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KNOWLEDGE, ATTITUDE & PRACTICE (KAP) BASELINE ASSESSMENT FINAL REPORT

Healthy Outcomes through Prevention Education (HOPE) program.



SUBMITTED TO: CHF INTERNATIONAL

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MAY, 2013

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ACRONYMS AND ABBREVIATIONS

ABC	Abstain, Be faithful, or use Condoms
AIDS	Acquired Immuno-Deficiency Syndrome
BoG	Board of Governors
CBS	Central Bureau of Statistics
CHF	Cooperative Housing Foundation
CSOs	Civil Society Organizations
DEO	District Education Officer
DfID	Department for International Development
DIQASOs	District Quality Assurance and Standards Officers
EFA	Education for All
FGD	Focus Group Discussion
GPS	Global Positioning System
HIV	Human Immuno-Deficiency Virus
HOPE	Healthy Outcomes through Prevention Education
ICT	Information Communication Technology
ID	Identification Number
IDI	In-Depth Interview
IEC	Information, Education and Communication
KAIS	Kenya AIDS Indicator Survey
KAP	Knowledge, Attitude and Practice
KDHS	Kenya Demographic Health Survey
KGGA	Kenya Girl Guide Association
KII	Key Informant Interviews
KNASP	Kenya National AIDS Strategic Plan
KNBS	Kenya National Bureau of Statistics
M&E	Monitoring and Evaluation
MDGs	Millennium Development Goals
MoE	Ministry of Education
NACADA	National Agency Campaign Against Drug Abuse
NACC	National AIDS Control Council
NASCOP	National AIDS and STI Control Programme
NCPD	National Council for Population and Development
NCC	Nairobi City Council

NOPE	National Organization of Peer Educators
PET	Participatory Educational Theatre
PLA	Participatory Learning and Action
PLWHA	People Living With HIV and AIDS
PRA	Participatory Rural Appraisal
PTA	Parents Teachers Association
RA	Research Assistant
SAPTA	Support for Addiction Prevention and Treatment in Africa
SBC	Social and Behavioural Communications
SDA	Seventh Day Adventist
SJCC	St. John's Community Centre
SMBs	School Management Boards
SOP	Standard Operating Procedures
SPSS	Statistical Package for Social Sciences
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
TRRG	Training Resources & Research Group Ltd.
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNFPA	United Nations Population Fund
UNIFEM	United Nations Development Fund for Women
USAID	United States Assistance for International Development
VCT	Voluntary Counselling and Testing

ACKNOWLEDGMENTS

This study was funded by United States Agency for International Development, USAID Kenya through CHF International, the implementing agency for Healthy Outcomes through Prevention Education (HOPE) Program. It was conducted by Training Resources and Research Group (TRRG) through a core team of researchers. The successful implementation of the study was made possible through the support received from the Ministry of Education (MoE) and the administration of the targeted schools in Nairobi and the surrounding environs.

We acknowledge the cooperation accorded by the management of the targeted schools and the student fraternity at large. We are most grateful to our informants for their willingness to provide information for the study. We are further indebted to the dedicated team of researchers that ensured the successful completion of the study. These include the team leader Dr. Joseph Okwesio, the data analyst Apollo Orlando Man'geni, the 12 field research assistants and the data entry clerks from TRRG.

Overall administrative and coordination support for this study was provided by CHF International staff and HOPE partners namely, Support for Addiction Prevention and Treatment in Africa (SAPTA), Kenya Girl Guide Association (KGGA), National Organization of Peer Educators (NOPE) and St. John's Community Centre (SJCC). We are grateful to the senior staff at CHF International Kenya – Kimberly Tillock (CHF Country Director), Betty Adera (HOPE Program Director), Michael Karanja (M&E Advisor), Luciana Koske (Senior Technical Advisor) and Fredrick Nyagah (Program Coordinator) – for their oversight and support to this important activity, as well as staff from the partner organisations. Appreciation also goes to Lily Murei (CHF M &E Advisor) for the support in reviewing and finalization of this report.

Our deepest gratitude goes to the many representatives, principals and teachers from the different schools, community elders, church leaders, parents and MoE staff who took time out of their busy schedules to meet and share with us their insight and expertise. We particularly thank the many young students in the schools whom we had the privilege of meeting and hope that our efforts will have an immediate and long-lasting impact on their health and wellbeing.

Finally, our thanks go to those colleagues who have reviewed and provided comments on drafts of this KAP survey report.

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EXECUTIVE SUMMARY

This report captures the findings from a baseline Knowledge, Attitude and Practice (KAP) assessment conducted by TRRG for the USAID funded Healthy Outcomes through Prevention Education (HOPE) Program implemented by CHF International. The assessment was conducted between July and December 2012 and focused on sampled schools within Nairobi and the surrounding counties of Kiambu, Kajiado and Machakos, in the following districts: Langata, Westlands, Embakasi, Njiiru, Dagoretti, Starehe, Kamukuji, Kasarani, Makadara, Kiambu, Kikuyu, Kajiado North, Athi River and Isinya.

HOPE PROGRAMME OVERVIEW

Healthy Outcomes through Prevention Education (HOPE) is a 4 year program conducted in partnership with USAID, Ministry of Education (MoE) and CHF International. The HOPE Program was awarded in March 2012 and is implemented by CHF International in collaboration with the National Organization of Peer Educators (NOPE), Kenya Girl Guide Association (KGGA), St. John's Community Centre (SJCC) and Support for Addiction Prevention and Treatment in Africa (SAPTA). The program targets 400 formal and non-formal primary and secondary schools in Nairobi and the surrounding environs focusing on schools within informal settlements.

The goal of the HOPE Program is to improve HIV and AIDS knowledge, attitudes and practices among Kenyan students through peer, school, and community-based interventions. Its key objectives are to a) improve HIV and AIDS knowledge, attitudes and practices among students through peer-to-peer support and mentoring; b) equip schools with capacity to provide HIV and AIDS-related knowledge, information and support through classroom instruction and extracurricular activities; c) support parents and community members in order to promote healthy living through increased schools involvement; and d) equip the Ministry of Education and new county education offices to revise and implement the Sector policy on HIV and AIDS.

Overview of the HOPE KAP Survey

The purpose of the KAP assessment was to help the HOPE program to:

1. Understand the risks, knowledge, attitudes and behaviours among primary and secondary school boys and girls of different ages regarding HIV and AIDS;
2. Determine program baselines to enable monitoring and evaluation of program progress regarding improved KAP and positive behaviour change among students;
3. Provide data to facilitate learning and impact evaluations at mid and end term of the program; and
4. Inform training needs and content as well as material development for program implementation

The baseline KAP assessment results will be used at midterm to evaluate progress and make necessary programmatic changes and at the end of the program to assess and document the overall impact of the program on the targeted population.

Methodology of the Assessment

The study utilised a quasi-experimental design which involved the use of intervention and control groups. The study sample comprised of 48 schools (out of 400), of which 24 were among the intervention group while 24 were in the comparison/control group.

The KAP baseline marked the initial phase of the evaluation design which included rigorous statistical analysis. Later phases will include data comparisons over time between the control and intervention groups.

A mixed method of data collection was used, including quantitative and qualitative methods. Quantitative questions were adapted from the World Bank, Intra-health and Family Health International (FHI360) and focused on age sensitive data on HIV and AIDS; sexual intercourse and associated risks; misconceptions and myths about HIV and AIDS and attitudes towards People Living With HIV and AIDS (PLWHAS); and were supported by qualitative questions which also explored relationships between the youth and their parents, teachers and the community at large. In addition, the assessment conducted focus group discussions (FGD) and key informant interviews (KII) with the parents/guardians, secondary and primary school teachers and community representatives including religious leaders and health workers.

A total of 1791 students were surveyed of which slightly over half were boys (56.6%). The breakout between primary and secondary students surveyed was 58% and 42% respectively. The school selection ensured various categories of schools were included such as primary/secondary, public/private, mixed/non-mixed, formal/non-formal and different counties/districts within the targeted study areas. Data from the quantitative and qualitative tools were analysed using SPSS and Nvivo respectively.

Key findings of the study

Findings on key goal level indicators

The study sought baseline information on four goal level indicators and the results were as follows:

Indicator 1: % of never-married young men and women aged 15-24 who have never had sex. Questions on this key indicator were asked only to the secondary school respondents (n=753). The finding was 64.5% had never had sex; of those 49% (238) were in the control group schools and 51% (248) were in the intervention group schools.

Indicator 2: % of young men and women aged 15-24 who have had sexual intercourse before the age of 15. Questions on this key indicator were also asked to the secondary school respondents who reported to have had sex. The finding was 45.2% of those who have had sex (n=228) had intercourse before the age of 15 while 39 (14.6%) respondents did not specify their age at first sexual debut. This represents 13.7% of all the 753 secondary aged respondents. Of those who had sex before the age of 15, 47.6% (49) were in the control group schools while 52.4% (54) were in the intervention group schools.

Indicator 3: % of young men and women who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission. Both primary and secondary students (n=1791) were asked the following five questions to measure their knowledge regarding HIV transmission.

- 1 Can people reduce their chance of getting the HIV by NOT having sex at all?
- 2 Can you tell that a person is infected with HIV simply by looking at him/her?
- 3 Do you believe that a person who looks healthy can be infected with HIV?
- 4 Do you believe that only homosexuals and prostitutes can have HIV?
- 5 In your opinion, if someone with HIV coughs or sneezes near you, can you get the virus?

Only 26.3% (471) got all the items correct, with 73.7% answering incorrectly one or more of the items. Of those who got all the knowledge items correct, 50.3% (237) were in the control group schools while 49.7% (234) were in the intervention group schools.

Indicator 4: % of population with accepting attitudes towards PLWHA. To test their attitudes towards people living with HIV and AIDS (PLWHAs), both primary and secondary students were asked the following four questions.

1. *In your opinion, if a student is infected with HIV and AIDS but does not appear sick, should he or she be allowed to attend school?*
2. *If a teacher tested positive for HIV and is not sick, should he/she be allowed to teach students?*
3. *Would you live with a family member who has HIV or AIDS?*
4. *If a member of your family tested HIV positive, would you want their status to remain secret?*

Only 29.5% answered all the four questions positively (showing accepting attitudes) leaving 70.5% displaying stigmatizing attitude(s) in one or more of the four areas. Of those who had accepting attitudes, 50.9% (269) were in the control group schools while 49.1% (259) were in the intervention group schools.

Intervention and Control schools analysis based on the key indicators

Based on the results of the above key indicators observed at baseline, there was no statistically significant difference between the intervention group schools and the control group schools.

Current knowledge among primary and secondary boys and girls regarding HIV and AIDS

Overall, 93.6% of all the students (primary and secondary) have heard of HIV and AIDS and more than 80% of the respondents correctly answered at least nine of twelve of the knowledge questions on HIV. However, it is important to note that at an individual level, comprehensive knowledge on HIV transmission was very low as only 26.3% correctly answered all the five key indicator questions on this knowledge with 73.7% answering incorrectly one or more of the items. Knowledge of HIV and AIDS increased with education level with knowledge highest among respondents in secondary schools. Secondary students also showed greater awareness of other STDs than their primary counterparts for instance a higher proportion of the standard 5 students (15%) were not aware of any disease that spreads through sexual intercourse compared to the other class levels. AIDS was also considered the main disease that spreads through sexual intercourse in both the primary and secondary groups.

Students also demonstrated high knowledge of HIV transmission modes as most were able to determine that HIV cannot be transmitted through sharing of clothes with an HIV infected person (80.8%), shaking someone's hand (95.8 %) sharing a toilet with someone who has HIV (84.9%), touching someone who is infected (94.3%) and through mosquito bites (88.6%). This was supported by the FGDs, in that students indicated that HIV could be transmitted through engaging in sexual intercourse, blood transfusion, from mother to child through breast feeding, through open wounds and sharing of sharp objects.

Most students (95%) also knew that sharing a needle or syringe is a possible mode of HIV transmission while more than half of the students (63.3%) knew that a woman or a girl cannot protect herself from HIV by taking contraceptive pills. Knowledge that contraceptive pills cannot protect one from an HIV infection was higher among secondary students (78.5%) than their primary counterparts (52.2%) and females also tended to be more aware than their male counterparts (83 for females vs. 76% for males).

However misperceptions still persist as a 13.8% of the students still thought that one could get HIV through sharing clothes with someone who is infected, 10.2% thought that one could contract the disease by sharing a toilet, whereas 9.2% thought that a mosquito bite can cause the transmission of HIV.

There also seemed to be confusion around whether an individual could get HIV when someone with HIV sneezed or coughed near them with 28% indicating that one could. 4% of the students also indicated that sharing a needle or syringe is not a transmission mode while 17.4% of the students believed contraceptive pills can protect one from an HIV infection. Misperceptions also came out in the FDGs where some students listed kissing and sharing of clothes as possible modes of HIV transmission.

The lack of adequate knowledge and continued misconception among students in primary and secondary schools about the possible ways in which HIV can be transmitted shows that despite the significant messaging and education, work still needs to be done to correct these misconceptions.

In terms of prevention, most students (93%) know that one can be infected with HIV after one single sexual intercourse with a person who is HIV infected. The majority of respondents (65%) also indicated that people can reduce their chances of getting HIV by not having sex at all with 29% indicating that this cannot. Compared to their secondary counterparts, primary school students were more inclined towards abstinence (not having sex) and delayed sexual debut, with 92.5% stating that people can reduce their chances of HIV infection by not having sex at all. The FDGs also brought out that HIV could be prevented by abstinence from sex, sterilization of sharp objects before using them, knowing ones HIV status and wearing protective gear when handling open wounds.

Most students (86.7%) also know that a person who looks healthy can be infected with HIV and 77.5% know that it is not easy to tell who is infected with HIV by simply looking. On the other hand, 11.3% think one cannot look healthy and be infected and 19.3% felt that it was easy to tell who is infected, signifying the fact that some students associate HIV and AIDS with particular symptoms. Most students (93.5%) also realize that a person of their age could get infected with HIV with only 6 % indicating that one could not. In addition, most students (73.5%) know that HIV and AIDS is not exclusive to homosexuals and prostitutes but still, a significant 23.1% believe that only homosexuals and prostitutes can be infected with HIV, pointing to some students believing that only those who are promiscuous can get HIV.

More than half of the students (57.4%) had not been tested for HIV of which a higher percentage (64.9%) was primary-aged students compared with 47% of secondary-aged students. There was also no notable difference between boys and girls in terms of how those who had been tested (35.9% for males vs. 32.34% for females). If the national goal of testing 80% of all adolescents and adults (KAIS 2007) is to be achieved more needs to be done to reach students.

Current attitudes among primary and secondary boys and girls towards PLWHAs

Most students (82.7%) would remain friends to a close friend or relative who is infected with HIV and AIDS, while 81% agree that students who are infected with HIV and AIDS and are not sick should be allowed to attend school. Further, 79% of the students agreed that a teacher who tests positive for HIV and is not sick should be allowed to teach. Most students (94%) also said people living with HIV and AIDS should not be left alone or isolated while 88% indicated that they would live with a family member who has HIV and AIDS.

In the FGDs, students reported they had no problem with talking with those infected with HIV and AIDS, sharing utensils with them, shaking their hands or even being in the same classroom with them.

Still a significant percentage demonstrated non-accepting attitudes. At an individual level, only 29.5% answered all the four key indicator questions on attitude positively (showing accepting attitudes) leaving 70.5% displaying stigmatizing attitude(s) in one or more of the four areas. These ‘unaccepting’ responses tended to be higher among primary school students. For example only 73.7% of the primary respondents said yes HIV positive students should be allowed to attend school and only 72.4% said a HIV positive teacher should be allowed to teach students. This may be attributed to lack of knowledge and fear among the young pupils. In addition, 7.2% of all the students indicated that they would avoid a close friend or relative who is infected with HIV and AIDS, 11% indicated that they would not live with a family member who had HIV and AIDS while 5.5% agreed that people living with HIV and AIDS should be left alone or isolated. The greatest negative attitude was on disclosure where over half of all the students (53%) indicated that the status of their family member who has tested positive should remain a secret.

