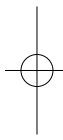
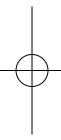
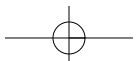


Bulletin 393  
KIT Development Policy & Practice

# HIV-positive adolescents in Kenya

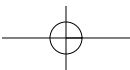
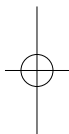
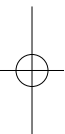
Access to sexual and reproductive health services

Francis Obare, Anke van der Kwaak, Bwibo Adieri, David Owuor,  
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Birungi



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# Acknowledgements

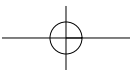
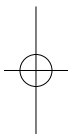
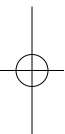
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# Acronyms

AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
ARV	Antiretroviral drugs
FGD	Focus Group Discussion
HIV	Human Immunodeficiency Virus
IUCD	Intrauterine Contraceptive Device
KDHS	Kenya Demographic and Health Survey
KEMRI	Kenya Medical Research Institute
KNBS	Kenya National Bureau of Statistics
KNCST	Kenya National Council of Science and Technology
NACC	National AIDS Control Council
NASCOP	National AIDS and STD Control Programme
NCAPD	National Coordinating Agency for Population and Development
NPHLS	National Public Health Laboratory Services
PMTCT	Prevention of Mother-to-Child Transmission
SRH	Sexual and Reproductive Health
STI	Sexually Transmitted Infection
VCT	Voluntary Counselling and Testing
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNFPA	United Nations Fund for Population Activities
WHO	World Health Organization



# Executive summary

In Kenya, as elsewhere in sub-Saharan Africa, programs to address the sexual and reproductive health (SRH) needs of adolescents aged 10-19 years who are living with HIV are lacking. Moreover, there are no systematic studies that assess the SRH needs of these adolescents in order to inform programming for them. Despite efforts to integrate reproductive health and HIV services, these tend to focus on adults. Moreover, although some HIV/AIDS treatment, care and support programmes have incorporated child counselling into their packages, this falls short of mentioning SRH issues. HIV-positive adolescents receiving services from these centres/ facilities are not empowered with the necessary information to enable them to balance rights and responsibilities, make informed decisions about their lives and contribute to their quality of life in general. Service providers seem not to be interested, motivated or prepared to find out whether these clients are sexually active. Thus, SRH issues are not given due attention, which often leaves sexually active HIV-positive adolescents unable to negotiate contraceptive use or even to access contraceptive methods.

The objective of this study was to assess the sexual and reproductive health needs of adolescents aged 15-19 years who are living with HIV in Kenya, and to identify and develop interventions that integrate these needs into the existing HIV/AIDS treatment, care and support programmes in the country. The study was conducted in Nairobi and Nyanza provinces between September and November 2009 by Plan Kenya, the Royal Tropical Institute- Netherlands, and Plan Netherlands through funding from Plan Netherlands, the Royal Tropical Institute- Netherlands, and the Dutch Ministry of Foreign Affairs. It involved a survey of 606 young people aged 15-19 years who are living with HIV, and four focus group discussions (comprising eight participants each) with HIV-positive adolescents aged 18-19 years.

## Key findings

*Many of the adolescents living with HIV are vulnerable:* Most of the adolescents have lost one or both parents. The majority are out of school largely because of lack of school fees or materials. Most of those who are out of school did not go beyond primary level education. This implies that opportunities for advancing in career are limited for most of them. In addition, HIV-positive female adolescents are even more vulnerable than their male counterparts.

*Limited discussion of sexual and reproductive health matters with parents/ guardians compared to service providers/ counsellors:* Most HIV-positive adolescents talk to service providers/ counsellors more than parents/ guardians about sexual and reproductive health

matters. However, with respect to general issues, they report talking to service providers/ counsellors and parents/ guardians in equal measure.

*Many do not belong to any support group:* Support groups for people living with HIV do provide peer support, life skills training, and psychosocial support. They are also a potential channel for reaching HIV-positive young people with critical sexual and reproductive health information. However, only half of the HIV-positive adolescents reported belonging to such groups.

*Most HIV-positive adolescents are or intend to be involved in sexual relationships:* More than four-fifths have been in a sexual relationship and more than two-thirds of these (i.e. those who have been in a sexual relationship) are still in a relationship. About nine-in-ten of those who have never been in a relationship intend to be involved in relationships in future. In addition, more than four-fifths of those who are not married or living with someone intend to marry.

*Many HIV-positive adolescents desire to have sex, have had sex, or intend to have sex in future:* Nearly two-thirds desire to have sex, and about three-quarters felt that someone living with HIV should have sex. More than four-fifths have had sex, and about two-thirds of those who have had sex had consensual first sex. In addition, about nine-in-ten of those who have never had sex intend to have sex in future.

*Higher knowledge but lower use of contraceptives:* About nine-in-ten of adolescents living with HIV know of a contraceptive method and a similar proportion knows of a place to get a method. However, among those who have ever had sex, only about one-in-ten used a preventive method at first sex, three-in-four have ever used a method, and two-thirds reported current use of a method. Focus group discussions indicate that the low use of contraceptives among young people is partly attributable to the long process of obtaining the methods, especially from health facilities.

*High rates of unintended pregnancies among HIV-positive adolescent girls:* More than two-thirds of sexually active HIV-positive adolescent girls have been pregnant. Of those who have ever been pregnant, more than one-in-four have been pregnant more than once. In addition, three-quarters of all the pregnancies are unintended.

*Many intend to have children in future but do desire to delay childbearing:* About three-quarters of HIV-positive adolescents intend to have children in future. Similarly, about three-quarters of those who intend to have children in future would like to do so later on in life.

*Lower use of PMTCT compared to antenatal care services:* The proportion of pregnancies for which mothers received antenatal care is higher than that for which they received PMTCT services. This implies that whereas the provision of PMTCT services for HIV-positive mothers should be part of antenatal care, there are still gaps in meeting the PMTCT service needs of pregnant HIV-positive adolescent girls.

*Major worries revolve around infecting others, pregnancy, sero-status disclosure and social acceptance:* More than three-quarters are worried about infecting someone with HIV and an almost similar proportion are worried about pregnancy. More than two-thirds are worried about disclosing their sero-status to others while slightly less than two-thirds are worried about being mistreated or rejected by friends.

### **Programmatic implications**

*Strengthen the provision of information and services on family planning and HIV prevention:* HIV/AIDS programmes need to recognize that HIV-positive adolescents engage or desire to engage in sex just like other adolescents. At the same, use of contraceptives is not concomitant with knowledge of the methods. The result is high rate of unintended pregnancies and the potential for further spread of HIV, especially with discordant partners. Moreover, HIV-positive adolescents are mostly worried about pregnancy and infecting others with HIV. HIV/AIDS treatment, care and support centres therefore need to assess the contraceptive and preventive service needs of adolescents living with HIV with a view to strengthening the provision of appropriate information and services to this group of clients. There is also need to ensure that integrated services do not focus on adults alone, but are made available to all in need.

*Ensure effective provision of PMTCT services for HIV-positive adolescents during pregnancy:* Services for prevention of mother-to-child transmission of HIV are an integral component of antenatal care, yet some HIV-positive adolescent mothers received antenatal care but not PMTCT services. HIV/AIDS programmes need to identify HIV-positive adolescent girls who are pregnant and provide support including information on and referral for the full range of antenatal care and PMTCT services.

*Update existing counselling and support packages to include sexual and reproductive health information and services:* Updating the counselling and support packages to include counselling on SRH will equip service providers/ counsellors with a tool to systematically assess the SRH information and service needs of HIV-positive adolescents, and to address such needs in time or make appropriate referral.

*Train/re-orient service providers/ counsellors on the updated packages:* Updating the counselling and support packages alone is not enough without enhancing provider capacity to handle the additional tasks. HIV/AIDS programmes therefore need to follow up any updates of the counselling and support packages with provider training and re-orientation to enable them carry out their work effectively.

*Involve parents/ guardians in discussion of sexual and reproductive health issues:* Whereas HIV-positive adolescents talk to service providers/ counsellors and parents/guardians alike about general issues in life, SRH issues are more likely to be discussed with the former. This implies that HIV/AIDS programmes need to establish mechanisms for involving parents/guardians in discussing SRH issues with HIV-positive adolescents.

*Encourage and strengthen support groups for HIV-positive adolescents:* Although support groups for people living with HIV are a source of peer and psychosocial support, life skills

training, and potential avenues for channelling SRH information, many HIV-positive adolescents do not belong to such groups. Thus, HIV/AIDS programmes in the country need to work with parents/guardians to encourage the formation of support groups for young people living with HIV and to strengthen the already existing ones.

*Strengthen life skills training for HIV-positive adolescents:* Most of the HIV-positive adolescents are vulnerable on account of several factors including their young age coupled with the fact that they are living with a chronic illness, many have lost one or both parents, and the majority are out of school. HIV/AIDS programmes therefore need to strengthen life skills training to enable them make informed choices, and to balance responsibility with sexual and reproductive desires.

