Title: The sexual behaviour of adolescents in sub-Saharan Africa: Patterns and trends from national surveys

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Abstract

Objectives

To describe the sexual and reproductive behaviour of adolescents in sub-Saharan Africa, particularly 15-19 year-olds.

Methods

Using DHS/AIS data (2000-2010), nine indicators of adolescent behaviour and one of adult attitudes towards condom education for adolescents were described for 24 countries. Indicators were disaggregated by gender, urban/rural residency and educational status, and time trends were described.

Results

Up to 25% of 15-19 year-olds reported sex before age 15 with this proportion decreasing over time in many countries. In most countries, ≥5% of females reported marriage before age 15, and >20% had commenced childbearing. Early sexual debut and childbearing were more common among the least educated and/or rural females. Reporting of multiple sexual partnerships was higher among males compared to females, but decreases over time were more common among males. Urban males and females, and females with higher education, were more likely to report multiple partnerships. Urban youth and those with higher education also reported more condom use. Adult support for condom education for 12-14 year-olds has increased over time to 60-65%.

Conclusions

Many 15-19 year-olds are at risk of HIV/STIs and unplanned pregnancies because of multiple partnerships and low condom and other contraceptive use. In many countries, trends are moving in a favourable direction. To better inform prevention programmes in this important area, we recommend routine collection of sexual and reproductive behaviour data for adolescents <15 years, expanding the data collected for 15-19 year-olds to include detailed information on sexual behaviour within partnerships, and disaggregating data according to socio-demographic variables.

Introduction

The developmental, physiological and behavioural changes that take place during adolescence can contribute to an increased risk of contracting HIV and other sexually transmitted infections (STIs) and of experiencing unplanned pregnancy (Dixon-Mueller, 2008, Lloyd, 2005). Adolescents are defined here as young people aged 10-19 years. Late adolescence (15-19 years) is particularly important as sexual debut and experimentation often take place during this period.

Given the cultural diversity found within sub-Saharan Africa (SSA), any attempt to generalise and describe common aspects of adolescent sexual behaviour is problematic. Nonetheless, broad patterns are worth considering given the severe course that the HIV epidemic has taken in SSA, especially amongst young people. Much of our knowledge about adolescent sexual behaviour in SSA comes from Demographic and Health Surveys (DHS) and more recently AIDS Indicator Surveys (AIS). In these surveys, routinely estimated youth sexual behaviour indicators include those related to sexual activity (e.g.primary/secondary abstinence, age at first sex, sex among unmarried youth); condom use (e.g. at first sex, last sex, ever); and sexual partnerships (e.g. multiple partners, age-mixing). Many of the indicators collected for adults ($\geq$15 years) are now presented separately for adolescents aged 15-19 years, but are rarely presented disaggregated by key determinants of behaviour, such as marital or socio-economic status. Furthermore, sexual behaviour data are not collected for adolescents < 15 years, although 30% of 15-19 year-olds in some countries report sex before the age of 15 (Dixon-Mueller, 2009).

A number of reviews have examined patterns and trends in adolescent sexual behaviour in SSA using nationally representative survey data (Mahy and Gupta, 2002, Khan and Mishra, 2008, Mishra et al., 2009, Wellings et al., 2006, Cleland and Ali, 2006, WHO, 2007). National surveys provide some evidence of a trend over time towards later age at first sex, first marriage, and first birth, although changes are often limited to subgroups of adolescents (e.g. gender, urban/rural, education, wealth) (Mahy and Gupta, 2002, Wellings et al., 2006, Mensch et al., 2005, Zaba et al., 2004, Slaymaker et al., 2009). Condom use appears to be increasing but overall levels remain low (Cleland and Ali, 2006, Wellings et al., 2006). Encouragingly, a recent review found a reduction in adolescent sexual risk behaviours that coincided with reductions in HIV prevalence in several countries (The International Group on Analysis of Trends in HIV Prevalence and Behaviours in Young People in Countries most Affected by HIV, 2010)

Most of the above reviews focused on the broader 15-24 year-old age group and only the last one included data collected since 2006. The aim of this review, therefore, is to provide an update on national survey findings on sexual and reproductive behaviour of adolescents in SSA, with particular focus on the often-neglected 15-19 year-old age group.