Despite reductions in HIV stigma since 2003 in Kenya (KAIS 2007), efforts to encourage acceptance of persons with HIV and AIDS should continue, especially in terms of embracing an attitude of openness and disclosure about a relative’s HIV status.

Current practices and risks among primary and secondary boys and girls regarding HIV/AIDS

Risky behaviours among the sampled groups exist. While a majority of the secondary school respondents (64.5 %) have not had sexual intercourse, 30.3% have, with a greater percentage of males (80.7%) reporting to have engaged in sex than females (19.3%). Of the students who reported having had sex, 41.1% said that they have had sex only once while 35.6% had sex 2-3 times of whom 79% had sex with more than one person. Again a higher percentage of male respondents reported having had sex with more people than the female respondents. Of those who had sex, 42.7% of reported having their sexual debut between ages 15-17 years and most of those were males, suggesting that male students tend have their sexual debut earlier than the female students. Most students who had sex (89%) also reported having sex at home when no one is there.

Secondary school students who had sex were also asked questions on condom use. During their first sexual intercourse 62.9% said they did not use a condom, compared to 51.4% who did not use a condom the last time they had sex. The most common reasons for not using condoms were; didn't think of them at the time (49.4%), don't like them (21.3%) and not available (17.9%). Male students also reported suggesting and using condoms more often than their female counterparts which may be attributed to the fact that more males reported to have had sex.

Both primary and secondary school students were asked where one can obtain a male condom. About a half (52%) indicated that they would easily obtain them from the clinic and 38.7% indicated that they would obtain condoms from the shops; others said they could get condoms from friends and peer educators.

Inter-generational relationships were also found to exist. The study found that 24.24% of secondary students (both males and females) who had sex, had it with a partner who was more than 10 years older, and 17.67% with a person 5-10 years older. 21.9% of students have also had sexual intercourse with an older person outside of the school setting, of whom majority (76%) were females.

9.2% of the students who reported having had sex also confirmed that they have had sex for pay, while 16% reported having had forced sex. A relative comparison analysis indicates that more females were paid (18.6% vs. 6.5%) and forced (35.7% vs. 11.9%) to have sex than the males. The study also found out that the older the students were, the less they were forced to have sex.

In terms of risk perception, an estimated 1 in 2 secondary students perceived themselves to be at risk of getting or can get HIV infection; of these, most attributed their risk to not knowing their status (35%), not being faithful to partners (8%), not using condoms (7%) and having multiple sexual partners (6%). The 45% who perceived themselves not to be at risk attributed this to never having had sex (41%), knowing their status (26%), and having trust in their partners and using condoms both at 7%. More males than females perceived themselves to have risk for an HIV infection.

Drug use while relatively low is an issue among students based on the study results. Secondary school students were asked if they had tried drugs other than those prescribed by a doctor and 18.5% said yes. The common drugs tried were glue (38%), kuber (37%), miraa (11%), valium (8%), bhang (3%), and mandrax (2%). Most of the students (94%) have never tried injecting drugs using a syringe, other than for medical purposes. 40% of the students had also tried alcohol while 20% had tried cigarettes. On the main reasons for taking drugs, 60% did not specify, 13% mentioned that it's because friends do it, 7% said it makes them feel better and a further 6% reported that a family member does it.

Engaging in watching or viewing pornography was also common with the internet (43%) cited as the principal source. Furthermore, 50% of the students watch pornographic films at home.

Both primary and secondary school students were asked questions regarding their leisure time and the main leisure activities cited by the students were sports (25%), watching television (23.3%), socializing with friends (22%) and reading (17.1%). Secondary students tended to spend more time watching TV than primary students (31% vs. 23%) and less time reading (9% vs. 17%). However, some students reportedly used their leisure time advancing relationships with members of the opposite sex. Secondary students spent more of their leisure time with people of the opposite sex compared with their primary counterparts (11.2% for secondary vs 7.0% for primary). 28.6% of the secondary students also confirmed forming sexual relationships at least once with people they have met during leisure.

Current information sources among primary and secondary boys and girls regarding HIV/AIDS
43.8% both in primary and secondary schools indicated that they could confide in their mother when they had a private or personal problem, a strong indication that mothers are good targets to focus interventions related to parent-child interactions on HIV and AIDS and sex issues. Slightly over a quarter of the students, indicated that television was a key source of information on HIV and AIDS followed by radio at 22.6%. Similarly most students indicated that they obtain information on drug abuse through the television (34%) followed by radio (20%). Other sources of information on HIV and AIDS and drug abuse were through counsellors, teachers, print media, books, peer educators and the internet. Parents and older siblings were also identified as options for providing information regarding HIV and AIDS as well as alcohol and drugs.

Conclusions and Recommendations

General knowledge on HIV and AIDS and STDs was high and increased with education level; being highest among respondents in secondary schools. However, in-depth knowledge on HIV transmission was very low more so at an individual level.

Much as majority of students in primary and secondary schools know some transmission modes and reject some major misconceptions about HIV transmission, the findings point to significant proportions of students lack of in-depth and comprehensive knowledge about HIV transmission and continued existence of misconceptions on HIV and AIDS. Many students still believe that AIDS can be contracted through shaking of hands, coughing or sneezing or through mosquito bites even after years of positive media about transmission.

Key educational messages on HIV transmission modes need to be designed and tailored more so for the primary age groups to improve their knowledge. Comprehensive education packages and materials on HIV and STI transmission and prevention should also be developed and infused into the life skill curricula both for the primary and secondary age groups respectively. In addition, continuous learner assessment on HIV and AIDS and STI knowledge need to be incorporated into HIV and AIDS programmes/ interventions.

Students still engage in risky behaviors that predisposes them to HIV infection. These include engaging in early sexual practices, unsafe sexual practices (multiple sexual encounters including paid and trans-generational sex without using condoms) drug and substance abuse. This is in spite of the fact that there have been efforts to enhance knowledge on HIV/STI prevention.

Strengthening implementation of life skills education in schools to incorporate comprehensive age appropriate sexuality education should be prioritized at all levels of education. Focus should be placed on promotion of delayed sexual debut and abstinence. Other interventions such as sensitization on proper consistent condom use and promotion of male circumcision should be considered potential avenues for educating the youth. Appropriate key messaging should also be considered to target both in and out of school youth. Messages should focus on preventing immediate events, such as unintended pregnancy and the STIs, because youth often discount the risk of HIV infection when its consequences are far in the future. Workable strategies should also be put in place to strengthen capacities of teachers, counselors and parents/caregivers to provide age appropriate sexuality education.

If reproductive health and HIV and AIDS programs for the youth are to succeed in reducing levels of coerced sex, unintended pregnancy, STIs, and HIV, greater emphasis should be placed on reducing youth alcohol and drug abuse. Youth programs should work to incorporate drug and substance abuse into HIV prevention programming and develop linkages with stakeholders working in this area. Strengthening linkages to youth friendly sexual and reproductive health services should also be considered.

More than half of the students had not been tested for HIV of which a higher percentage was primary-aged students. Testing coverage needs to increase substantially to reach the national goal of testing 80% of all adolescents and adults (KAIS 2007). It is recommended that the age of testing without parental consent be reduced from the current 18 years in order to improve VCT uptake among the youth.

Stigmatizing attitudes still exist including beliefs that infected students should not be allowed to attend school and that some students would not live with a family member who has HIV and AIDS. This point to the need for more targeted, creative interventions to reach these populations particularly the primary school children with preventive HIV and AIDs educative strategies

Efforts to encourage acceptance of persons with HIV and AIDS should continue, especially in terms of embracing an attitude of openness and disclosure about a relative's HIV status.

Behavior Change Communication strategies targeting the youth as well as appropriate key messaging on accepting attitudes should be employed. IEC materials, the internet, TV and radio could be used as avenues for reaching out to these populations. Peer to peer interventions should also be encouraged in schools and these may include peer counseling sessions, participatory education theaters, debates and role plays.

Introduction and strengthening of health clubs in schools should be considered to help young people understand issues on HIV and AIDS and support in encouraging accepting attitudes towards PLWHAs. Focused interventions should target the youth in primary schools especially through the use of participatory techniques to help them better understand concepts on HIV. Policy on stigma and discrimination should also address school setting especially among the school youth besides creating an enabling environment among the students.

While school programs are important they cannot take the place of parents and as the study shows mothers are key confidants of most children. As such parents and mothers in particular need to be reached through sensitization programs on ways of supporting youth. Fathers should also be empowered in order to support the mothers in encouraging youth to adopt healthy lifestyles. Emphasis should be based on creating a good enabling environment among family members and peers for a healthy lifestyle among the youths to discourage engagement in sex, watching pornography, smoking, alcohol, drug and substance abuse.

At the same time, focus on helping youths to understand the value of making healthier choices, in spite of the environment should be addressed. The HOPE program should emphasize peer efforts and messaging mobilizing and empowering youth to adopt healthy lifestyles.

Participatory approaches that build self-esteem and foster empowerment, especially among girls to speak up on key issues such as sex, condom use and sex with older men should be emphasized. Engagement of boys in HIV prevention efforts should be encouraged.

The study has shown that television is a key source of information on HIV and AIDS and drug/substance abuse followed by radio. Positive media especially through television and radio should be used to target the school youth. Key messages should be developed for the TV and radio media in order to reach the students. Further, the internet and the social media should be explored as avenues to reach the youth with such messages.

I INTRODUCTION AND STUDY BACKGROUND

Studies on adolescent sexual behaviour in sub-Saharan Africa show that young people's premarital sexual encounters are generally unplanned and sporadic, thereby predisposing them to risks of unwanted pregnancies and sexually transmitted infections (STIs), including HIV/AIDS (Neema et al. 2004). This is compounded by low use of preventive methods among this group.

Preliminary estimates from the 2008-2009 Kenya Demographic and Health Survey (KDHS) show that among young people aged 15-19 and 20-24 years, only 2% of the female respondents and 58% of male respondents in each age group reported current use of condoms (KNBS et al. 2009). The Joint United Nations Programme on HIV and AIDS (UNAIDS) notes that although young people aged under 25 years account for over 40% of all new HIV infections worldwide, HIV prevention efforts for this segment of the population still remain inadequate (UNAIDS 2006)

HIV and AIDS education for young people plays a vital role in global efforts to end the AIDS epidemic. Despite the fact that HIV transmission can be prevented, each year hundreds of thousands of young people become infected with the virus. In 2009 alone, there were 890,000 new HIV infections amongst young people aged 15-24¹ and in 2010, 5 million 15-24 year olds were living with HIV.²

The 2007 Kenya AIDS Indicator Survey estimated that 7.4% of Kenyans aged 15-64 are infected with HIV. In Nairobi, the overall prevalence rate is 9%, the second highest rate in the country per province. The same study found a dramatic difference in HIV prevalence between 15-19 year olds (2.3%) and 20-24 year olds (5.2%) suggesting that many young people are infected during adolescence. Among the youth, female are more likely to be infected than their male peers. For instance, among 15-19 year olds, 3.5% of females and 1% males are HIV positive, while among 20-24 year olds, 7.4% and 1.9%, respectively, are infected. Muslim Kenyans have HIV prevalence roughly half the national average (3.3%), compared with 5.9% of Roman Catholics and 6.6% of people of Protestant or another Christian denomination (Kenya National Bureau of Statistics, 2010)

Women are disproportionately affected by HIV. In 2008/09 HIV prevalence among women was twice as high as that for men at 8 percent and 4.3 percent respectively. This disparity is even greater in young women aged 15-24 who are four times more likely to become infected with HIV than men of the same age. Kenyan women also experience high rates of violent sexual contact, which is thought to contribute to the higher prevalence of HIV. In a 2003 nationwide survey, almost half of women reported having experienced violence and a quarter of women aged between 12 and 24 had lost their virginity by force.³

Young people living with HIV contract the virus 'vertically' through the mother, 'horizontally' through unprotected sex (including rape and child sexual abuse), or through intravenous drug use (UNICEF, 2011a).

¹ UNAIDS/UNICEF (2010) 'Children and AIDS: Fifth Stocktaking Report

² WHO/UNAIDS/UNICEF (2011) , 'Global HIV/AIDS Response: Epidemic update and health sector progress towards Universal Access 2011

³ UNGASS (2008) 'Country report – Kenya' Kenya Office of the President, Ministry of Special Programmes

The most recent report from the National AIDS Control Council (NACC) shows a rise in HIV prevalence, and is “raising questions on the effectiveness of the Behaviour Change Communication Strategy” (National AIDS Control Council, (2010), p. 51). The emphasis on behavioural approaches to youth sexual health, which aims to educate young people about risks and reproductive decision making, is prominent in Kenya (Cho et al., 2011). The Plan of Action recognizes that “improving young people’s reproductive health is therefore key to improving the world’s future economic and social well-being” (NCPD, 2005, p. 12).

In the education sector, HIV and AIDS is recognized as an important constraint in achieving Education for All (EFA) and the Millennium Development Goals (MDGs). However, education is also recognized as an effective “social vaccine” against the disease. It has also been shown that the youth-to-adulthood transition is a key stage in shaping future health decisions, as they tend to be reproduced over time and across generations (Frohlich and Potvin, 2008; Graham, 2002: 2009).

A good quality education is considered one of the key defences against HIV especially among girls. Studies in many countries have linked higher levels of education with increased HIV and AIDS awareness and knowledge, higher rates of contraceptive use, and greater communication on HIV prevention among partners. Evidence shows that secondary education can significantly reduce girls’ vulnerability to HIV, since those years of schooling boost the skills and opportunities they need to achieve greater economic independence (*UNAIDS, UNFPA and UNIFEM, 2004*).

Both boys and girls need information on HIV and AIDS, healthy relationships, their responsibilities, and where they can go for help when they are affected by the disease. A systematic review⁴ of HIV prevention among young people in Sub-Saharan Africa indicated that interventions in schools were largely successful at demonstrating increased knowledge and reductions in reported risk behaviours and other HIV and AIDS mediating factors. Curriculum-based, adult-led interventions showed strong evidence of effectiveness in terms of improving knowledge and reported sexual risk behaviours. Overall, in-school interventions are a logical and promising means of imparting necessary information and skills to school-age children.

1.1 CHF HOPE Program Description

The Healthy Outcomes through Prevention Education is a USAID funded program implemented by CHF International, in collaboration with the National Organization of Peer Educators (NOPE), Kenya Girl Guide Association (KGGA), St. John’s Community Centre (SJCC) and Support for Addition Prevention and Treatment in Africa (SAPTA). The goal of program is to improve students’ HIV and AIDS knowledge, attitudes and practices through peer, school, and community-based interventions through school and community-based HIV and AIDS prevention activities. The program targets 400 primary and secondary formal and non – formal schools in Nairobi and its surrounding environs focusing on schools within the informal settlements. The expected outcomes of the program are:

- i) Students’ HIV and AIDS knowledge, attitudes and practices improved through peer-to-peer support and mentoring*
- ii) Schools equipped with the capacity to provide HIV and AIDS-related knowledge, information and support through classroom instruction and extracurricular activities*
- iii) Parents and community members promote healthy living through increased school involvement*

⁴ Conducted in September 2009 by the London School of Hygiene and Tropical Medicine

- iv) The Ministry of Education (MoE) and new County Education Offices⁵ equipped to implement the MoE's Revised Sector Policy on HIV and AIDS.*

HOPE program is also implemented in Nairobi province due to the high HIV incidence and prevalence rates and also to complement USAID/Kenya's expansion of education programs into Nairobi's informal urban settlements.⁶

1.2 Purpose of the Assessment

The purpose of the knowledge, attitude, and practice (KAP) baseline assessment is to understand the risks, knowledge, and behaviours regarding HI and /AIDS among primary and secondary school aged boys and girls within the geographic target areas. Findings from the KAP assessment will be used for program baselines to monitor and evaluate (M&E) program progress and impact regarding improved KAP and positive behaviour change among students. The KAP assessment will also support the refinement of a comprehensive peer education strategy, training manual adaptation, social and behaviour change communications (SBCC), and potential material and message development.

