 2nd Lieutenant to Captain; and 2) senior commissioned officers (SCOs), from Major to Field Marshall. (See Appendix 2 for complete ranking structure).

Both groups are graduates of the Nigerian Defence Academy or other foreign academies of defence and include professionals who join the military on short service commissions. Upon graduation, regular and short service commission officers are commissioned as Lieutenants and may rise to the rank of Field Marshall.[6] For this study, the ranks of the respondents were used as proxies for their socio-economic status.

4.3 Study Design and Methods

This was a descriptive, cross-sectional behavioural survey of military personnel. Detailed information on the knowledge and attitudes regarding STDs and HIV/AIDS and risky behaviour patterns were elicited from a representative sample of the entire population of the Armed Forces. Also, information on some socio-demographic factors that could have possible explanatory values or confounding effects was also obtained. The field work for the study took place between May and August 2001.

This study design was adopted because it provides an efficient and rapid way of mapping out dominant behaviours, sexual mixing patterns, and potential high-risk groups.

4.4 Selection of Study Areas and Study Population

For the purpose of this study, all divisions/zones were included. In each zone, four sites were randomly selected from sampling frames of sites drawn from each division. Subsequently, from each selected site, one subdivision from a randomly selected arm was selected. This was done to ensure a wide coverage of the sites in Nigeria.

4.5 Sample Size

Behavioural data from a WHO survey on sexual behaviour was used as the basis for the calculation of an adequate sample size for this study.[7]

It was estimated that for most of the parameters to be measured, a minimum sample of 1,200 was adequate. However, taking into account an approximately 20 percent refusal and absence rate, the total sample size was increased to 1,600. Although this calculated sample size did not take clustering into account, precision was not appreciably altered in the main outcome variables, even for a design effect of 1.5.

4.6 Sampling Methods

To ensure that all zones and divisions were given a fair chance of selection, a multistage sampling method was adopted whereby sampling was done in three stages in each division. (See Appendices 2 and 3 for details).

In the first stage, at least three locations or sites (depending on the total number of locations) were randomly selected using existing sampling frames. In order to ensure that certain relevant characteristics such as sex and rank were not excluded in the sample, stratified samples were drawn from each site.

In the second stage, a cluster from only one branch of the Armed Forces was randomly selected from each selected site.

The third stage involved the random selection of respondents based on probabilities proportionate to the sizes of the clusters. Hence, from each of the selected clusters, 50, 15, and 25 respondents were selected by systematic sampling from the NA, NN, and NAF, respectively. Consideration was also given to stratification based on rank and sex distribution.

Therefore, from a total population of approximately 100,000 personnel distributed as:

- 80,000 Army personnel (comprising 8,000 officers and 72,000 other ranks);
- 10,000 Navy personnel (comprising 2,000 officers and 8,000 other ranks); and
- 8,000 Air Force personnel (comprising 1,500 officers and 7,500 other ranks),

1,600 respondents were selected using a ratio of 8:1:1 (1,280 NA : 160 NN : 160 NAF).

In recognition of the existence of various strata in the target population, stratification was based on:

1. *Rank/Branch of office.*
   - Army: 128 officers; 1,000 other ranks
   - Navy: 40 officers; 120 other ranks
   - Air Force: 40 officers; 120 other ranks

2. *Sex distribution.* It was difficult to obtain information on the sex distribution because of the unknown male-female sex ratio. However, an assumption that it could be 9:1 or less was used to determine the sex distribution of the respondents for the purpose of stratification.

5. Project Limitations

5.1 Study Design

The cross-sectional design adopted for this survey, though efficient and cheap, had the following limitations:

1. There was the potential for biased conclusions regarding the temporal sequence of risk factors and outcome variables of interest.

2. Information obtained on the socio-cultural and demographic characteristics could have changed over time, not reflecting the true picture.

3. There was the possibility of recall bias or incorrect statements on certain demographic factors such as age at first sexual contact, number of sexual partners, exact age, and so forth. To overcome these limitations, checks were built into the questionnaire to validate responses obtained. Also, the study procedures adopted were standardised and made uniform for all respondents.

To improve the quality of data collected, anonymity and confidentiality of information obtained were ensured throughout the duration of the study.

5.2 Determination of HIV Prevalence Using Proxy Data

One of the study objectives was to ascertain the prevalence of HIV in the military indirectly using proxy medical/laboratory records. However, this could not be achieved because after several attempts were made to obtain the data, it was eventually found that they were poorly kept, uncoordinated, and unreliable and had incomplete numerator records. Denominator data were not available for the calculation of risks and rates.

5.3 Financial Constraints

It would have been desirable to regard each arm of the Armed Forces as an independent group, thereby increasing the sample size to three times 1,250. However, this could not be implemented because of financial constraints. Rather, the calculated sample size was divided into three. The implication of this was that stratified analyses by branch of service could not be carried out on some of the key variables because of low cell sizes.

6. Main Findings

In this section we discuss the main findings of this first nationally representative behavioural survey conducted among military personnel in the Nigerian Armed Forces.

One thousand six hundred questionnaires were distributed and one thousand five hundred and sixty were returned. Although there were a few abstentions on some of the questions, most of the responses were devoid of inconsistencies and on the whole, the response rate of 97.5 percent was encouraging.

6.1 Background Characteristics of the Sample

6.1.1 Socio-demographic Characteristics

As can be seen in Table 1, the population surveyed was predominantly male (94.0%), whereas women are still a significant minority in the Nigerian military forces (6.0%). The population was also quite young, with a mean age of 37.2 (SD 10.2). The women surveyed were, on average, seven years younger than the men. In terms of religious affiliation, Christians represented 75 percent of all respondents with only 25 percent of respondents identifying as Muslim whereas Muslims represent nearly 45 percent of the general population.[8] There was a somewhat unequal distribution of respondents in the six geo-political zones in Nigeria, with the south-east perhaps being slightly under-represented.

Almost all the respondents (96.5%) were literate; only 3.5 percent reported having no formal education or their primary education incomplete. Unlike in the past, new entrants into the Nigerian Armed Forces are now required to have some level of education either from within the military system through the Nigerian Defence Academy or from outside the system. Thus, the Nigerian military population is quite well educated compared with the general population. About half (52.7%) of the respondents had completed at least a secondary education and nearly one-third had completed a tertiary education or higher. Respondents from the north-central and south-east regions of Nigeria had the highest proportion of uneducated personnel (data not shown). The proportion of respondents who had a primary education in the south-south region was higher than in the other regions (data not shown). The north-east had the highest proportion of respondents with a secondary education whilst the south-west had the highest proportion (47.8%) of respondents with a tertiary education and the north-east the least (28.7%). These findings agree to some extent with the trend in the general population where the south-west has the highest proportion of Nigerians with tertiary education although the north-west as against the north-east, as reported in this survey, has the lowest proportion with a tertiary education.[11] According to the 1999 Nigeria Demographic and Health Survey (NDHS), in the general population, in which fewer women (30.5% and 6.2%) than men (36.8% and 12.0%) attained secondary and tertiary levels of education, respectively. Women in the military are generally better educated than the general population; nearly half of the female respondents (48.4%) in this study had a tertiary level of education compared with not quite one-third of the male respondents (27.6%).[8]

Table 1. Demographic Characteristics of the Respondents

Characteristics	Frequency (%) Male	Female	Total % (n)
Sex	94	6	100 (1,549)
Age (yrs)			
18–24	6.7	21.7	7.6
25–34	37.3	47.8	37.9
34–44	29.0	25.0	28.8
45+	27.0	5.4	25.7
Mean age in years	*37.6*	*30.7*	*37.2*
Total	**1,450**	**92**	**1,542**
Religion			
Christianity	75.2	83.9	75.7
Islam	24.8	16.1	24.3
Total	**1,443**	**93**	**1,536**
Zone of origin			
SE	8.0	17.2	8.5
SS	24.2	22.6	24.1
SW	15.8	25.8	16.4
NE	16.8	16.1	16.8
NC	23.4	15.1	22.9
NW	11.8	3.2	11.3
Total	**1,452**	**93**	**1,545**
Level of education			
None/primary incomplete	3.7	1.1	3.5
Primary/secondary incomplete	15.8	2.2	15.0
Secondary/tertiary incomplete	53.0	48.4	52.7
Tertiary and other	27.6	48.4	28.8
Total	**1,451**	**93**	**1,544**

6.1.2 Experience in the Nigerian Military

Table 2 shows the distribution of respondents across the three arms of service, with more than two-thirds of all respondents from the NA, less than one-fifth of respondents (18%) from the NAF, and 14 percent from the NN.

Nearly 90 percent of respondents are NCOs, whilst 12.3 percent are junior and senior COs. Clearly, military service is a career in Nigeria with mean length of service nearly 17 years among men and 10.4 years among women.

There were many more non-commissioned officer respondents in this study population than officers—a true reflection of the target population, in which the ratio of officers to men was 1:12 in the NA and 1:4 in both the NAF and the NN.

Table 2 . Military Experience of Respondents

Characteristics	Frequency (%) Male	Female	Total %
Arm of service			
Nigerian Army	68.9	44.1	67.4
Nigerian Air Force	17.4	33.3	18.3
Nigerian Navy	13.7	22.6	14.3
Total	**1,456**	**93**	**1,549**
Rank			
"Men"	87.5	89.8	87.7
Officers	12.5	10.2	12.3
Junior NCO/Rank I	64.4	73.9	65.0
Senior NCO/Rank II	23.1	15.9	22.7
Junior CO/Rank III	6.2	4.5	6.1
Senior CO/ Rank IV & V	6.3	5.7	6.2
Total	**1,391**	**88**	**1,479**
Length of service (years)			
0–10	31.9	53.3	33.1
11–20	35.6	38.0	35.7
21–30	11.8	7.6	11.5
>30	20.8	1.1	19.6
Mean Length of Service	*16.9*	*10.4*	*16.5*
Total	**1,444**	**92**	**1,536**

6.2 Sexual History and Behaviour of the Respondents

This study also examined sexual experience and history. Nearly all of the respondents had experienced sex at least once; only thirteen respondents (0.9%) claimed they had never had sex (data not shown).

Table 3 shows median age at sexual debut was 19 for men and 20 for women, quite similar to the national averages reported in the 1999 NDHS.[8] The advantage of delaying, or being older at sexual initiation, of course is that people are generally protected from STDs and HIV per act of sex.[8] In Nigeria, the official age of maturity is 18 years.[12] In this study, almost half of the study population was sexually active by the age of 19 years and by 24, about 90.0 percent were sexually active. For those who had experienced sex, 95.8 percent of men and 83.7 percent of women were sexually active (had sexual intercourse within the preceding year).

Table 3. Percentage Distribution of Respondents According to Their Sexual Activity Status

	Male	Female
Age of sexual debut (years)		
Mean age at sexual debut	19.9	20.9
Median age at sexual debut	19.0	20.0
Total	**1,397**	**87**
Recent sexual activity		
Has **not** had intercourse in last 12 months	4.2	16.3
Had intercourse in the last 12 months	95.8	83.7
Total	**1,420**	**86**

6.2.1 Types of Sexual Relationships

For the purpose of this survey, a sexual partner was defined as "any person with whom respondents have had sex including spouse, girl/boyfriends, casual partners, commercial sexual partners."[13,15] Respondents were asked several questions about their sexual partnerships, including the number of sexual partners he/she had at the time of the interview, the number of sexual relationships engaged in when on peace-keeping operations, and the number of sexual partners during the previous 12 months. This last question provides the most detailed information on the nature and the dynamics of sexual relationships because a series of questions were asked about the types of relationships and about condom and contraceptive use for each of the relationships mentioned (up to a maximum of three).

At the time of this survey, as seen in Table 4, 5.7 percent of all respondents reported no current sexual partner. Nearly four-fifths (78.0%) reported just one partner, 12.3 percent had two partners, and the rest (4.0%) had three or more. When asked in more detail about sexual partnerships during the previous 12 months, the pattern is fairly similar, with 12.9 percent reporting two sexual relationships and 4.4 percent reporting at least three. Whilst a slightly higher proportion of respondents report having no sexual partnerships during the previous year than compared with current sexual relationships, this is a small difference caused by those respondents who did not answer the questions on sexual partnerships during the previous 12 months.

The types of relationships that respondents had with their last three sexual partners varied. Table 5 shows the type of relationship with sexual partners in the previous 12 months according to the number of sexual partnerships reported by respondents. For those with only one sexual relationship in the past year, most of the partners (79.0%) were either spouses or live-in partners. Non-cohabiting girl/boyfriends comprised 20 percent of the sexual relationships reported by those with only one partner. For those who reported more than one sexual partnership within the previous 12 months, the proportion of partners identified as spouses or live-in partners was much lower compared with those with only one sexual partnership (27.3% and 19.7% for those with two and three partners, respectively). The proportions of partners identified as girl/boyfriends

Table 4. Distribution of Respondents' Marital Status and Partnerships by Respondents' Sex

Characteristics	Frequency (%)		
	Male	Female	Total %
Marital status			
Currently married[1]	69.9	46.7	68.6
Previously married	4.8	3.3	4.7
Never married	25.2	50.0	26.7
Total	**1,447**	**92**	**1,539**
Type of marriage[2]			
Polygamous	9.5	9.3	9.5
Monogamous	90.5	90.7	90.5
Total	**1,007**	**43**	**1,050**
Mean number of children[3]	4.1	2.4	4.0
Median number of children[4]	4.0	2.0	4.0
Total	**884**	**32**	916
Number of sexual partners at time of interview[5]			
0	5.3	12.5	5.7
1	77.6	83.9	78.0
2	12.9	3.2	12.3
3+	4.2	1.1	4.0
Total	**1,442**	**93**	**1,535**
Number of sexual relationships in past year[6]			
0			9.5
1			73.2
2			12.9
3+			4.4
Total			**1,509**

(non-cohabiting) for those with two and three or more sexual relationships were much higher at 64.9 percent and 71.2 percent, respectively. Paid (commercial) sexual partnerships and sexual relationships with casual acquaintances do not appear to figure prominently in the types of sexual relationships reported by respondents, representing fairly small proportions of the types of sexual relationships. However, the proportion of relationships defined as "casual acquaintances" does increase for those with two and

[1] Married or living together. Note: of those married or living together, 16.1% of men and 27.9% of women do not cohabit with their partner.
[2] Only for those currently married, overall 16.6% of married respondents do not cohabit.
[3] For those who have children. Note: of the currently married men, 88.6% have children, and of the women, 76.7% have children.
[4] For those who have children.
[5] Married and unmarried.
[6] Out of a maximum possible of three sexual relationships reported by respondents.

three or more sexual relationships, as compared to those with only one sexual relationship in the preceding 12 months.

Table 5. Distribution of Sexual Partnerships by Type of Relationship with Partners in Past 12 Months, by Number of Partners and by Partner's Age

	Type of Relationship with Partner				
	Spouse/Live-in	**Girl/boyfriend**	**Commercial**	**Casual Acq.**	**Total**
Number of partners[7]					
1	79.0	20.0	0.1	0.8	1,104
2	27.3	64.9	1.5	6.2	193
3+	19.7	71.2	1.5	7.6	65
Total					**1,362**
Mean age of partner/relationship, Number of Partners[8]					
1	30.8	22.3	23.0	13.6	28.9 (1,079)
2	31.5	23.9	9.0	20.7	25.7 (44)
3+	32.2	22.8	9.0	19.0	24.1 (65)

To date, the most common way of dividing relationships into high and low risk for HIV/AIDS and STDs has been by using a measure of time. Thus any (non-marital) relationship that has lasted, or is expected to last, for more than a year is classified as "regular" whilst any other relationship is classified as "non-regular."[13,15] Because a time-based definition of "non-regular" does not adequately capture the level of risk inherent in a partnership, it has been proposed that relationships be classified on the basis of cohabitation. In this regard, therefore, sex with any non-cohabiting partner is considered to be of higher risk than with a cohabiting partner, regardless of the duration of the relationship.[13] The definition used for this study captures these various classifications.

Non-regular partners (girl/boyfriends, CSWs, and casual acquaintances) tend to be young adults and adolescents, as can be seen by the mean ages of such partners in Table 5. In recent times, older men and women have either lured or coerced more adolescents into early sexual relations because of the erroneous belief that adolescents are less likely to be infected with HIV. What is not commonly known, however, is that the number of women, particularly adolescents and youth who are typically thought to be free of the disease, who are HIV-positive is rapidly reaching and surpassing the number of men infected with HIV.[16] In Africa, HIV-positive women now outnumber infected men by two million.[16] Biologically and culturally, women are more vulnerable to STDs than men, resulting in a burden of disease for women from STDs (excluding AIDS) that is more than three times higher than that for men.

[7] For those reporting at least one sexual partner in the past year.
[8] For those reporting at least one sexual partner in the past year.