Methods:

Using reported data from DHS and/or AIS surveys, we described the following nine indicators of sexual and reproductive behaviour separately for 15-19 year-olds. Some variables are presented for females only because they were not applicable to males, or because male reports were negligible:

- Sexual intercourse before age 15
- Marriage before age 15 (females only)
- Sex in past year among never married adolescents
- For those who had sex in past year, a report during that period of:
    - Multiple sexual partnerships
    - Sex with a partner ≥10 years older (females only)
    - Condom use at last sex (among never married adolescents only)
    - An HIV test with known result
- Currently pregnant or have had a child (females only)
- Current use of a modern contraceptive (including condoms) among never married adolescents who had had sex in the last 30 days (females only)

In addition, we looked at the following indicator of adult attitudes towards sex education for adolescents:

- Adult (18-49 years) support for condom use education for 12-14 year-olds

Indicators were described for SSA countries only if the relevant data were available in the online MEASURE DHS STATcompiler (http://www.statcompiler.com/) or HIV/AIDS Survey Indicator database (http://www.measuredhs.com/hivdata/)(accessed May 2011) or in the published final report for each survey. UN definitions of geographical regions were used (United Nations, 2011). Of the 48 independent countries in SSA, 24 countries that have had a DHS or AIS survey between 2005 and 2010 were included (see Table 1). We examined trends over time using data from 14 countries which have had two DHS or AIS between 2000 and 2010 and where the surveys were at least 5 years apart (see Figure 1c). Indicators disaggregated by urban/rural residence and educational status were described for 15-24 year-olds

where disaggregated data for 15-19 year-olds were not available. Questionnaires differed slightly between surveys and chosen indicators were not available for all selected surveys. Weighted sample sizes of 15-19 year-olds in the 38 selected surveys ranged from 948 to 6493 for females and 416 to 2532 for males. Proportions were calculated using population-weighted denominators. A chi-squared test was used to assess the significance of changes in an indicator between sub-groups and over time. All chi-squared tests were adjusted for a design effect of 1.5 to take into account the multi-stage stratified design of the DHS surveys. A p-value of <0.05 was considered 'significant'. Below key findings are highlighted in the text, tables and/or figures, but supporting data are not shown in some instances due to space constraints.

Results:

Sex before age 15

In 24 SSA countries with a DHS/AIS survey since 2005, there was large variation in the proportion of 15-19 year-olds who reported having had sex before the age of 15 years, with values ranging between countries from 2-27% for males and 5-26% for females (**Table 1**). In general, a significantly larger proportion of females compared to males reported having had early sex (before age 15) in countries in West Africa. In Central, East and Southern Africa the pattern was mixed with a higher proportion of males reporting early sex in many countries **(Table 1)**. With the exception of Rwanda and Lesotho, early sex among females (15-24 years) was significantly higher in rural compared to urban areas. Among males there were few significant differences in reporting between urban and rural areas **(Figure 1a)**. Less educated females were significantly more likely to report having had sex at an early age **(Figure 1b)**. In most countries the proportion of 15-19 year-olds reporting sex before age 15 has significantly decreased over time (**Figure 1c**).

Marriage before age 15

The proportion of 15-19 year-old females who were married before age 15 ranged from 0.2% (Rwanda 2005) to 28% (Niger 2006) **(Table 1)**. In 5/14 countries marriage before age 15 significantly decreased over time. However, in Mali and Madagascar early marriages significantly increased over time.

Sexual activity of never married adolescents in the past year

Approximately one quarter of never married 15-19 year-olds reported sex in the 12 months prior to the survey. The prevalence of this indicator varied widely between countries ranging from 4% (Ethiopia 2005) to 55% (Mozambique 2009) among males and 0.8% (Niger 2006) to 60% (Liberia 2007) among females. Reporting was significantly higher among males compared to females in 9/14 countries, but

higher among females in Ghana and Nigeria **(Table 1)**. The prevalence of this indicator for never married 15-24 year-olds was significantly higher in urban areas compared to rural areas for both males (7/14) and females (9/14). Among females, in the majority of countries (8/14), reports of sexual activity were significantly higher for those with higher levels of education; however, in Madagascar and Tanzania the opposite trend was seen. Among never married males, no consistent pattern was seen and sex in the past year was significantly associated with higher levels of education in only 3/14 countries.

Multiple sexual partners in the past year

Among those who had sex in the past year, the proportion of 15-19 year-olds who reported more than one sexual partner during that time ranged from 4% (Ethiopia 2005) to 32% (Cote d'Ivoire 2005) among males and from 0.4% (Ethiopia 2005, Niger 2006) to 12% (Liberia 2007) among females.A significantly higher proportion of males compared to females reported multiple partners in the past year (Figure 2). In almost all countries a higher proportion of 15-24 year-olds in urban compared to rural areas reported multiple partners, however, this difference was only significant among females in 4/11 countries. In most countries, and significantly so in 4/11 countries, higher educated females were more likely to report multiple partners than those with less education. Among males there was no consistent pattern according to education level. There was limited evidence of a decline in reporting of multiple sexual partnerships over time, although in Ethiopia and Mozambique significant declines were seen among both sexes, and in Nigeria and Zambia among males only **(Figure 2)**.

Partner ten or more years older in the past year

In most countries, 2-6% of 15-19 year-old females who had sex in the past year had a partner who was 10 or more years older during that time. Overall this ranged from 0.1% (Ethiopia 2005, Niger 2006) to 13% (Zimbabwe 2005-2006) **(Figure 3)**. Such age-disparate sex was significantly higher among urban compared to rural females in 6/10 countries, and was associated with a higher level of education in 5/10 countries. Some difference in reporting of this indicator according to marital status was seen, for example, in Lesotho in 2009 ever married females were 2.5 times more likely than sexually experienced never married females to report age-disparate sex.