1.3 Justification of the Study

Priority needs and interventions for HIV and AIDS programs in schools can only be effectively guided, monitored and addressed if baseline KAP estimates are accurately determined and existing. In addition, the socio-economic situations of schools in informal settlements and the currently existing programmatic areas of focus for HIV and AIDS intervention in schools must be ascertained for proper inferences to be made and appropriate support channelled.

This study sought to provide a comprehensive picture of the status of HIV and AIDS knowledge, attitude and practice in selected schools within Nairobi and its environs. Furthermore, the baseline data from this study shall be used as a benchmark for monitoring and evaluating program success over time.

1.4 Significance of the Study

The results of the study will be an immediate benefit to the target schools, the local communities, CHF International and the country at large and shall assist in the formulation and refinement of programmatic needs assistance to the target schools as well as regulations related to the administration of HIV and AIDS programs specific to schools in informal settlements.

The study will particularly benefit USAID, the Government of Kenya and its development partner organizations in the formulation of policies, programs and activities aimed at enhancing schools selection for specific assistance and fair objective distribution of resources through integrated assistance. The results of this study will enlighten program managers on the achievement of the objectives outlined for assessment. This should delve into appropriate development and implementations of continuous evaluation, data management and other key stakeholders in the area of evaluation in the communities as well as in the schools.

⁵ The recently promulgated Kenyan Constitution creates 47 new counties within Kenya. It is expected that new County Education Offices (or a similarly-named entity) will be created in mid- to late- 2012, thus activities related to the new counties should be planned for late 2012 onwards.

⁶ In April, 2011 USAID/Kenya's Education for Marginalized Children in Kenya (EMACK) program, implemented by the Aga Khan Foundation, and launched activities in several informal urban settlements within Nairobi, including Mathare and Mukuru.

Finally, the study will form a base on which other stakeholders and social scientists can develop their research studies. Research into other baseline assessments can also be done using strategies developed in this study.

1.5 Study Limitations

The study area: This study is limited to certain HOPE primary and secondary schools in Nairobi and its environs. Schools outside the study area and those supported with other organizations/institutions were not included in the assessment.

Similar HIV and AIDS Interventions: There are a number of HIV and AIDS prevention programs on going in Nairobi and within schools in Kenya which will impact the findings particularly of the end line assessment and the schools selected for the control group. It is possible that the control group may receive interventions similar to HOPE over the course of the program.

Socio-Economics & Poverty Levels: Dynamics in poverty levels are so varied within the study areas thus difficult to match poverty levels, as one of the key factors in the selection of the control groups to be matched with the respective intervention schools for the study. Also different socio-economic drivers exist across Nairobi, as there are different economic activities, such as transportation, water and sanitation infrastructure.

2 STUDY METHODOLOGY

2.1 Study Design

The study was a cross-sectional, descriptive, exploratory control using both quantitative and qualitative methods to collect data in order to establish baseline data for knowledge, attitude and practice regarding HIV and AIDS in selected schools within Nairobi and its environs.

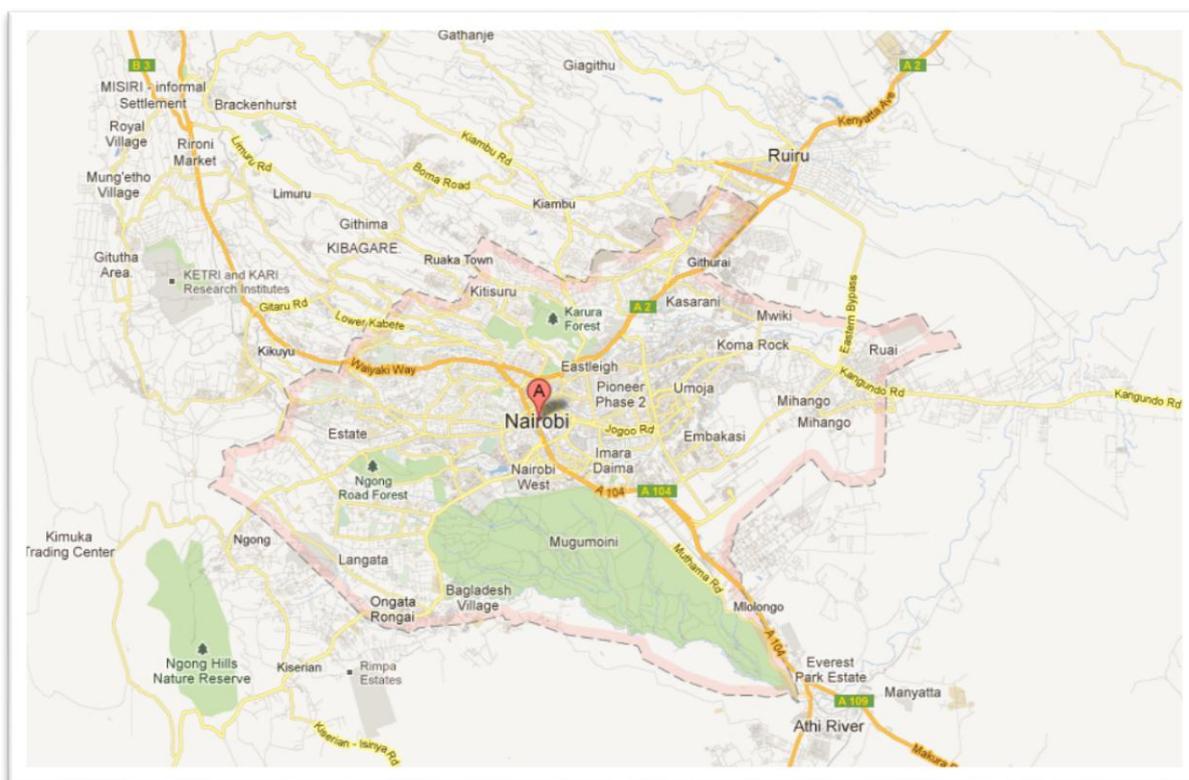


Figure 1: A map showing the study area - Nairobi and its environs

Quantitative and qualitative methods were used to determine the KAP among the primary and secondary students. Qualitative methods were further used to explore relationships between the youth and their parents, teachers and the community at large as well as to determine the availability and effectiveness of policies, programs, curriculum and coordination structures relating to HIV and AIDS in schools.

2.2 Study Population

The study population comprised of students enrolled in selected primary and secondary schools. A sub-sample of key informants drawn from school administrators, academic staff and teachers were also interviewed. Focus Group Discussions (FGDs), were further conducted with selected parents/caregivers and community/opinion leaders drawn from the surrounding communities.

The selected schools were drawn from the following districts; Kamukunji, Starehe, Embakasi, Njiru, Langata, Westlands, Kasarani, Makadara, Dagoretti, Kiambu, Kikuyu, Ruiru, Athi-River, Kajado North and Isinya.

2.3 Ethical Considerations

The tools used in this study were reviewed by the Ministry of Education (MoE) and the CHF International HOPE technical team prior to their use in the field. Permission to use the tool within the selected schools was sought and received from ministry. MoE also wrote a letter of authorization to conduct the study. Permission was also sought from the Nairobi City Council (NCC), the concerned District Education Offices (DEO) and the respective school's heads before conducting interviews with the students. Further, the students who were eventually selected were asked to consent prior to the interviews.

Community entry/social mobilization was conducted prior to the data collection exercise through community leaders and school's administration. CHF International in collaboration with its implementing partners assisted TRRG with the mobilization of the various schools and the targeted respondents. Furthermore, all recruited interviewers (enumerators), completed training in research ethics and general interviewing practices and were appraised before commencement of the study.

Finally, all interviews were conducted where the respondents felt comfortable answering questions and in a language and moderation that was friendly to each specific target group, especially the use of participatory rural appraisal techniques for primary pupils whenever appropriate. Results and data sets of this study were only shared with the client and its designated partners.

2.4 Sampling and Sampling Method(s)

The study involved careful selection of primary and secondary schools within the target areas to be included in the intervention and control arms of the study. Stratified and multi stage sampling methods were used to select a representative sample of 48 schools (half intervention and half control) from a list of 400 schools provided by CHF International. Primary and secondary schools were selected at a ratio of 60:40 which was proportional to the schools distribution within the study areas. Consideration was also given for the inclusion of formal and informal schools, co-educational schools and single sex schools.

2.4.1 STEP 1: Schools Sample Size Determination and Selection

The list of 400 HOPE targeted schools and their locations formed the sampling frame for the selection of schools for the study. Of these schools, CHF targeted 75 schools to receive interventions for the first year of the program, while the rest were to receive the interventions later in the program, progressively for the rest of the 4 years.

Given the budget and time constraints, the 10 - 12% rule of thumb for a representative sample was applied in the selection of sample of schools for inclusion into the study. A sample size of 48 schools representing 12% (the upper limit) of the targeted 400 schools was used.

In the selection of schools for the intervention arm of the study, TRRG listed the 75 schools targeted for the first year intervention by their geographical locations (the study districts) and used stratified random sampling within the respective locations to obtain 24 schools. The various strata used were: public or private, mixed or non-mixed, day or boarding and formal or non-formal schools.

Through purposive sampling technique a number of schools equal in proportion to the ones selected for the intervention group were also selected as samples for the control group (the non-

intervention group/control cohort). The 24 control group schools were selected based on the following criteria:

- a) *Schools that had never received any similar intervention from any USAID funded program; and*
- b) *Schools with similar characteristics to the intervention group schools including socio-economic setting, cultural setting, school type (public or private, day or boarding, mixed and non-mixed) and similar student capacity.*

Given the programmatic emphasis on schools in the informal settlements, consideration was given to the following options:

- i) *Schools in other informal settlements within Nairobi and its environs;*
- ii) *Schools in peri-urban setting;*
- iii) *Schools within the same setting but reasonably distanced from the intervention schools; or*
- iv) *Other low income level schools.*

The criterion outlined above was employed to minimize the effects of cross interference for the duration of the study. The basic parameters for sampling at this level were therefore the condition setting and origin of the conditions. Priority was also given to the remaining schools from the pool of 400 HOPE targeted schools, on the basis that they would not receive the intervention within the first year but rather later in the program for instance third year of intervention. This was done to ensure that control group schools would not be completely locked out; and that they shall be able to benefit from the program eventually. To ensure similar distribution in the intervention and non-intervention arms of the study, careful frequency matching of schools based on setting and type of school was conducted.

Table 1: Selected primary and secondary schools for the KAP survey

	SELECTED PRIMARY SCHOOLS		SELECTED SECONDARY SCHOOLS	
	Intervention group	Control group	Intervention group	Control group
1	Kabiria Primary School	Gatina Primary School	Ruthimitu High School	Elyon High School
2	Gachie Primary School	Ndenderu Primary School	Kiambu High School	
3	Wangige Primary School	Uthiru Primary School	Kyumbi Secondary School	St. Augustine Mlolongo Secondary School
4	Mlolongo Primary School	St. Pauls Primary School	Uhuru Secondary School	Highway Secondary School
5	Olturoto Primary School	Olteyani Primary School	St. Teresa's Boys High School	Pumwani Secondary School
6	Muthurwa Primary School	Moi Airbase Primary School	Komarock High School	Dandora Secondary School
7	Salama Primary School	Pumwani Primary School	Olympic Secondary School	Langata High School
8	James Gichuru Primary School	Bondeni Primary School	Ruaraka High School	Kamiti Secondary School
9	Ayany Estate Primary School	Langata Road Primary School	St. Anne Jogoo Road	New Jogoo Road Girls High School
10	Kilimani Primary School	Muguga Green Primary School	Aquinas High School	Dagoretti High School
11	Mathare North Primary School	Githurai Primary School	Kayole Secondary School	Ofafa Jericho High School
12	Mariakani Primary School	Kaloleni Primary School		
14	Madaraka Primary School	Ngei Primary School		
13	Dagoretti Special Primary School			
15		Emmanuel Junior Primary School		

2.4.2 STEP 2: Selection of Individual Study Participants (Students).

In determining a suitable sample size for individuals to be included in the quantitative aspect of the survey, two main issues were considered:

- *A sample size that is adequate to provide stable estimates on the level of knowledge on HIV and AIDS in each of the targeted schools; and*
- *A sample size that would allow comparisons between schools and stratification for important correlates of knowledge, attitudes and practices within schools*

The sample size was determined using the derived formula for assessment of proportions in cross-sectional studies for random sample procedures (*Leslie Kish, 1964*). The sample was designed to provide KAP estimates for each of the selected schools with a sampling error (*Level of precision*) of +/- 5 % and p set to .5. The following assumptions were made:

- *A design effect (DEFF) of 1 since simple random sampling will be used at all levels of the survey*
- *An overall minimum response rate of 90% percent to adjust the sample size for non-response*
- *A precision of +/- 5%*

At 95% confidence level, and an error correction of 5 percent for stratum specific estimates;-

$$n = \frac{\left(\frac{P[1-P]}{\frac{A^2}{Z^2} + \frac{P[1-P]}{N}} \right)}{R}$$

Where:

n = sample size required

N = number of individuals in the population

P = estimated variance in population (set at $p=.5$ for population; 50-50)

A = Desired Precision (set at .05 for +/- 5%)

Z = Based on confidence level; 1.96 for 95% confidence level

R = Estimated response rate set at 90% (.9)

The study targeted Class 5, 6 and 7 (3 levels) pupils in primary schools and Form 1, 2 and 3 (3 levels) students in secondary schools. Besides, the recommended class population size in Kenya is 40; and with the assumption of three streams existing per class in a school, the minimum number of possible students in each school (either primary or secondary) would hence be (40x3x3=360 students). Thus; for 48 schools, a total population of 17,280 (360x48) students were targeted.

Thus:

$$P [1-P] = 0.5(1-0.5) = 0.25$$

$$A^2/Z^2 = 0.05^2/1.96^2 = 0.0025/3.8416 = 0.000651$$

$$N = 17280$$

$$R = 0.9$$

$$n = \{0.25/[0.000651+0.0000144676]\} / 0.9 = 417.417434$$

$$n = \{0.25/[0.0006654676]\} / 0.9 = 417.42$$

The base sample size required was $n_0=376$, at 95% confidence level, with precision at $\pm 5\%$. Taking into assumption that 10% of the participants may refuse to participate, the response rate was thus represented as .90 and based on the equation above, the final sample size for the study was $n=418$. On average, a population size distribution of 418 individuals among 48 schools gave approximately 9 individuals to be interviewed per school that further translated to at least 3 participants targeted per class. TRRG chose to select 12 participants (6 girls and 6 boys) per class level in each school to give a final population of 1,728 individual student participants targeted for interviews (12 students in all streams x 3 class levels x 48 schools).

Subsequently, TRRG obtained the respective student's class registers from the school administration and used it as the sampling frame for selecting the individual student participants. TRRG stratified the names of students in the registers into girls and boys particularly for the mixed schools and based on the assumption that in each class level there is minimal variability in age (difference is ± 1), we randomly selected from each strata per class level, 6 girls and 6 boys to participate in the study. A total of 1791 students were finally surveyed of which slightly over half were boys. Frequency matching of the samples for girls and boys in the control group similar to the study group samples was also done. Age and sex were the basic parameters for sampling at this level.

2.4.3 STEP 3: Selection of Individuals for Key Informant and FGD interviews.

A total of 16 FGDs were conducted, where 8 were in the intervention and 8 in the control arms of the study. The FGDs were broken out as follows: 4 with teachers (mixed gender), 4 with parents/caregivers (mixed gender), 4 with community/opinion leaders/Parents Teachers Association (PTA) representatives (mixed gender) and 4 with students (male students/pupils leaders and female students/pupils leaders). Each of the FGDs comprised homogeneous groups of 8-12 people and discussions were conducted in Kiswahili and English as appropriate.