*Strengthen school-based programs to support HIV-positive and other vulnerable students:* The fact that many HIV-positive adolescents are out of school could be an indication that the school environment is not supportive to their needs and the needs of other vulnerable children. School-based programs to support HIV-positive students should therefore aim at enhancing the capacity of teachers and school matrons/nurses to respond to their health needs, including nutritional needs; strengthening the school health system (sick-bays) where these exist; as well as putting in place mechanisms for supporting them and other vulnerable children with school fees and materials.

# 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. In Kenya, for instance, HIV prevalence doubles from 4% among adolescent girls aged 15-19 years to 8% among those aged 20-24 years and from 1% to 2% among male adolescents of similar age groups (NAS COP 2008). At the same time, 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 in each age group reported current use of condoms. The corresponding figure for male respondents is 58% in each age group (KNBS et al. 2009). Furthermore, the Joint United Nations Programme on HIV/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). Interventions to alter the transmission of diseases and to prevent pregnancy among adolescents have emphasized delaying sexual debut, reducing the number of sexual partners, and increasing correct and consistent condom use. These interventions have, however, tended to focus on the general population who are assumed to be either HIV-negative or are unaware of their HIV status.

In Kenya, as elsewhere in sub-Saharan Africa, programs to address the sexual and reproductive health (SRH) needs of adolescents aged 10-19 years who are living with HIV are lacking. Although some existing HIV/AIDS treatment centres in the country are now beginning to integrate family planning services, these tend to target HIV-positive adults (Family Health International 2006). Moreover, although some service sites have incorporated child counselling into their treatment, care and support packages, this falls short of mentioning SRH issues, including family planning. HIV-positive adolescents receiving services from these centres/ facilities are not empowered with the necessary information to enable them to balance rights and responsibilities, make informed decisions about their lives and contribute to their quality of life in general. For instance, evidence from Uganda shows that if SRH is discussed during counselling of young HIV-positive clients, it tends to be about delaying sexual initiation (Birungi et al. 2008). Service providers seem not to be interested, motivated or prepared to find out whether these clients are sexually active. Thus, SRH issues are not given due attention, which often leaves sexually active HIV-positive adolescents unable to negotiate contraceptive use or even to access contraceptive methods.

HIV infection has not significantly changed attitudes towards childbearing in many parts of sub-Saharan Africa (Kirumira 1996). In Uganda, for example, a comparison of adolescents who were perinatally infected with HIV and knew their sero-status and adolescents in the general population showed that the two groups of young people do not significantly differ with respect to their childbearing experiences and intentions (Obare and Birungi 2010). The desire to have children is therefore high, and a romantic relationship is commonly not considered legitimate unless it produces a baby. Thus, in this context, adolescents living with HIV may desire and/or succumb to familial/social pressure to have children early so that they do not die without an offspring. In spite of this, existing HIV care and support programs do not seem to address the reproductive aspirations or desires of this segment of the population. This emerging evidence reinforces the need to understand relationships among adolescents living with HIV and their implications not only for HIV prevention but also for contraceptive information and use, especially among those who are or desire to be sexually active. However, there are no systematic studies in Kenya to inform programming in this direction. The implication is that the SRH needs of adolescents living with HIV in the country are largely unknown.

Recent guidelines by the World Health Organization (WHO) and the United Nations Fund for Population Activities (UNFPA) on care, treatment and support for women living with HIV/AIDS and their children in resource-constrained settings have underscored the need to address the particular SRH needs of adolescent girls with HIV (WHO 2006; Birungi et al. 2008). This includes ensuring the availability of age-appropriate information and counselling on sexual and reproductive health, safer sexual practices, and offering family planning counselling and services that are adolescent-friendly. In order to achieve this, HIV/AIDS treatment, care and support programs in Kenya and elsewhere in the Africa region will need to provide HIV-positive adolescents with information and practical support to make decisions about their reproduction, negotiate vital aspects of their lives, and avoid undesired consequences like unwanted pregnancies, infection of others and self re-infection. There is also need to develop integrated counselling strategies that emphasize dual protection and family planning. Providers will need to understand the reasons why adolescents living with HIV may or may not choose to have children and to tailor their counselling to clients' needs, perceptions and circumstances. Effective counselling should also be provided so that adolescents living with HIV can make informed choices and be able to balance responsibility with SRH needs.

# Study goal and objectives

## **Overall goal**

- To reduce unmet need for sexual and reproductive health information and services among HIV-positive adolescents in Kenya by increasing awareness of and access to such information and services.

## **Specific objectives**

- 1 To assess the sexual and reproductive health needs of adolescents aged 15-19 years who are living with HIV in Kenya.
- 2 To identify and develop interventions that integrate these needs into the existing HIV/AIDS treatment, care and support programmes in the country.

# Methodology

The project involved both a quantitative survey and focus group discussions (FGDs) with adolescents aged 15-19 years who are living with HIV, are aware of their sero-status, and have a reflective ability to talk about their inner lives. It was carried out in Nairobi and Nyanza provinces of Kenya between September and November 2009. Respondents were identified and recruited through a total of 23 HIV/AIDS treatment, care and support centres/ facilities in the two provinces. The Nyanza Provincial Medical Officer of Health, the Nairobi Provincial Children's Office, the District Children's Officers (Nairobi), and the Medical Officer of Health- City Council of Nairobi assisted with the identification of the appropriate centres/ facilities from where adolescents satisfying the study criteria receive services or support. The counsellors and community health workers at the centres then identified the eligible adolescents and linked those who were willing to participate in the study with members of the research team. The interview setting was agreed upon between the research team and the informants for confidentiality purposes.

Interviews were conducted by research assistants recruited from the respective study sites (Nyanza and Nairobi). They first obtained written consent from participants before conducting the interviews. For respondents aged 15-17 years, written consent was first obtained from the parent/guardian, then individual assent was obtained from the participant. For respondents aged 18-19 years and those aged 15-17 years who were not living under the control of parents/guardians (i.e. those looking after their siblings, married or looking after their own children), only individual written consent was sought. Out of a total 615 adolescents identified to participate in the survey, interviews were completed with 606. Of those who did not complete the interviews, one refused while the remaining interviews were partially completed because the respondents broke down (3), were still unaware of their sero-status (2), were in denial (2), or due to doubts about their HIV status (1). A structured questionnaire was used to collect information on respondents' background characteristics, access to information and support services, relationships and dating, sexual behaviour and desires, knowledge and use of preventive/contraceptive methods, pregnancy and childbearing experiences and intentions, pregnancy outcomes and use of maternal health services, experiences with physical and sexual violence, as well as issues of self-esteem. The study tools were translated into local languages, that is, *Dholuo* and *Kiswahili* for Nyanza and Nairobi provinces respectively.

Besides the survey, a total of four focus group discussions (FGDs) were held with some of the study participants aged 18-19 years to determine group opinions, perceptions, attitudes around their sexual and reproductive health information and service needs. Two FGDs were conducted per study site (Nyanza and Nairobi), that is, one for female and another



for male participants with each FGD having eight participants. The age group was selected for logistical reasons since including those aged below 18 years required obtaining parental or guardian consent first before they could participate in the FGDs. The number of FGDs conducted was limited by the study budget. Each FGD was conducted by two research assistants-- a facilitator and a note-taker-- in the local languages. An FGD guide was used to direct the discussions.

Ethical clearance for the study was granted by the Research Ethics Committee of the Royal Tropical Institute (KIT) and the Ethics Review Committee of the Kenya Medical Research Institute (KEMRI). In addition, Plan-Kenya reviewed the study protocol to ensure that it conformed to their child protection policies. The project also obtained a research clearance from the National Council of Science and Technology in the Ministry of Higher Education, Science and Technology, Kenya.

The survey data was entered in EPIDATA and analyzed using STATA. The results are presented in the form of frequencies and percentages for female and male respondents. The qualitative data was tape-recorded, transcribed, typed in Word, and analyzed for content.

# Characteristics of survey participants

More than three-in-four (78%) of the respondents were females, which may be a reflection of the fact that in Kenya, as elsewhere in sub-Saharan Africa, women are disproportionately affected by HIV/AIDS compared to men. It could also be that more girls than boys are seeking care. In addition, female respondents were, on average, older than their male counterparts (Table 1). There was, however, no significant difference in the distribution of respondents by study site, that is, between Nairobi and Nyanza provinces (51% versus 49%;  $p=0.62$ ).

Slightly more than two-in-three of the respondents (67%) reported that one or both of their biological parents are dead, and almost a similar proportion (63%) did not live with any biological parent (Table 1). Besides, whereas 93% of the respondents reported having at least one surviving sibling, only 60% of those with surviving siblings reported living with at least one in the household. This suggests that the majority of the respondents are vulnerable, a situation that is compounded by their HIV status. Differences by geographic site show that the proportion of adolescents living with at least one biological parent in Nairobi was similar to that of Nyanza province (36% versus 37%;  $p=0.80$ ). However, the proportion of adolescents who reported that both their parents are dead was significantly higher in Nyanza compared to Nairobi (35% versus 25%;  $p<0.01$ ), perhaps reflecting the higher HIV prevalence in the former compared to the latter region.