In this study, the average age of the first sexual partner mentioned was 28.9 years, 25.7 years for the second sexual partner, and 24.1 years for the third sexual partner (Table 5). Thus, the mean ages of the partners decreased from the highest for the first partnership mentioned, which tended to be predominately spouses, to the lowest for third partners, who were predominantly girl/boyfriends. Clearly, spouses tend to be older on average than girl/boyfriends and other types of sexual partners.[9] This finding is somewhat in keeping with both the nature of the relationship (non-cohabiting) and with the fact that men in Nigeria tend to partner with younger women. Nationally, the mean age difference between husbands and wives is 11 years and in polygamous unions, the mean age difference between husbands and second wives is 18 years.[8] It is not surprising to find that those respondents in the Nigerian military with more than one partner are also more likely to be choosing younger partners.

Respondents in this study met their partners at various places, including social gatherings, friends' houses, school, and at the mess. Whilst most partners lived in the same village, base, or town as the respondents, there were more non-regular partners (58.4%) than regular partners (29.7%) who lived outside respondents' towns/villages (data not shown). This way, it is easier for respondents to get away from their regular partners for the night or weekend without getting into situations in which there could be conflict.

Sexual intercourse within a regular relationship carries a low risk of HIV infection, provided that the partnership is mutually exclusive.[13,15] This is based on the assumption that neither party is infected. By extension, the more frequently sexual intercourse occurs in a non-regular relationship, the higher the risk of HIV infection.[4] In this study, the frequency of sexual contact was higher between regular sexual partners than non-regular partners. Also, the chances of encountering someone with prior exposure to HIV increase as the number of sexual partners increases.[9,11,13,15,17] To measure the extent to which fidelity was practiced, respondents were asked whether they believe their partners had sex with other partners. More than one-tenth (13.7%) of the study population's sexual partners were perceived to be having sex with others (data not shown).

6.2.2 Multiple Partnering

Multiple partners are a risk factor in HIV/AIDS transmission. Nearly one-fifth (17.4%) of respondents reported having more than one sexual partnership in the previous year. Table 6 examines some of the characteristics of respondents that might be associated with higher numbers of sexual partnerships. Clearly, those respondents who are in polygamous unions are much more likely to report multiple sexual partnerships than those who report monogamous unions (with approximately two-thirds of the respondents in polygamous unions reporting two or three sexual partnerships in the previous year versus 12.9 percent of those in monogamous unions). Similarly, respondents who are not cohabiting with a partner are more likely to report multiple sexual partnerships than those who are. A higher proportion of men than women in the Nigerian military report two or more sexual partnerships (18.2% versus 4.4%). COs also seem more likely to report more than one

[9] Note: Data for commercial partners (n=1,2,1) and casual acquaintances (n=7,12,5) based on extremely small numbers of cases.

sexual partnership in the previous 12 months than NCOs. Age and education do not seem to have linear associations with the number of sexual partnerships.

Table 6. Percentage Distribution of Number of Sexual Partnerships in Last 12 Months by Respondent Characteristics

Characteristics	Number of Sexual Partnerships[10]			
	0	**1**	**2**	**3**
Sex				
Male	9.0	72.8	13.5	4.7
Female	16.7	78.9	4.4	0
Total	**143**	**1,104**	**195**	**67**
Rank				
Junior NCO (I)	10.2	75.3	10.8	3.7
Senior NCO (II)	8.7	72.1	15.5	3.7
Junior CO (III)	8.1	61.6	17.4	12.8
Senior CO (IV)	7.6	58.7	25.0	8.7
Total	**138**	**1,046**	**189**	**66**
Age group				
18–24	15.8	66.7	11.4	6.1
25–34	11.4	71.5	12.3	4.7
35–44	7.4	74.7	13.6	4.4
45+	6.8	75.8	13.8	3.6
Total	**141**	**1,099**	**195**	**67**
Education				
None/primary incomplete	1.9	87.0	9.3	1.9
Primary/secondary incomplete	6.6	77.5	12.3	3.5
Secondary/tertiary incomplete	9.5	74.2	12.6	3.7
Tertiary/other	12.1	67.3	14.2	6.5
Total	**143**	**1,101**	**194**	**66**
Cohabiting				
Yes	7.3	79.1	10.6	3.0
No	6.3	61.7	26.3	5.7
Total	**74**	**795**	**138**	**36**
Type of marriage[11]				
Polygamous	12.5	16.1	57.0	10.1
Monogamous	6.6	80.6	10.1	2.8
Total	**69**	**768**	**127**	**34**

[10] Out of a maximum possible of three sexual relationships reported on by respondents.
[11] Only married or cohabiting respondents included.

6.2.3 Knowledge of and Patterns of Condom Use

Table 7. Distribution of Respondents by Their Patterns of Condom Usage

	%	Total
Had seen/used condoms		
Heard of	97.0	1,545
Seen	97.6	1,511
Used	58.8	1,496
Supplied condoms by the Armed Forces		
Yes (of all respondents)	26.4	1,496
Yes (of all who have used condoms)	46.6	891
Thought supply was adequate (of all who were supplied)		
Yes	34.1	
No	65.9	399
When condoms were supplied		
Never	1.7	
Within last 12 months	58.8	417
Year or more	39.5	
Experienced problems with condoms		
Yes (of those who have used condoms)	19.7	894
No	80.3	
Problems encountered with condoms (of those who had problems)		
Unavailable		
Expensive	2.3	
Not useful in the prevention of transmission of HIV/AIDS	4.0	
Not useful in the prevention of transmission of STDs	5.7	
Reduction of sexual pleasure	4.0	
Others (bursts easily, messy, low grade quality difficult to apply)	62.6	
	21.4	174
Knew where condoms were sold (of those who have used condoms)		
Yes	97.8	895
No	2.2	
Knew specified outlets for condoms		
Roadside shops	12.6	
Pharmacy/patent medicine shops	93.0	876
Hospitals/family planning clinics	76.0	
Bar/hotel/sexual partner/NGOs	10.3	
Time to procure condoms		
Under one hour	96.0	
<12 hours	3.3	849
>12 hours	0.7	

In this study, almost all of the respondents (97.0%) were aware of what a condom looks like, although only 58.8 percent had ever used one (Table 7). Of those 58.8 percent, approximately one-half (47%) had received a condom supplied by the Armed Forces. Only approximately one-quarter of the entire study population said they had been supplied condoms by the Armed Forces. Of those respondents who had received a condom from the Nigerian military at least once, many (58.8%) reported that the last supply was within the year whilst others (39.5%) reported the last supply being over a year ago. This suggests that although the Nigerian military has supplied condoms to its members, the supply is rather irregular and does not reach all military personnel. In fact, nearly two-thirds of those who had received condoms from the Nigerian military thought that the supply was inadequate.

Fortunately, most of the respondents (97.8%) knew where to procure condoms and were able to correctly mention specified outlets for condoms. Most (96.0%) reported it would take less than an hour to buy a condom. All indications point to the fact that condoms are, to a large extent, in adequate supply and within reach of Nigerians, although this does not imply that they are actually used. This is evidenced by the fact that less than 60 percent of the study population has ever used condoms.

Condoms appear to be known and reasonably available, if not directly through the Nigerian military. It is encouraging to note that 80 percent of those respondents who have used condoms have not experienced any problems with them. For the approximately one-fifth of respondents who have used condoms and had a problem, most cited reduction of sexual pleasure as a problem (62.6%). More worrisome is that approximately 20 percent of those who have experienced problems with condoms cited bursting or tearing as a problem. In keeping with the responses regarding availability, only a small proportion of those citing problems (6.3%) mentioned high cost and unavailability.

Table 8 examines whether or not respondents have ever used a condom according to selected respondent characteristics. Ever-use of a condom was highest amongst the NN personnel (75.2%), followed by the NAF (63.2%) and NA (54.1%). Whilst COs are much more likely than NCOs to have used a condom, it is interesting to note that a greater proportion of younger men than men older than 45 have used condoms.

Also to be noted in Table 8, respondents who have completed secondary or tertiary levels of schooling have higher levels of ever-use of condoms than respondents with less than a secondary level education. Differences in the socio-economic classes of respondents could in part explain the reasons for the differential utilisation patterns of condom use, although there is clearly an age effect, which may signal a change in the culture or acceptability of condom use among younger cohorts. However, education levels may affect respondents' ability to appreciate the importance of the personal efforts needed to protect themselves from contracting STDs, including HIV, with condoms. Potentially, income levels may affect the ability to procure condoms. Interestingly, men and women in the military are equally likely to report ever having used a condom. Since it is well known that unprotected sex propagates the spread of HIV in most countries, increasing

condom use by making them readily available and accessible are prerequisites for any successful HIV/AIDS control programme.[13] Also, the importance of mounting effective health education programmes within each arm of service cannot be over-emphasised.

Table 8. Condom Usage by Respondent Characteristics

Ever Used a Condom	Yes (58.8%)	Total (1,496)
Arm of service		
NA	54.1	1,013
NAF	63.2	266
NN	75.2	215
Rank		
Junior NCO	57.9	927
Senior NCO	53.9	323
Junior CO	76.4	89
Senior CO	80.9	89
Age group		
18–24	68.8	112
25–34	67.2	570
35–44	64.3	426
45+	37.5	379
Sex	58.9	1,404
Male	56.7	90
Female		
Level of Education		
None/primary incomplete	21.2	52
Primary/secondary incomplete	31.6	215
Secondary/tertiary incomplete	61.6	786
Tertiary and other	71.6	436
Religion		
Christianity	61.0	1,118
Islam	51.5	363

A measure of the extent to which respondents practiced safe sex was ascertained by what proportion of them used condoms the first and last time they had sex with their partners. As seen in Table 9, condom usage was quite stable between first sex and last sex at approximately 25 percent. What is important is the differential level of usage by type of sexual relationship. Respondents are least likely to report condom use with a spouse or a live-in partner, with condom usage levels at about 10 percent. With non-cohabiting regular partners, respondents report much higher levels of condom usage. Thus, with girl/boyfriends, respondents report usage of about 55 percent, and for CSWs or sexual encounters with casual acquaintances, condom usage is approximately 65 percent. There is no doubt that it is easier to establish safe sexual behaviours from the outset of a

relationship than to change existing behaviours.[4,13,15] The most commonly proffered reason for non-use or irregular use of condoms was that it was felt it to be unnecessary, although some simply just disliked it (data not shown). This is in line with most military personnel who, by virtue of their training and accepted norms, are imbued with feelings of invulnerability that distort their perceptions of risk.[9,18]

Table 9. Condom Use at First and Last Sexual Contact with all Sexual Partners in the Past 12 Months by Type of Relationship with Partner[12]

	Relationship with Partner				
	Spouse/Live-in	**Girl/Boyfriend**	**Commercial**	**Casual Acq.**	**Total**
Condom use at first sexual contact with partners					
Yes	9.2	56.7	65.0	65.6	25.5
Total	**1,096**	**506**	**20**	**32**	**1,654**
Condom use at last sexual contact with partners					
Yes	10.4	56.0	55.0	61.3	25.8
Total	**1,095**	**504**	**20**	**31**	**1,650**

6.2.3.1 Indulging in Paid Sex and Condom Use with Paid Sex

Frequenting CSWs is another form of risky behaviour. It is well known that military personnel, whether on peace-keeping or not, attract sex workers. Reasons for this are two-fold. Firstly, soldiers are perceived as having disposable income. Hence, they attract CSWs. At the same time, soldiers themselves are more prone to pursuing sex with many partners, including commercial sex partners.

Table 10. Paid for Sex in the Last 12 Months and Condom Use at Last Paid Sex

Paid for Sex	**%**
Yes	2.6
No	97.4
Total	**1,441**
Condom use at last paid sex	
Yes	54.3
No	45.7
Total	**35**

In this study, however, as can be seen in Table 10, only approximately 3 percent of those interviewed admitted to having paid for sex in the last year, consistent with the small numbers reported for commercial sexual partnerships in the past year. Condom use at

[12] Note: More cases than number of respondents because the unit of analysis is the sexual relationship, which number more than the individual respondents.

last sex with paid sexual partners are at similar levels to always-use of condoms when engaging in sexual activity whilst away on peace-keeping operations, with only a little over half of those reporting paid sex using a condom.

6.3. Time Away from Home and Participation in Peace-keeping Operations

Military personnel, by virtue of the nature of their jobs, are often taken away from their usual base for variable periods of time. To gain insight into life mobility patterns, in addition to those times when respondents had to be posted on peace-keeping missions, this study considered duration away from home to be a period of more than a month over a 12-month period. Nearly 62 percent of the respondents claimed they were not away from their homes for more than a month in the previous year, and those who were (38.2%) spent a number of nights away, ranging from less than a week (20.7%) to a month (1.7%) (data not shown). This is a common practice that cut across the ranks, although the "other ranks" tended to spend more nights away from their homes than the officers. More Navy personnel (69.3%) spent more nights away from their homes than their colleagues in the other service arms. The findings of a small study conducted in the general population indicate that a higher proportion (71.8%) of Nigerians overall did not spend time away from their homes compared with the findings among Nigerian military personnel in this study (60.4%); and over a 12-month period, only 31.4 percent compared with 39.4 percent in this study spent over a month away.[14]

Participation in peace-keeping operations either within or outside the country is one of the essential assignments of military personnel. In this survey, 653 respondents (42.3%) participated in various operations to Sierra Leone, Liberia, UN missions, and internal operations to Bakassi, Modakeke, and so forth (Figure 2).

Figure 2. Respondents Who Participated in Peace-keeping Operations

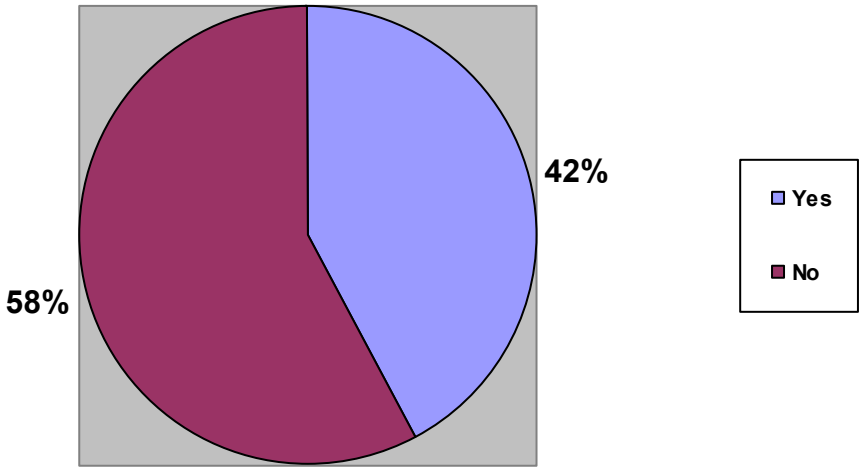


Table 11. Characteristics of Respondents Who Went on Operations

Characteristics	Yes (%)	No (%)	Total (%)
Sex			
Male	44.9	55.1	94.0
Female	2.2	97.8	6.0
Total	**653**	**889**	**1,542**
Rank			
Junior NCO	40.7	59.3	64.9
Senior NCO	43.4	56.6	22.7
Junior CO	46.7	53.3	6.1
Senior CO	60.9	39.1	6.3
Total	**632**	**840**	**1,472**
Service arm			
NA	45.6	54.4	67.5
NAF	30.9	69.1	18.3
NN	41.6	58.4	14.2
Total	**653**	**889**	**1,542**
Level of education			
None/primary incomplete	60.4	39.6	3.4
Primary/secondary incomplete	55.0	45.0	15.0
Secondary/tertiary incomplete	39.7	60.3	52.6
Tertiary and other	38.5	61.5	28.9
Total	**651**	**886**	**1,537**
Age group			
18–24	20.7	79.3	7.6
25–34	38.6	61.4	37.9
35–44	46.7	53.3	28.9
45+	49.9	50.1	25.7
Total	**652**	**883**	**1,535**
Duration of service (years)			
0–10	32.5	67.5	33.0
11–20	44.4	55.6	35.8
21–30	54.8	45.2	11.6
>30	48.7	51.3	19.6
Total	**650**	**879**	**1,529**

Participation in external operations is almost exclusively on the part of males, as only two female respondents were posted. One of the women was posted to an internal operation and the other to an exercise. As can be seen in Table 11, it appears that more senior officers (60.9%) went on the peace-keeping missions. More Army personnel (45.6%) went on peace-keeping compared with the Navy (41.6%) and Air Force (30.9%). Also, the longer respondents spent in service, the more likely they were to be deployed on peace-keeping, although beyond thirty years of service the likelihood of being posted dropped to less than half.

Although there is no written policy specifying the maximum length of time any military personnel can be expected to be away on a mission, outside his or her base, there is evidence that deployment to unsettled areas increases the chances of military personnel acquiring HIV. This is because they are exposed to socially disrupted local settings where STDs/HIV may abound and at the same time, the possibility of infection through wounds and contaminated blood is increased.[4,9]

In this study, the cumulative length of time spent at each peace-keeping mission ranged from less than one month to more than 36 months. For ease of analysis, length of time spent was further collapsed to less than six months and more than one year. Table 12 shows that higher proportions of respondents posted to Sierra Leone (58.2%), Liberia (43.9%), and Internal Operations (36.2%) spent more than one year on their peace-keeping missions compared with those who were posted to the United Nations (17.6%).