20 individuals were purposively selected to participate in the key informant interviews (KII) again half in the intervention arm and the other half in the control arm of the study. Key informants included: teachers, head teachers, PTA/ School Management Boards (SMBs) representatives, District Quality Assurance and Standards Officers (DIQASOs), parents, life skills teachers, provincial administration and religious leaders from around the sampled schools and representing all geographic areas covered by the assessment. In addition, the academic staff or teacher responsible for the schools' HIV and AIDS curriculum/education were interviewed for each school.

2.5 Data Collection Methods and Instruments

Data was collected through participant interviews, direct observation, FGDs, digital voice recordings and desktop review. CHF International provided TRRG with sample questions approved by MoE for the purposes of this study which were then reviewed and revised by TRRG to produce the final survey tools.

A pre-test of the study tools was conducted in two schools in Nairobi which were not among the 400 HOPE target schools, but met the criteria for the study. These schools were Olympic Primary School and Raila Odinga Educational Centre both located in Kibera. From the pre-test, most students were able to understand the questions and provide clear and precise answers. The students in primary and secondary levels were also comfortable answering the questions on their own and this enhanced privacy and confidentiality of the information provided. Some of the questions that were not clear were reframed and incorporated in the final data collection tools.

Following the pre-test, the study opted to use self-administered questionnaires for the secondary school students and enumerator assisted method (cases where an enumerator fills in/checks the correct responses on behalf of the students) for the primary school students whenever necessary.

2.6 Data Processing & Analysis Methods

Peer reviews of data transcriptions and translations from the FGDs were undertaken for consistency, reliability and readability. Quantitative data sets were entered and analyzed using SPSS analysis software. For qualitative sets, the NVIVO statistical software was used after transcriptions, alongside identification parameters for the qualitative analysis. A codebook was developed that included all relevant thematic areas.

2.7 Data Management - Quality Verification

Data quality assurance and control was achieved and monitored in four ways: staff training, internal auditing, measures to ensure data quality, and quality control reporting.

- **Internal Audit** - The data manager and fieldwork supervisors checked all completed questionnaires and conducted a minimum of 30 percent call-back or spot checks in order to verify the accuracy of the data recorded and, where deemed necessary, clarified with respondents any inconsistencies in their answers as compared with answers recorded.
- **Review of enrollment documents** - The field supervisors reviewed all the study forms, study visit checklists, and relevant study tools before the interviewer proceeded to the next participant(s) or at the earliest possible convenience before the interviewer resumed with subsequent data collection activities. The supervisors then submitted all the field forms to the data manager at the end of the day who then reviewed all materials received to ensure completeness. The Principal Investigator made a final review of a minimum of 30 percent of the study files to check for their accuracy and completeness.
- **Ensuring Data Quality** - In order to minimize errors associated with manual data entry, the following precautions were taken: 1) Double data entry where 10% of all the manually entered data were re-entered by a second individual and whenever more than 5% of the entries were found to be in error, all data since the last successful data check were re-entered; and 2) Study ID double check where study IDs were created per study protocol by the responsible interviewer and then double checked by a second member of the study staff (i.e. field supervisor or second interviewer).



Figure 2: Training of the KAP Survey enumerators

3 STUDY FINDINGS

This chapter describes the findings from the baseline survey and the analysis. 24 control schools and 24 intervention schools were reached and the breakout between primary and secondary students surveyed was 58% and 42% respectively. The school selection ensured that various categories of schools were included such as primary/secondary, public/private, mixed/non-mixed, formal/non-formal and consideration of different geographical areas. The findings also describe information on 4 key goal level indicators sought by the study to be monitored using the KAP data at baseline, mid-term and end-line of the program which include:

1. % of never-married young men and women aged 15-24 who have never had sex;
2. % of young men and women aged 15-24 who have had sexual intercourse before the age of 15;
3. % of young men and women who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission; and
4. % of population with accepting attitudes towards PLWHA.

The chapter is organized into the following sections: 1) Socio-demographic characteristics of the respondents, 2) Knowledge and misconceptions on HIV and AIDS, 3) Attitudes towards people living with HIV and AIDS, 4) Practices and related risks and 5) Sources of information on HIV and AIDS and related issues.



Figure 3: Respondents in a secondary school participating in the KAP survey

3.1 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

A total of 1791 students⁷ in standard 5, 6, and 7 and form 1, 2, and 3 were interviewed as shown in table 2. Out of the 1791 students, 1014 (56.6%) were males and 773 (43.2%) were females, a distribution partly attributed to the design of the study but largely as a default finding of the statistical analysis.

⁷ The term students has been used in the study to mean youth attending primary and secondary schools

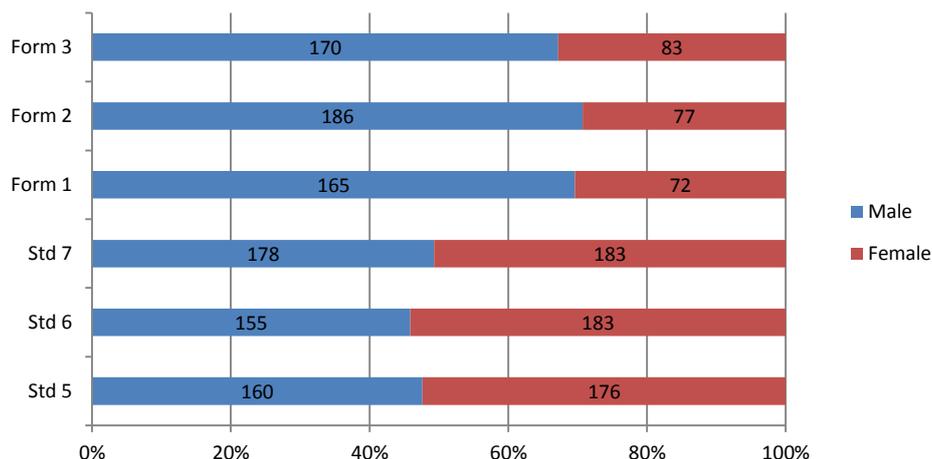


Figure 4: Distribution of study respondents by class and sex

The majority (73.2%) of the students were between 12 and 17 years of age. This age bracket distribution was expected for upper primary and secondary school levels according to Kenya’s 8-4-4 education system. Those who were aged 11 years and below and 21 years and above were 16.4% and 0.3% respectively. Figure 5 below shows the age group distribution (in years) of all the 1791 respondents

Majority (73.2%) of the students were aged between 12 and 17 years, the age bracket distribution expected for upper primary and secondary school levels according to Kenya’s 8-4-4 education system. Those who were aged 11 years and below and 21 years and above were 16.4% and 0.3% respectively.

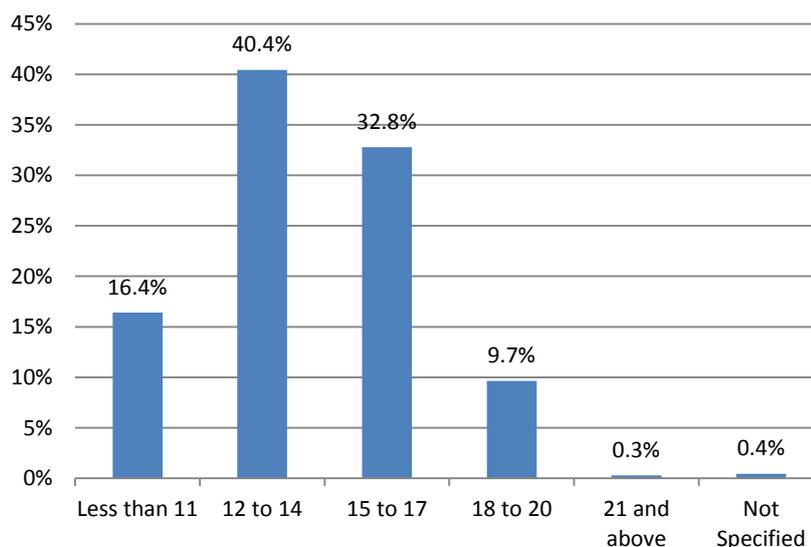


Figure 5: Distribution of the Students by their Age (n=1791)

Almost half of the respondents (49%) reported to be Christian belonging to major denominations in the country including Catholic (30.2%), Anglican (13.2%) and Seventh Day Adventist (SDA) (5.6%), reflecting the fact that the study took place in a predominantly Christian area. Another 44.9% specified that they belong to other religious affiliations which include Protestants, Hindu, and Traditionalists⁸ among others while 5.5% of the respondents reported to be Muslims. From these findings, the emphasis on potential interventions related to religion should largely dwell on the main affiliations and other denominations as a group. However, future studies should aim at breaking further these denominations for specific tailored interventions.

⁸ Traditionalists - Those with beliefs, moral codes and values passed down from generation to generation and in line with their ethnic practices and cultures, that are not necessarily in line with Christianity or any other conventional religion.

National data indicates that by religious affiliations, majority of Kenyans are Protestant (45%) followed by Roman Catholic 33%, Islam 10%, indigenous beliefs 10% and others 2%. It is important to note that a large majority of Kenyans are Christian, but estimates for the percentage of the population that adheres to Islam or indigenous beliefs vary widely (Kenya Demographics Profile 2012).

3.2 FINDINGS ON THE KEY INDICATORS

Indicator 1: % of never-married young men and women aged 15-24 who have never had sex. Questions on this key indicator were only asked to the secondary school respondents (n=753). Based on the findings 64.5% indicated they had not yet had sex. Of those 49% (238) were in the control group schools while 51% (248) were in the intervention group schools.

Indicator 2: % of young men and women aged 15-24 who have had sexual intercourse before the age of 15. Questions on this key indicator were also asked to the secondary school respondents who reported to have had sex. The finding was 45.2% of those who have had sex (n=228) had intercourse before the age of 15 while 39 (14.6%) respondents did not specify their age at first sexual debut. This represents 13.7% of all the 753 secondary aged respondents. Of those who had sex before the age of 15, 47.6% (49) were in the control group schools while 52.4% (54) were in the intervention group schools.

Based on the results of the above key goal indicators (1 and 2) observed at baseline, there was no statistically significant difference between the intervention group schools and the control group schools, as $p > 0.05$, from the chi square (χ^2) tests in the indicators as shown below.

Table 2: Comparison of control and intervention group schools with regard to indicator 1 & 2

Pearson Chi-Square	P-Value Asymp. Sig. (2-sided)	df
<i>Indicator 1: % of never-married young men and women aged 15-24 who have never had sex.</i>	0.7975	1
<i>Indicator 2: % of young men and women aged 15-24 who have had sexual intercourse before the age of 15.</i>	0.8886	1

Indicator 3: % of young men and women who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission. Both primary and secondary students (n=1791) were asked the following five questions to measure their knowledge regarding HIV transmission.

- 1 Can people reduce their chance of getting the HIV by NOT having sex at all?
- 2 Can you tell that a person is infected with HIV simply by looking at him/her?
- 3 Do you believe that a person who looks healthy can be infected with HIV?
- 4 Do you believe that only homosexuals and prostitutes can have HIV?
- 5 In your opinion, if someone with HIV coughs or sneezes near you, can you get the virus?

Only 26.3% got all the items correct, with 73.7% answering incorrectly one or more of the items as shown in the table below. Of those who got all the knowledge items correct, 50.3% (237) were in the control group schools while 49.7% (234) were in the intervention group schools.

Table 3: Distribution of respondents with regard to Indicator 3

	Frequency	Percent	Cumulative Percent
<i>Correct identification</i>	471	26.3	26.3
<i>Incorrect identification</i>	1320	73.7	100.0
Total	1791	100.0	

Based on the results of the above key goal indicator observed at baseline, there was no statistically significant difference between the intervention group schools and the control group schools, as $p > 0.05$, from the chi square (χ^2) test as shown below.

Table 4: Comparison of control and intervention group schools with regard to indicator 3

Pearson Chi-Square	P-Value Asymp. Sig. (2-sided)	df
<i>Indicator 3: % of young men and women who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission.</i>	0.9480	1

Indicator 4: % of population with accepting attitudes towards PLWHA. To test their attitudes towards people living with HIV and AIDS (PLWHAs), both primary and secondary students were asked the following four questions.

5. *In your opinion, if a student is infected with HIV and AIDS but does not appear sick, should he or she be allowed to attend school?*
6. *If a teacher tested positive for HIV AIDS? And is not sick, should he/she be allowed to teach students?*
7. *Would you live with a family member who has HIV AIDS?*
8. *If a member of your family tested HIV positive, would you want their status to remain secret?*

Only 29.5% answered all the four questions positively (showing accepting attitudes) leaving 70.5% displaying stigmatizing attitude(s) in one or more of the four areas as shown in table 5 below. Of those who had accepting attitudes, 50.9% (269) were in the control group schools while 49.1% (259) were in the intervention group schools.

Table 5: Distribution of respondents with regard to indicator 4

	Frequency	Percent	Cumulative Percent
<i>Accepting attitudes</i>	528	29.5	29.5
<i>Unaccepting attitudes</i>	1263	70.5	100.0
Total	1791	100.0	

Based on the results of the above key goal indicator, there was no statistically significant difference between the intervention group schools and the control group schools, as $p > 0.05$, from the chi square (χ^2) test as shown below.

Table 6: Comparison of control and intervention group schools with regard to indicator 4

Pearson Chi-Square	P-Value Asymp. Sig. (2-sided)	df
<i>Indicator 4: % of population with accepting attitudes towards PLWHA.</i>	0.8055	1

3.3 KNOWLEDGE AND MISCONCEPTIONS ON HIV & AIDS

Knowledge essentially is the recall recognition of specific and universal elements in a subject area.⁹ In the context of HIV and AIDS, having knowledge implies the ability to recall facts concerning causes, transmission and prevention of HIV and AIDS. It is expected that when one has the knowledge of HIV and AIDS, the accompanying behaviour would be logical.¹⁰ Awareness of HIV, an understanding of how it may be transmitted, and a perception of individual risk are essential to sexual risk reduction, although they are often insufficient on their own to prevent transmission. Nearly all Kenyans have heard of HIV. Furthermore, misconceptions about HIV and AIDS usually arise from several different sources. These sources may be from the simple ignorance and misunderstandings about scientific knowledge regarding HIV infections and the etiology of AIDS to misinformation propagated by individuals and groups with ideological stances that deny a causative relationship between HIV infection and the development of AIDS. Based on this understanding, the study sought to examine the knowledge of students on HIV and AIDS that may in turn influence their behaviour as well as the associated misconceptions.