The other indication that the majority of the respondents are vulnerable is the low proportion (about one-in-four) that was still attending school by the time of the survey (Table 1). The fact that a significantly higher proportion of female than male respondents were not attending school (81% versus 50%) underscores the fact that adolescent girls living with HIV are even more vulnerable. Differences in the proportion of adolescents still in school by study site are, however, not statistically significant (23% in Nairobi versus 29% in Nyanza;  $p=0.09$ ). The major reason for non-attendance of school was lack of school fees or materials with no significant difference between female and male respondents reporting this problem (Figure 1). However, a significantly higher proportion of male than female respondents had completed the given level of education ( $p<0.01$ ).

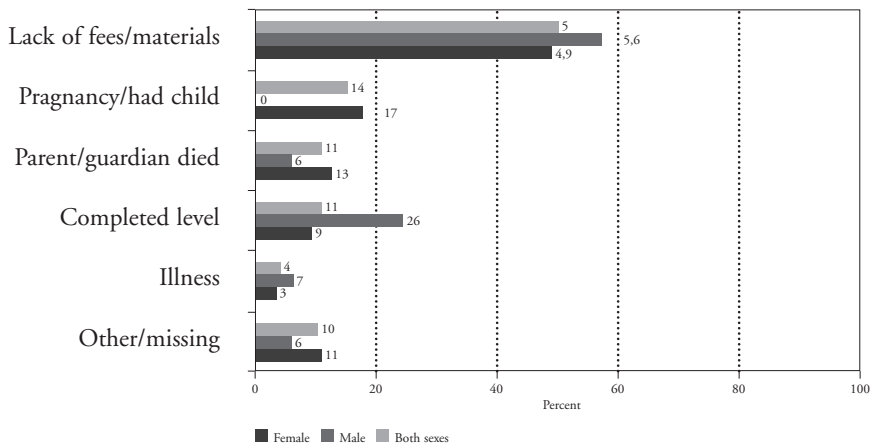
The proportion of adolescents who were out of school because of lack of school fees or materials was significantly higher in Nairobi than in Nyanza (57% versus 42%;  $p<0.01$ ). In contrast, a significantly higher proportion of adolescents in Nyanza compared to those in Nairobi were out of school because of pregnancy or having a child (9% versus 20%;  $p<0.01$ ). Furthermore, slightly more than two-thirds (67%) of adolescents not attending school had attained only primary level education with a significantly higher proportion of female than male respondents having reached that level (71% versus 46%;  $p<0.01$ ).

**Table 1**      **Distribution of survey participants by background characteristics**

<b>Characteristics</b>	<b>Female (N=471)</b>	<b>Male (N=135)</b>	<b>Both sexes (N=606)</b>
Mean age (years)	18	17**	18
Age distribution (%)			
15	9	27**	13
16	9	13	10
17	11	12	11
18	25	20	24
19	46	28**	42
Missing	0	1*	0
Study site (%)			
Nairobi	52	50	51
Nyanza	48	50	49
Parental survival status (%)			
Both parents alive	33	27	31
Both parents dead	30	32	30
Mother dead	11	13	11
Father dead	26	27	26
Don't know if alive	1	2	1
Lives with at least one biological parent (%)			
Yes	35	44	37
No	65	56	63
Has at least one surviving sibling (%)			
Yes	93	94	93
No	7	6	7
Lives with at least one sibling in household (%) <sup>a</sup>			
Yes	59	64	60
No	41	36	40
Currently attending school (%)			
Yes	19	50**	26
No	81	50**	74

*Notes:*      <sup>a</sup>Among those with at least one surviving sibling (441 female and 132 male respondents);  
Differences between male and female respondents are statistically significant at: \* $p < 0.05$ ;  
\*\* $p < 0.01$ .

**Figure 1** Distribution of respondents not currently attending school by the major reason for non-attendance



# Information and support

Respondents were asked whether they found it easy or difficult to talk to a service provider or counsellor about things that are important to them. Slightly more than one-in-ten (12%) reported finding it difficult to talk to a service provider/counsellor with no significant difference between female and male respondents (12% each). They were also asked whether they have ever talked to a service provider or counsellor and parent or guardian about sexual and reproductive health issues such as dating and relationships, sex, contraceptives, pregnancy, and living with HIV. As expected, respondents reported having talked to service providers/counsellors most about living life as a young person with HIV (90%) with no significant difference between female and male respondents (91% versus 87%; Table 2).

**Table 2** Percentage of respondents who ever talked with service providers/ counsellors and parents/guardians about sexual and reproductive health issues

Issue talked about	Service provider/ counsellor (%)			Parent/ guardian (%)		
	Female (N=471)	Male (N=135)	Both (N=606)	Female (N=471)	Male (N=135)	Both (N=606)
Menstruation	73	N/A	N/A	63	N/A	N/A
Dating and relationships	74	64*	72	55	46	53
How pregnancy occurs	79	56**	74	61	36**	55
Method of birth control	82	58**	77	62	43**	58
Having/not having children	76	62**	73	61	46**	58
Sex	83	84	83	53	49	52
Hopes about self	75	79	76	76	79	76
Fears in life	74	77	75	73	73	73
Living life as a young person with HIV	91	87	90	76	82	78
Wet dreams	N/A	38	N/A	N/A	19	N/A
Body size	52	36**	49	38	22**	35
Masturbation	31	27	30	15	12	14

*Notes:* N/A- not asked; Differences between male and female respondents are statistically significant at: \*p<0.05; \*\*p<0.01.

Other issues that respondents mostly talked to service providers/counsellors about were sex (83%), methods of birth control (77%), hopes about self (76%), fears in life (75%), how pregnancy occurs (74%), and having or not having children (73%). A significantly higher proportion of female than male respondents reported having ever talked to service providers/counsellors about dating and relationships, how pregnancy occurs, method of birth control, having or not having children, and issues of body size. In most cases, the proportion of respondents reporting talking to parents or guardians about these issues is lower than that reporting talking to service providers/counsellors (Table 2). Again, differences between female and male respondents regarding talking to parents/guardians about these issues are similar to those observed for the service providers/counsellors.

Adolescents living with HIV also need psychosocial support from the society and fellow HIV-positive young people. One way by which they can obtain such support is by belonging to support groups for HIV-positive persons. However, only half (50%) of the respondents reported belonging to such groups with no significant differences between female and male respondents (52% versus 43%;  $p=0.06$ ) or between study sites (50% in each site). Three-quarters (75%) of those who were members of support groups never felt being discriminated against because of their belonging to such groups, perhaps reflecting the fact that the groups mostly comprise those who have accepted their HIV sero-status (Table 3). Still, about two-in-five (41%) of the respondents felt some form of discrimination because of their HIV status. Although the difference between female and male respondents is not statistically significant, the proportion of respondents that felt some form of discrimination because of their HIV status was significantly higher in Nairobi than in Nyanza (45% versus 35%;  $p<0.05$ ).

**Table 3** Distribution of respondents by frequency of feelings of discrimination

Reason and frequency of feelings	Female (%)	Male (%)	Both sexes (%)
Belonging to a support group for HIV-positive <sup>a</sup>	(N=246)	(N=58)	(N=304)
Often	5	0	4
Sometimes	13	9	12
Rarely	10	5	9
Never	72	86*	75
Receiving services at HIV/AIDS centre	(N=471)	(N=135)	(N=606)
Often	8	4	7
Sometimes	14	20	16
Rarely	12	10	12
Never	65	66	66
Being HIV-positive	(N=471)	(N=135)	(N=606)
Often	9	4	7
Sometimes	20	22	21
Rarely	13	12	13
Never	58	63	59

*Notes:* <sup>a</sup>Among those who belong to a support group; Differences between male and female respondents are statistically significant at: \* $p<0.05$ ; \*\* $p<0.01$ .

# Dating and relationships

Adolescents living with HIV aspire to lead normal lives just like other adolescents, which includes engaging in dating and sexual relationships. For instance, slightly more than four-in-five (87%) of the respondents reported ever having had a boyfriend or girlfriend (Table 4). Interestingly, a significantly higher proportion of female than male respondents reported having been in a relationship (89% versus 78%). In addition, the proportion of adolescents reporting having been in a sexual relationship was significantly higher in Nairobi than in Nyanza (93% versus 80%;  $p < 0.01$ ).