Table 12. Percentage Distribution by Type of Operation and Duration of Stay[13]

	<6 months (%)	**6–12 months (%)**	**>1 year (%)**	**Total (%)**
ECOMOG to Sierra Leone	16.4	25.4	58.2	30.6
ECOMOG to Liberia	15.0	41.2	43.9	36.2
UN Mission	47.5	35.0	17.6	12.9
Internal Operations	33.9	29.9	36.2	35.8
Exercises	81.3	11.0	7.7	15.2
Others	74.0	13.0	13.0	8.6
Total				**653**

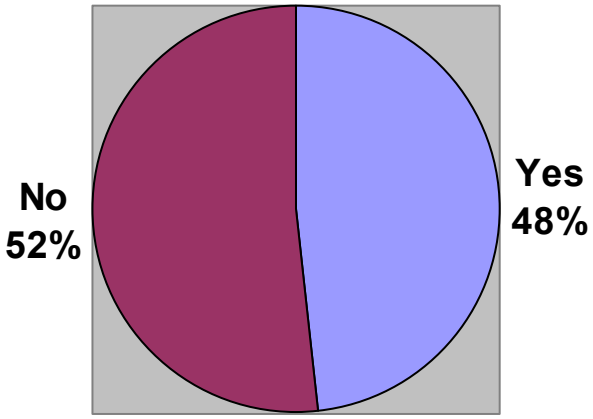
Although officers were more likely to be posted out on missions than the other ranks, the latter were more likely than officers to spend more than one year away. The two female respondents who were posted out on peace-keeping both spent less than six months on their posting.

[13] Multiple responses possible.

6.3.1 Sexual Relations During Peace-keeping

The risk of HIV and other STDs is further enhanced among soldiers deployed on peace-keeping missions because of the new roles now assigned to peace-keeping troops, which entail the de-mobilisation of troops and creation of institutions that will sustain peace in the troubled areas in addition to separating the contending forces. The resultant effect is that short-term peace-keeping missions extend into lengthy ones, most often in the presence of large populations of vulnerable refugees and displaced persons—a situation that fosters risky behaviour that further exacerbates the risk of exposure to HIV and STDs.[4]

Figure 3. Respondents Who Had Sexual Relations During Peace-keeping Operations



This increase in risky behaviour is corroborated in this study, with 48.0 percent of respondents posted out on peace-keeping missions engaged in sexual relations, as shown in Figure 3. Indulgence in sexual relations during peace-keeping missions was a common feature that cut across all the ranks and age groups, although it was more prevalent amongst the higher ranked respondents, as can be seen in Table 13. For those respondents who did report having sex whilst on peace-keeping operations, it is interesting to note that only one-half reported always using a condom. As was the case when examining ever condom use, although the absolute numbers are quite small, respondents from the Navy and the Air Force reported having always used a condom at higher levels than did those in the Army. Also, similar to the findings presented for ever-use of condoms, COs report always-use at higher levels than NCOs. Once again, younger men (ages 18–24) are less likely to report always using a condom during operations than are men ages 25–34 and 35–44, but men older than 45 have lower use levels than even the youngest men. Finally, condom use during operations increases with increased levels of education with the exception of men with no formal schooling or primary education incomplete, who use condoms at a higher rate than those with a secondary education. Unfortunately, those men with more than one sexual partner whilst on operations do not seem to be more likely to always use a condom.

Table 13. Condom Usage by Respondents Who Had Sexual Relations During Peace-keeping Operations by Respondent Characteristics

	Yes (%)	Total
Frequency of condom use		
Always	51.1	305
Arm of service		
NA	47.8	255
NAF	57.9	19
NN	73.3	30
Rank		
Junior NCO	45.7	188
Senior NCO	43.5	46
Junior CO	66.7	27
Senior CO	78.8	33
Age group		
18–24	45.5	11
25–34	54.1	111
35–44	60.6	109
45+	33.3	72
Level of education		
None/primary incomplete	58.3	12
Primary/secondary incomplete	35.1	57
Secondary/tertiary incomplete	51.0	157
Tertiary and other	62.3	77
Religion		
Christianity	49.1	230
Islam	57.1	70
Number of Sexual Partners Whilst on Operations		
1	51.5	171
2	55.0	60
3+	48.0	65
Total	**51.4**	**296**

6.4 Knowledge of and Experience with STDs and HIV/AIDS

6.4.1 Knowledge of STDs

STDs are a major public health problem in many countries. There is ample evidence to support the fact that in peace time, military personnel have a 2–5 times higher rate of STDs than the civilian populations, and during war times, STD rates are further increased 100–fold compared with the civilian rates.[4,5,9-11,15] This is quite disturbing because the presence of one STD, particularly the ulcerative types, facilitates transmission of HIV by a factor of 10–300 times.[5,9,15,17]

The study attempted to ascertain participants' level of knowledge with respect to STDs through a number of questions. Good knowledge of STD symptoms was divided into knowledge about women's and men's STD symptoms. Thus, a good knowledge level was assigned to those who correctly named two STD symptoms each for women and men. As shown in Table 14, respondents' level of knowledge about the correct symptoms of STDs for men was similar for male and female respondents, with only about half of the respondents able to correctly cite two symptoms. Male knowledge levels of STD symptoms for females were even worse, with only 21.5 percent able to correctly name two symptoms. Female respondents had much better knowledge, with two-thirds of the women able to correctly identify STD symptoms in women.

Table 14. Knowledge of STD Symptoms by Respondents' Sex

STD Symptoms	Male	Female	Total
Knows at least two symptoms of STDs in men	49.7	47.3	
Knows at least two symptoms of STDs in women	21.5	65.6	
Total	**1,456**	**93**	**1,549**

Increasing the level of knowledge of the early signs and symptoms and expanding STD treatment will significantly impact HIV transmission rates.[9] Furthermore, mounting an effective STD surveillance system could be used as a direct or indirect marker for HIV since STD data, which should normally be routinely reported, could serve as an easy and cost effective way of indirectly monitoring sexual behaviour (condom use) and the potential presence of HIV.

6.4.2 Prevalence of Genital Ulcers

The presence of an STD dramatically increases the risk of acquiring HIV during unprotected sex with an HIV-positive partner. The presence of genital ulcers can be used as a crude way of gauging the level of STD prevalence. Only sixty respondents (3.9%) reported having genital discharge or ulcers in the previous 12 months (see Table 15).

Table 15. Characteristics of Respondents who Reported Having Had Genital Ulcers or Genital Discharge in Last 12 Months

	Yes (%)	No (%)	Total
Sex			
Male	3.2	96.8	
Female	15.4	84.6	
Total	**60**	**1,456**	**1,516**
Level of education			
None/primary incomplete	0	100.0	
Primary/secondary incomplete	3.1	96.9	
Secondary/tertiary incomplete	4.5	95.5	
Tertiary and other	3.7	96.3	1,511
Rank			
Junior NCO	4.7	95.3	
Senior NCO	3.1	96.9	
Junior CO	1.1	98.9	
Senior CO	3.3	97.7	1,446
Total number of sexual partnerships in last year[14]			
None	7.9	92.1	
1	2.6	97.4	
2	5.1	94.9	
3+	14.9	85.1	1,484
Had sex whilst on operations			
Yes	5.1	94.9	
No	1.3	98.7	631
Frequency of condom use when on operations			
Always	3.2	96.8	
Not always	6.8	93.2	304
Whether paid sex			
Yes	16.2	83.8	
No	3.6	96.4	1,437

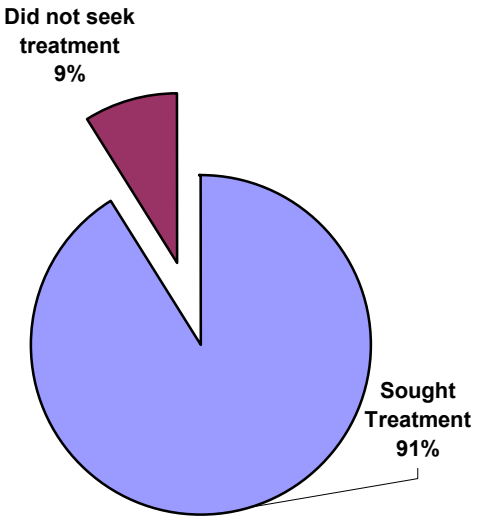
More females (15.4%) than males (3.2%) reported having genital ulcers. Those with more three sexual partnerships in the past 12 months were more likely to report genital ulcers than those with fewer partnerships. Respondents reporting having paid for sex in the past year have higher levels of genital ulcers as do those who report having had sex whilst away on operations and not always using a condom. Other factors such as level of education or rank do not seem to be associated with genital ulcers/discharge.

[14] Out of a maximum possible of three sexual relationships reported on by respondents.

6.4.3 Health-seeking Behaviour of the Respondents

It is known that patients with STD symptoms consult a wide range of health care providers, including public, private, informal, and traditional sources of care. The effective treatment, control, and prevention of STDs have been recognised as major strategies in the prevention of HIV and ultimately HIV/AIDS. In this study, most of the respondents (89.0%) sought advice or treatment from health care providers upon noticing the genital ulcer/discharge (Figure 4). Others patronised traditional healers, and some sought advice from their friends and relatives.

Figure 4. Treatment-seeking Behaviour of Respondents with Genital Ulcers or Genital Discharge.



6.4.4 Knowledge of and Attitudes of Respondents to HIV

It is well known that the future trend of the HIV pandemic to a large extent depends on the level of HIV/AIDS awareness and knowledge in both civilian and military populations. Furthermore, an appreciable level of knowledge of the modes of transmission of HIV and how to prevent it are important prerequisites for behaviour change.[13] For this reason, most national programmes, including Nigeria's, have put a great deal of effort into information, education, and communication (IEC) campaigns. In this study, almost all of the respondents (98.9%) had heard of HIV, although there were still about 5 percent of the study population who either did not believe in or were unsure of its existence (see Table 16). This contrasts with the findings of the 1999 NDHS, which reported that only 74 percent of women and 90 percent of men in the general population had heard of HIV/AIDS.[11,20]

Unlike the 1999 NDHS report, which cited the radio, relatives, and friends as the most common sources of information on HIV/AIDS, in this study television (83.3%) and radio

(79.3%) were the most commonly cited sources of information (for those who had heard or seen information about HIV/AIDS in the four weeks preceding the interview). The print media was also an important source of information; it was cited by half of the respondents. With the improvement in information technology, a higher proportion of both the military and civilian populations have better access, either directly or indirectly, to more sources of information. Just over one-quarter of the study population cited the Armed Forces Programme on AIDS Control (AFPAC) as a source of information—an impressive achievement.

Table 16. Respondents' Information About HIV/AIDS

	%
Proportion who had heard of HIV	
Yes	99.1
No	0.9
Total	**1,541**
Proportion who believed that HIV exists	
Yes	96.6
No/Unsure	5.6
Total	**1,510**
Sources of information[15]	
Television	83.3
Radio	79.3
Print media	50.0
IEC materials	33.3
Health Care Providers	22.5
Mosque/Church	9.2
Friend/family	22.1
AFPAC initiative	26.1

6.5 HIV/AIDS Knowledge Score

HIV/AIDS knowledge levels were classified by judging respondents' answers about how HIV/AIDS is transmitted, including whether the respondent felt you could tell if someone has HIV/AIDS by the way they look, and how HIV/AIDS can be prevented.

With regard to the modes of transmission of HIV, some (7.2%) could not identify any correct answer. However, a high proportion was familiar with the actual modes of transmission, as can be seen in Table 17. Unfortunately, there still exist many misconceptions regarding how HIV/AIDS can be transmitted. For example, some still believed that HIV could be spread by sharing toilets (5.1%), shaking hands with an infected person (3.4%), or through mosquito bites (3.0%) or kissing (1.3%). When asked about the symptoms of HIV, 85.3 percent of the respondents knew that a healthy looking

[15] For those who have heard or seen information about HIV/AIDS in the past four weeks (84.5% of respondents).

person could be infected with the AIDS virus. This is higher than in the 1999 NDHS survey of the general population, which reported only 60 percent. Research has shown that military personnel are likely to have more casual sex partners compared with the civilian population, particularly during the periods when they are posted away from their homes. Therefore, it is important that they are informed that people who are infected with HIV quite frequently look healthy and live normal lives, including having sex; but unknown to their partners and even themselves, they are carriers of the virus.

Table 17. Respondents' Perception of Various Modes of Transmission of HIV

	%
Modes of transmission of HIV mentioned	
Correct:	
Having sex with infected persons	86.0
Using contaminated or re-used needles	55.8
Through blood transfusion	54.8
From pregnant women to their babies	19.2
Incorrect:	
Sharing razors or eating utensils	45.9
Circumcision	15.5
Sharing toilets with infected persons	5.1
Shaking hands with infected persons	3.4
From mosquito bites	3.0
Don't know	7.2
Total	**1,537**

To receive a high score on knowledge of transmission, respondents had to have no incorrect answers (including don't know) for questions on whether HIV/AIDS is transmitted by mosquitoes or whether it can be transmitted by shaking hands with an infected person. In addition, the respondent must not have answered that they can tell if someone has HIV/AIDS by their appearance. Respondents scored well on the transmission composite score, with 80.7 percent scoring no incorrect answers about transmission (data not shown).

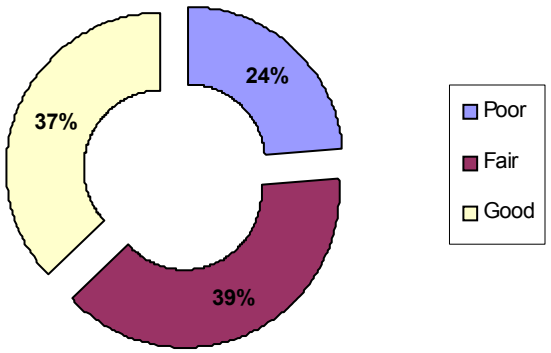
Practicing safer sex, which involves not exchanging body fluids, can significantly prevent sexual transmission of HIV. This includes not having sex, promoting fidelity between uninfected partners, indulging in non-penetrative sex, using condoms correctly and consistently, and not having sex when drunk or under the influence of drugs, which may impair judgement.[9–11] For this survey, the three main methods that were studied were correct and consistent use of condoms, fidelity, and abstinence.[13,15]

Table 18. Knowledge of HIV/AIDS Prevention

	%
Correct:	
Use of condoms	72.7
Fidelity	59.7
Avoiding injections with contaminated needles	38.6
Avoiding blood transfusion	33.7
Avoiding sex with CSWs	32.0
Avoiding sex with casual partners	27.2
Avoiding sex	12.8
Incorrect:	
Sharing shaving blades/nail cutters	37.2
Prayers	11.5
Avoiding kissing	10.3
Avoiding mosquito bites	2.2
Using herbal preparation	1.3
Taking antibiotics/medication	0.7
Total	**1,411**

Approximately 12 percent of the respondents knew of no ways to prevent HIV/AIDS. Some of the commonly cited modes of prevention of HIV included use of condoms (72.7%), fidelity (59.7%), and not receiving injections with shared or re-used needles (38.6%). Abstinence was mentioned by only slightly more than 10 percent of all respondents. Some of the misconceptions or incorrect responses included prevention by not kissing (10.3%) and by avoiding mosquito bites (2.2%). Some suggested the use of antibiotics (0.7%), whilst others would either seek traditional healers' or use herbal preparations (1.3%) (see Table 18). To score correctly on HIV/AIDS prevention, respondents had to mention condom use, fidelity, and abstinence as means of prevention. Only 5.4 percent of respondents mentioned all three of the most important means of HIV/AIDS prevention on this component of the HIV knowledge score, although as can be seen in Table 18, many respondents identified at least one of the three.

Figure 5. Distribution of Respondents by Their HIV Knowledge Scores



The HIV/AIDS knowledge score was computed by adding the knowledge scores on transmission and prevention. Because most respondents did not mention all three modes of prevention, only 73 respondents (4.7%) received an "excellent" score, with six of the six items correct. However, 32.2 percent of respondents did score five items correct, which is classified as "good" HIV/AIDS knowledge. Four correct answers is classified

as "fair" HIV/AIDS knowledge, and between zero and three correct answers are "poor" scores. Figure 5 shows the distribution of respondents' HIV/AIDS knowledge scores. Nearly one-quarter of all military personnel surveyed are classified as having poor HIV/AIDS knowledge because they are unable to answer more than three of the six items on the scale correctly. Thirty-nine percent of respondents have fair knowledge, and 37 percent have good knowledge.