3.3.1 Knowledge of HIV and AIDS and Sexually Transmitted Diseases (STDs)

Nearly all students are aware of HIV and AIDS. When asked if they have ever heard of HIV or AIDS, 93.6% of all surveyed students (Primary and Secondary) said yes with only 5.6% saying no while others did not answer, potentially signifying fear of the disease or associated stigma. There was little difference between boys (93.6%) and girls (93.8%) in terms of this knowledge. However knowledge level increased by class level as shown in the figure below. As one student stated in an FGD *"AIDS is a common disease, an incurable disease, a virus and a killer disease especially in Africa"*

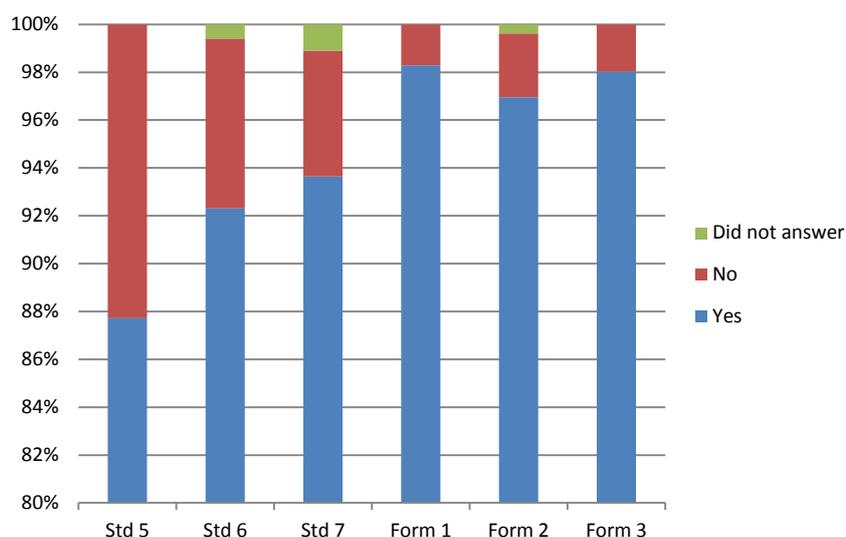


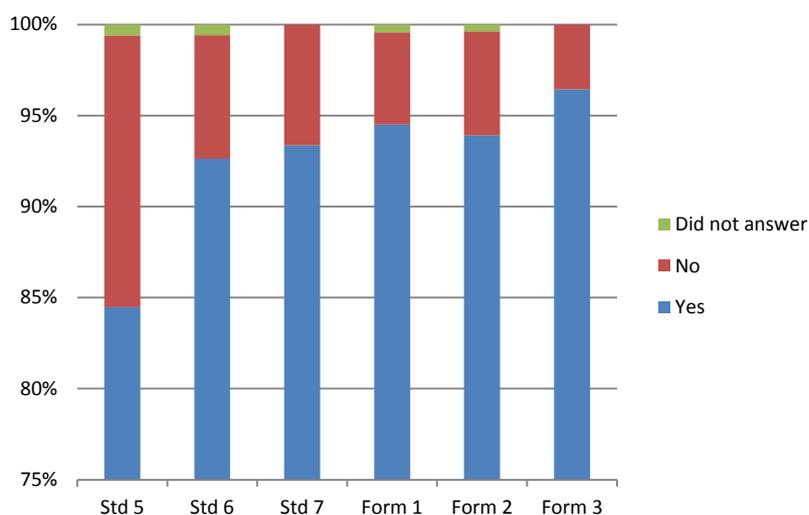
Figure 6: Whether students had heard of HIV or AIDS by relative percentages at class levels

All students (n= 1791) were then asked if they have ever heard of a disease that spreads through sexual intercourse. Of these, 1650 students (92.1%) responded on the affirmative while 133 students (7.4%) said they have not heard of such a disease. 16 students did not answer this question, suggesting that they are not sure.

⁹ Adegbola, O., Babalola and J. Oni, 1995. Sexual net working in Freetown the background of AIDS epidemics. *Health Transition Review*, suppl 5: 81-110.

¹⁰ Odu, B.K and Akanle, F.F. (2008). Knowledge of HIV/AIDS and Sexual Behaviour among the Youths in South West Nigeria. *Humanity & Social Sciences Journal* 3 (1): 81-88, 2008. Retrieved November, 14 from [http://www.idosi.org/hssj/hssj3\(1\)08/10.pdf](http://www.idosi.org/hssj/hssj3(1)08/10.pdf).

A comparison between the primary and secondary school data indicated that a higher proportion of the standard 5 students (15%) were not aware of any disease that spreads through sexual intercourse compared to other class levels.

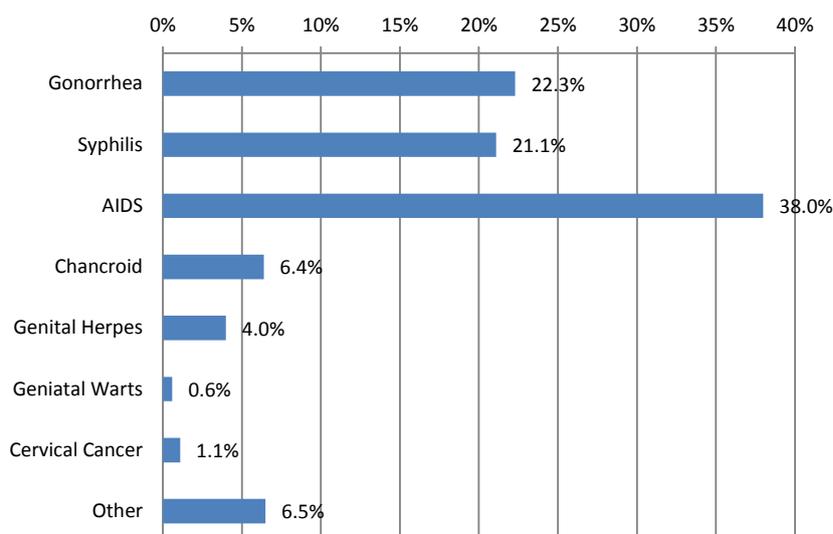


A comparison between the primary and secondary school data indicated that a higher proportion of the standard 5 students (15%) were not aware of any disease that spreads through sexual intercourse compared to other class levels.

Figure 7 besides shows the distribution of students (in relative percentages) by class levels on whether they have heard of a disease that spreads through sexual intercourse

Figure 7: Comparison between primary and secondary classes with regard to STI knowledge

When provided with a list of potential diseases that are spread through sexual intercourse, over a third (38%) of the students selected AIDS, followed by Gonorrhoea (22.3%) and Syphilis (21.1%). This shows that students are aware that sexual intercourse is a key mode of HIV transmission. Very few (1.1%), were aware that cervical cancer was spread through sexual intercourse. On further disaggregating the data to understand knowledge levels of STDs among younger students (primary groups) and older students (secondary groups), it was found that AIDS was still considered the main disease that spreads through sexual intercourse in both groups. However, more secondary students were aware of other STDs than their primary school counterparts.



On further disaggregating the data to understand knowledge levels of STDs among younger students (primary groups) and older students (secondary groups), it was found that AIDS was still considered the main disease that spreads through sexual intercourse in both groups. However, more secondary students were aware of other STDs than their primary counterparts.

Figure 8 besides and 9 below depicts this

Figure 8: Diseases that spread through sexual intercourse that all students had heard of

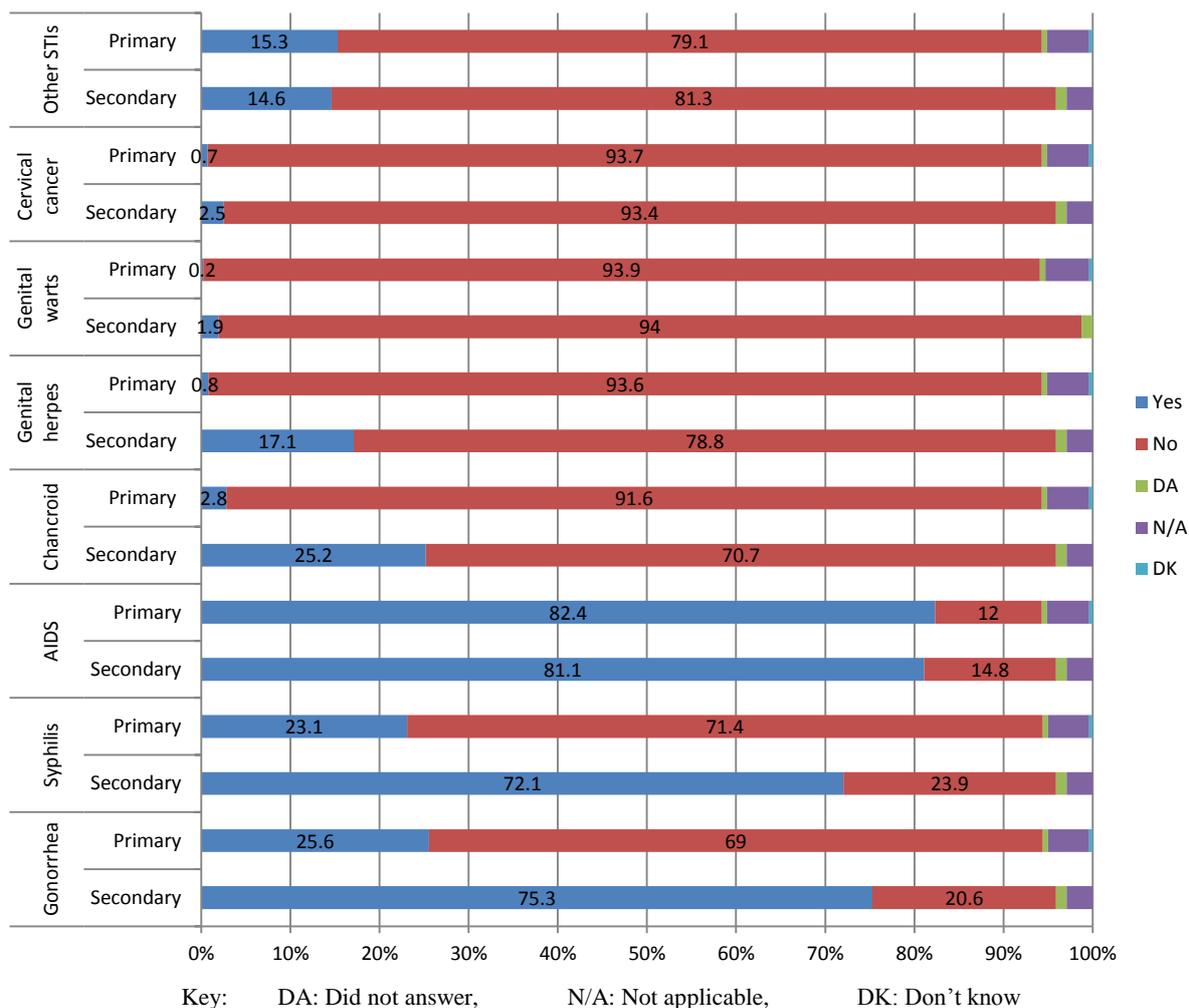


Figure 9: Diseases that spread through sexual intercourse that the respondents have heard by class level

3.3.2 Knowledge on HIV transmission modes and protection

The study asked various questions on modes of transmission. In general students demonstrated high knowledge of various HIV transmission modes. However, it is important to note that at an individual level, comprehensive knowledge on HIV transmission was very low as only 26.3% correctly answered all the five key indicator questions on this knowledge with 73.7% answering incorrectly one or more of the items. Most were able to determine that HIV cannot be transmitted through sharing of clothes with an HIV infected person (80.8%), shaking someone’s hand (95.8 %) sharing a toilet with someone who has HIV (84.9%), touching someone who is infected (94.3%) and through mosquito bites (88.6%). This was supported by the FGDs, in that students indicated that HIV could be transmitted through engaging in sexual intercourse, blood transfusion, from mother to child through breast feeding, through open wounds and sharing of sharp objects. However misperceptions persist.

A significant 13.8% of all the students still thought that one could get HIV through sharing clothes with someone who is infected while 5.4% did not specify, indicating that they are not sure. 10.2% also thought that one could contract the disease by sharing a toilet, whereas 9.2% thought that a mosquito bite can cause the transmission of HIV, a mis-conception.

Interestingly 2.9% of the students think that one can get HIV through shaking hands while 4.4% believe one can through touching. In addition, a near equal proportion of primary students (2.99%) and secondary students (2.79%) were found to agree that one can get HIV through shaking hands indicating that there was no significant difference on this knowledge between the primary and secondary school levels. The discrepancy on shaking hands and touching may be attributed to some further knowledge on the context of touching among students. There also seemed to be confusion around whether an individual could get HIV when someone with HIV sneezed or coughed near them with 28% indicating that one could and 62.9% saying it is not a transmission mode. Misperceptions also came out in the FDGs where some students listed kissing and sharing of clothes as possible modes of HIV transmission. Other than lack of knowledge and ignorance on this phenomenon, the existing misconception can potentially culminate into and fuel stigma and isolation among students and PLWHAs. Furthermore, the lack of adequate knowledge and continued misconception among students in primary and secondary schools about the possible ways in which HIV can be transmitted shows that despite the significant messaging and education, work still needs to be done.

Most students (95%) also know that sharing a needle or syringe is a possible mode of HIV transmission with 4% indicating that it is not. From these findings, students are much aware that injecting drug use is a way HIV can be transmitted, but still there is need to reach out to the few who are unacquainted with this mode of transmission.

In terms of prevention, most students (93%) know that one can be infected with HIV after one single sexual intercourse with a person who is HIV infected. A small percentage of the respondents, 4.1% indicated that one could not while 2.9% did not specify. The majority of respondents (65%) also indicated that people can reduce their chances of getting HIV by not having sex at all with 29% indicating that this does not reduce one's chances. Compared to their secondary counterparts, primary school students were more inclined towards abstinence (not having sex) and delayed sexual debut, with 92.5% stating that people can reduce their chances of HIV infection by not having sex at all. The FDGs also brought out that HIV could be prevented by abstinence from sex, sterilization of sharp objects before using them, knowing ones HIV status and wearing protective gear when handling open wounds.

The difference between the high percentage of students (93%) knowing that one can be infected after a single sexual intercourse and the lower percentage (65%) who feel one can reduce his/her chances of HIV infection by abstaining may be attributed to the fact that some students recognize there are other modes of HIV transmission in addition to sex. To support this, the respondents were further asked whether people could protect themselves from HIV by only abstaining from sex of which 50.4% answered on the affirmative.

More than half of the students (63.3%) knew that a woman or a girl cannot protect herself from HIV by taking contraceptive pills. However 17.4% of the students believed contraceptive pills can protect one from an HIV infection while 19.4% did not specify, indicating possible lack of knowledge on contraceptive pills in terms of STI prevention. Knowledge that contraceptive pills cannot protect one from an HIV infection was higher among secondary students (78.5%) than their primary counterparts (52.2%). Females also tended to be more aware than their male counterparts (83 for females vs. 76% for males).

Most students (93.5%) also realize that a person of their age could get infected with HIV with only 6 % of the respondents indicating that one could not. In addition, most students (73.5%) also know that HIV and AIDS is not exclusive to homosexuals and prostitutes.

Still, a significant 23.1% of students, believe that only homosexuals and prostitutes can be infected with HIV, pointing to students still believing that only those who are promiscuous can get HIV.

Understanding the target population's perceptions of risk and the accuracy of these perceptions is important to guide prevention efforts. At an individual level, risk perceptions can affect sexual and HIV test-seeking behavior. From the study findings, an estimated 1 in 2 secondary students perceived themselves to be at risk of getting or can get HIV infection; of these, most attributed their risk to not knowing their status (35%), not being faithful to partners (8%), not using condoms (7%) and having multiple sexual partners (6%). The 45% who perceived themselves not to be at risk attributed this to never having had sex (41%), knowing their status (26%), and trust in their partners and using condoms both at 7%. More males than females perceived themselves to have risk for an HIV infection

HIV and AIDS are part of many students' everyday lives. Most of the respondents (61.7%) know someone who is infected or has died of AIDS, while over a third of them (37.4%) indicated that they did not know. Most students (86.7%) know that a person who looks healthy can be infected with HIV and 77.5% know that it is not easy to tell who is infected with HIV by simply looking. On the other hand, 11.3% think one cannot look healthy and be infected and 19.3% felt that it was easy to tell who is infected, signifying the fact that some students associate HIV and AIDS with particular symptoms despite the fact that with antiretroviral drugs, eating and living healthy, it is possible for one to be HIV positive and show no physical signs of the disease.

HIV and AIDS prevention work is happening in schools. In the FGDs, students reported that they engaged in HIV prevention activities in and out of school including holding debates, drama and writing poems. Others reported that they were involved in guidance and counseling through peer to peer sessions as well as participating in awareness walks. Teachers in the FGDs reported doing some work on HIV and AIDS prevention though some of it is based on individual initiative versus systemically integrated interventions into school activities. One of the teachers explained: *"Personally I am involved in talking to pupils about abstinence, encouraging students to avoid youth parties, talking on the dangers of HIV and telling them that condoms are for the married."* Another teacher explained: *"Holding guidance and counselling sessions to school pupils, teaching students on how to live with infected persons, preventing stigmatization among infected students in the school and being a member of a youth group that teaches other youths life skills"*.