**Table 4** Distribution of respondents by experiences with relationships and dating

Relationships and dating indicators	Female (%)	Male (%)	Both sexes (%)
Ever had a boy/girlfriend <sup>a</sup>	89	78**	87
Currently in a relationship <sup>b</sup>	67	70	67
Relative age of current partner	(N=282)	(N=73)	(N=355)
Younger	3	36**	10
Same age	18	52**	25
Older	68	10**	56
Much older	11	1**	9
Don't know	0	1	0
Seriousness of relationship	(N=282)	(N=73)	(N=355)
Not serious	21	27	22
Serious but no intention to marry	25	37*	28
Serious/might lead to marriage/married	53	36**	50
Missing	1	0	1
Ever engaged in	(N=471)	(N=135)	(N=606)
Kissing	77	63**	74
Touching	81	76	80
Fondling	76	69	74
Masturbation	34	28	33
Hugging	84	79	83
Fantasizing about sex	76	72	75
With current partner	(N=282)	(N=73)	(N=355)
Kiss on lips	67	65	67
Hold hands	87	95	89
Hug	89	91	89
Touch private parts	63	51	60

*Notes:* <sup>a</sup>Among all respondents (471 female and 135 male respondents); <sup>b</sup>Among those who have ever had boyfriends/girlfriends (422 female and 105 male respondents); Differences between male and female respondents are statistically significant at: \* $p < 0.05$ ; \*\* $p < 0.01$ .

Among respondents who have ever been in a sexual relationship, about two-in-three (67%) were still in a relationship at the time of the survey (Table 4). A significantly higher proportion of those in Nairobi than in Nyanza reported being in a sexual relationship at the time of the survey (71% versus 62%;  $p < 0.05$ ). In addition, a significantly higher proportion of female than male respondents considered such relationships serious enough to lead to marriage or they were already married. In contrast, a significantly higher proportion of male than female respondents considered the relationships serious but with no intention to marry. Similarly, whereas a significantly higher proportion of female than male respondents reported that their current partners were generally older than them, a significantly higher proportion of male than female respondents reported that their current partners were younger than or of the same age as them (Table 4).

The majority of the respondents reported having engaged in kissing, touching, fondling, hugging, and fantasizing about sex (Table 4). Except for kissing, there is no significant difference in the proportions of female and male respondents that have ever engaged in these expressions of sexuality. However, a significantly higher proportion of respondents in Nairobi than in Nyanza reported having engaged in kissing (80% versus 67%;  $p < 0.01$ ), fondling (79% versus 69%;  $p < 0.01$ ), masturbation (37% versus 28%;  $p < 0.05$ ), and hugging (86% versus 80%;  $p < 0.05$ ). Moreover, most of those who were in relationships at the time of the survey reported engaging in kissing on the lips, holding hands, hugging, and touching private parts with their partners, again with no significant difference between female and male respondents.

Among respondents who have never been in a sexual relationship, 89% reported that they would want to be in such relationships in future (84% of the female versus 97% of the male respondents;  $p = 0.08$ ). Similarly, among those who were not married or living with anyone, almost a similar proportion (87%) indicated that they intend to marry in future with no significant difference between female and male respondents (86% versus 90%;  $p = 0.23$ ). There is no significant difference by study site in the proportions of respondents reporting that they would want to be in a relationship (86% in Nairobi versus 89% in Nyanza;  $p = 0.71$ ) or that they intend to marry in future (87% in Nairobi versus 86% in Nyanza;  $p = 0.74$ ).

Respondents were further asked what their choice of partner would be if they are to be involved in relationships. Half of them (50%) preferred an HIV-positive partner (52% and 43% of the female and male respondents respectively;  $p = 0.07$ ). Another 21% preferred someone who is HIV-negative while 25% preferred anybody. A significantly higher proportion of male than female respondents reported preference for an HIV-negative person (30% versus 18%;  $p < 0.01$ ) while a significantly higher proportion of female than male respondents reported preference for anybody (27% versus 18%;  $p < 0.05$ ). With respect to study site, a significantly higher proportion of respondents in Nyanza compared to those in Nairobi preferred someone who is HIV-positive (57% versus 43%;  $p < 0.01$ ). In contrast, a significantly higher proportion respondents in Nairobi than those in Nyanza reported preference for someone who is HIV-negative (27% versus 14%;  $p < 0.01$ ).



# Sexual desires and behaviour

All respondents were asked whether they ever desire to have sex; slightly more than three-in-five (61%) reported that they do, with no significant difference between female and male respondents (Table 5) or between study sites (59% in Nairobi and 63% in Nyanza;  $p=0.31$ ). Three-in-five (60%) of those who ever desire to have sex reported thinking about it sometimes or most of the time.

**Table 5** Distribution of respondents by sexual desires and behaviour

Sexual desires and behaviour indicators	Female	Male	Both sexes
Ever desires to have sex (%) <sup>a</sup>	61	62	61
Frequency of thinking about sex (%)	(N=285)	(N=84)	(N=369)
Most of the time	10	10	10
Sometimes	49	55	50
Rarely	40	36	39
Never	1	0	1
Ever had sex (%) <sup>a</sup>	88	73**	84
Mean and median age at first sex (years)	(N=401)	(N=96)	(N=497)
Mean	15	13**	14
Median	15	14	15
Circumstances of first sex (%)	(N=413)	(N=98)	(N=511)
Forced/raped	12	1**	10
Tricked	22	5**	19
Persuaded with money	10	3*	9
Both willing/wanted to have sex	56	91**	63
Relationship to first sexual partner (%)	(N=413)	(N=98)	(N=511)
Husband/wife	2	0	2
Steady boy/girlfriend	60	47*	58
Friend/acquaintance	26	42**	29
Stranger	8	4	7
Relative	1	5**	2
Other	2	1	1
Missing	1	1	1
Relative age of first sexual partner (%)	(N=363)	(N=97)	(N=460)
Younger	2	27**	7
Same age	32	51**	36
Older	61	20**	52
Much older	4	3	4

*Notes:* <sup>a</sup>Among all respondents (471 female and 135 male respondents); Differences between male and female respondents are statistically significant at: \* $p<0.05$ ; \*\* $p<0.01$ .

More than two-thirds (71%) of the respondents felt that someone living with HIV should have sexual intercourse. Interestingly, a significantly higher proportion of female than male respondents felt this way (74% versus 61%;  $p < 0.01$ ). In addition, a significantly higher proportion of respondents in Nyanza than those in Nairobi expressed this feeling (77% versus 64%;  $p < 0.01$ ). The view about having sexual intercourse is supported by the following excerpts from the focus group discussions:

*[Hypothetical HIV-positive boy] can't abstain forever, he has sexual feelings too so it is normal for him to think about girls, not unless he masturbates alone* (Male FGD participant, Nairobi).

*[Hypothetical HIV-positive girl] thinks about sex, she is a teenager and her 'blood is boiling.' Sex is like a body massage* (Female FGD participant, Nairobi).

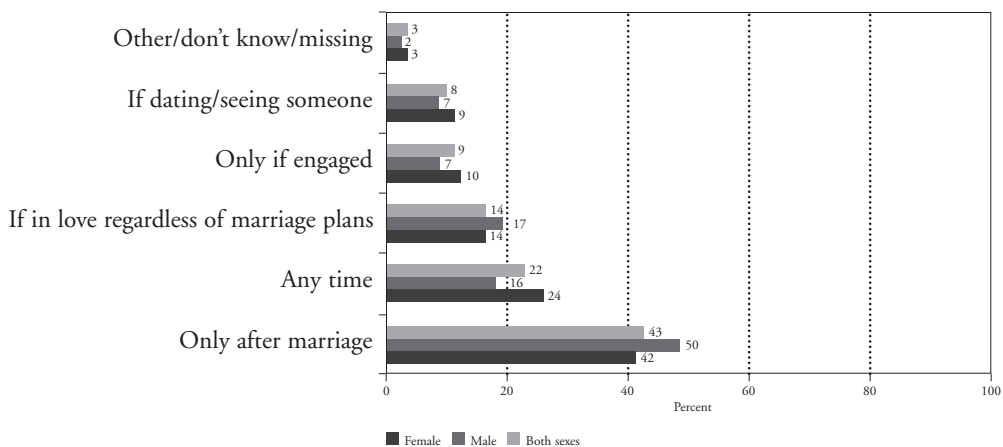
*To me, it [HIV-positive person having sex] is important* (Male FGD participant, Nyanza).

Most of the survey respondents, however, felt that someone living with HIV should start having sex only after marriage with no significant difference between female and male participants (Figure 2). Nearly one-in-four (22%) of the respondents felt that someone living with HIV should start having sex any time (24% of female and 16% of male respondents;  $p = 0.12$ ). The following excerpts from focus group discussions reflect these varied opinions about having sex for those living with HIV:

*She [hypothetical HIV-positive girl] can just pray that she finds somebody to share about her status and marry* (Female FGD participant, Nyanza).