Table 19. HIV Knowledge Scores by Respondents' Characteristics

	Poor	Fair	Good	Total
Sex				
Male	24.3	39.3	36.5	94.0
Female	12.9	41.9	45.2	6.0
Total	**365**	**610**	**572**	**1,547**
Level of education				
None/primary incomplete	61.1	24.1	14.8	3.5
Primary/secondary incomplete	30.4	43.9	25.7	14.9
Secondary/tertiary incomplete	22.8	41.5	35.8	52.7
Tertiary and other	17.1	35.3	47.6	28.9
Total	**364**	**608**	**570**	**1,542**
Rank				
Junior NCO	25.9	42.2	31.9	65.0
Senior NCO	21.8	39.7	38.5	22.7
Junior CO	15.6	25.6	58.9	6.1
Senior CO	9.8	29.3	60.9	6.2
Total	**345**	**588**	**544**	**1,477**
Age group				
18–24	23.1	37.6	39.3	7.6
25–34	23.5	39.6	37.0	37.9
35–44	16.7	38.1	45.3	28.8
45+	31.4	41.3	27.3	25.6
Total	**362**	**607**	**571**	**1,540**
Arm of service				
NA	27.5	41.7	30.8	67.4
NAF	18.0	30.3	51.8	18.4
NN	12.3	40.5	47.3	14.2
Total	**365**	**610**	**572**	**1,547**
STD knowledge scores (men)				
Poor				
Good	30.2	38.2	31.6	50.5
Total	17.2	40.5	42.3	49.5
	368	**610**	**168**	**1,550**
STD knowledge scores (women)				
Poor	26.8	40.6	32.6	75.9
Good	14.2	35.4	50.4	24.1
Total	**368**	**610**	**572**	**1,550**

Table 19 shows HIV knowledge scores by respondent characteristics. The men were more likely to have poor knowledge scores than the women. The officers had higher levels of good HIV knowledge than did the NCOs. Not surprisingly, more educated respondents also scored higher. Age of the respondent did not seem to have a linear effect, but men older than 45 had poorer knowledge than any of the younger age groups. Naval and Air Force personnel scored higher than respondents in the Army. Having high STD knowledge scores also seems to be associated with better HIV knowledge scores.

As an indicator of the extent of the spread of HIV, respondents were asked whether they knew people living with HIV/AIDS (PLWHA). Table 20 shows that two-fifths of all respondents (42.3%) knew any PLWHA and out of those who did, 36.4 percent identified these individuals as close relatives or friends.

Table 20. Respondents and PLWHA

	%	
Know any PLWHA	42.3	
Total	**1,539**	
Know PLWHA who are close relatives or friends	15.3	(36.4)[16]
Total	**1,539**	**(651)**

6.6 Perceived Risk of Contracting HIV

Respondents were asked about their perceived risk of contracting HIV/AIDS. About 62.8 percent believed they were at no risk at all of contracting HIV. This is slightly lower than the 1999 NDHS, which reported 67 percent in the civilian population.(8) One-fifth of the respondents claimed they had a small risk whilst only 8.1 percent felt they had a great risk of contracting HIV. Respondents' perceptions of personal risk were not significantly different when looked at according to a number of behaviours perceived to heighten risk or exposure. Thus, respondents who participated in peace-keeping missions had no difference in perceived risk than those who had not. Similarly, length of stay at the peace-keeping posting did not significantly influence respondents' perception of contracting HIV. Reporting to have paid for sex made no difference in respondents' risk perceptions, nor did having more sexual partnerships in the previous year (data not shown). As can be seen in Table 21, those who felt they were at low risk of contracting HIV thought so because they practised safe sex (34.7%), did not have multiple partners (56.9%), or avoided sex with prostitutes (29.3%) and homosexuals (16.4%). Eleven percent of the respondents abstained from sex altogether. Other reasons given for perceiving low risk included not kissing, seeking protection of traditional healers, and going for regular clinic check-ups. Only 24.2 percent felt they had little risk because they used condoms correctly and consistently.

[16] Of those who know PLWHA, 36.4% report that they have PLWHA who are relatives or close friends—whereas only 15.3% of all respondents know PLWHA who are close relatives or friends.

Table 21. Perceived Risk of Contracting HIV

	%
Perceived risk of contracting HIV	
No risk at all	41.4
Small risk	22.2
Moderate risk	6.9
Great risk	8.1
Don't know	21.4
Total	**1,527**
Why respondents felt they either had no risk or a small risk of contracting HIV	
Practiced safe sex	34.7
Abstained from sex	11.3
Avoided multiple sex partners	56.9
Avoided sex with prostitutes	29.3
Avoided sex with homosexuals	16.4
Ensured safe blood transfusion	30.8
Ensured injections with sterilised needles	30.0
Used condom correctly every time	24.2
Avoided kissing	3.7
Avoided mosquito bites	0.6
Sought protection from traditional healer	0.5
Went for regular clinic checkups	2.9
Total	**961**

Table 22 shows attitudes of military personnel to HIV/AIDS. Although there was widespread understanding amongst most of the respondents (94.9%) that AIDS is a fatal disease, 1.6 percent of the respondents believed that AIDS never leads to death and 23.3 percent did not know how often people with AIDS died from the disease.

Table 22. Percentage Knowing that HIV/AIDS is Deadly

	%
Know AIDS is fatal	
Yes	96.1
Total	**1,537**
How often it is thought that persons with AIDS die from the disease	
Never	1.6
Sometimes	13.8
Always	61.3
Don't know	23.3
Total	**1,521**

There is strong evidence to show that military personnel are a population group at special risk of exposure to STDs, including HIV. In peace time, STD rates among the Armed

Forces are generally 2–5 times higher than in the civilian population and in times of conflict, the difference can be as high as 50 times and more.[9] A recent comparative study of sexual behaviour in France, UK, and USA showed that military personnel (both career and conscripted personnel) had a much higher risk of HIV infection than groups of equivalent age and sex in the civilian population. Similar findings have also been reported in other parts of the world. For example, estimates of HIV rates in the Zimbabwean Armed Forces showed rates 3–4 times higher than that in the general population.[9]

6.7 What Respondents Did to Reduce Their Risks of HIV

Respondents were asked to select from a list of eight behavioural changes that they may have adopted in the face of the HIV/AIDS epidemic. Results are shown in Table 23. Since hearing about HIV/AIDS, 94 percent of the respondents, compared with less than 75 percent amongst the civilian population,[12] claimed to have changed their sexual behaviour. The most common change in behaviour reported by the respondents (just as in the 1999 NDHS report) was restricting sex to one partner (65.5%). The next most common behaviour change was using condoms, as reported by 42.7 percent of the respondents. A small proportion of respondents (6%) did not bother changing their behaviour. In an attempt to protect themselves or reduce their risk of contracting HIV, some respondents (6%) reported stopping having sex altogether. Although this may serve as a short-term solution, it may be very difficult to sustain. Also, it may also lead their partners to engage in casual sex with acquaintances or paid sex in order to satisfy sexual urges.

Table 23. Change in Behaviour

	%
Proportion who changed behaviour since hearing of AIDS	
Yes	94.0
No	6.0
Total	**1,482**
What behavioural changes were adopted?	
Not starting sex	1.2
Stopping all sex	6.0
Using condom	42.7
Restricting sex to one partner	65.5
Reducing number of sex partners	23.4
Advising partner to be faithful	24.4
No more homosexual contacts	5.2
Ensuring injection with sterilised needles	25.0
Total	**1,375**

6.8 Attitude of Respondents Toward HIV Testing

Voluntary counselling and testing (VCT) for HIV under confidential cover is an increasingly important area of HIV prevention and care programming. The availability of VCT services can be a factor in reducing stigma surrounding HIV and in encouraging community support and care for those affected.[13] However, in areas where HIV is heavily stigmatised and where there are few VCT services, people are often reluctant to come forward for testing.

In this study, we found that only 69.9 percent of respondents believed it was possible to have confidential HIV testing (see Table 24). Only 40.4 percent of the respondents had taken an HIV test, of which 35.1 percent voluntarily took the test whilst more than half of them (57.8%) were mandated to take the test. A smaller proportion (7.1%) was tested without prior knowledge.

Table 24. Attitudes Toward HIV Testing

	%
Possibility of having confidential HIV testing	
Yes	69.6
No	15.1
Don't know	15.3
Total	**1,534**
Proportion who had taken the HIV test	
Yes	40.4
No	59.6
Total	**1,502**
Proportion who voluntarily had HIV testing	
Volunteered	35.1
Required	57.8
Tested without prior knowledge	7.1
Total	**609**
Proportion who found out their HIV test result	
Yes	80.8
No	19.2
Total	**579**
Proportion who will voluntarily get HIV test if free	
Yes	89.0
No	11.0
Total	**1,495**

The proportion of people returning for test results is likely to be affected by the quality of pre-test counselling. Out of the 609 respondents who took the HIV test, 80.8 percent

returned for the test result. Not returning for a test result may be an indication of the stigma attached to being HIV-positive.

People who assess their risk of contracting HIV as high are less likely to return for the result so as not to confirm their fears. Not returning for test results also indicates a counsellor's failure to convey the importance of knowing one's sero-status irrespective of what the result could be. If HIV testing were to be provided free by the Armed Forces, 89.0 percent respondents would voluntarily take the test. This shows that cost could be an important barrier to individuals volunteering for HIV testing.

7. Summary

This behavioural survey of 1,560 military personnel in Nigeria reveals that they, as a result of their personal and professional circumstances, are exposed to situations that lead to risky behaviours for contracting STDs, including HIV. Furthermore, in view of the fact that military personnel live with and interact freely with the civilian population, they could serve as a potential core transmission group for these infections to the larger population. This is of great concern and calls for prompt interventions.

7.1 Risky Behaviour

The following are some of the risky behaviours identified:

- *Multiple Partners.* Over the last 12 months, 73 percent of the respondents had one partner and 15 percent had at least two partners, and of these partners, 33 percent were non-regular sexual partners comprising casual acquaintances, girl/boyfriends, and paid sex partnerships. Many respondents believed that their non-regular partners have additional sexual relationships.

- *Frequenting CSWs.* Although small numbers of those interviewed admitted to paying for sex, half of those reporting paid sex did not use a condom.

- *Condom Use.* Although a large proportion of respondents were aware that condoms could be used as protection against HIV/AIDS and other STDs and although most of the respondents (97.8%) can easily acquire a condom in Nigeria, more than 40 percent did not use condoms with their non-regular sex partners.

- *Sexual Relations During Operations.* Almost half (48.0%) of the 42.3 percent of respondents who participated in various peace-keeping operations admitted having sexual partners during their period away. The longer their time spent away, the higher the chances that respondents will have sexual partners. Only one-half of the respondents protected themselves by using condoms with these sexual partners.

Some of the factors that could have influenced these behaviours include the fact that military personnel

- Are single (nearly one-third of the men and 40% of the women);
- Spend long periods away from their homes and partners, particularly when they go on peace-keeping missions;
- Have poor knowledge of STDs/HIV; and
- Have low risk perception and attitude toward HIV.

7.2 Risk Reduction Behaviour

Steps taken by respondents to reduce risky behaviours were few. Many (65.5%) reported restricting sex to one sexual partner, 42.7 percent reported using condoms, and 6 percent took a more drastic step of abstaining from sex altogether.

Other ways of reducing the risk of HIV included different methods adopted by the respondents to satisfy their sexual urge. Whilst many had sex with their sexual partners, some masturbated (4.1%) and some (2.2%) drank alcohol.

The health-seeking behaviour of most of the respondents (88.9%) was generally good because they sought medical treatment for STDs. Others sought the advice of traditional healers (27.8%) and self-medicated (35.2%).

7.3 Level of Knowledge of STDs and HIV/AIDS

The general level of men's and women's knowledge of STDs was low with regard to STD symptoms in men (with only about 50 percent able to correctly identify two symptoms). Men's knowledge of STD symptoms in women was even lower.

A significant proportion of respondents (24.0%) still have poor knowledge of HIV/AIDS. In addition, some still have misconceptions and partial knowledge of the modes of transmission of HIV and practise invalid preventive measures. HIV/AIDS health education campaigns need to focus on these issues.

Respondents' perception of their risk of contracting HIV was poor as more than 40 percent felt they faced no risk of contracting HIV and 22.2 percent felt they had only a small risk. Nearly 20 percent were unable to quantify their risk.

Only 40 percent of the respondents had been tested for HIV, out of which some 35 percent voluntarily took the test and nearly four-fifths returned for their result. If HIV testing were to be provided free, 89 percent of respondents would take the test.

Sixty respondents (3.9%) reported a positive history of genital ulcers or discharge, comprising 3.2 percent and 15.4 percent amongst the male and female respondents, respectively.

8. Recommendations

It has now been established that military personnel are among the most susceptible populations to STDs, including HIV/AIDS, resulting in infection rates up to 2–5 times higher than among the civilian population. HIV/AIDS is, therefore, a harsh reality that needs to be tackled with all the available resources at the earliest possible time. To preserve the lives of military personnel and the future peace and security of the nation, the following are hereby recommended based on the findings of this behavioural survey:

1. STD and HIV Prevention Education Programmes should be conducted regularly (i.e. before, during, and after deployment) among military personnel and their families in the barracks and schools to reinforce health promoting behaviours. The emphasis should be on behaviour change and communication (BCC) programmes, encouraging condom use in particular. Efforts should be focused on those segments of the population shown to have lower knowledge levels, lower levels of preventive actions, and higher exposure to risk. The Army, which is the largest branch of the Nigerian military, shows lower levels of condom usage both in general and when away on peace-keeping operations. Army personnel also have lower levels of HIV/AIDS knowledge than their colleagues in the Navy or Air Force. NCOs are less likely to have ever used condoms and to have used them when on operations. They are also less likely to have good knowledge of HIV/AIDS prevention and transmission. These "men" represent the bulk of military personnel, and more needs to be done to prepare them to protect themselves. Men are less knowledgeable about STD symptoms, particularly in their female partners, than are women. Those individuals with multiple partners, indulging in paid sex, having sex whilst on operations, and not always using a condom when on operations are at higher risk of STDs.

2. Educational programmes should focus on changing military personnel's perception of risk for HIV/AIDS. Most of the individuals interviewed did not perceive themselves to be at risk and those who did showed no differences in preventive or protective behaviours. Military personnel must be educated to understand and act on the real risks that confront themselves and their families.

3. Condom promotion activities should be mounted using social marketing strategies that are adapted to the local, social, economic, and cultural sensitivities of the country.

4. There should be policies guiding the regular supply and distribution of condoms to military personnel. It would seem particularly important to ensure that personnel sent away on operations be provided with a constant supply of condoms as well as education to motivate them to use condoms with every sexual act.

5. Efforts should be made to ensure that STD symptoms are more widely known and promptly treated. Whilst women make up a small sample of the military personnel interviewed here, it is of concern that they seem to have much higher levels of STDs than do men, in spite of their higher levels of knowledge.

6. The number of HIV pre- and post-test counselling sites should be increased in the military health or laboratory facilities, preferably offering services free or at a cost that is affordable to the lowest ranking personnel. Counselling should focus on those behaviours that are common among personnel that put them at risk for HIV/AIDS.

7. Military personnel living with HIV/AIDS should be assured of the confidentiality of their HIV test results and protection of job security, employment, and possibility of advancement in rank at least until medical discharge from the service.

8. There should be social and psychological care and support given to military personnel and their dependents who are infected with and/or affected by HIV.

9. It is recognised that behavioural surveillance is a key element of HIV/AIDS surveillance systems. Ideally, information from behavioural surveillance should complement biological surveillance. Hence, to maximise the benefits of behavioural surveillance in the military, there is an urgent need for biological studies to determine the prevalence of STDs/HIV in the military.

10. Further research is needed to quantify the prevalence and incidence of HIV/AIDS in the military so that effective treatment and control measures can be put in place. It is also necessary to conduct longitudinal studies on military personnel who go on peace-keeping missions in order to ascertain the hazard ratios of risky sexual behaviours. Finally, although Navy and Air Force personnel represented a small sample of all military personnel interviewed, they seem to have higher levels of knowledge and preventive behaviour (condom use). It might be informative to compare educational curricula as well as condom supply policies across branches of the Nigerian military to see how the Armed Forces might replicate successful programmes and policies.

11. It is also recommended that the length of time military personnel are required to spend during peace-keeping be reviewed so that healthy sexual and marital relationships can be encouraged.

The single most important tactic for preventing new STDs and HIV is the use of condoms during every act of sexual intercourse. To facilitate this, many militaries, particularly in developed countries, have condom procurement and distribution policies, albeit at times not documented or structured. These policies vary from country to country.

Some militaries provide free condoms whilst some sell them and others rely on commercial vendors. At the same time, the distribution policy may also vary. Whilst many militaries routinely issue condoms to everyone, others expect soldiers themselves to request condoms.[4] Borrowing a cue from this, it is recommended that the Nigerian military also formulate policies addressing whether or not condoms should be distributed freely and how regular the supply should be.

Further studies are needed to determine the ideal duration of time military personnel can spend away from their base and avoid unhealthy sexual relationships.

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APPENDIX 1: Study Procedure

The study was conducted in five phases.