National statistics indicate that HIV-related knowledge has increased over the last decade in virtually every age cohort (Kenya National Bureau of Statistics, 2010). Young people are less likely than adults to exhibit accurate, comprehensive understanding of how to prevent HIV transmission (Tegang et al., 2007). Certain misconceptions about HIV also persist; in 2008–2009, nearly one in five adult men and almost one in four women were not aware that mosquito bites could not transmit HIV. Other indicators, such as age of sexual debut, have shown more modest declines. Kenyans with a post-secondary education are three times more likely than those who have completed primary school to use a condom and 12 times more likely than those without any formal education (Central Bureau of Statistics, 2004).

3.3.3 Testing for HIV and AIDS

Testing and counseling for HIV is the entry point to HIV prevention, treatment, care and support. As a result, KNASP III identifies HIV testing and counseling as a cornerstone of Kenya's efforts to address HIV.

Students were asked whether they had been tested for HIV and of the 1791 respondents over a third (34.3%) indicated that they had been tested while a majority (57.4%) indicated that they had not been tested. Among those who had been tested, 52.8% were in the control group schools while 47.2% were in the intervention group schools. More primary students 64.9% than secondary students (47%) had not been tested, indicating that more secondary students were aware of their status. There was no notable difference between boys and girls in terms of those who had been tested (35.9% for males vs. 32.34% for females). Furthermore, majority of those who had been tested in the survey were aged 15-17 years and stood at 44.28%.

The Government of Kenya policy on HIV testing states that minors (those below 18 years) may only be tested with the consent of their parents or guardians unless they are symptomatic, pregnant, married, a parent, or engaged in behavior that puts them at risk of contracting HIV, which may add to the higher "no" response in the study findings.

National averages indicate that among adults aged 15-49 in 2008–2009, 23% of all males and 29% of all females reported receiving an HIV test in the previous 12 months and knowing their results. Young adults are also significantly more likely than older Kenyans to have ever been tested (NASCOP, 2009). The percentage of adults who say they have ever received their HIV test results declines with age, with the lowest shares reported for individuals age 40 and older (NASCOP, 2009).

If testing is key to prevention, then there is need to advocate for the reduction of the age of testing without parental consent from the current 18 years in order to improve VCT uptake among the youth. From the qualitative interviews, one of the key informants stated; *"Personally I tell them (the students) how to live with others, for example others don't know that they are infected so I advise them to go get tested and they can live if they know there health."* Class teacher; form 2; Jogoo Road Girls High School.

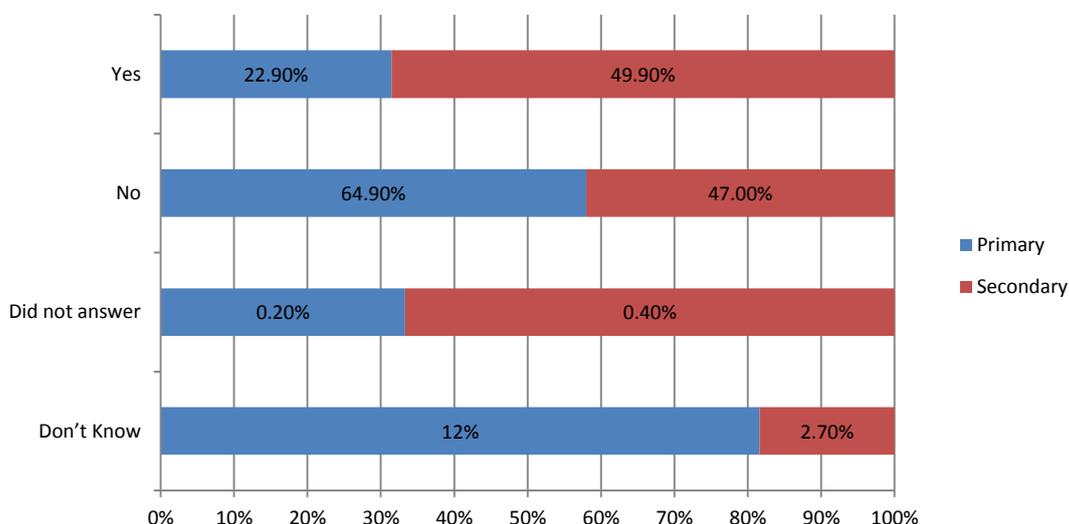


Figure 10: Distribution of pupils/students on testing for HIV and AIDS by primary and secondary

3.4 ATTITUDES TOWARDS PEOPLE LIVING WITH HIV & AIDS

Sub Saharan Africa is estimated to have 29.4 million HIV positive people, of which 10 million young people (age 15-24) and almost 3 million children under the age of 15, are considered to be living with HIV and AIDS. In addition to human suffering, discrimination against the infected may lead to rejection and social isolation. HIV and AIDS related discrimination intrudes into many contexts and many parts of the lives of people living with HIV and AIDS and people thought to be HIV positive. It seems that for PLWHA, or those assumed to be HIV positive, no area of life is untouched by stigma and no area of life is invulnerable to discrimination.

People with HIV and AIDS are discriminated against by their family, their neighbours and their communities. Discrimination has also occurred in educational institutions, often in relation to employment matters involving teaching staff. But discrimination has also involved students. The widespread fear of AIDS has led many adults to take extreme measures in an effort to prevent HIV positive children from attending school.

Debbie's 8-year-old foster son Michael was born HIV positive. He was placed in a school in a small village in the south-west and everything was fine until someone broke confidentiality. This caused such panic and hostility that they were forced to move out of the area. A local mother screamed at them in the street to keep Michael away from her children, shouting that he should have been "put down" at birth. (National AIDS Trust, 2003)

This baseline study sought to find out the attitude that students have towards PLWHA.

Most students in subsequent questions demonstrated accepting attitudes. When asked what they would do if a close friend or relative was infected with HIV and AIDS, most students (82.7%) indicated that they would remain their friends, while 81% said students who are infected with HIV and AIDS and are not sick should be allowed to attend school. Further, 79% of the students agreed that a teacher who tests positive for HIV and is not sick should be allowed to teach. Most students (94%) also said people living with HIV and AIDS should not be left alone or isolated while 88% indicated that they would live with a family member who has HIV and AIDS. In the FGDs, students also reported they had no problem with talking with those infected with HIV and AIDS, sharing utensils with them, shaking their hands or even being in the same classroom with them.

A Significant percentage demonstrated non-accepting attitudes. These 'unaccepting' responses tended to be higher among primary school students. For example only 73.7% of the primary respondents said yes HIV positive students should be allowed to attend school (25.6% said no) and only 72.4% said a HIV positive teacher should be allowed to teach students (27.2% said no). This may be attributed to lack of knowledge and fear among the young pupils. For instance a student who perceives that HIV can be transmitted through shaking of hands, sharing of clothes or touching an infected person, will more likely shun a student colleague who is infected.

7.2% of all the students indicated that they would avoid a close friend or relative who is infected with HIV and AIDS while a 11% indicated that they would not live with a family member who has HIV and AIDS. 18.1% of all the students indicated that HIV positive students should not be allowed to attend school, strengthening the fact that discrimination can be stronger against outsiders. A significant 20.5% also noted that HIV positive teachers should not be allowed to teach while 5.5% agreed that people living with HIV and AIDS should be left alone or isolated.

The greatest negative attitude was on disclosure. Over half of all the students (53%) indicated that the status of their family member who has tested positive should remain a secret. Reasons given for this were relatives and friends would shun them; their respective families would be shunned for having HIV and AIDS positive members; and belief that there was no reason for others to know their status.

Even though awareness of HIV and AIDS in Kenya is high, many people living with the virus still face stigma and discrimination. Studies have shown that although people are aware of the basic facts about HIV and AIDS, many do not have the more in-depth knowledge that addresses issues of stigma¹¹. With 16% of people living with HIV in Kenya reporting having felt suicidal, social stigma of HIV is an urgent issue.¹² Surveys among people living with HIV have shown that 30% have reported being excluded from family events and 79% have reported being gossiped about by members of their community¹³. Negative attitudes regarding people living with HIV may be abating somewhat over time. From 2003 to 2008–2009, increases were reported in the percentage of both women and men who expressed willingness to care for a relative with HIV, a willingness to buy food from an HIV-infected vendor, and a belief that HIV-positive teachers should be allowed to continue to teach.

Evidently, there is still a portion of students who still believe that they cannot mingle with PLWHAs. In a school setting, avoiding PLWHAs can cause a string of social and emotional distress that can result into poor performance, non-attendance or school dropouts and isolation/segregation. It is therefore important that key interventions focusing on behaviour and attitude change towards PLWHAs be addressed in schools.

3.5 PRACTICES AND RELATED RISKS

Students become more sexually active when they reach their adolescence and many often experiment and engage in their first sexual experiences including kissing, fondling and having sexual intercourse. Abstinence is one of the principle methods of avoiding acquisition of the HIV virus. The concept of Abstain, Be faithful, or use Condoms (ABC) had been developed and propagated for many years. However, there are various other modes of HIV transmission outside sex and as such, one can abstain from sex and still be infected depending on the type of exposure.

Delayed sexual debut is also one of the key fundamental concepts being advocated for in schools today. A Participatory Educational Theatre (PET) group - Shades Classics - designed a youth programme that traversed many schools in Nairobi between 2003 and 2008 with creative drama series echoing the slogan "No Sex Please, We Are Students", an initiative that saw marked change in behaviour among primary and secondary school students targeted (SHADES annual report 2005). Recently, the "Nimechill" initiative has also contributed to marked improvement on risky behaviour among students both in Nairobi and the country at large.

The main mode of HIV transmission is through sexual intercourse especially unprotected sex which also exposes one to other risks including but not limited to contracting STIs and unwanted pregnancy among others¹⁴. There are also other risky behaviors that the youth involve in including drugs and substance abuse, alcohol, smoking and addiction to pornography.

Providing young people with basic AIDS education enables them to protect themselves from becoming infected. Young people are often particularly vulnerable to sexually transmitted HIV, and to HIV infection as a result of drug-use. Acquiring knowledge and skills encourages young people to avoid or reduce behaviours that carry a risk of HIV infection.¹⁵¹⁶ Even for young people who are not yet engaging in risky behaviours, AIDS education is important for ensuring that they are prepared for situations that will put them at risk as they grow older.

¹¹ International Treatment Preparedness Coalition (2007, December) 'Missing the target #5: Improving AIDS drug access and advancing health care for all'

¹² UNAIDS (2012) 'Global Report: UNAIDS Report on the Global AIDS Epidemic 2012'

¹³ UNAIDS (2012) 'Global Report: UNAIDS Report on the Global AIDS Epidemic 2012'

¹⁴ Cichocki, M. R.N. (2010). Before You Have Unprotected Sex. Retrieved November 17th 2012 from <http://aids.about.com/od/tipsforsafesex/bb/beforeunsafe.htm>

¹⁵ UNESCO (2009, May), 'A strategic approach: HIV & AIDS and education'

¹⁶ Paul-Ebhohimhen V.A. et al (2008), 'A Systematic Review of School-based Sexual Health Interventions to Prevent STI/HIV in sub-Saharan Africa' BMC Public Health 8(4).

This section examines various risky behaviours among students including unprotected sex, drug and substance abuse and pornography. The section also explores how students spend their leisure time and the associated activities. Questions in this section were only asked to secondary school-aged students (n=753).

3.5.1 Sexual Intercourse and Condom Use

Most of the secondary school aged students surveyed (64.5 %) indicated they have not had sexual intercourse. 30.3% indicated that they have had sexual intercourse which is relatively higher than the national average considering the age group (20.0% and 22.4%, respectively, of young women and men 15 years of age had had sex at least once. By contrast, 53.7% of women and 56.4% of men aged 18 years reported having had sex. – (KAIS 2007). There is a possibility that some of the respondents did not feel comfortable to report that they had had sex despite the efforts to ensure anonymity of those participating in the survey. This possibility is also borne out in the relatively high percentage (5.2%) of respondents who did not mark this question (i.e., non-specified). Of the students who reported having had sex, 41.1% said that they have had sex only once while 35.6% had sex 2-3 times.

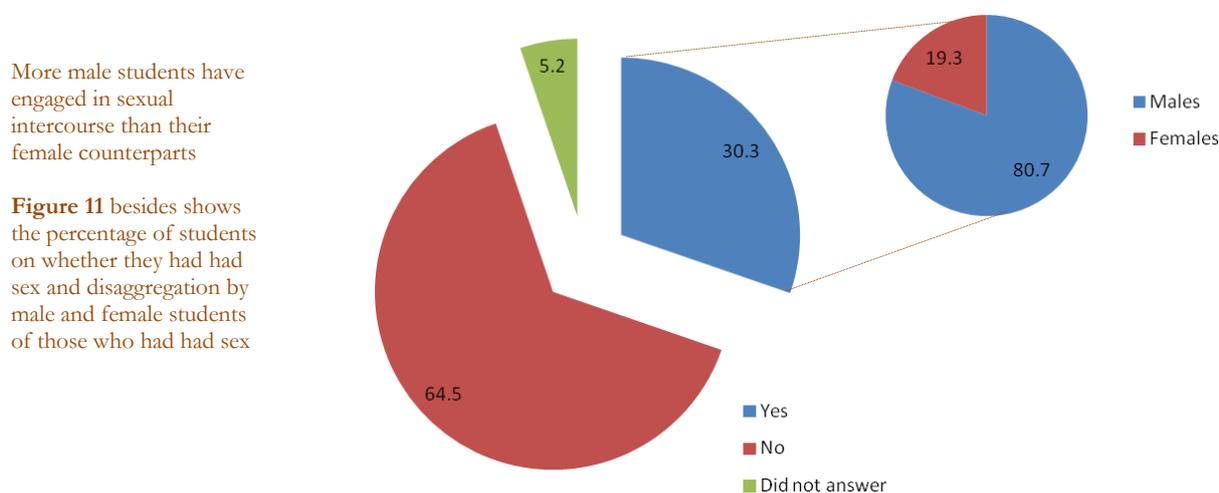


Figure 11: Distribution of respondents on whether they had had sex

Of those who reported having had sex, 80.7% were males while 19.3% were females and most (73.2%) were in the age group 15-17 years. Most of the youth (73.5%) in age group (15-17) also reported having kissed or had sexual touching with a partner. However, of all the secondary respondents, 56.7% had experienced kissing or had sexual touching with a partner. With reference to religion, Catholic respondents were the majority (28%) of those who have had sex among the major denominations. However, the study found that those belonging to other religious communities formed 35% and their denominations were highly varied for them to be broken down.

It is well established that the risk of becoming infected with HIV is directly correlated with the number of sexual partners (Mishra et al., 2009). This finding has been repeatedly confirmed by epidemiological studies in Kenya (Amornkul et al., 2009; Mattson et al., 2007). Of those who reported having had sex, 44.2% of the students had had sex with one person, 79% had had sex with three or fewer people and 7.3% indicated that they had sex with more than 6 people. Male respondents had had sex with more partners than females.

¹⁷ Bankole A. et al (2007), 'Knowledge of Correct Condom Use among Adolescents in sub-Saharan Africa' African Journal of Reproductive Health 11(3).

Lesser respondents (163) reacted to this question (how many sex partners they have had) from the number that indicated that they had had sex (228) culminating to a non-response rate of 28.5%. This can be attributed to the fact that students did not feel comfortable to report on their sexual experiences or were afraid to share information on an activity that is otherwise considered wrong especially at school.

Of the students who had had sexual intercourse majority (42.7%) said they first engaged when they were between 15-17 years. Within this group, 81.7% were males while 18.29% were females suggesting that male students tend to have their sexual debut earlier than the female students. On the other hand, 68.4% of males and 12.7% of females reported becoming sexually active before age 18. Nationally, roughly half of all 15–49-year-olds (48% of women and 55% of men) reported becoming sexually active before age 18 (Kenya National Bureau of Statistics, 2010). One in nine women (11%) and more than one in five men (22%) surveyed in 2008–2009 said they had sex before age 15 and the average age of sexual debut for women in Nairobi is 20.3 years (Kenya National Bureau of Statistics, 2010). Again between 2003 and 2007, the percent of all youth (women and men combined) reporting sexual debut before 15 years of age was significantly different in 2003 (18.3%) compared to 2007 (23.8%). (KAIS 2007). Findings from this study indicate 55.3% of males and 45.2% of females said they had sex before age 15 which is higher than the national averages.