*My opinion is that it will be a nice thing to go out with a girl while still in primary school and then have sex for the first time with her after class eight* (Male FGD participant, Nairobi)

**Figure 2 Distribution of respondents by perceived appropriate time for an HIV-positive boy or girl to start having sex**



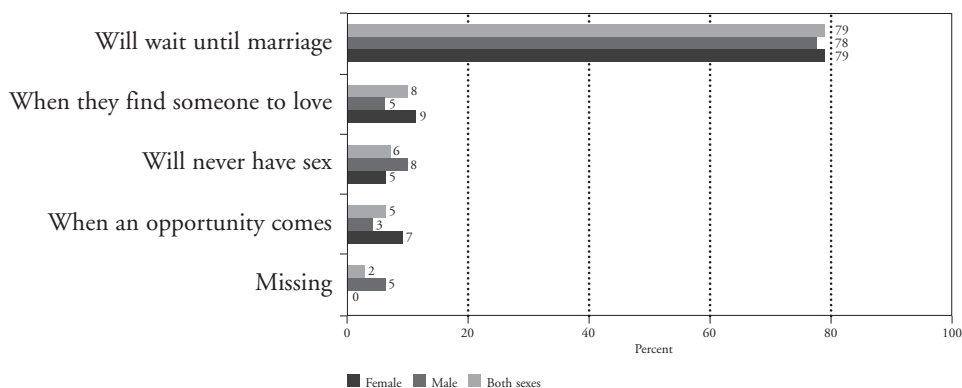
More than four-in-five (84%) of the respondents had ever had sex, and contrary to sexual behaviour literature where more boys/men than girls/women report sexual encounters, a significantly higher proportion of female than male respondents reported having had sex (Table 5). The proportion of respondents who had ever had sex is also significantly higher in Nairobi than in Nyanza (90% versus 78%;  $p < 0.01$ ). Similarly, the mean age at first sex is significantly higher among female than among male respondents ( $p < 0.01$ ) and in Nyanza compared to Nairobi (15 versus 14 years;  $p < 0.01$ ).

Nearly two-thirds (63%) of respondents who had ever had sex reported consensual first sex, that is, both were willing or wanted to have sex. Nonetheless, a significantly higher proportion of male than female respondents reported consensual first sex while a significantly higher proportion of female than male respondents reported that the first sex was a result of being forced/raped, tricked, or being persuaded with money (Table 5). The proportion of respondents reporting consensual first sex is also significantly higher in Nyanza than in Nairobi (72% versus 56%;  $p < 0.01$ ).

For more than half (58%) of the respondents that had ever had sex, the first sexual encounter was with a steady boyfriend or girlfriend (Table 5). A significantly higher proportion of female than male respondents reported that the first sexual partner was a steady boy/girlfriend while a significantly higher proportion of male than female respondents reported that the first sexual partner was just a friend or an acquaintance. Furthermore, a significantly higher proportion of female than male respondents reported that the first sexual partner was older or much older while a significantly higher proportion of male than female respondents reported that the first sexual partner was younger or of the same age.

Among respondents who had never had sex, 92% reported that they intend to have sex in future. Although not statistically significant, the proportion of respondents who reported intention to have sex in future is higher among female than male participants (95% versus 86%;  $p = 0.11$ ) and in Nairobi than Nyanza (93% versus 90%;  $p = 0.63$ ). However, more than three-in-four (79%) of respondents who had never sex reported that they intend to wait until marriage before having sex with no significant difference between female and male respondents (Figure 3).

**Figure 3** Distribution of respondents who have never had sex by intentions of having sex in future



# HIV sero-status disclosure

Disclosure of one's sero-status to the partner can be a relevant HIV prevention strategy since it may encourage the adoption of protective measures. Nearly three-in-four (74%) of the respondents who were in a relationship at the time of the survey had talked to their partners about their own HIV status (Table 6). A lower proportion (63%) knew the HIV status of their partners. A significantly higher proportion of female than male respondents had talked to their partners about their own HIV status and knew the HIV status of the partner. Of those who knew the HIV status of the partner, more than one-in-five (21%) were in discordant relationships (HIV-negative partner). A significantly higher proportion of male than female respondents reported being in discordant relationships. Differences by study site with respect to talking to the partner about own HIV status (72% in Nairobi versus 75% in Nyanza), knowing the HIV status of the partner (65% in Nairobi versus 61% in Nyanza), and being in discordant relationships (24% in Nairobi and 17% in Nyanza) are not statistically significant.

Apart from disclosing their HIV status to the partner, all respondents were asked who they had talked to about their sero-status. As expected, most (86%) had talked to the service provider/ counsellor followed by family members or close relatives and friends (Table 6). There is no significant difference between female and male respondents with respect to talking to these persons about their HIV status. However, the proportion of adolescents reporting talking to religious leaders and friends is significantly higher in Nairobi than in Nyanza (21% versus 14% for religious leaders;  $p < 0.05$  and 62% versus 39% for friends;  $p < 0.01$ ) while the proportion reporting talking to family members/close relatives is significantly higher in Nyanza than in Nairobi (88% versus 80%;  $p < 0.01$ ).

Despite the substantial proportion of respondents reporting having talked to their partners and parents/guardians about their HIV status, focus group discussions reveal the kind of challenges young people living with HIV face regarding disclosing the sero-status as exemplified by the following extracts:

*Disclosure [is what mostly worries HIV-positive young people] mostly to parents and relatives. Some parents will worry so much while others are harsh and will go telling everybody about your status (Female FGD participant, Nairobi).*

*For an HIV+ person, it is very difficult to disclose one's status especially to an HIV- girl whom you like while it may take time to find HIV+ girl whom you like. I see this as a challenge (Male FGD participant, Nairobi).*

*He [hypothetical HIV-positive boy] will feel that if he shares his secret that the person might spread the information about him* (Male FGD participant, Nyanza).

*It is hard for us to talk about our HIV status because the girl might go on telling every one and it won't be a secret any more* (Male FGD participant, Nairobi).

**Table 6** Distribution of respondents by HIV sero-status disclosure

Disclosure indicators	Female (%)	Male (%)	Both sexes (%)
Ever talked with partner about own status <sup>a</sup>	76	63*	74
Knows HIV status of partner <sup>a</sup>	66	52*	63
Partner's HIV status	(N=187)	(N=38)	(N=225)
HIV-positive	82	53**	77
HIV-negative	16	45**	21
No answer/missing	2	3	2
Other persons talked to about status <sup>b</sup>	(N=471)	(N=135)	(N=606)
Service provider/counsellor	85	87	86
Teacher	11	20**	13
Religious leader	18	16	18
Family member/close relative	85	79	84
Friends	50	53	50
Neighbours	16	10	15
Other	5	2	4

*Notes:* <sup>a</sup>Among those currently in relationships (282 female and 73 male respondents); <sup>b</sup>Questions allowed for multiple responses, percentages do not therefore sum to 100; Differences between male and female respondents are statistically significant at: \* $p < 0.05$ ; \*\* $p < 0.01$ .

# Knowledge of preventive and contraceptive methods

Respondents were asked about ways in which someone can get infected with HIV. Having unprotected sex with an infected person was the most mentioned way, followed by use of contaminated non-sterilized instruments, blood transfusion and accidents, mother-to-child through pregnancy, delivery and breastfeeding, and kissing of an infected person (Table 7). In nearly all the cases, there is no significant difference between female and male respondents except for kissing an infected person which was reported by a significantly higher proportion of male than female respondents.

Use of condoms was the most commonly cited way of avoiding re-infection with another strain of HIV followed by abstinence and taking/adhering to antiretroviral drugs (ARVs). Whereas a significantly higher proportion of female than male respondents mentioned the use of condoms, a significantly higher proportion of male than female respondents mentioned abstinence (Table 7). Consistent with findings from previous studies including KDHS, knowledge of contraceptive methods is high (91%). A significantly higher proportion of female than male respondents reported knowing a contraceptive method (Table 7); there is no significant difference in the proportion of adolescents who knew a contraceptive method by study site (90% in Nairobi versus 93% in Nyanza;  $p=0.19$ ).

The most commonly known methods are condoms, pills and injectables (Table 7). A significantly higher proportion of female than male respondents reported knowledge of the pills and injectables while a significantly higher proportion of male than female respondents reported knowledge of condoms. Among those who knew a method, 93% reported knowing a place where the methods can be obtained with no significant difference between female and male respondents.

**Table 7** Distribution of respondents by knowledge and awareness of preventive/contraceptive methods

Knowledge/awareness indicators	Female (%)	Male (%)	Both sexes (%)
Ways of getting infected with HIV <sup>a</sup>	(N=471)	(N=135)	(N=606)
Unprotected sex with infected person	94	93	94
Using non-sterilized instruments	76	79	76
Blood transfusion/accidents	51	53	52
Mother-to-child	39	36	39
Kissing an infected person	8	16**	10
Sharing sharp objects	4	3	4
Other	3	2	3
Don't know	1	2	1
Ways of preventing re-infection <sup>a</sup>	(N=471)	(N=135)	(N=606)
Abstinence	47	61**	50
Using condoms	82	70**	79
Not sharing sharp instruments	22	28	23
Taking/adhering to ARVs	9	10	9
Being faithful to one partner	6	5	6
Other	8	10	8
Don't know	2	2	2
Knows any contraceptive methods	93	86*	91
Methods known <sup>a</sup>	(N=438)	(N=116)	(N=554)
Pill	69	51**	65
Injectables	68	34**	61
Condoms	70	88**	74
IUCD/coil	19	8**	17
Norplant/implants	20	4**	17
Emergency pill	7	6	7
Withdrawal	3	4	3
Abstinence	13	33**	17
Rhythm	9	9	9
Other	7	3	6
Knows any source of contraceptives <sup>b</sup>	93	94	93

Notes: <sup>a</sup>Questions allowed for multiple responses, percentages do not therefore sum to 100; <sup>b</sup>Among those who reported knowing a contraceptive method (438 female and 116 male respondents); IUCD- intrauterine contraceptive device; ARVs- antiretroviral drugs; Differences between male and female respondents are statistically significant at: \*p<0.05; \*\*p<0.01.