Phase 1: Pilot Study

The logistics, acceptability, and feasibility of recruiting an unbiased sample of respondents and of conducting the study were assessed through a pilot study. The study questionnaire was administered to about fifty military personnel representing the three branches using the same ratio of 8:1:1 (the NA, NAF, and NN, respectively) and sampling procedure as in the main study. Therefore, the sample of fifty respondents was selected as 40:5:5. This gave an opportunity to review the acceptability and feasibility of the study procedures and interviewing methods to the study population, which represented diverse cultural backgrounds. The pilot study was conducted at the Dodan Barracks and respondents who participated in the pilot study were not included in the main study in order to avoid dilution of results.

Prior to the commencement of the pilot study, permission was sought from the relevant authorities in the selected clusters designated for the pilot study. There was a meeting of stakeholders from Federal Ministry of Health (FMOH), Federal Ministry of Defence (FMOD), National Action Committee on AIDS (NACA), Family Health International (FHI), POLICY Project, AFPAC, and representatives from different services of the Armed Forces. Also, a training workshop was held for field supervisors and interviewers who were military personnel recruited specifically for this survey.

The field supervisors were medical doctors who had an appreciable knowledge of the communities surveyed and who had previous experience in research. They were given refresher training and subsequently trained the interviewers. During the training workshop (the pilot study), the draft manuals developed for both the interviewers and field supervisors were pre-tested. (See Appendix for Training Workshop Report.)

Data collected from the pilot survey were analysed and experiences shared. Also, lessons learned were used in the reformulation and modification of the standard questionnaire. At the end of this phase, both the questionnaire and supervisors' and interviewers' manual were revised for use during the main field survey. Detailed instructions regarding how individuals were to be selected and approached for the interview sessions were provided in specially designed manuals. The manuals also provided guidance on how to deal with unusual situations and questions and how to code the likely responses.

Phase 2: Main Survey

The appropriate timing and place of interview of the respondents were determined from the findings of the pilot study. With permission sought from all the relevant authorities, all selected respondents who gave their full consent to participate in the study were recruited. Potential respondents were duly informed about the general nature and purpose of the study and their rights to withdraw at any time without this prejudicing

their present or future employment (see ethical consideration under materials and methods).

Respondents who refused to participate at the outset of the study were replaced with new respondents, although as much as possible, information on their socio-demographic characteristics were obtained in order to ascertain if their refusal to participate in the study was related to the outcome.

Specially trained male and female interviewers were recruited to interview respondents confidentially using the structured pre-coded questionnaire.

Phase 3: Data Collection Instrument

The standardised data collection instrument for this survey was a knowledge, attitudes and behaviour (KAP) adapted from the Nigerian Military Personnel Health Survey questionnaire and the Family Health International's Behavioural Surveillance Survey (BSS) instrument.

It is hoped that the data derived from this study will serve as baseline data for catalyzing the establishment of a surveillance system in the military that can subsequently be enhanced for incorporation into the national HIV surveillance system.

The questionnaire consisted of a total of 102 question items, which were divided into 6 sections:

- *Section 1 (16 items):* The socio-demographic characteristics of the respondents such as age, marital status, occupation, education, current residence and length of stay, and mobility patterns.

- *Section 2 (23 items):* Marriage and live-in partnerships, number of partners, contraceptive use, how long respondents had been in the sexual relationships with the partners, and so forth.

- *Section 3 (11 items):* Sexual history and behaviour. This section also covered information on possible risk factors (confounders) for HIV (i.e. STD history, knowledge, attitudes regarding STDs/HIV, and risky behavioural patterns).

- *Section 4 (11 items):* Condom use.

- *Section 5 (9 items):* STDs.

- *Section 6 (24 items):* Knowledge of HIV/AIDS and exposure to interventions.

Each interview session lasted approximately 35–40 minutes. To minimise information bias, thereby increasing the quality of information obtained the supervisors monitored the field interviewers closely and crosschecked the completed questionnaires.

Phase 4: Data Management

The success of any survey is determined by the quality of data obtained, proper handling of study instruments, and subsequent management of the data. For this survey, data management commenced in the field during data collection with checks put in place to ensure that the sampling strategy was strictly followed. Also, completed questionnaires were cross-checked in the field by supervisors for errors and inconsistencies. Questionnaires detected by the supervisors to be filled out incorrectly at the end of each interview were re-administered.

Receipt and Control Procedures at the Coordinating Centre

All batches of completed questionnaires were returned to the AFPAC Headquarters in Lagos for storage and processing. The services of eight experienced but retrained data entry clerks were employed for effective and timely data entry. Eight computers, each with EPIInfo software installed, were provided. Each data entry clerk was given three days of orientation in order to ensure that each was familiar with both the software and the system.

Upon receipt of the administered and filled questionnaires, they were counted, registered, and stored in batches. Subsequently, random samples were selected by the consultant and checked for completeness (i.e. no missing answers) and consistency of answers.

Data Entry and Validation

The data were transferred directly from the completed questionnaires to the prepared EPIInfo computer database matching the format used for the questionnaires. Data entry was combined with validation whereby range, structure, and consistency checks were pre-programmed in order to ease the detection and immediate correction of errors. At this stage, questionnaires with gross errors that could not be resolved were rejected.

It was initially planned to double enter all the data. However, this was suspended due to time constraints. Instead, batches of randomly selected questionnaires were re-entered and consistent errors that were detected were immediately corrected and brought to the notice of the data entry clerks in order to forestall further errors from occurring. By combining this alternative with the pre-programmed validation, errors were minimised to a large extent.

All respondents' questionnaires were given computer-derived codes that were specific for each respondent.

Phase 5: Statistical Analyses

Data analyses commenced immediately following data entry, cleaning, and checking of the data. Statistical analyses were performed going through the following stages:

- *Univariate analyses:* Descriptive analyses were done for the important variables, including frequencies of some of the identified risk factors, and construction of indicators.

- *Bivariate analyses:* These allowed for examination of the distribution of some key outcome variables according to respondent characteristics that were suspected to be associated, such as age, socio-economic status, activities, and mobility patterns.

Operational Definitions[6]

1. REGULAR PARTNER:	A person (man or woman) with whom the respondent cohabits, has had sex with for more than a year, and he intends to continue to have sex with.
2. COMMISSIONED OFFICER (CO):	An officer of the Nigerian Armed Forces who has passed through the Nigerian Defence Academy programme or other Foreign Defence Academies following which he was commissioned as an officer in the Armed Forces.
3. NON-COMMISSIONED OFFICER (NCO):	A recruit into the Nigerian Armed Forces who goes through military training but is not commissioned after training.
4. JUNIOR COMMISSIONED OFFICER (JCO):	An officer of the following ranks in the Nigerian Armed Forces: 2nd Lieutenant, Lieutenant, or Captain.
5. SENIOR COMMISSIONED OFFICER (SCO):	Major, Lieutenant Colonel, Colonel, Brigadier, Major General, Lieutenant General, General, or Field Marshall.
6. JUNIOR NON-COMMISSIONED OFFICER:	Private, Lance Corporal, or Sergeant.
7. SENIOR NON-COMMISSIONED OFFICER:	Staff Sergeant, Warrant Officer Class II, or Warrant Officer Class I.

APPENDIX 2: Ranking Structure in the Nigerian Armed Forces

Senior Commissioned Officers

FIELD MARHSALL
GENERAL
LIEUTENANT GENERAL
MAJOR GENERAL
BRIGADIER
COLONEL
LT. COLONEL
MAJOR

Junior Commissioned Officers

CAPTAIN
LIEUTENANT
2ND LIEUTENANT

Senior Non-commissioned Officers

WARRANT OFFICER CLASS I
WARRANT OFFICER CLASS II
STAFF SERGEANT

Junior Non-commissioned Officers

SERGEANT
LANCE CORPORAL
PRIVATE

APPENDIX 3: Selected Study Sites and Sub-divisions

Steps

1. All divisions/zones were covered in the sampling.

2. From each division/zone, some sites and clusters under any of the Services were selected by balloting using existing sampling frames.

3. From each of the selected clusters, 50, 15, and 25 respondents will be selected by systematic sampling from the NA, NN, and NAF, respectively. Consideration will be given to stratification based on rank and sex distribution.

List of Sites and Clusters Selected

Site	Army	Navy	Air Force
1 Division (Kaduna Zone)			
Kaduna	1 Division HQ		345 NAF AMM
Zaria	Depot Zaria		301 FTS
Sokoto	26 Bn		
Kano			NAF station
2 Division (Western Zone)			
Ibadan	2 Division Hospitals		
Benin	School of S&T		81 AMG
Ede	Engineer Construction Regt		
Badagry	242 Rec.Bn		
Kainji			NAF Station
Oshodi	Armed Forces Resettlement Centre		
3 Division (Jos Zone)			
Jos	531 Sig Supt Regt		NAF Station
Yola	23 ARMD BDE		
Maiduguri			204 WG (Detachment)
Gombe	232 TK Bn		

Site	Army	Navy	Air Force
81 Division (Lagos Zone)			
Island		NN Dockyard V.I	
Mainland	ANNS Barracks Yaba COD	HQ Naval Base Apapa	403 CMO Shasha
		NNS Quorra Apapa	88 MAG Ikeja
Apapa/Mile	2 Command Finance Ojo		
82 Division (Eastern Zone)			
Enugu			305 FTS
Port Harcourt	Amph Bn		
Warri		NNS Umalokun Naval Base	
Calabar		HQ Eastern Naval Command	
Takum	4 MOT Inf Bn		
Makurdi			33 LOG GP
Ogoja	342 FAR Bn		
Ikom	103 MOT Inf Bn		
Bakassi	Operational		
Abuja Zone			
	HQ BDE of Guards		
	National War College		
	Sanni Abacha Barracks		

APPENDIX 4: Ethical Considerations

Informed Consent

Efforts were made to ensure that all the participants understood the nature of the study and appreciated the benefits to them and their community. Consent was subsequently obtained from all the participants. They were also informed about sensitive issues concerning their sexual and reproductive health in the interview.

Confidentiality

Strict precautions were taken to ensure confidentiality throughout the duration of the study. Respondents were assured that all instruments used (i.e. questionnaires and database entries) would only bear computer-derived code numbers and not respondents' names.

Risk to Participants

A few direct risks to participants included embarrassment from the sensitive nature of the questions, particularly since the interviewers were also military personnel.

Third Party Risk

This was not an issue in this study, as biological samples were not obtained from participants.

Incentives

No monetary incentive was given to any respondent during the course of the study. However, free HIV/AIDS IEC materials and condoms were distributed to all respondents.

Feedback of Results

Upon completion of the investigation, respondents, the HIV/AIDS Unit of the Federal Ministry of Health, and the Ministry of Internal Affairs will be informed of the results of the study in a way that will ensure they fully understand the implications of the findings.

Bias and Confounding

Potential Confounders: There are many risk factors associated with the risk of HIV infection that are recorded in the literature. A few of the important factors include respondents' and partners' occupational and educational levels, marital status, drug use, age, mobility, socio-economic status, and residence. Others include ranks structures, arm of service (which were stratified for), number of sexual partners, history of STDs and genital ulceration, and contraceptive (particularly condom) use.

Attempts were made to collect as much information as possible on the important risk factors so that appropriate adjustments could be made during the analyses to control for their effects.

Potential Sources of Bias: Selection bias was minimised by pooling respondents from the six zones across all the identified strata. Also, attempts were made to use uniform selection methods.

Information Bias: This was minimised as much as possible but in addition, checks were built in to validate responses to questions.

APPENDIX 5: Training Manual for Field Workers

'AIDS PREVENTION INDICATOR SURVEY: KNOWLEDGE, ATTITUDES & SEXUAL BEHAVIOR.

ARMED FORCES PROGRAMME FOR AIDS CONTROL (AFPAC)
IN COLLABORATION WITH THE POLICY PROJECT

VENUE: NNS QUORRA, Lagos

DATE: 22ND–25TH MAY, 2001

The Training Schedule
Day 1

Time	Topic/Activity	Facilitator(s)
9.00am–9.00am	Welcome Address and Introduction of Participants	AFPAC/Consultant/Policy Project
9.10am–9.20am	Norms of Workshop /House Keeping	Col. Egbewunmi
9.20am–9.35am	Background and Purpose of the Survey	Dr. Mafeni
9.35am–9.45am	Workshop Goals and Objectives	Dr. Sylvia Adebajo
9.50am–10.35am	**TEA BREAK** / AIDS Video	
10.40am–11.00am	Role of Interviewers and Their Responsibilities	Dr. Sylvia Adebajo
11.05am–11.20am	Description of Sampling Frame and Methodology	Dr. Sylvia Adebajo
11.20am–11.35am	How to Select Respondents Eligible for the Survey	Dr. Sylvia Adebajo
11.35am–12.05pm	How to Conduct Interviews and Skills Required	Dr. Sylvia Adebajo
12.05pm–2.05pm	Question-by-question Review of Questionnaire	Dr. Sylvia Adebajo
2.05pm–3.05pm	**LUNCH BREAK**	
3.10pm – 4.00pm	Role play	
4.00pm – 5.00pm	Reviewing the questionnaire after completion Provision of IEC materials to Respondents Call-backs Giving Feedback to Supervisor Field Practice: Selecting Respondents and Conducting Interviews Review of Field Exercise Review of Interviewer's Role in Quality Control Logistics Target Dates for Completion of Survey	Dr. Sylvia Adebajo Dr. Sylvia Adebajo/AFPAC

Objectives of Training

By the end of this workshop, field interviewers will be able to:

- Randomly select using defined selection criteria and guidelines and determine a respondent's eligibility;
- Introduce themselves properly to the eligible respondents;
- Select a quiet place for interviews, provide assurance of confidentiality, and gain the cooperation of each respondent;
- Conduct the interview properly with the selected respondents, including asking questions as they are printed in the questionnaire, writing clearly, and following skip patterns and filters;
- Review the questionnaire for errors prior to ending the session;
- Answer respondents' questions about HIV/AIDS/STDs and give them IEC materials;
- Recognise the importance of selecting eligible respondents accurately for validity of the survey; and
- Recognise the importance of asking questions as they appear in the questionnaire and to refrain from influencing the answers of the respondents.

Interviewer Responsibilities and Importance of Interviewers

The objective of the survey is to obtain quality information that will assist the federal government and the military in particular to prevent and control the spread of HIV infection. This information can be obtained by means of structured interviews with carefully selected members of the Armed Forces.

The questionnaire includes questions that are very sensitive—some relating to a person's sexual behaviour and whether or not the person uses condoms.

The interviewer has a key role to play in the survey. It is the responsibility of the interviewer to obtain accurate responses from the respondents. The value of the survey depends on quality of the data collected.

Interviewers' Responsibilities

Interviewers are responsible for accurately completing the questionnaire. Their responsibilities include the following:

- To introduce themselves properly to the respondents.
- To select a quiet place for the interview, provide assurance of confidentiality, and gain the cooperation of each respondent.
- To conduct the interview properly with selected respondents, including asking questions as they are printed in the questionnaire, writing clearly, and following skip patterns and filters.
- To review the questionnaire for errors prior to ending the session.

- To provide AIDS IEC materials to the respondents after all interviews in a cluster have been completed.
- To refer questions to the supervisor.

Conducting Interviews

The success of an interview depends largely on how the interviewer initially presents himself/herself to the respondent. A hesitant or embarrassed interviewer is less likely to receive the cooperation of the respondent. Timing of the interviews is very important and should ideally be restricted to working hours (i.e. between 9.00am–3.30pm).

Qualities of a Good Interviewer

- Amiable
- Courteous
- Persistent
- Careful
- Organised
- Accurate

The interviewer should ask questions in a way that does not reflect his/her values and perceptions of the topic. This allows the respondent to answer truthfully without fear of judgement.

The interviewer must not rush the interview and must not pressure the respondent to answer questions quickly.

If the respondent is having difficulty answering a question, the interviewer should repeat the question, making sure the question is understood.

A general rhythm should be maintained during the interview. Questions should be posed carefully and slowly, allowing time for complete responses. On the other hand, the questions should not proceed too slowly because the respondent will grow bored!

Introduce Yourself to the Respondent

The interviewer should have a letter of introduction to present to the respondent. The respondent should be informed that the survey is confidential and that the results will be used to improve health programmes for the country.

Please note, it *should not be mentioned* that the survey is about AIDS, condoms, or STDs, because this may discourage and bias respondents.

The Questionnaire

The core questionnaire consists of 121 questions plus 2 filters and a few additional entries and optional questions. No respondent will be asked all the questions. Hence, it will take about 30–40 minutes to complete.

The questionnaire is designed to be used as a verbatim instrument. That is, the interviewer should read aloud each question exactly as it is written and adhere to the specified order of questions. This is essential to achieve reasonable reliability. Filters and skips have been included in the questionnaire so that inappropriate and inapplicable questions can be avoided. Filters always refer back to information already obtained in the interview whilst skips direct the course of questions.

Coding Responses

It is pertinent to write clearly and legibly. The interviewer should write down all of the respondent's replies during the course of the interview and should not rely on being able to remember details of an interview after leaving the respondent.