When students who had sexual intercourse were asked to indicate the age when they first engaged in sexual intercourse, 42.7% of them indicated the age bracket of 15-17 years. Of these respondents, 81.7% were males while 18.29% were females, suggesting that more male students have their sexual debut earlier than the female students.

Figure 12 besides shows the number and relative proportions of students by sex at the first age of sexual intercourse

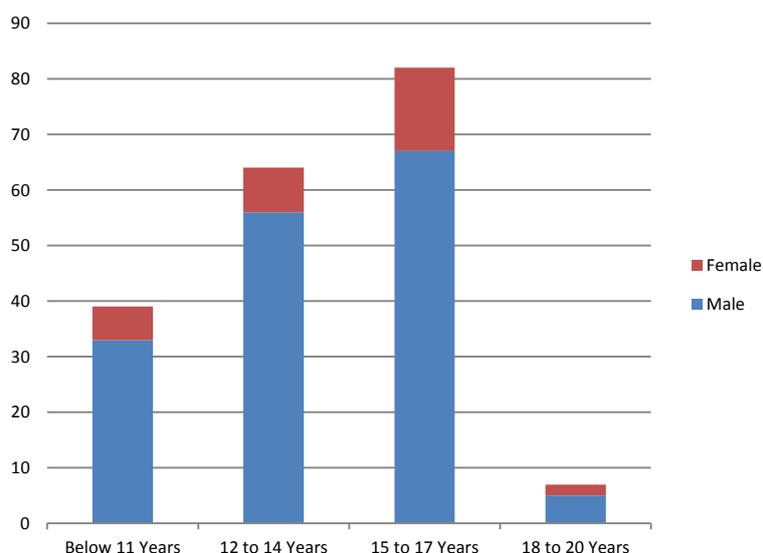


Figure 12: Distribution of students by age at first sex

On further asking if they used a condom during the first time they had sexual intercourse, 200 students out of a possible 228 responded, of whom 27.6% said yes, 62.9% said no, 4.5% refused to answer and 4.97% did not know. However, when the students were asked if they or their partners used a condom the last time they had sex, 175 students out of a possible 228 who reported having sex responded, of whom majority (51.4%) said they did not. Reasons given for not using a condom included condoms were not available (17.9%), they did not like using them (21.3%) and did not think of them at the time of having sex (49.4%). The decline in the response rate at first and last sexual encounter shows that condom use is not a common thing in schools and that students do not think of them nor do they embrace its use as a way of preventing HIV transmission.

Majority (76.2%) of the students who reported using a condom last time they had sex were in the age bracket of 15-17 years and mostly males. Interestingly of the 145 students who used a condom last time they had sex, 39.3% said they use condoms all the time when having sex, 40% most of the time, 15.7% a few times and 4.8% rarely. More males reported using condoms often than their female counterparts.

Most of those who used condoms also reported that it is either they or is a joint decision on who suggests using a condom between them and their partners. It is important to note that given males comprise the majority of those responding using condom, they are the ones reported to have suggested or initiated the use of a condom as compared to the females.

Concerning condom use among other students, 41% of all the secondary students (n=753) reported they believe that other students use a condom when they have sex and of these, majority were male students. However, 29% did not know if others use condoms while 30% said they don't believe other students use condoms. Furthermore, most students (79%) of those who reported that they believe others use condoms mentioned that its most of the students who use condoms compared to 17% who reported that only a few of them use condoms. Again males made up the majority of the respondents who believe most students use condoms (76%) which may be attributed to the fact that more males reported to have had sex.

Both primary and secondary school students were asked where one can obtain a male condom. 52% indicated that they would easily obtain them from the clinic and 38.7% indicated that they would obtain condoms from the shops; others said they could get condoms from friends and peer educators. Comparing primary and secondary data, primary students tended to believe that condoms were more easily obtained from clinics than shops (56% vs. 36%) while secondary students also had the same bias toward clinics but at a lower rate (47% vs. 43%). Others said they could get condoms from friends and peer educators.

Condom use is rare during young people's first sexual episode. In 2008–2009, 25.5% of Kenyan women (ages 20–54) and 28.4% of Kenyan men said they used a condom the first time they had sex (Kenya National Bureau of Statistics, 2010). However, these figures represent a notable increase over rates of condom use at first sex reported in 2003 (11.9% for women and 14.0% for men) (Central Bureau of National Statistics, 2004). Surveys have consistently found that young men are more likely than young women to use a condom the first time they have sex (NASCO, 2009).

Inter-generational relationships – especially those involving younger women and older men – have long been considered an important factor in the disproportionate risk of infection encountered by girls and young women. Both the UNAIDS general population survey and the Demographic and Health Surveys (DHS) AIDS modules use the term age-mixing and define it as: young women ages 15 to 19 who "have had non-marital sex in the last 12 months with a man who is 10 years or older than themselves".

Respondents who had sex were asked how much younger or older the person with whom they had their first sexual experience. 24.24% said the person was more than 10 years older and 17.67% said that the person was 5-10 years older while 5.5% said person was more than 10 years younger and 24.24% did not know.

Concerning if they ever had sexual intercourse with an older person outside of the school setting, 78% said no but a relatively significant 21.9% said yes. Of the respondents who said yes, the majority (76%) were females.

Older was not defined as such it is not clear by how much older the individual was, yet it is highly likely that more females engaged with persons more than 10 years older. Future studies may want to clarify this point to build greater understanding of prevalence and nature of inter-generational sex in schools.

DHS data from Africa over the past six years have shown that a small, but significant proportion of young women are having sex with older men (see Table 7 below). Moreover, in Uganda, 11% of young women ages 15 to 24 reported that their first sex partner was 10 or more years older, according to a 2002 DHS report. Other surveys suggest that the prevalence of cross generational sex may be even higher. A 2003 national survey of young people in South Africa (ages 15–24) found that nearly 33% of the females had a recent sex partner at least five years older (OCR Macro DHS Reports).

Table 7: Recent DHS Surveys on cross-generational sex

<i>Country, Year of DHS Survey</i>	<i>Percentage of sexually active women aged 15–17 with partner at least 10 years older in past year</i>	<i>Percentage of sexually active women aged 18–19 with partner at least 10 years older in past year</i>
Ghana, 2003	1.7	7.9
Nigeria, 2003	21.3	4.2
Malawi, 2004	0.9	2.4
Tanzania, 2004	4.9	7.8
Lesotho, 2004	7.5	7.0
Uganda, 2004–5	9.4	9.9

Source: DHS Reports from ORC Macro.

Regarding if anyone had paid them to have sex, only 9.2% of the students who reported having had sex confirmed and majority were between 15-17 years followed by those between 18-20 years. Males made up most (61.9%) of those who reported being paid for sex but this also reflects the fact that more males reported to have had sex. A relative comparison analysis indicates that more females (18.6%) were paid to have sex than the males (6.5%). Of those who had sex for pay, 44% did not use a condom, 34% used a condom, 19% did not answer and 3% did not know if they used.

On the other hand, when asked if any of their sexual partners forced them to have sex, 16% said yes and majority of these students by relative proportions were also female (35.7%); males were 11.9% although more males reported cases of forced sex as more males reported engaging in sexual intercourse than females. Again the majority of students who reported having been forced to have sex were aged 15-17 years. Most (48%) said the number of times they were forced to have sex was about 2 times with 30% not specifying and 13% reporting about 10 times or more. The study also found that the older the students were, the less they were forced to have sex.

A majority students forced to have sex by relative proportions were female students (35.7%) while males were (11.9%). It is important to note that more males had previously reported engaging in sexual intercourse than females and in as much as they reported forced sex in more numbers (18) than the females (10), the study still revealed that by relative proportions, more females encounter forced sex than the males

Figure 13 besides shows the number and relative proportions of students by sex at the first age of sexual intercourse

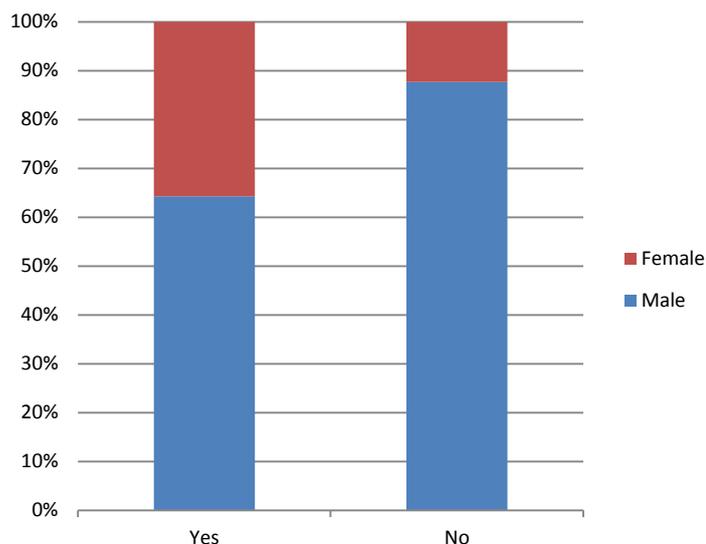


Figure 13: Distribution by relative proportions of students who reported having been forced to have sex

In terms of where students have sex, most (89%) reported at home when no one is there, followed by events like music or drama festival (9%) and in the classroom when no one is there (2%). Both male and female students tended to have sex at home than other places. However, male students tended to have sex in and outside home compared to the females.

3.5.2 Drugs, Substance Abuse and Pornography

The relationship between alcohol use and self control is widely recognized. Several studies have shown a link between alcohol abuse and loss of cognitive/self-control (Eckardt et al., 1995; Zinn et al., 2004). In a WHO (2005) study, it was noted that in Kenya, alcohol use was believed to reduce fears connected to sex and encouraged risky sex, and to provide extra power for sex while, in South Africa, it was noted that alcohol use and sex were a “match made in heaven” that is, they are inseparable.

Alcohol and drug abuse are widely considered to be on the rise in Kenya and one of the major challenges confronting youth today. There is much pressure to drink and use drugs in Kenya, in part because of the great idleness found among out-of-school and unemployed youth. Studies indicate that many in- and out-of-school youth use and abuse alcohol and drugs. Statistics from the National Agency for the Campaign Against Drug Abuse (NACADA) reveal that, in 2009, more than 22% of primary school children and 68% of university students had taken alcohol and youth themselves see this as a very serious problem. According to NACADA the most commonly abused substances are alcohol (including local brews), khat (miraa), chang’aa (illicit liquor), cannabis, glue, heroin, and other injectable or oral drugs.

Drug use while relatively low is an issue among students based on the study results. Secondary school students were asked if they had tried drugs other than those prescribed by a doctor of whom 18.5% said yes while the majority of the students (79.7%) had not. Of the students who had tried drugs, the most common drugs were glue (38%), kuber (37%), miraa (11%), valium (8%), bhang (3%), and mandrax (2%). When asked how often during the last 4 weeks they have had these drugs a majority (42%), reported that they take these drugs at least once a week, 30% said less than once a week while few (28%) said every week. The students were also asked if they had ever tried injecting drugs using a syringe, other than for medical purposes in the last 12 months. Majority (94%) had not while a minority (2%) had tried.

Asked on the main reasons for taking drugs, 60% did not specify, 13% mentioned that it's because friends do it, 7% said it makes them feel better and a further 6% reported that a family member does it.

Concerning whether students had ever tried alcohol, 40% answered to the affirmative, 54% said they had not while 6% did not answer or reported that they did not know. On cigarettes, 74% said they had not tried while 20% had. Others did not answer.

Secondary school students were also asked if they had ever watched pornographic films or read pornographic magazines and majority (71%) confirmed that they had while 26% said they had not. In addition, 29% of them said they had watched or viewed these pornographic materials about 5 times in the past month, 22% about 20 times or more while 10% reported about 10 times. However 31% mentioned "other" to mean that they must have watched or viewed the pornographic materials less than 5 times since they were only provided with the following responses; about 20 times or more, about 10 times, about 5 times and other. When asked where they get these pornographic materials, the principal source was the internet (43%) followed by friends at school (31%), video dens (14%), older men and women (5%), family members (4%) and strip joints (3%). Furthermore, 50% of the students reported that they watch pornographic films at home, at friend's home (28%) and other places (18%). These other places may include at school, outside the school compound, cyber cafes, and mobile phones or in night clubs.



Figure 14: Students undertaking an FGD discussion in a secondary school

3.5.3 Leisure Time Activities

Leisure time is simply understood as free time and there are a number of activities that youth get involved in during their leisure time including include surfing the internet, playing video games, listening to music, gardening, community volunteer work, camping, jogging, exercise clubs, sports (soccer, basketball) and cycling. Both primary and secondary school students were asked questions regarding their leisure time and activities.

The main leisure activities cited by the students were sports (25%), watching television (23.3%), socializing with friends (22%) and reading (17.1%).

Secondary students tended to spend more time watching TV than primary students (31% vs. 23%) and less time reading (9% vs. 17%). However from the analysis, students used their leisure time variedly. There were students who used their time advancing knowledge while others in helping the community. One FGD respondent puts: *For me, I spend my leisure time during holidays helping AIDS infected patients in the home for the sick. I also visit local hospitals and other health facilities to console and pray with the sick.* However, some students reportedly used their leisure time advancing relationships with members of the opposite sex.

Students further explained that boy-girl relationship in schools was the most common risky behavior that would have negative effect on the life of students since it could lead to unwanted pregnancies and HIV.

In terms of whom they spend their leisure time with almost half, (47.7%) of the respondents indicated that they spent their time with members of both sexes, 41.9% with people from the same gender as them, 8.7% with people of the opposite gender while 1.8% did not specify. Primary aged students tended to spend their time with people of the same sex compared with their secondary aged counterparts (54.2% vs 25.4%).

Over a half (52.9%) of all the students said they thought it was easy to start relationships during their leisure time while 39.9% of them thought that it was not easy. More secondary students (73.3%) than primary students (38.2%) indicated it was easy to start a relationship during their leisure time. Asked if boys and girls were in relationships in their schools 75.4% of the secondary students and 68.3% of the primary students said there were. Furthermore 46% of the secondary students and 25% of the primary students indicated that relationships in their schools were very common, and was supported by the FDGs as one discussion participant said: *"In this school, boy-girl relationships are very common"*. However, majority of primary students (35.5%) indicated that relationships in their schools were not very common compared to the secondary students (19.7%).

Secondary students were asked if they had ever formed sexual relationships with people they have met during leisure activities. The majority (66.9%) indicated that they had not; 28.6% reported that they had formed sexual relations during leisure at least once.



Figure 15: Primary school pupils participating in the KAP survey

3.6 SOURCES OF INFORMATION ON HIV & AIDS AND RELATED ISSUES

There are different sources of information about HIV and AIDS. Some of these sources include but not limited to the internet, social media, print media, peers, family members among others. According to a study entitled "HIV and AIDS related knowledge, Sources of Information and Reported Need for Further Education among Dental Students in Sudan"¹⁸, lectures and Radio/TV were the most frequently reported sources of information related to HIV and AIDS. Evidence also suggests that there is an association between multimedia access to HIV/AIDS information and high HIV risk sexual behaviours.

¹⁸ Nasir, E. F., Åstrøm, A.N., Jamil, D. and Rouf, W.A. (2008). *HIV and AIDS related knowledge, sources of information, and reported need for further education among dental students in Sudan - a cross sectional study*. Retrieved November 17, 2012 from <http://www.biomedcentral.com/1471-2458/8/286>.

For example, Bertrand and Rebecca (2006) investigated effectiveness of mass media in changing HIV/AIDS related behaviour among young people in developing countries and reported that multimedia access has positive effects on skills, knowledge about health services and social norms. This study intended to establish the common sources that primary and secondary school students were familiar with in the provision of information on HIV, AIDS and related issues.