# Use and sources of contraceptive methods

Although knowledge of contraceptives is high, actual use is lower than the level of knowledge. For instance, among those who had consensual first sex, only 14% used a preventive method at first sex with no significant difference between female and male respondents (Table 8) or between study sites (12% in Nairobi versus 17% in Nyanza;  $p=0.13$ ). Among those who had ever had sex, 72% had ever used a contraceptive method while 66% reported currently using a method. There is no significant difference between female and male respondents with respect to ever or current use of contraceptives although there are significant differences with respect to current use of certain methods. In addition, there is no significant difference in ever use of a method by study site (71% in Nairobi versus 74% in Nyanza) although a significantly higher proportion of those in Nairobi compared to those in Nyanza reported current use of a method (70% versus 60%;  $p<0.05$ ).

Nearly three-in-four (74%) of those currently using a contraceptive method reported always using the methods (Figure 4). Although a higher proportion of female than male respondents reported always using a method, the difference is not statistically significant. However, a significantly higher proportion of male than female respondents reported rarely using a method (15% versus 7%;  $p<0.05$ ).

Among current users of contraceptives, condoms are the most common methods; more than four-in-five (86%) reported using condoms (Table 8). The most commonly cited reason for using condoms is to prevent pregnancy (Figure 5). There is no significant difference between female and male respondents with respect to using condoms for pregnancy prevention. However, a significantly higher proportion of female than male respondents reported using condoms to prevent being re-infected with another strain of HIV. In contrast, a significantly higher proportion of male than female respondents reported using condoms to prevent HIV/STIs and for dual protection (prevention of pregnancy and HIV/STIs).

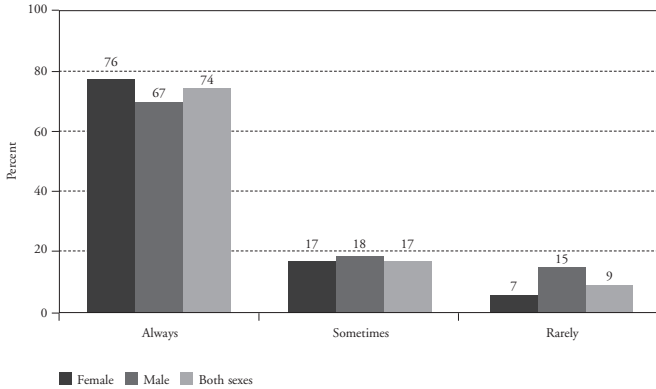


**Table 8** Distribution of respondents by use and source of contraceptive methods

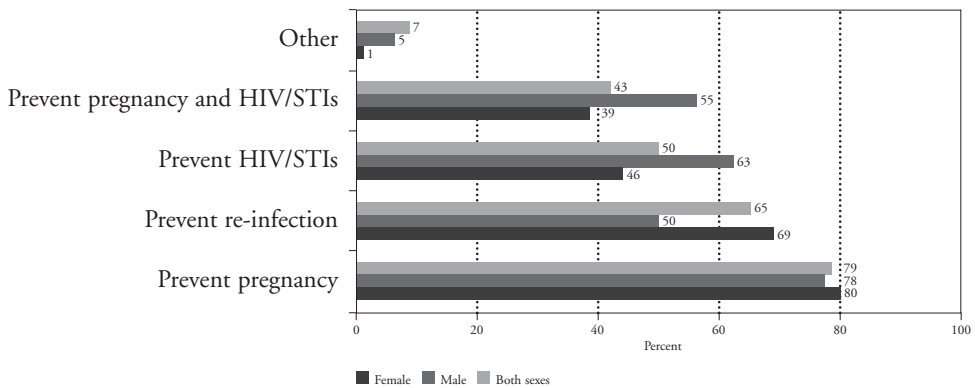
Use and source of method	Female (%)	Male (%)	Both sexes (%)
Used a preventive method at first sex <sup>a</sup>	15	12	14
Ever used a contraceptive method <sup>b</sup>	72	70	72
Currently using a method <sup>b</sup>	65	68	66
Methods currently using with partner <sup>c</sup>	(N=269)	(N=67)	(N=336)
Condom	84	96*	86
Pill	6	3	6
Injectables	28	2**	23
IUCD	2	0	2
Implants	2	2	2
Emergency pill	2	0	2
Foam/jelly	1	0	1
Withdrawal	2	0	1
Other	6	5	5
Source of method <sup>c</sup>	(N=269)	(N=67)	(N=336)
Shop	30	42	32
Pharmacy	15	24	16
HIV/AIDS/VCT centre	48	54	49
Other health facility	39	25*	36
Friends	3	6	4
Other	5	15	7
Preferred source of contraceptives <sup>c</sup>	(N=471)	(N=135)	(N=606)
HIV/AIDS/VCT centre	40	33	38
Family planning clinic	22	16	21
Any health facility	13	14	13
Youth clinic/ centre	11	10	11
Pharmacy	8	9	8
Other	2	12**	5
No answer/missing	4	7	5

*Notes:* <sup>a</sup>Among those whose first sexual experience was not forced/rape (363 female and 97 male respondents); <sup>b</sup>Among those who have ever had sex (413 female and 98 male respondents); <sup>c</sup>Questions allowed for multiple responses, percentages do not therefore sum to 100; IUCD- intrauterine contraceptive device; Reported use of pills, injectables and implants by male respondents refers to their partners' use; Differences between male and female respondents are statistically significant at: \* $p < 0.05$ ; \*\* $p < 0.01$ .

**Figure 4** Distribution of respondents who are currently using contraceptives by the frequency of use



**Figure 5** Distribution of respondents currently using a condom by the reasons for use



*Notes:* Question allowed for multiple responses; percentages do not therefore sum to 100; STIs- sexually transmitted infections.

The most common sources of methods for current users of contraceptives are the HIV/AIDS and voluntary counselling and testing (VCT) centres (49%), other health facilities (36%), and shops (32%; Table 8); condoms are the method mostly available from the HIV/AIDS/VCT centres. Similarly, among all respondents, the most preferred source of contraceptives if they were to use them is the HIV/AIDS/VCT centres (38%) followed by family planning clinics (21%; Table 8). The excerpts below from qualitative interviews highlight the challenges and expectations of young people living with HIV regarding the sources of sexual and reproductive health information and services:

*The process is too long and young people don't want to go through it. In hospital there are many questions a young person does not want to answer. Many people like shortcuts like going to buy pills from a chemist* (Female FGD participant, Nairobi).

*I think the health providers should be youth just like us; they have gone through the same challenges as we so they will understand us better* (Male FGD participant, Nairobi).

*It [source of reproductive health information and service] should be near a school, where your parents can't see you go and be opened until Sunday* (Female FGD participant, Nairobi).

*They should not only put the condoms in various centres but also in private places where those who are shy can pick them* (Male FGD participant, Nyanza).

*The services should be offered through existing HIV/AIDS treatment, care and support centre for accessibility of HIV information to all youth who visit the centre* (Male FGD participant, Nairobi).

# Pregnancy and childbearing experiences and intentions

More than two-thirds (68%) of female respondents who had ever had sex have been pregnant while slightly more than one-in-four (27%) of male respondents who had ever had sex have made someone pregnant (Table 9). The proportion of respondents who have ever been pregnant or impregnated someone is significantly higher in Nyanza than in Nairobi (65% versus 56%;  $p < 0.05$ ). Of those who have ever been pregnant or made someone pregnant, more than one-in-four (27%) of the female respondents and nearly one-in-three (31%) of the male respondents had done so more than once. Nearly one-in-five (19%) of the female respondents who have been pregnant and about one-in-three (31%) of the male respondents who have made someone pregnant reported no living child.

All respondents were further asked about their intention of having children in future. More than three-in-four (76%) intend to have children in future. A significantly higher proportion of male than female respondents reported such intention (Table 9). There is, however, no significant difference in the proportion of respondents who intend to have children in future by study site (78% in Nairobi versus 75% in Nyanza;  $p = 0.38$ ). Among those who intend to have children in future, nearly three-in-four (73%) intend to have children later on in life (74% of female and 71% of male respondents;  $p = 0.52$ ). A significantly higher proportion of respondents in Nyanza compared to those in Nairobi intend to have children later on in life (84% versus 63%;  $p < 0.01$ ) while a significantly higher proportion of respondents in Nairobi than those in Nyanza were undecided regarding the timing of future child birth (28% in Nairobi versus 11% in Nyanza;  $p < 0.01$ ). On average, male respondents intended to have more children than their female counterparts while respondents in Nyanza intended to have more children than those in Nairobi (3 versus 2 children in each case;  $p < 0.01$ ).