The interviewer should circle response codes carefully so as not to obliterate the code number and not include more than one code. Where the respondent has given an answer that does not fit the response codes, the interviewer should circle "other specify" and write the answer in the respondent's own words on the line provided.

Filters and Skips

The filters and skips help direct the course of questioning so that the respondent does not have to answer inappropriate questions. It is important, however, to follow instructions carefully so that important questions are not omitted.

Reviewing the Questionnaire

At the close of the interview, the interviewer should thank the respondent and ask for a few minutes to review the questionnaire before leaving. The interviewer should check all skips and filters and should make sure that each response is clearly legible.

Call-backs

Interviewers must attempt to locate respondents at least three times before reporting a result code indicating they were not at home. Call-backs should be made at times when it is likely that the respondents will be available.

Review of the Interviewer's Role in Quality Control

Quality control is very important in the collection of field data. For this reason, interviewers are required to review and edit completed questionnaires at the end of the

interview before leaving the respondent. Also, at the end of each day's interviewing, the interviewer should again thoroughly edit each completed questionnaire whilst the interview is still fresh in the interviewer's mind.

For each question, the interviewer must make sure that

- The appropriate response option is circled completely;
- Written entries are legible and complete;
- Interviewer instructions have been correctly followed; and
- Skip patterns have been correctly observed.

APPENDIX 6: Training Manual for Field Supervisors

HIV/AIDS PREVENTION INDICATOR SURVEY: KNOWLEDGE, ATTITUDES & SEXUAL BEHAVIOR.

ARMED FORCES PROGRAMME FOR AIDS CONTROL (AFPAC)
IN COLLABORATION WITH THE POLICY PROJECT

VENUE: NNS QUORRA, LAGOS
DATE: 22ND–25TH MAY 2001

Supervisor's Supplementary Training Schedule
Tuesday, 22nd May 2001

Time	Topic/Activity	Facilitator(s)
9.30am–10.00am	Welcome Address and Introduction of Participants	AFPAC/Consultant/ Policy Project
10.15am–10.45am	Norms of Workshop/Housekeeping	
10.50am–11.20am	Background and Purpose of the Survey	Dr. Sylvia Adebajo
11.30am–12.00noon	Workshop Goals and Objectives	Dr. Mafeni
12.00–12.30pm	**TEA BREAK**	
12.35pm–1.25pm	Role of Supervisors and Their Responsibilities	Dr. Sylvia Adebajo
1.30pm–2.30pm	Detailed description of Sampling Frame and Methodology	Dr. Sylvia Adebajo
2.35pm–3.45pm	**LUNCH BREAK**	
4.00pm–4.30pm	Required Editing and Retrieval of Questionnaires	
4.30pm–5.00pm	How to Conduct Interviews and Skills Required	Dr. Sylvia Adebajo
4.00pm–4.30pm	How to Select Respondents Eligible for the Survey	Dr. Sylvia Adebajo
4.30pm–5.00pm 5.30pm–6.00pm	Logistics, Including Schedules and Transportation Survey Timetable	Dr. Sylvia Adebajo

Objectives of Training

By the end of this workshop, field supervisors will

- Be aware of the study population, the study size, selection process and criteria, and duration of the study;
- Be familiar with the study instrument;
- Acquire the skills necessary for proper completion of the questions and be able to train others;
- Know the tasks of each group of participants;
- Be able to guide the field interviewers to carry out the responsibilities expected of them;
- Know how to handle completed forms; and
- Be mindful of quality control at every stage of the study.

Responsibilities of Supervisors

The overall task of the supervisor is to ensure that the interviewers in his or her team conduct interviews properly. In particular, the supervisor has the following responsibilities:

- To ensure that full efforts are made to locate and interview all selected households and all selected respondents.
- To ensure that the schedule for conducting interviews makes optimal use of evening and weekend hours when respondents are most likely to be home.
- To collect questionnaires daily and organise them by cluster.
- To log progress daily on the cluster control sheets and fill out a cluster summary sheet as the cluster is completed.
- To answer questions raised by interviewers in the field, which requires spending the day in the field with the interviewers.
- To review questionnaires each evening and inform interviewers of mistakes.
- To ensure that interviewers are properly introduced to any community officials who need to know that the survey is being conducted.
- To inform the coordinator of the progress of the survey.

Field Checks on Completed Questionnaires

It is an important task for the field supervisors to detect and eliminate errors at an early stage. Each questionnaire should be carefully checked for legibility of recorded answers, completeness (i.e. no missing answers), structure (i.e. filters have been followed properly), and consistency (i.e. answers are logically consistent with each other). When an error is detected, it should be corrected immediately. This may or may not necessitate a repeat visit.

When checking questionnaires in the field, it is a good strategy to take the work of each interviewer in turn. This allows the supervisor to detect common patterns of answers repeated in several questionnaires. Repeated patterns arouse suspicion that the interviewer is not following instructions but is merely entering stereotyped responses.

SAMPLE CONTROL SHEET

Supervisor's Name: _____
Division Covered: _____

ELIGIBLE RESPONDENTS						
CLUSTER NAME	**TOTAL ELIGIBLE RESPONDENTS SELECTED**	**1**	**2**	**3**	**4**	**8**

KEY

1 = Completed
2 = Not available
3 = Refused to be interviewed
4 = Partially completed
8 = Other (please specify)

APPENDIX 7: Trainer's Manual

HIV/AIDS PREVENTION INDICATOR SURVEY: KNOWLEDGE, ATTITUDES & SEXUAL BEHAVIOR.

ARMED FORCES PROGRAMME FOR AIDS CONTROL (AFPAC)
IN COLLABORATION WITH THE POLICY PROJECT

VENUE: NNS QUORRA, Lagos

DATE: 22ND–25TH MAY, 2001

General Introduction to the Workshop

Duration: 20 minutes

Overview: Familiarisation of participants and introduction of workshop objectives.

Objectives: At the end of the session participants will be able to

- Clarify the norms and guidelines for the workshop; and
- Familiarise with one another.

Materials:

- Handouts/workshop manual
- Writing materials

Activities:

- The facilitator introduces the session with a review of the overview and objectives of the session.
- The facilitator introduces himself to the members of the training team.
- The facilitator asks the participants to introduce themselves to the entire group, following the guidelines for introduction as given by the facilitator.
- The facilitator explains the workshop goals, objectives, and ground rules using the prepared handouts, provides opportunities for questions and clarification.
- The facilitator provides an opportunity to respond to general questions and clarifies issues arising therein.

Workshop Agenda

- Workshop starts at 8.00am each day and the duration of workshop shall be three days.
- Punctuality on the part of the participants is very important.

Session 1: Protocol

Duration: 45 minutes

Objectives: At the end of this session, participants shall be aware of the study population, the study size, selection criteria, and how to conduct interviews.

Activities:

- The facilitator introduces himself.
- He then takes the participants through the protocol module.
- He allows time for questions and answers.
- He ensures that each participant understands every detail.
- Study population.
- Study size.
- Inclusion criteria.
- Sample size.
- Duration of sampling.

Session 2: Study Instrument - The Questionnaire

Duration: 60 minutes

Overview: The session will outline the questionnaire. It addresses the importance of the questionnaire using recommended procedure, there will be demonstration on how to extract data and organise relevant information for completing the form.

Objectives: By the end of this session, participants should be able to

- Identify the questionnaire; and
- Acquire the skills necessary for proper completion of the form and be able to train others on the questionnaire.

Materials:

- Blank copies of the questionnaire
- Completed questionnaire
- Overhead projector and transparencies of questionnaire.

Activities:

- The facilitator introduces himself.
- S/he describes the questionnaire to the participants using the blank copies distributed.
- S/he asks questions to ensure that the questionnaires are properly understood.
- The facilitator and co-facilitators demonstrate the procedure of completing the questionnaire.
- The participants are paired for simulation exercises.
- Each group presents its simulation exercise result to the larger body.
- Questions arising from the exercise are asked and answered.

Session 3: Responsibility

Duration: 30 minutes

Overview: The session deals with the expected tasks that each group of participants should handle.

Objectives: At the end of the session, the participants should:

- Know the tasks of each group of participants.
- Be able to guide the field participants to carry out the responsibilities expected of them.

Activities:

- The facilitator introduces himself.
- Explains the responsibilities of each group of participants to the larger group.
- Time is allowed for questions and answers for clarification.

Responsibilities of Survey Coordinators

Each division will have a survey coordinator.

The overall task of each survey coordinator is to ensure that the field work is conducted properly. This includes the following responsibilities:

- To identify supervisors and interviewers.
- To plan and conduct the training of supervisors and interviewers, including the logistic administrative arrangements.
- To communicate clearly the amount that each interviewer and supervisor will be paid and to ensure that the amounts are paid.
- To communicate problems arising in the field to headquarters and to facilitate resolution of the problems in the field.
- To ensure that the field schedule is kept.
- To supervise the supervisors.
- To deliver the completed questionnaires safely and promptly to headquarters.
- To complete the sample summary sheet for the domain using the cluster summary sheets.

Responsibilities of Supervisors

The overall task of the supervisor is to ensure that the interviewers in his or her team conduct interviews properly. In particular, the supervisor has the following responsibilities:

- To ensure that full efforts are made to locate and interview all selected households and all selected respondents.
- To ensure that the schedule for conducting interviews makes optimal use of evening and weekend hours when respondents are most likely to be home.
- To collect questionnaires daily and organise them by cluster.
- To log progress daily on the cluster control sheets and fill out a cluster summary sheet as the cluster is completed.
- To answer questions raised by interviewers in the filed, which requires spending the day in the field with the interviewers.
- To review questionnaires each evening and inform interviewers of mistakes.
- To ensure that interviewers are properly introduced to any community officials who need to know that the survey is being conducted.
- To inform the coordinator of the progress of the survey.

Responsibilities of Interviewers

Interviewers are responsible for accurately completing the questionnaire. Their responsibilities include the following:

- To introduce themselves properly to the respondents.
- To select a quiet place for interview, provide assurance of confidentiality, and gain the cooperation of each respondent.
- To conduct the interview properly with selected respondents, including asking questions as they are printed in the questionnaire, writing clearly and following skip patterns and filters.
- To review the questionnaires for errors prior to ending the session.
- To provide AIDS IEC materials to the respondents after all interviews in a cluster that have been completed.
- To refer questions to the supervisor.

The Questionnaire

<u>Section 1. Identification</u>

This includes the outcome of the interview visit. If the interviewer fails to make contact with the respondent on the first or second visit, the outcome of each attempt will be recorded. This information is required to calculate the response rates.

Section 2. Background Characteristics

These questions serve two purposes:

1. To establish a rapport between interviewers and respondents before more intimate questions are asked; and
2. To permit analysis of key indicators by social, cultural and geographical strata.

The question on alcohol consumption is justified because of the frequent assumption that opportunities and inclination for sex with non-regular partners often arise in the context of drinking, usually in public places.

Section 3. Marriage and Regular Partnerships and Condom Use

- Current marital status
- Number of current spouses
- Number of other regular sex partners
- Perceived faithfulness of spouses/regular partners
- Recency of last intercourse with spouse/regular partner
- Use of condom for last intercourse
- Age at first intercourse

Non-regular and Commercial Sex:

- Number of non-regular sex partners in last 12 months
- Recency of last intercourse with non-regular partner
- Whether last intercourse was a commercial transaction
- Use of condom for last intercourse
- Source of condom

The main reasons for asking these questions is to measure sexual risk behaviour for each respondent (P4 and P5).

The sequence of questions is carefully designed to progress from consideration of marriage to other regular partnerships and finally to more transient and potentially high-risk sexual relationships.

A regular partnership is defined as one that lasts for 12 months or more.

Sexual intercourse within such regular relationships carries a low risk of HIV infection, provided that the partnership is mutually exclusive and assumes that neither party is already infected. This element of exclusivity or fidelity is measured by asking respondents whether they think that their spouse/regular partner has sex with other people.

Parts of this section contain critically important questions concerning the number of non-regular partners in the last 12 months and use of a condom for the most recent intercourse with any of them.

Both sections require very careful translation to convey the concepts of marriage, regular partnership, and non-regular liaisons. Translation of the term sexual intercourse requires care to avoid potential confusion between on the one hand, penetrative anal and vaginal intercourse and on the other hand, forms of sexual activity that do not involve penetrative intercourse (e.g. masturbation).

This section also measures knowledge of condoms and knowledge of places where they can be obtained. This information are needed to construct PI 3.

Section 4. STDs and Health Issues

This concerns self-reported incidence of STDs needed for the measurement of PI 9.

Section 5. Knowledge of HIV/AIDS, Risk Perception, and Behaviour Change

This section measures PI 1 on knowledge of preventive practices. People who have not heard of HIV/AIDS cannot be asked about preventive practices. Respondents who correctly identify at least the two main preventive practices (condom use and no casual sex) should be classified as having effective knowledge of preventive methods.

Preventive Indicators

PI 1: Knowledge of Preventive Practices

$$\frac{\text{Number of people citing at least two acceptable ways to protect from HIV infection}}{\text{Total number of people aged 15–49 surveyed}}$$

PI 3: Condom Availability at the Peripheral Level

$$\frac{\text{Number of people who can acquire a condom}}{\text{Population ages 15–49}}$$

PI 4: Reported Non-regular Sexual Partners

$$\frac{\text{Total number of people ages 15–49 reporting sexual intercourse with a non-regular sex partner in the last 12 months}}{\text{Number of people ages 15–49 who report having had at least one sex partner in the last 12 months}}$$

PI 9: Reported STD Incidence

$$\frac{\text{Number of reported episodes of urethritis in men aged 15–49 in the last 12 months}}{\text{Number of men aged 15–49 surveyed}}$$

APPENDIX 8: The Survey

ARMED FORCES PROGRAMME ON AIDS CONTROL (AFPAC)

HIV/AIDS PREVENTION INDICATOR SURVEY: KNOWLEDGE, ATTITUDES, & SEXUAL BEHAVIOUR

REVISED: May 25, 2001

INFORMED CONSENT

Introduction

"My name is _____ and I'm working on behalf of the Armed Forces Programme on AIDS Control. We're interviewing members of the Armed Forces to learn about your awareness and understanding of the human immunodeficiency virus, or HIV, which is the virus that causes AIDS.

Confidentiality and Consent

"I'm going to ask you some very personal questions that some people might find difficult to answer. Your answers are completely confidential. Your name will not be written on this form, and will never be used in connection with any of the information you tell me. You do not have to answer any questions that you don't want to answer but you are implored to endeavour to complete answering to the best of your ability.

Your honest answers to these questions will help us better understand what people think, say, and do about certain kinds of behaviours. We would greatly appreciate your help in responding to this survey.

The survey will take about 45 minutes to ask the questions. Would you be willing to participate?"

I certify that the respondent gave verbal informed consent to participate in this survey.