Both the primary and secondary students were asked to indicate who they could confide in when they had a private or personal problem. Almost half of students (43.8%) indicated that they could confide in their mother followed by their friends (19.8%), fathers (18.8%), older sister/brother (9.9%) and peers¹⁹ (7.6%). This shows that a larger number of students would confide in their family members (mother, father, brother or sister). This trend was also similar for both primary and secondary students, a strong indication that mothers are good targets to focus interventions related to parent-child interactions on HIV and AIDS and sex issues.

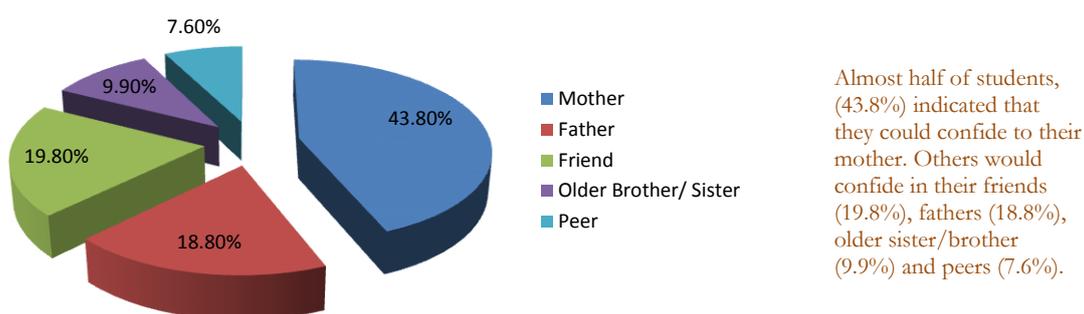


Figure 16: Students' response on who they confide in when they have a private or personal problem

Over a quarter of the students (29.3%) obtained information on HIV and AIDS from various sources including counselors, teachers and peer-educators (depicted in the figure 17 below as other) followed by television (25.4%) and radio (22.6%). From the FGDs, it also emerged internet, social media, print media and books were also key sources information on HIV. Other sources that were pointed out included VCT centre, awareness walks, science subjects, churches and medical facilities. Parents and older siblings were also identified as options for providing information regarding HIV and AIDS as well as alcohol and drugs.

In terms of sources of information on drug and substance abuse, 34% obtained information through the television, slightly more than a quarter (28%) received information from counsellor, teachers and educators and 20% said that the radio was among the key sources of information on drug abuse. In the FGD a good number of students pointed out that they obtained from the television and media in general.

¹⁹ Peers has been used in the context of the study to mean people in the same age bracket or class level that may not necessarily be friends.

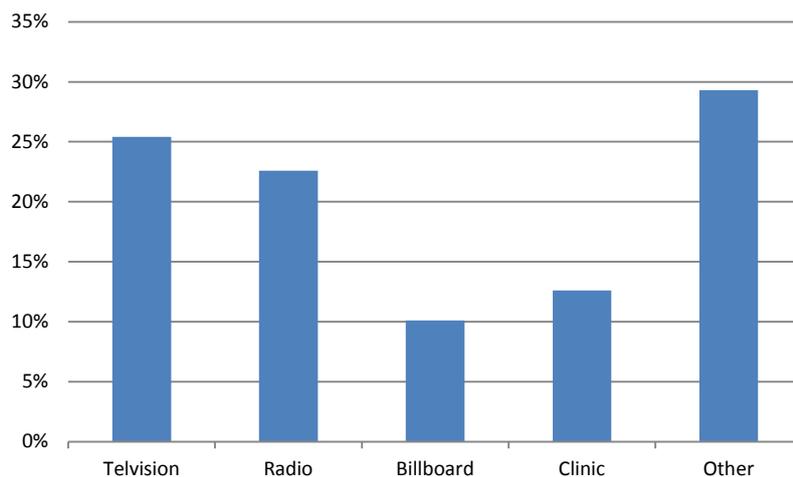


Figure 17: Distribution of the Students on where they heard about HIV and AIDS

With regards to whom the students confided in, most students turned to their family members (mother, father, brother or sister) when they had personal matter. Thus this group would be their main source of guidance. The students also reported that they would seek information from counselors, teachers and peer-educators from the counseling and guidance department in the school fraternity.

4 CONCLUSIONS AND RECOMMENDATIONS

General knowledge on HIV and AIDS and STDs was high and increased with education level; being highest among respondents in secondary schools. However, in-depth knowledge on HIV transmission was very low more so at an individual level. Much as majority of students in primary and secondary schools know some transmission modes and reject some major misconceptions about HIV transmission, the findings point to significant proportions of students' lack of in-depth and comprehensive knowledge about HIV transmission and continued existence of misconceptions on HIV and AIDS. Many students still believe that AIDS can be contracted through shaking of hands, coughing or sneezing or through mosquito bites even after years of positive media about transmission.

Key educational messages on HIV transmission modes need to be designed and tailored more so for the primary age groups to improve their knowledge. Comprehensive education packages and materials on HIV and STI transmission and prevention should also be developed and infused into the life skill curricula both for the primary and secondary age groups respectively. In addition, continuous learner assessment on HIV and AIDS and STI knowledge need to be incorporated into HIV and AIDS programmes/ interventions.

Students still engage in risky behaviors that predisposes them to HIV infection. These include engaging in early sexual practices, unsafe sexual practices (multiple sexual encounters including paid and trans-generational sex without using condoms) and substance abuse. This is in spite of the fact that there have been efforts to enhance knowledge on HIV/STI prevention.

Strengthening implementation of life skills education in schools to incorporate comprehensive age appropriate sexuality education should be prioritized at all levels. Focus should be placed on promotion of delayed sexual debut and abstinence. Appropriate key messaging should also be considered to target both in and out of school youth. Messages should focus on preventing immediate events, such as unintended pregnancy and the STIs, because youth often discount the risk of HIV infection when its consequences are far in the future. Workable strategies should also be put in place to strengthen capacities of teachers, counselors and parents/caregivers to provide age appropriate sexuality education.

If reproductive health and HIV and AIDS programs for the youth are to succeed in reducing levels of sex, unintended pregnancy, STIs, and HIV, greater emphasis should be placed on reducing youth alcohol and drug/substance abuse. Youth programs should work to incorporate drug/substance abuse into HIV prevention programming and develop linkages with stakeholders working in this area. Strengthening linkages to youth friendly sexual and reproductive health services should also be considered.

More than half of the students had not been tested for HIV of which a higher percentage was primary-aged students. Testing coverage needs to increase substantially to reach the national goal of testing 80% of all adolescents and adults (KAIS 2007).

It is recommended that the age of testing without parental consent be reduced from the current 18 years in order to improve VCT uptake among the youth. Furthermore, one of the objectives of the Government of Kenya's 2005-2015 Plan of Action under the Adolescent Reproductive Health Development Policy is to establish and promote adolescent-friendly VCT services in order to improve access to and utilization of sustainable youth-friendly sexual and reproductive health services (NCPD).

Stigmatizing attitudes still exist including beliefs that infected students should not be allowed to attend school and that some students would not live with a family member who has HIV and AIDS. From the survey, less than a third of students answered all the four key attitude questions positively (showing accepting attitudes) to PLWHAs leaving a majority displaying stigmatizing attitude(s) in one or more of the four areas. This points to the need for more targeted, creative attitudinal interventions to reach these youth particularly the primary school children.

Efforts to encourage acceptance of persons with HIV and AIDS should continue, especially in terms of embracing an attitude of openness and disclosure about a relative's HIV status. Social Behavior Change Communication strategies (SBCC) targeting the youth as well as appropriate key messaging on accepting attitudes should be employed. Information, Education and communication (IEC) materials, such as the internet, TV and radio could be used as avenues for reaching out to these youthful populations. Peer to peer interventions should also be encouraged in schools and these may include peer counseling sessions, participatory education theaters, debates and role plays. Introduction and or strengthening of health clubs in schools to help young people understand issues on HIV and AIDS as well as use them as an avenue to provide information on the importance of having an accepting attitudes towards PLWHAs. Focused interventions should target the youth in primary schools especially through the use of participatory techniques to help them better understand not only concepts on HIV but also HIV preventive measures. Policy on stigma and discrimination should also address school setting especially among the school youth besides creating an enabling environment among the students to reduce stigma and discrimination.

While school programs are important, they cannot take the place of parents and as the study shows mothers are key confidants of most children. As such parents and mothers in particular need to be reached through sensitization programs on ways of supporting youth for instance; through open discussions, supporting and engaging them in activities like sports, school work and social duties that keep youth busy and less susceptible to risky behaviors. Fathers should also be empowered in order to support the mothers in encouraging youth to adopt healthy lifestyles. Emphasis should be based on creating a good enabling environment among family members and peers for a healthy lifestyle among the youths to discourage from engaging in sex and pornographic activities, smoking, alcohol drug and substance abuse. Parent-parent sessions and sharing should also be encouraged to help parents critique and build upon practical solutions on effective and workable strategies on the fight against HIV and AIDS at home. At the same time, focus on helping youths to understand the value of making healthier choices, in spite of the environment should be addressed. The HOPE program should emphasize peer efforts and messaging mobilizing and empowering youth to adopt healthy lifestyles.

Participatory approaches that build self-esteem and foster empowerment, especially among girls to speak up on key issues such as sex, condom use and sex with older men should be emphasized. Engagement of boys in HIV prevention efforts should be encouraged. There are a number of effective models in Africa which would be useful for the program to learn from which are detailed in the case studies in this report.

The study has shown that television is a key source of information on HIV and AIDS and drug abuse followed by radio. Positive media especially through television and radio should be used to target the school youth. Key messages should be developed for the TV and radio media in order to reach the students. An example of such intervention includes the "Nimechill" project promotes abstinence among the school going youth. Further, the internet and the social media should be explored as avenues to reach the youth with such messages.

Case study 1:

One other effective intervention modeled and designed by Nike Foundation in collaboration with DfID dubbed the Girl Effect, is currently being implemented in Rwanda through the Girl Hub Rwanda. This intervention aims to empower young and adolescent women in Rwanda on improving their reproductive health, reducing the transmission of HIV and making them independent in making their own informed decisions about sex and reproductive choices. The program has also been designed to fight gender based violence that can lead to forced sex among young girls. This has been achieved through introduction of health clubs, health talks through radio programs, trainings on life skills and HIV prevention and engaging the youth in community based activities. HOPE program should adopt this framework and focus should be emphasized on peer efforts and messaging on empowering the targeted group especially the girls to speak up more and to help them recognize that they have the power to do so, especially on condom use, sex with older men and gender based violence, as well as on boys to complement and also be more proactive on these issues.

Case study 2:

Important lessons can also be learned from two relevant programs: SHAZI! (Shaping the Health of Adolescents in Zimbabwe), and a project of the Institute of Tropical Medicine (ITM) in Nyanza Province, Western Kenya. These two programs have demonstrated that well-developed interventions for young people can reduce a range of risky sexual behaviours, including cross-generational sex. Both combine vocational skills training with a life-skills curriculum focused on HIV and reproductive health education to give participants tools to negotiate the terms of the sexual relationships and decrease unsafe behaviours.

Case study 3:

Programs that have promoted community dialogue show promise in addressing gender power imbalances. One such program is Stepping Stones, a training package on gender, HIV, communications, and relationships, developed from early research in Uganda and now used globally. The Stepping Stones methodology encourages community participation in facilitated focus group discussions where young and older women, and young and older men, have an opportunity to discuss gender and relationship issues together with their peers. The program often uses dramas and role-plays to help people communicate about sensitive subjects. The methodology also provides both a process and skills development for reporting back to the wider community on the concerns and solutions identified in the group discussions.

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APPENDICES

4.1 APPENDIX I: FINDINGS ON THE KEY INDICATORS

Indicator 1: % of never-married young men and women aged 15-24 who have never had sex. Questions on this key indicator were only asked to the secondary school respondents (n=753). Based on the findings 64.5% indicated they had not yet had sex. Of those 49% (238) were in the control group schools while 51% (248) were in the intervention group schools.

Indicator 2: % of young men and women aged 15-24 who have had sexual intercourse before the age of 15. Questions on this key indicator were also asked to the secondary school respondents who reported to have had sex. The finding was 45.2% of those who have had sex (n=228) had intercourse before the age of 15 while 39 (14.6%) respondents did not specify their age at first sexual debut. This represents 13.7% of all the 753 secondary aged respondents. Of those who had sex before the age of 15, 47.6% (49) were in the control group schools while 52.4% (54) were in the intervention group schools.

Based on the results of the above key goal indicators (1 and 2) observed at baseline, there was no statistically significant difference between the intervention group schools and the control group schools, as $p > 0.05$, from the chi square (χ^2) tests in the indicators as shown below.

Table 8: Comparison of control and intervention group schools with regard to indicator 1 & 2

Pearson Chi-Square	P-Value Asymp. Sig. (2-sided)	df
<i>Indicator 1: % of never-married young men and women aged 15-24 who have never had sex.</i>	0.7975	1
<i>Indicator 2: % of young men and women aged 15-24 who have had sexual intercourse before the age of 15.</i>	0.8886	1

Indicator 3: % of young men and women who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission. Both primary and secondary students (n=1791) were asked the following five questions to measure their knowledge regarding HIV transmission.

- 6 Can people reduce their chance of getting the HIV by NOT having sex at all?
- 7 Can you tell that a person is infected with HIV simply by looking at him/her?
- 8 Do you believe that a person who looks healthy can be infected with HIV?
- 9 Do you believe that only homosexuals and prostitutes can have HIV?
- 10 In your opinion, if someone with HIV coughs or sneezes near you, can you get the virus?

Only 26.3% got all the items correct, with 73.7% answering incorrectly one or more of the items as shown in the table below. Of those who got all the knowledge items correct, 50.3% (237) were in the control group schools while 49.7% (234) were in the intervention group schools.

Table 9: Distribution of respondents with regard to Indicator 3

	Frequency	Percent	Cumulative Percent
<i>Correct identification</i>	471	26.3	26.3
<i>Incorrect identification</i>	1320	73.7	100.0
Total	1791	100.0	

Based on the results of the above key goal indicator observed at baseline, there was no statistically significant difference between the intervention group schools and the control group schools, as $p > 0.05$, from the chi square (χ^2) test as shown below.

Table 10: Comparison of control and intervention group schools with regard to indicator 3

Pearson Chi-Square	P-Value Asymp. Sig. (2-sided)	df
<i>Indicator 3: % of young men and women who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission.</i>	0.9480	1

Indicator 4: % of population with accepting attitudes towards PLWHA. To test their attitudes towards people living with HIV and AIDS (PLWHAs), both primary and secondary students were asked the following four questions.

9. *In your opinion, if a student is infected with HIV and AIDS but does not appear sick, should he or she be allowed to attend school?*
10. *If a teacher tested positive for HIV AIDS? And is not sick, should he/she be allowed to teach students?*
11. *Would you live with a family member who has HIV AIDS?*
12. *If a member of your family tested HIV positive, would you want their status to remain secret?*

Only 29.5% answered all the four questions positively (showing accepting attitudes) leaving 70.5% displaying stigmatizing attitude(s) in one or more of the four areas as shown in table 5 below. Of those who had accepting attitudes, 50.9% (269) were in the control group schools while 49.1% (259) were in the intervention group schools.

Table 11: Distribution of respondents with regard to indicator 4

	Frequency	Percent	Cumulative Percent
<i>Accepting attitudes</i>	528	29.5	29.5
<i>Unaccepting attitudes</i>	1263	70.5	100.0
Total	1791	100.0	

Based on the results of the above key goal indicator, there was no statistically significant difference between the intervention group schools and the control group schools, as $p > 0.05$, from the chi square (χ^2) test as shown below.

Table 12: Comparison of control and intervention group schools with regard to indicator 4

Pearson Chi-Square	P-Value Asymp. Sig. (2-sided)	df
<i>Indicator 4: % of population with accepting attitudes towards PLWHA.</i>	0.8055	1

Disclaimer

This KAP Survey Report was made possible through funding provided by the President's Emergency Plan for AIDS Relief through the United States Agency for International Development (USAID) under co-operative agreement No. AID-623-A-12-00009, Healthy Outcomes through Prevention Education (HOPE) Program.

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