**Table 9** Distribution of respondents by pregnancy and childbearing experiences and intentions

Pregnancy and childbearing indicators	Female (%)	Male (%)	Both sexes (%)
Ever been pregnant/impregnated someone (%) <sup>a</sup>	68	27**	60
Number of times pregnant/impregnated someone (%)	(N=281)	(N=26)	(N=307)
1	73	69	73
2	22	19	22
3	4	8	4
4	1	4	1
Number of living children (%)	(N=281)	(N=26)	(N=307)
0	19	31	20
1	66	58	62
2	13	12	13
3	3	0	2
Intends to have children in future (%)	(N=471)	(N=135)	(N=606)
Yes	73	90**	76
No	25	7**	21
Not sure/don't know	2	2	2
No answer/missing	1	2	1
Intended timing of future childbirth (%)	(N=342)	(N=121)	(N=463)
Very soon	7	5	7
Later on in life	74	71	73
Not decided	19	24	20
Mean and median number of intended children	(N=337)	(N=118)	(N=455)
Mean	2	3**	3
Median	2	3	2

*Notes:* <sup>a</sup>Among respondents who have ever had sex (413 female and 98 male respondents); Differences between male and female respondents are statistically significant at: \* $p < 0.05$ ; \*\* $p < 0.01$ .

# Pregnancy outcomes and use of health services

A total of 369 pregnancies were reported by 281 female respondents who had ever been pregnant. Of these pregnancies, three-in-four (75%) were unintended (Table 10). Although the proportion of unintended pregnancies was higher in Nairobi than in Nyanza province, the difference is not statistically significant. Boyfriends were responsible for nearly two-in-three (65%) while husbands were responsible for nearly one-in-four (23%) of the pregnancies. In addition, husbands were responsible for a significantly higher proportion of pregnancies in Nyanza than in Nairobi province.

Antenatal care services were received for more than four-in-five (87%) of the pregnancies, which is consistent with the high utilization of antenatal care services in Kenya. Mothers made an average of four antenatal care visits. However, the proportion of pregnancies for which the adolescent mothers received services for prevention of mother-to-child transmission (PMTCT) of HIV is lower than the proportion of pregnancies for which antenatal care services were received (Table 10).

Most of the pregnancies (86%) resulted in a live birth while respondents were still pregnant in 5% of the cases (Figure 6). Of the pregnancies that had ended, nearly three-in-four (74%) were delivered at a health facility and mothers received assistance from a doctor or a nurse for a similar proportion of pregnancies. Nonetheless, whereas adolescent mothers received post-natal care services for more than four-fifths (86%) of the pregnancies that had ended, the use of family planning methods after delivery was low (66%).

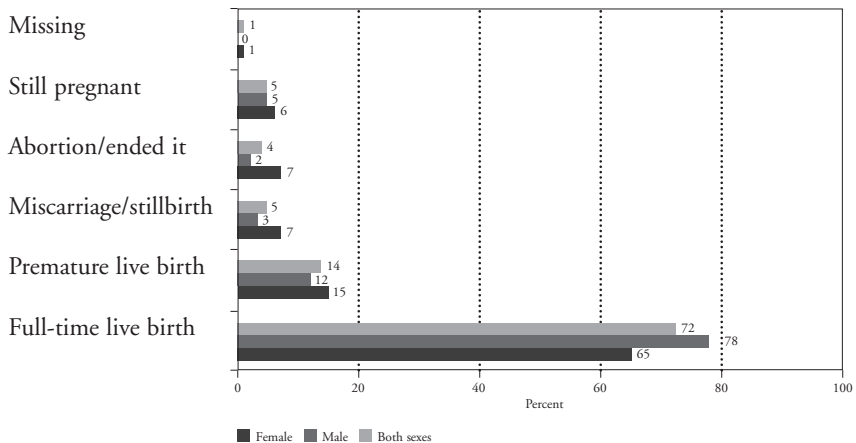
Of pregnancies that resulted in live births, 87% of the infants were tested for HIV and in nearly all cases where the infant was tested, the mothers were willing to share the test results. Nearly four-in-five (79%) of the infants that were tested were HIV-negative. Besides, slightly more than nine-in-ten (91%) of the infants that were born alive were still surviving by the time of the survey.

**Table 10** Distribution of pregnancies by outcomes and use of maternal and child health services according to study site

Indicators	Nairobi	Nyanza	Both sites
Percent of pregnancies unintended <sup>a</sup>	78	72	75
Relationship to person responsible for pregnancy (%)	(N=183)	(N=186)	(N=369)
Boyfriend	65	66*	65
Fiancé	3	0**	1
Husband	15	31*	23
Acquaintance	7	2	4
Stranger	5	2**	3
Other	4	0	2
No answer/missing	1	0	1
Received antenatal care (%) <sup>a</sup>	84	89	87
Mean and median number ANC visits	(N=141)	(N=158)	(N=299)
Mean	4	5**	4
Median	3	4	4
Received PMTCT services (%) <sup>a</sup>	75	67	71
Mean and median number PMTCT visits	(N=114)	(N=119)	(N=233)
Mean	4	4	4
Median	3	4	4
Delivered at health facility (%) <sup>b</sup>	78	70	74
Assisted by doctor/nurse (%) <sup>b</sup>	79	69*	74
Received post-natal care (%) <sup>b</sup>	82	90*	86
Used family planning after delivery (%) <sup>b</sup>	67	65	66
Child tested for HIV (%) <sup>c</sup>	88	86	87
Respondent willing to share results (%) <sup>d</sup>	97	99	98
HIV test results (%)	(N=129)	(N=141)	(N=270)
HIV-positive	18	16	17
HIV-negative	79	78	79
Indeterminate	1	4	2
Don't know	2	3	3
Child is still alive (%) <sup>c</sup>	91	90	91

*Notes:* <sup>a</sup>Among all pregnancies (183 in Nairobi and 186 in Nyanza); <sup>b</sup>Among pregnancies that had ended (173 in Nairobi and 176 in Nyanza); <sup>c</sup>Among pregnancies that resulted in live births (148 in Nairobi and 167 in Nyanza); <sup>d</sup>Among live births that were tested for HIV (133 in Nairobi and 141 in Nyanza); ANC- antenatal care; PMTCT- prevention of mother-to-child transmission (of HIV); Differences between study sites are statistically significant at: \*p<0.05; \*\*p<0.01.

**Figure 6 Distribution of pregnancies by outcomes**





# Experiences of violence and self-esteem

Respondents were asked whether they have ever been physically or sexually abused by anyone. Two-in-five (40%) and nearly one-in-four (22%) reported experiencing physical and sexual abuse respectively (Table 11). A significantly higher proportion of female than male respondents reported experiencing these abuses. In addition, whereas a significantly higher proportion of respondents in Nyanza than those in Nairobi reported experiencing physical abuse (44% versus 36%;  $p < 0.05$ ), a significantly higher proportion of those in Nairobi compared to those in Nyanza reported experiencing sexual abuse (27% versus 16%;  $p < 0.01$ ). In more than half (52%) of the sexual abuse cases, the perpetrators were those familiar to the respondents, that is, steady boy/ girlfriend, friend or an acquaintance. Among those who experienced physical abuse, 73% discussed the problem with someone while only 63% of those who experienced sexual abuse discussed the problem with someone. In both cases, the problem was mostly discussed with a family member.

With respect to self-esteem, most young people living with HIV aspire to be successful in life just like any other person. Although the majority are out of school, they still dream of being successful business people and professionals. Moreover, nearly two-in-three (63%) were optimistic about their health status and rated their health as very good or good (Table 12). They are mostly worried about infecting someone else with HIV and becoming or making someone pregnant. Other most important worries revolve around disclosure of their sero-status to others and being rejected by friends.

**Table 11** Distribution of respondents by experiences of violence

Indicators of violence	Female (%)	Male (%)	Both sexes (%)
Ever been physically abused <sup>a</sup>	42	32*	40
Discussed problem with anyone <sup>b</sup>	74	70	73
Person discussed problem with <sup>c</sup>	(N=146)	(N=30)	(N=176)
Family member	67	57	65
Close friend	22	30	23
Teacher	2	7	3
Healthcare provider/counsellor	13	13	13
Religious leader	2	0	2
Other	14	10	14
Ever been sexually abused <sup>a</sup>	25	9**	22
Perpetrator of sexual abuse	(N=119)	(N=12)	(N=131)
Relative	6	0	5
Steady boy/girlfriend	19	50*	21
Friend/acquaintance	30	33	31
Stranger	31	8	29
Other	14	8	14
Discussed problem with anyone	66	33*	63
Person discussed problem with <sup>c</sup>	(N=79)	(N=4)	(N=83)
Family member	70	0**	66
Close friend	29	100**	33
Teacher	4	0	4
Healthcare provider/counsellor	11	0	11
Religious leader	3	0	2
Other	18	25	18

Notes: <sup>a</sup>Among all respondents (471 female and 135 male respondents); <sup>b</sup>Among respondents that had been physically abused (198 female and 43 male respondents); <sup>c</sup>Questions allowed for multiple responses, percentages do not therefore sum to 100; Differences between male and female respondents are statistically significant at: \* $p < 0.05$ ; \*\* $p < 0.01$ .