_____

Interviewer's Signature

Q001 **QUESTIONNAIRE SERIAL NUMBER**
|__|__|__|__|

Q002 **CITY/TOWN/VILLAGE** _____

Q003 **STATE** _____

Q004 **BASE / UNIT** _____

Interview Results

		Visit 1
Q005	**Date**	___/___/___
Q006	**Interviewer Name**	_____
	ID Code	[___|___]
Q007	**Interview Result***	

* Result codes:

Completed the survey	1	Refused to complete the survey	4
Partially completed the survey	2	Other (SPECIFY)	5
Postponed completing the survey	3		

Time interview started: _____

Time interview ended: _____

Interviewer's Signature: _____

Date reviewed: _____

Supervisor's Signature:: _____

Date reviewed: _____

Section 1: Background characteristics

Interviewer (read out): *First I would like to ask you some questions about you.*

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
Q101	Record the sex of the Respondent	MALE .....1 FEMALE 2	
Q102	Service Arm to which you belong **(Please indicate only one option)**	NIGERIAN ARMY 1 NIGERIAN AIR FORCE 2 NIGERIAN NAVY 3	
Q103	Which Corps of the service do you belong?	_____	
Q104	When were you born?	DD/MM/YY [___[___|___|___|___|___] DON'T KNOW 98	
Q105	How old were you on your last birthday? **(COMPLETE RESPONSE AND CORRECT Q104 IF NECESSARY.)**	AGE IN COMPLETED YEARS [___|___]	
Q106	What is your rank?	SPECIFY_____...	
Q107	What is the highest level of school you attended?	NONE..... 1 PRIMARY UNCOMPLETED.....2 PRIMARY COMPLETED.....3 SECONDARY UNCOMPLETED.....4 SECONDARY COMPLETED.....5 HIGHER UNCOMPLETED..... 6 HIGHER COMPLETED.....7 OTHERS (SPECIFY).....8	
Q108	When did you join the Armed Forces?	DD/MM/YY [___|[___|[___|[___|[___[___|	
Q109	How long have you been based at this unit/base?	YEARS.....[___|___] **RECORD 00 IF LESS THAN 1 YEAR**	
Q110	What is your State of Origin?	SPECIFY:_____ CODE.....[___|___]	
Q111	What is your religion? **(ENTER NAME OF SPECIFIC DENOMINATION.)**	SPECIFY_____ CODE.....[___|___]	
Q112	In the last 4 weeks, how many nights in total have you slept in another location other than your home?	NUMBER OF NIGHTS SLEPT ELSEWHERE |___]|___]	
Q113	In the last 12 months have you been away from your home for	YES.....1	

	more than one month altogether?	NO.....2	
Q114	Have you ever taken alcohol?	YES 1 NO.....2	→**Q119**
Q115	At what age (years) did you first drink alcohol?	_____ DON'T KNOW 98	
Q116	Do you still drink alcohol?	YES.....1 NO.....2	
Q117	If no, when did you stop drinking?	DD/MM/YY.....[___|[___|[___|[___|[___[___|	
Q118	In the last 4 weeks, on how many days did you drink alcohol?	NUMBER OF DAYS [___|___]	
Q119	Which of the following if any, have you tried? **(READ LIST AND PROMPT FOR OTHER UNFAMILIAR NAMES. AND ANY OTHERS?**	YES NO COCAINE 1 2 HEROINE 1 2 INDIAN HEMP/WEE-WEE/Quayan 1 2 OTHERS (SPECIFY): _____ 1 2	
Q120	Have you ever smoked cigarette	YES 1 NO 2	→**Q125**
Q121	At what age (years) did you first smoke?	_____ DON'T KNOW 98	
Q122	Do you still smoke?	YES.....1 NO 2	→**Q124**
Q123	**(If yes)**, how many cigarettes do you smoke per day?	1-5 cigarettes .....1 6-10 cigarettes .....2 > 10 cigarettes.....3	
Q124	**(If no)**, when did you stop?	DD/MM/YY [___|[___|[___|[___|[___[___|	
Q125	Have you ever injected **hard drugs** for recreation? **DRUGS INJECTED FOR MEDICAL PURPOSES OR TREATMENT OF AN ILLNESS <u>DO NOT</u> COUNT.**	YES.....1 NO 2	

SECTION 2: MARRIAGE AND LIVE-IN PARTNERSHIPS

Interviewer: *Now I would like to ask you some general questions about your marriage and live-in partnerships.*

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
Q201	Have your ever been married or lived with a man/woman as if you were married for up to 12 months?	YES 1 NO.....2	→**Q301**

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
Q202	How old were you when you first married or lived with a man/woman as if you were married?	AGE IN COMPLETE YEARS .....[___|___]	
Q203	Are you *currently* married or living together with a man/woman as if you are married?	YES, MARRIED 1 YES, LIVING TOGETHER 2 NO 3	→**Q301**
Q204	For how many years have you been married or living together as if you were married?	YEARS.....[___|___] **(RECORD 00 IF LESS THAN ONE YEAR.**	
Q205	**MEN:** Do you have more than one wife or live-in partner who live with you? **WOMEN:** Does your husband have other wives or does he live with other partners?	YES 1 NO.....2	→**Q207**
Q206	**MEN:** Altogether, how many wives or other partners live with you? **WOMEN:** Including yourself, how many wives or other partners live with your husband?	NO. WIVES/PARTNERS.....[___|___]	
Q207	Do you have any children with your spouse/partner(s)?	YES 1 NO 2	→**Q209**
Q208	If yes, how many children do you have?	NO. CHILDREN.....[___|___]	
Q209	Does your spouse/partner live with you or does he/she live somewhere else?	WITH RESPONDENT 1 SOMEWHERE ELSE 2	→**Q211**
Q210	How often do you visit your spouse/partner?	EVERY WEEK 1 2 TO 3 TIMES A MONTH 2 ONCE A MONTH 3 ONCE EVERY 2 MONTHS 4 ONCE EVERY 3 MONTHS 5 LESS THAN ONCE EVERY 3 MONTHS 6 OTHERS SPECIFY_____.....7	
Q211	What is the longest period of time that you have had to be separated from your spouse/partner?	NEVER BEEN SEPARATED 1 3 OR FEWER MONTHS 2 4 TO 6 MONTHS 3 7 TO 12 MONTHS 4 MORE THAN 1 YEAR 5	→**Q301**
Q212	What was the reason for your separation?	OUTSIDE OPERATION 1 POSTING 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
		TRAINING/WENT ON COURSE 3 EXERCISE 4 WIDOWED .....5 DIVORCED… .....6 OTHER SPECIFY:_____ 7	

SECTION 3A SEXUAL HISTORY AND BEHAVIOUR

Interviewer (read out):

I am going to ask some specific questions about sex and your sexual partners in the last 12 months.

Sexual partners are any persons with whom you might have had sex, including your husband, wife or wives, girlfriends, boyfriends, friends, casual partners, prostitutes, someone you may have met at a bar, a wedding, a special event, or during the normal course of your day.

For this survey, the term "sexual intercourse" refers to vaginal or anal sex.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
Q301	At what age did you first have sex?	NEVER .....99 AGE (YEARS).....|___|___|	→**Q303**
Q302	When was the *last time* you had sex? **(COMPLETE ONLY ONE OF THE OPTIONS)**	TODAY.....1 [___|___|] DAYS AGO.....2 [___|___|] WEEKS AGO.....3 [___|___|] MONTHS AGO.....4 [___|___|] YEARS AGO.....5 [___|___|]	
Q303	How do you satisfy your sexual urges? **(CIRCLE ALL ANSWERS MENTIONED)**	BY MASTURBATING.....1 BY PRAYING .....2 BY DRINKING WATER.....3 BY DRINKING ALCOHOL.....4 BY HAVING SEX WITH SPOUSE/PARTNER.....5 BY PAYING FOR SEX.....6 NONE OF THE ABOVE.....7 OTHERS (SPECIFY).....8	→**Q305** →**Q305** →**Q305** →**Q305** →**Q305**
Q304	Some people practice different forms of sexual intercourse. Which of the following have you tried? **(Read List & circle all answers mentioned)**	SEX WITH OPPOSITE SEX .....1 SEX WITH SAME SEX .....2 SEX WITH CHILDREN .....3 ANAL SEX.....4 ORAL SEX.....5 OTHERS (SPECIFY)_____..... 6	

Section 3B Condom Use

Interviewer (read out): *Now I would like to ask some questions relating to condom usage.*

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
Q305	Have you ever ***heard*** *of* a male condom? **Show picture or sample of one**.	YES.....1 NO.....2	 **→Q315**
Q306	Have you ever ***seen*** a male condom?	YES.....1 NO.....2	 **→Q315**
Q306	Have you and your sexual partner ***ever used*** a male condom?	YES.....1 NO.....2	 **→Q315**
Q307	Are you supplied condoms by the Armed Forces?	YES.....1 NO.....2	 **→Q310**
Q308	When was the last time you received condoms supplied by the Armed Forces?	NEVER.....99 TODAY.....1 [___|___] DAYS AGO.....2 [___|___] WEEKS AGO.....3 [___|___] MONTHS AGO.....4 [___|___] YEARS AGO..... .....5 [___|___]	**→Q310**
Q309	Do you think the supply is adequate?	YES.....1 NO.....2	
Q310	Do you have problems using a condom?	YES.....1 NO.....2	 **→Q312**
Q311	What problems have you experienced? **READ AND CIRCLE <u>ALL</u> ANSWERS** **ANY OTHERS?**	CONDOMS ARE NOT READILY AVAILABLE ..... A CONDOMS ARE TOO EXPENSIVE..... B CONDOMS ARE **NOT** USEFUL IN PREVENTING THE TRANSMISSION OF HIV/AIDS? ..... C CONDOMS ARE **NOT** USEFUL IN PREVENTING THE TRANSMISSION OF VD/STDS ....D CONDOMS REDUCE SEXUAL PLEASURE .....E CONDOMS BURST EASILY..... F CONDOMS PROLONG ERECTION..... G CONDOMS MAKE SEX MESSY ..... H CONDOMS ARE LOW GRADE.....I CONDOMS ARE DIFFICULT TO APPLY.....J OTHERS.(SPECIFY).....K	
Q312	Do you know where condoms can be obtained?	YES.....1 NO.....2	 **→Q315**
Q313	**Where can you obtain male**	SHOP..... A	

	condoms? **PROBE AND CIRCLE <u>ALL</u> ANSWERS** **Any others?**	ROADSIDE MALAM SHOP..... B PHARMACY/PATENT MEDICAL STORE ..... C HOSPITAL/CLINIC ..... D FAMILY PLANNING CENTRE ..... E BAR/HOTEL ..... F BARBING SALOON..... G FRIEND ..... H SEXUAL PARTNER ..... I OTHER (SPECIFY):_____ ....J DON'T KNOW..... Z	
Q314	How long will it take you to obtain a condom (male) close to your house or to where you work?	UNDER 1 HOUR ..... 1 1 HOUR TO HALF A DAY..... 2 HALF A DAY TO 1 DAY..... 3 MORE THAN 1 DAY ..... 4 DON'T KNOW.....98	
Q315	Have you participated in any operations away from your base?	YES .....1 NO 2	 **→Q322**
Q316	Indicate which operations you participated in. **(Circle all that are mentioned)**	ECOMOG TO SIERRIA LEONE.....A ECOMOG TO LIBERIA .....B UN MISSIONS .....C INTERNAL OPERATIONS (i.e. BAKASSI) .....D EXERCISES.....E OTHERS _____.....F	
Q317	How many times did you participate in the various operations?	ECOMOG TO SIERRIA LEONE……_____ ECOMOG TO LIBERIA ……_____ UN MISSION ……_____ INTERNAL OPERATIONS (i.e. BAKASSI)_____ EXERCISES……_____ OTHERS (SPECIFY)_____	
Q318	How long in all did you participate at each operation?	ECOMOG TO SIERRIA LEONE……[___|___] (days/weeks/months/years) ECOMOG TO LIBERIA ……[___|___] (days/weeks/months/years) UN MISSION ……[___|___] (days/weeks/months/years) INTERNAL OPERATIONS ……[___|___] (days/weeks/months/years) EXERCISES ……[___|___] (days/weeks/months/years)	

		OTHERS _____.....[___|___] (days/weeks/months/years)	
Q319	During your participation in the military operations or exercises, did you have sexual relations?	YES.....1 NO.....2	→**Q322**
Q320	How many sexual partners did you have during the operations	NONE.....1 ONE.....2 TWO.....3 THREE.....4 MORE THAN THREE.....5 DON'T KNOW.....98	
Q321	With this/these sexual partners, did you always use a condom?	YES.....1 NO.....2 DON'T KNOW.....98	
Q322	How many partners do you currently have?	...../____/____/ DON'T KNOW..... 98	

SECTION 3C SEXUAL PARTNERS' HISTORY

Interviewer (read out):

I would like for you to think about the last time you had sex, and I am going to ask you some questions about your last 3 sexual partners, beginning with the person with whom you had sex most recently. (Ask respondent Q323-Q398, beginning with the most recent partner. When you have finished asking these questions about partner 1, ask the same questions for partner 2, and so forth.)

NO.	QUESTIONS	PARTNER 1	PARTNER 2	PARTNER 3
Q323	**What is your relations hip with this partner?** **(READ OUT)**	HUSBAND/WIFE .....1 LIVE-IN PARTNER.....2 GIRLFRIEND/BOYFRIED NOT LIVING WITH YOU.....3 SOMEONE WHOM YOU PAID OR WHO PAID YOU FOR SEX 4 CASUAL ACQUAINTANCE ..5 OTHER (SPECIFY).....6 _____	HUSBAND/WIFE..... 1 LIVE-IN PARTNER ..... 2 GIRLFRIEND/BOYFRIED NOT LIVING WITH YOU.....3 SOMEONE WHOM YOU PAID OR WHO PAID YOU FOR SEX 4 CASUAL ACQUAINTANCE.. 5 OTHER (SPECIFY) ..... 6 _____	HUSBAND/WIFE .....1 LIVE-IN PARTNER .....2 GIRLFRIEND/BOYFRIED NOT LIVING WITH YOU.....3 SOMEONE WHOM YOU PAID OR WHO PAID YOU FOR SEX 4 CASUAL ACQUAINTANCE ..5 OTHER (SPECIFY) .....6 _____
Q324	How old is this partner?	AGE ..... [___|___] DON'T KNOW 98	AGE ..... [___|___] DON'T KNOW 98	AGE.....[___|___] DON'T KNOW.....98
Q325	At what place or event did you ***first*** talk to or get to know this	OWN OR FRIEND'S HOUSE.....1 WORK OR MESS HALL.....2 MAMMY MARKET 3	OWN OR FRIEND'S HOUSE ..... 1 WORK OR MESS HALL..... 2 MAMMY MARKET 3	OWN OR FRIEND'S HOUSE .....1 WORK OR MESS HALL .....2 MAMMY MARKET.....3

NO.	QUESTIONS	PARTNER 1	PARTNER 2	PARTNER 3
	partner?	CHURCH 4 BAR/NIGHT CLUB/DISCO ..5 FAMILY EVENT OR SOCIAL GATHERING 6 HOTEL 7 BROTHEL .....8 SCHOOL.....9 BARRACKS.....10 CAN'T REMEMBER .....11 DON'T KNOW .....12 OTHER (SPECIFY).....13	CHURCH 4 BAR/NIGHT CLUB/DISCO . 5 FAMILY EVENT OR SOCIAL GATHERING 6 HOTEL 7 BROTHEL ..... 8 SCHOOL.....9 BARRACKS.....10 CAN'T REMEMBER..... 11 DON'T KNOW ..... 12 OTHER (SPECIFY)..... 13	CHURCH ..4 BAR/NIGHT CLUB/DISCO….5 FAMILY EVENT OR SOCIAL GATHERING ..6 HOTEL ..7 BROTHEL.....8 SCHOOL.....9 BARRACKS.....10 CAN'T REMEMBER.....11 DON'T KNOW.....12 OTHER (SPECIFY) 13
Q326	Where does this partner live? **PROBE:** Does he/she live: **(READ OUT)**	AT SAME HOUSE.....1 AT SAME BASE .....2 IN SAME VILLAGE /NEIGHBORHOOD .....3 IN OTHER: (SPECIFY)_____4 DON'T KNOW.....98	AT SAME HOUSE.....1 AT SAME BASE ..... 2 IN SAME VILLAGE /NEIGHBORHOOD..... 3 IN OTHER: (SPECIFY) _____4 DON'T KNOW.....98	AT SAME HOUSE.....1 AT SAME BASE.....2 IN SAME VILLAGE /NEIGHBORHOOD .....3 IN OTHER: (SPECIFY)_____4 DON'T KNOW.....98
Q327	About how many times have you slept with this partner in the last 4 weeks?	No. of times [___|___]	No. of times [___|___]	No. of times [___|___]
Q328	How long ago did you first have sex with this partner?	DAYS.....1[___|___] WEEKS.....2[___|___] MONTHS.....3 [___|___] YEARS.....4[___|___]	DAYS ..... 1 [___|___] WEEKS ..... 2 [___|___] MONTHS ..... 3 [___|___] YEARS..... 4 [___|___]	DAYS.....1 [___|___] WEEKS .....2 [___|___] MONTHS.....3 [___|___] YEARS .....4 [___|___]
Q329	Did you use a condom the first time you had sex with this partner?	YES..... 1 NO..... 2 DON'T KNOW 98	YES.....1 NO .....2 DON'T KNOW 98	YES .....1 NO .....2 DON'T KNOW..... 98
Q330	When was the last time you had sex with this partner? **(COMPLETE ONLY *ONE***	DAYS AGO..... 1 WEEKS AGO ..... 2 MONTHS AGO ..... 3 YEARS AGO..... 4 WAS A ONE-TIME	DAYS AGO..... 1 [___|___] WEEKS AGO .... 2 [___|___] MONTHS AGO.. 3 [___|___] YEARS AGO ..... 4 [___|___] WAS A ONE-TIME	DAYS AGO .....1 [___|___] WEEKS AGO.....2 [___|___] MONTHS AGO ..3 [___|___] YEARS AGO.....4 [___|___] WAS A ONE-TIME