**Table 12** Distribution of respondents by various indicators of self-esteem

Indicators of self-esteem	Female (N=471) (%)	Male (N=135) (%)	Both sexes (N=606) (%)
Self-rated health status			
Very good	11	11	11
Good	53	50	52
Fair	31	35	32
Poor	5	2	4
No answer/missing	0	2**	1
Percentage of respondents worried about			
Being mistreated/rejected by friends	62	60	62
Being unable to find boy/girlfriend/partner	42	43	42
Being dumped by boy/girlfriend/partner	57	58	57
Their looks	37	27*	35
Being HIV-positive	55	58	55
Disclosing their HIV status to friends	68	68	68
Becoming/making someone pregnant	71	69	71
People finding out they are living with HIV	68	70	68
Infecting someone else with HIV	77	81	78
Body not developing as fast as their friends'	41	39	40
Having sex	53	52	53
Being forced to do sexual things they don't want	57	40**	53

*Notes:* Differences between male and female respondents are statistically significant at: \* $p < 0.05$ ; \*\* $p < 0.01$ .

# Summary of findings

One of the main objectives of this study was to better understand the sexual and reproductive health needs of adolescents living with HIV in Kenya by identifying those needs that are not adequately addressed by the current HIV/AIDS programmes. The second major objective was to identify and develop interventions that integrate these needs into the existing HIV/AIDS treatment, care support programmes in the country. Key findings of the study include:

- 1 ***Many of the adolescents living with HIV are vulnerable:*** Most of the adolescents have lost one or both parents. The majority are out of school largely because of lack of school fees or materials. Most of those who are out of school did not go beyond primary level education. This implies that opportunities for advancing in career are limited for most of them. In addition, HIV-positive female adolescents are even more vulnerable than their male counterparts.
- 2 ***Limited discussion of sexual and reproductive health matters with parents/ guardians compared to service providers/ counsellors:*** Most HIV-positive adolescents talk to service providers/ counsellors more than parents/ guardians about sexual and reproductive health matters. However, with respect to general issues, they report talking to service providers/ counsellors and parents/ guardians in equal measure.
- 3 ***Many do not belong to any support group:*** Support groups for people living with HIV do provide peer support, life skills training, and psychosocial support. They are also a potential channel for reaching HIV-positive young people with critical sexual and reproductive health information. However, only half of the HIV-positive adolescents reported belonging to such groups.
- 4 ***Most HIV-positive adolescents are or intend to be involved in sexual relationships:*** More than four-fifths have been in a sexual relationship and more than two-thirds of these (i.e. those who have been in a sexual relationship) are still in a relationship. About nine-in-ten of those who have never been in a relationship intend to be involved in relationships in future. In addition, more than four-fifths of those who are not married or living with someone intend to marry.
- 5 ***Many HIV-positive adolescents desire to have sex, have had sex, or intend to have sex in future:*** Nearly two-thirds desire to have sex, and about three-quarters felt that someone living with HIV should have sex. More than four-fifths have had sex, and about two-thirds of those who have had sex had consensual first sex. In addition, about nine-in-ten of those who have never had sex intend to have sex in future.

- 6 ***Higher knowledge but lower use of contraceptives:*** About nine-in-ten of adolescents living with HIV know of a contraceptive method and a similar proportion knows of a place to get a method. However, among those who have ever had sex, only about one-in-ten used a preventive method at first sex, three-in-four have ever used a method, and two-thirds reported current use of a method. Focus group discussions indicate that the low use of contraceptives among young people is partly attributable to the long process of obtaining the methods, especially from health facilities.
- 7 ***High rates of unintended pregnancies among HIV-positive adolescent girls:*** More than two-thirds of sexually active HIV-positive adolescent girls have been pregnant. Of those who have ever been pregnant, more than one-in-four have been pregnant more than once. In addition, three-quarters of all the pregnancies are unintended.
- 8 ***Many intend to have children in future but do desire to delay childbearing:*** About three-quarters of HIV-positive adolescents intend to have children in future. Similarly, about three-quarters of those who intend to have children in future would like to do so later on in life.
- 9 ***Lower use of PMTCT compared to antenatal care services:*** The proportion of pregnancies for which mothers received antenatal care is higher than that for which they received PMTCT services. This implies that whereas the provision of PMTCT services for HIV-positive mothers should be part of antenatal care, there are still gaps in meeting the PMTCT service needs of pregnant HIV-positive adolescent girls.
- 10 ***Major worries revolve around infecting others, pregnancy, sero-status disclosure and social acceptance:*** More than three-quarters are worried about infecting someone with HIV and an almost similar proportion are worried about pregnancy. More than two-thirds are worried about disclosing their sero-status to others while slightly less than two-thirds are worried about being mistreated or rejected by friends.

# Programmatic implications

Based on the findings of this study, the following are recommendations for programmatic actions:

- 1 *Strengthen the provision of information and services on family planning and HIV prevention:*** HIV/AIDS programmes need to recognize that HIV-positive adolescents engage or desire to engage in sex just like other adolescents. At the same, use of contraceptives is not concomitant with knowledge of the methods. The result is high rate of unintended pregnancies and the potential for further spread of HIV, especially with discordant partners. Moreover, HIV-positive adolescents are mostly worried about pregnancy and infecting others with HIV. HIV/AIDS treatment, care and support centres therefore need to assess the contraceptive and preventive service needs of adolescents living with HIV with a view to strengthening the provision of appropriate information and services to this group of clients. There is also need to ensure that integrated services do not focus on adults alone, but are made available to all in need.
- 2 *Ensuring effective provision of PMTCT services for HIV-positive adolescents during pregnancy:*** Services for prevention of mother-to-child transmission of HIV are an integral component of antenatal care, yet some HIV-positive adolescent mothers received antenatal care but not PMTCT services. HIV/AIDS programmes need to identify HIV-positive adolescent girls who are pregnant and provide support including information on and referral for the full range of antenatal care and PMTCT services.
- 3 *Update existing counselling and support packages to include sexual and reproductive health information and services:*** Updating the counselling and support packages to include counselling on SRH will equip service providers/ counsellors with a tool to systematically assess the SRH information and service needs of HIV-positive adolescents, and to address such needs in time or make appropriate referral.
- 4 *Train/re-orient service providers/ counsellors on the updated packages:*** Updating the counselling and support packages alone is not enough without enhancing provider capacity to handle the additional tasks. HIV/AIDS programmes therefore need to follow up any updates of the counselling and support packages with provider training and re-orientation to enable them carry out their work effectively.
- 5 *Involve parents/ guardians in discussion of sexual and reproductive health issues:*** Whereas HIV-positive adolescents talk to service providers/ counsellors and parents/ guardians alike about general issues in life, SRH issues are more likely to be discussed

with the former. This implies that HIV/AIDS programmes need to establish mechanisms for involving parents/ guardians in discussing SRH issues with HIV-positive adolescents.

- 6 ***Encourage and strengthen support groups for HIV-positive adolescents:*** Although support groups for people living with HIV are a source of peer and psychosocial support, life skills training, and potential avenues for channelling SRH information, many HIV-positive adolescents do not belong to such groups. Thus, HIV/AIDS programmes in the country need to work with parents/guardians to encourage the formation of support groups for young people living with HIV and to strengthen the already existing ones.
- 7 ***Strengthen life skills training for HIV-positive adolescents:*** Most of the HIV-positive adolescents are vulnerable on account of several factors including their young age coupled with the fact that they are living with a chronic illness, many have lost one or both parents, and the majority are out of school. HIV/AIDS programmes therefore need to strengthen life skills training to enable them make informed choices, and to balance responsibility with sexual and reproductive desires.
- 8 ***Strengthen school-based programs to support HIV-positive and other vulnerable students:*** The fact that many HIV-positive adolescents are out of school could be an indication that the school environment is not supportive to their needs and the needs of other vulnerable children. School-based programs to support HIV-positive students should therefore aim at enhancing the capacity of teachers and school matrons/nurses to respond to their health needs, including nutritional needs; strengthening the school health system (sick-bays) where these exist; as well as putting in place mechanisms for supporting them and other vulnerable children with school fees and materials.

# Study limitations

- 1 Due to logistical difficulties, respondents were not randomly selected from among those who were receiving treatment, care and support from the centres/facilities and knew their sero-status. In addition, there were not enough numbers of adolescents meeting these criteria to randomly sample from. The nature of the study could also not allow for sampling of respondents from the general population.
- 2 Respondents were not asked how HIV infection occurred, when they were started on ARVs, or their experiences with adherence to ARVs. This could partly be attributed to the fact that this was a diagnostic study focusing on the SRH information and service needs of HIV-positive adolescents.
- 3 Because of funding limitations, no interviews were conducted with service providers/counsellors. This could have permitted an understanding of the availability of youth-friendly providers and services for HIV-positive adolescents as well as the issues around SRH counselling for these adolescents from the providers' point of view.



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