NO.	QUESTIONS	PARTNER 1	PARTNER 2	PARTNER 3
	OPTION.)	SEXUAL CONTACT 5	SEXUAL CONTACT 5	SEXUAL CONTACT 5
Q331	The last time you had sex with this partner, did you or this partner use a condom?	YES 1 NO 2 DON'T KNOW 3 *IF YES SKIP TO Q339*	YES 1 NO 2 DON'T KNOW 3 *IF YES, SKIP TO Q339*	YES 1 NO 2 DON'T KNOW 3 *IF YES, SKIP TO Q339*
Q332	If not, why didn't you and your partner use a condom the last time you had sex? **CIRCLE <u>ALL</u> ANSWERS MENTIONED**	NOT AVAILABLE A TOO EXPENSIVE B PARTNER OBJECTED C ***DON'T LIKE TO USE THEM D*** USED OTHER CONTRACEPTIVE E DIDN'T THINK IT WAS NEEDED F TOO IMPATIENT TO USE ONE..... G INDIFFERENT.....H SKIN REACTIONS.....I OTHERS: _____ J ***DON'T KNOW Y***	NOT AVAILABLE A TOO EXPENSIVE B PARTNER OBJECTED C ***DON'T LIKE TO USE THEM D*** USED OTHER CONTRACEPTIVE E DIDN'T THINK IT WAS NEEDED F TOO IMPATIENT TO USE ONE.....G INDIFFERENT.....H SKIN REACTIONS.....I OTHERS: _____J ***DON'T KNOW Y***	NOT AVAILABLE A TOO EXPENSIVE B PARTNER OBJECTED C ***DON'T LIKE TO USE THEM D*** USED OTHER CONTRACEPTIVE E DIDN'T THINK IT WAS NEEDED F TOO IMPATIENT TO USE ONE.....G INDIFFERENT.....H SKIN REACTIONS.....I OTHERS: _____J ***DON'T KNOW Y***
Q333	Who suggested using a condom the last time you had sex?	YOURSELF 1 YOUR SEX PARTNER 2 JOINT DECISION 3 ***DON'T KNOW 98***	YOURSELF 1 YOUR SEX PARTNER 2 JOINT DECISION 3 ***DON'T KNOW 98***	YOURSELF 1 YOUR SEX PARTNER 2 JOINT DECISION 3 ***DON'T KNOW 98***
Q334	In general, with what frequency did you and this sexual partner use a condom?	EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 ***DON'T KNOW 98***	EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 ***DON'T KNOW 98***	EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 ***DON'T KNOW 98***
Q335	The last time you had sex, did you or this partner drink alcohol before hand?	YES 1 NO 2 DON'T KNOW 98	YES 1 NO 2 DON'T KNOW 98	YES 1 NO 2 DON'T KNOW 98
Q336	The last time	YES 1	YES 1	YES 1

NO.	QUESTIONS	PARTNER 1	PARTNER 2	PARTNER 3
	you had sex, did you or this partner do anything to delay or avoid getting pregnant?	NO 2 DON'T KNOW 98 **IF NO OR DON'T KNOW SKIP TO Q338**	NO 2 DON'T KNOW 98 IF NO OR DON'T KNOW, SKIP TO Q338	NO 2 DON'T KNOW 98 **IF NO OR DON'T KNOW,** SKIP TO Q338
Q337	What did you do to avoid getting pregnant?	USED CONDOMS 1 PILL 2 IUD 3 INJECTION 4 WITHDRAWAL 5 SELF OR PARTNER IS STERILE 6 DOUCHING.....7 SPERMICIDES.....8 TRADITIONAL METHODS.9 NOTHING .....8 OTHER (SPECIFY)9 _____	USED CONDOMS 1 PILL 2 IUD 3 INJECTION 4 WITHDRAWAL 5 SELF OR PARTNER IS STERILE 6 DOUCHING.....7 SPERMICIDES.....8 TRADITIONAL METHODS.9 NOTHING 8 OTHER (SPECIFY)9 _____	USED CONDOMS 1 PILL 2 IUD 3 INJECTION 4 WITHDRAWAL 5 SELF OR PARTNER IS STERILE 6 DOUCHING.....7 SPERMICIDES.....8 TRADITIONAL METHODS.9 NOTHING 8 OTHER (SPECIFY)9 _____
Q338	Do you think this partner has/had other partners?	YES..... 1 NO..... 2 DON'T KNOW 98	YES.....1 NO.....2 DON'T KNOW 98	YES .....1 NO .....2 DON'T KNOW..... 98
Q339	Now think about the partner you had sex with before the partner we just talked about. Was this sexual contact within the past 12 months?	YES..... 1 **(IF <u>YES</u>, GO BACK TO 323 & ASK ABOUT PARTNER 2)** NO..... 2 **(IF NO, GO TO Q340** DON'T KNOW 98	YES.....1 **(IF <u>YES</u>, GO BACK TO 323 & ASK ABOUT PARTNER 3)** NO .....2 **(IF NO, GO TO Q340)** DON'T KNOW 98	YES .....1 NO .....2 **(IF <u>NO</u>, THEN GO TO Q340.)** DON'T KNOW..... 98

STOP!
GO ON TO Q340 ONLY AFTER ASKING ABOUT THE
THREE MOST RECENT SEXUAL PARTNERS DURING THE LAST 12 MONTHS.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
Q340	In the last 12 months, with how many people <u>overall</u> have you had sex, including these last partners that we've discussed? **(Probe for answer)**	NUMBER.....,.....[___|___] DON'T KNOW 98	
Q341	In the last 12 months have you exchanged or received money for sex?	YES ..1 NO ..2	 →**Q401**
Q342	The last time you had sex with someone and exchanged money, did you or this partner use a condom?	YES ..1 NO ..2	

Section 4: Sexually Transmitted Diseases

Interviewer (read out): *Now I would like to ask some questions about sexually transmitted diseases.*

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
Q401	Have you been circumcised?	YES ..... 1 NO ..... 2 DON'T KNOW.....3	
Q402	If not, why haven't you been circumcised?	_____	
Q402	Have you heard about diseases that can be transmitted through sexual intercourse?	YES ..... 1 NO 2	 →**Q405**
Q403	**In a MAN,** what signs and symptoms would lead you to think that he has such a disease or infection? **Any others?** **(CIRCLE <u>ALL</u> THAT ARE MENTIONED. MORE THAN ONE ANSWER IS POSSIBLE.)** **<u>DO NOT</u> READ OUT THE SYMPTOMS.**	ABDOMINAL PAIN ..... A DISCHARGE FROM PENIS ..... B ITCHING IN GENITAL AREA ..... C BURNING PAIN ON URINATION ..... D PAIN DURING INTERCOURSE..... E GENITAL ULCERS/OPEN SORES ..... F SWELLINGS IN GENITAL AREA..... G BLOOD IN URINE ..... H FAILURE TO PASS URINE..... I LOSS OF WEIGHT ..... J FAILURE TO MAINTAIN ERECTION..... K FAILURE TO IMPREGNATE.....I NO SYMPTOMS ..... J OTHER (SPECIFY)_____... K DON'T KNOW..... Z	
Q404	**In a WOMAN,** what signs and symptoms would lead you to think that she has such a disease or infection? **Any others?** **(CIRCLE ALL THAT ARE MENTIONED. MORE THAN ONE ANSWER IS POSSIBLE.)** **<u>DO NOT</u> READ OUT THE SYMPTOMS.**	ABDOMINAL PAIN ..... A DISCHARGE FROM VAGINA..... B ITCHING IN GENITAL AREA ..... C BURNING PAIN ON URINATION ..... D PAIN DURING INTERCOURSE..... E GENITAL ULCERS/OPEN SORES ..... F SWELLINGS IN GENITAL AREA..... G BLOOD IN URINE ..... H FAILURE TO PASS URINE..... I LOSS OF WEIGHT ..... J INABILITY TO CONCEIVE ..... K NO SYMPTOMS L	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
		OTHER (SPECIFY)_____ ..... M DON'T KNOW..... Z	
	CHECK Q301 HAS HAD SEXUAL INTERCOURSE □ ↓	**HAS NOT HAD SEXUAL INTERCOURSE** □→	**→Q501**
Q405	In the last 12 months have you had a genital discharge or ulcer?	YES ..... 1 NO 2	**→Q501**
Q406	When you had a genital discharge or ulcer during the last 12 months, did you seek any kind of advice or treatment?	YES ..... 1 NO 2	**→Q409**
Q407	When you had a genital discharge or ulcer in the last 12 months, did you: **READ OUT ACTIONS.** (CIRCLE ALL THAT ARE MENTIONED. MORE THAN ONE ANSWER IS POSSIBLE.)	SEEK ADVICE OR MEDICINE FROM A HEALTH WORKER IN A CLINIC OR HOSPITAL?..... ..A SEEK ADVICE OR MEDICINE FROM A TRADITIONAL HEALER?..... B SEEK ADVICE OR BUY MEDICINES IN A SHOP OR PHARMACY?..... C ASK FOR ADVICE FROM FRIENDS OR RELATIVES? D OTHER (SPECIFY)_____E	
Q408	When you had a genital discharge or ulcer in the last 12 months, what was the **FIRST THING** you did for either advice or treatment? **READ OUT ACTIONS.** **(CHOOSE ONLY <u>ONE</u> ANSWER.)**	SEEK ADVICE OR MEDICINE FROM A HEALTH WORKER IN A CLINIC OR HOSPITAL?.....A SEEK ADVICE OR MEDICINE FROM A TRADITIONAL HEALER?.....B SEEK ADVICE OR BUY MEDICINES IN A SHOP OR PHARMACY?.....C ASK FOR ADVICE FROM FRIENDS OR RELATIVES?..D OTHER (SPECIFY)_____ E DON'T KNOW.....98	
Q409	When you had a genital discharge or ulcer in the last 12 months, did you: **READ OUT ACTIONS.** **(CIRCLE <u>ALL</u> THAT ARE MENTIONED. MORE THAN ONE ANSWER IS POSSIBLE.)**	TELL YOUR SEXUAL PARTNER (S) ABOUT THE SYMPTOMS? ..... A STOP HAVING SEX WHEN YOU HAD THE SYMPTOMS?B USE A CONDOM DURING SEX WHEN YOU HAD THE SYMPTOMS? ..... . C TAKE MEDICINE WHEN YOU HAD THE SYMPTOMS? D OTHER (SPECIFY)_____E	

Section 5: Knowledge about HIV/AIDS and level of exposure to interventions

Interviewer (read out): *Now I would like to ask some questions about HIV, the virus that causes AIDS.*

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
Q501	Have you ever heard of the virus HIV or an illness called AIDS?	YES.....1 NO.....2 DON'T KNOW.....98	
Q502	Do you believe that HIV or AIDS exist?	YES.....1 NO.....2 UNSURE.....3 DON'T KNOW.....98	
Q503	In the past 4 weeks, have you heard or seen any information about the AIDS virus?	YES.....1 NO.....2	→**Q505**
Q504	From what source(s) did you receive this information about the AIDS virus? **(CIRCLE <u>ALL</u> THAT ARE MENTIONED. MORE THAN ONE ANSWER IS POSSIBLE.)** **Any other sources?**	TELEVISION.....A RADIO.....B NEWSPAPER/MAGAZINE.....C PAMPHLET/POSTER.....D HEALTH CARE WORKER.....E MOSQUE/CHURCH.....F FRIEND.....G FAMILY MEMBER.....H SEX PARTNER.....I WORKPLACE.....J AFPAC AIDS Initiative K OTHER (SPECIFY)_____.....L DON'T KNOW.....Z	
Q505	During the past 4 weeks, have you discussed the AIDS virus with anyone?	YES.....1 NO.....2	→**Q507**
Q506	With whom have you discussed the AIDS virus during the past 4 weeks? **(CIRCLE ALL THAT ARE MENTIONED. MORE THAN ONE ANSWER IS POSSIBLE.)** **ANYONE ELSE?**	SEX PARTNER.....A FRIEND.....B FAMILY.....C HEALTH CARE WORKER.....D CO-WORKER.....E OTHER (SPECIFY)_____.....K DON'T KNOW.....Z	
Q507	Do you know anyone who is infected	YES.....1	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
	with HIV or who has died of AIDS?	NO.....2	→Q509
Q508	Was this person a close relative or close friend?	YES.....1 NO.....2	
Q509	How do you think the virus that causes AIDS is transmitted? **(CIRCLE ALL THAT ARE MENTIONED. MORE THAN ONE ANSWER IS POSSIBLE.)** **ANY OTHER WAYS?**	FROM A PREGNANT WOMAN TO HER UNBORN CHILD A USING A TOILET .....B SEX WITH AN INFECTED PERSON .....C SHAKING HANDS/NON-INTIMATE CONTACT .....D BLOOD TRANSFUSIONS .....E MOSQUITO BITES .....F CONTAMINATED OR RE-USED NEEDLES .....G SHARING RAZORS OR EATING UTENSILS .....H CIRCUMCISION .....I OTHER_____ .....J OTHER_____.....K DON'T KNOW .....Y	
Q510	Is there anything a person can do to avoid or reduce their chances of getting infected with HIV, the virus that causes AIDS?	YES.....1 NO.....2 DON'T KNOW 98	 →Q512 →Q512
Q511	What kinds of things can a person do to avoid getting HIV? **RECORD ALL MENTIONED** **ANY OTHER WAYS?**	PRAYERS.....A NO SEX AT ALL .....B USE CONDOMS.....C STICKING TO ONE SEXUAL PARTNER/AVOID MULTIPLE PARTNERS .....C NO SEX WITH PROSTITUTES .....D NO SEX WITH CASUAL PARTNERS.....E AVOID BLOOD TRANSFUSIONS .....F AVOID INJECTIONS WITH CONTAMINATED NEEDLES G SHARING SHAVING BLADES .....H AND NAIL CUTTERS.....I AVOID KISSING.....J AVOID MOSQUITO BITES.....K USE HERBAL PREPARATIONS.....L TAKE ANTIBIOTICS, INJECTIONS, OTHER MEDICATIONS.....M SEEK PROTECTION FROM TRADITIONAL HEALER ..N OTHERS (SPECIFY)_____O	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
		DON'T KNOW .....Y	
Q512	**What does "safe sex" mean to you?** **RECORD <u>ALL</u> MENTIONED**	ABSTAIN FROM SEX.....A USE CONDOMS.....B HAVE ONLY ONE SEX PARTNER WHO HAS NO OTHER PARTNERS.....C AVOID SEX WITH PROSTITUTES .....D AVOID SEX WITH HOMOSEXUALS .....E AVOID SEX WITH CASUAL PARTNERS.....F OTHER_____ .....G DON'T KNOW .....Y	
Q513	Is AIDS a deadly disease?	YES.....1 NO.....2 DON'T KNOW 98	
Q514	Is it possible for a healthy-looking person to have the AIDS **virus**?	YES.....1 NO.....2 DON'T KNOW 98	
Q515	How often do you think that persons with AIDS die from the disease?	NEVER .....1 ALMOST NEVER.....2 SOMETIMES .....3 ALMOST ALWAYS .....4 ALWAYS.....5 DON'T KNOW 98	
Q516	What are your chances of getting AIDS?	NO RISK AT ALL .....1 SMALL.....2 MODERATE .....3 GREAT .....4 DON'T KNOW 98	 **→Q518** **→Q518** **→Q518**

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
Q517	Why do you think that you have no risk or only a small chance of getting AIDS? **RECORD ALL MENTIONED**	PRACTICE SAFE SEX .....A ABSTAIN FROM SEX.....B AVOID MULTIPLE SEX PARTNERS.....C AVOID SEX WITH PROSTITUTES .....D AVOID SEX WITH HOMOSEXUALS .....E AVOID SEX WITH CASUAL PARTNERS..... ENSURE SAFE BLOOD TRANSFUSIONS .....F ENSURE INJECTIONS WITH STERILIZED NEEDLES.G USE CONDOMS CORRECTLY EVERY TIME THEY HAVE SEX.....H AVOID KISSING.....I AVOID MOSQUITO BITES.....J SEEK PROTECTION FROM TRADITIONAL HEALER ..K REGULAR CLINIC CHECKUPS.....L USE SPERMICIDES.....M OTHER_____ .....N DON'T KNOWN .....Y	
Q518	Since you have heard of AIDS, have you changed your behaviour to prevent getting AIDS?	YES.....1 NO.....2 DON'T KNOW 98	 →**Q520** →**Q520**
Q519	If yes, what did you do? **RECORD ALL MENTIONED**	DIDN'T START SEX .....A STOPPED ALL SEX .....B STARTED USING CONDOMS.....C RESTRICTED SEX TO ONE PARTNER.....D REDUCED NUMBER OF SEX PARTNERS .....E ADVISED SPOUSE/PARTNER TO BE FAITHFUL .....F NO MORE HOMOSEXUAL CONTACTS .....G ENSURED INJECTIONS WITH STERILIZED NEEDLES H NO BEHAVIOUR CHANGE I OTHER_____.....J OTHER_____.....Y	
Q520	Some people use a condom for sexual intercourse to avoid getting AIDS or other sexually transmitted diseases. Have you ever heard of this?	YES.....1 NO.....2 DON'T KNOW 98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
Q521	Is it possible in your community for someone to get a confidential test to find out if they are infected with HIV? By confidential, I mean that no one will know the result if you don't want him or her to know it.	YES.....1 NO.....2 DON'T KNOW 98	
Q522	I don't want to know the result, but have you ever had an HIV test?	YES.....1 NO.....2 DON'T KNOW 98	
Q523	Did you voluntarily undergo the HIV/AIDS test, or were you required to have the test?	VOLUNTEERED.....1 REQUIRED .....2 TESTED WITHOUT PRIOR KNOWLEDGE.....3 DON'T KNOW 98	
Q524	Please don't tell me the result, but did you find out the results of your test?	YES.....1 NO.....2 DON'T KNOW 98	
Q525	If HIV test were to be provided free of charge, will you voluntarily go for the screening test?	YES.....1 NO.....2 DON'TKNOW.....98	