Condom use at last sex

The proportion of never married 15-19 year-olds who had sex in the past year and reported condom use at last sex ranged from 8% (Madagascar 2008-2009) to 81% (Namibia 2006-2007) among males and from 5% (Madagascar 2008-2009) to 67% (Namibia 2006-2007) among females.. Female reporting of this indicator in the selected countries varied widely by region, from an average of 22% in West Africa

and Central Africa, to 35% in East Africa and 60% in Southern Africa. Condom use was significantly higher among males compared to females in 2/4 of the West African countries, but only 2/10 of the East and Southern African countries **(Figure 4)**. Reported condom use was significantly higher among urban compared to rural youth, for both males (14/14) and females (10/13). For males (13/14) and females (12/14) in almost all countries, condom use was positively associated with a higher level of education. Some countries have seen a significant increase in condom use by never married males (3/14) and/or females (6/14) over time. However, reporting significantly decreased among females in Uganda from 54% in 2001/2 to 38% in 2006 ($p<0.01$) **(Figure 4)**.

Pregnancy

The proportion of 15-19 year-olds who were mothers or currently pregnant ranged from 4% (Rwanda 2005) to 39% (Niger 2006) **(Table 1)**. Childbearing was slightly more common in West Africa than in East and Southern Africa **(Table 1).** Experience of pregnancy increased with age, with values of 0-11% among 15 year-olds and rising to 13-65% among 19 year-olds. Childbearing among 15-24 year-olds was significantly higher among those with no education (13/13 countries) and those living in rural areas (11/13 countries), but the difference between these subgroups varied considerably between countries.

Use of modern contraceptives at last sex

Current use of modern contraceptives by never married females (15-19 years) who had sex in the last 30 days ranged from 0% (Rwanda 2005, Niger 2006) to 76% (Namibia 2006-2007) **(Table 1)**. Reporting for this indicator increased in the majority of countries between the last two DHS rounds. However, significant increases were seen only in Benin and Zambia.

HIV test in the past year

The proportion of 15-19 year-olds who had sex in the last year and who were tested for HIV during that period and knew their results ranged from 0% (Ghana 2008) to 23% (Kenya 2008-2009) among males and from 0.9% (Niger 2006) to 49% (Lesotho 2009) among females . In many countries (6/7 females; 4/7 males), testing has significantly increased over time. For example, amongst 15-24 year-old females in Tanzania this indicator increased from 6% in 2004-2005 to 24% in 2007-2008 and 39% in 2010. HIV testing was significantly higher among females compared to males in 8/14 countries but significantly higher among males in Nigeria and Ethiopia. In almost all countries, testing was significantly higher in urban compared to rural areas (8/14 for males; 11/14 for females) and significantly increased with education level (10/14 males; 12/14 females).

Adults support for condom education for 12-14 year-olds.

The proportion of women aged 18-49 years who were in favour of 12-14 year olds being educated about condom use ranged from 30% (Sierra Leone 2008) to 84% (Namibia 2006-2007). The proportion of 18-49 year old men supporting this ranged from 47% (Nigeria 2008) to 85% (Namibia 2006-2007), with male support significantly higher than female support in 10/12 countries. Urban females in 11/12 countries and urban males in 6/12 countries were significantly more likely than their rural counterparts to support such education. Approval for condom education has increased significantly over time in some East and Southern African countries. However, significant decreases were observed in each of the three West African countries for which there were data from two surveys, largely due to decreases amongst women **(Figure 6)**.

Discussion:

This analysis of national survey data from 24 countries in SSA found that a high proportion of 15-19 year-olds were sexually active and at risk of contracting HIV, other STIs or of unplanned pregnancy because of lack of condom and other contraceptive use, and through having multiple sexual partners. There were some residency and education risk patterns common to most of the surveyed countries. For example, in comparison to urban populations, rural populations had relatively high reports of early sex and childbearing (especially for females), as well as low condom or other contraceptive use amongst young people in general. In contrast, in urban areas never married males and females were more likely to report sex in the past year, and females were more likely than their rural counterparts to report age-disparate relationships and multiple partnerships. Across the surveyed countries, youth with low education levels were more likely than those with higher education to report early sexual debut, marriage and childbearing, and they were less likely to have used condoms or to have received an HIV test result. However, young people with relatively high education were more likely to report multiple or age-disparate partners. Each of these indicators will be discussed in more depth below.

Early Sex, Pregnancy and Marriage

In many countries, sizeable minorities of adolescents became sexual active before age 15, suggesting there is a need for interventions to target young people before that age. However, one promising finding of this review is that reported sex before age 15 has decreased over time in the majority of countries. In general, adolescents living in the lower HIV prevalence region of West Africa commenced sexual activity and got married at an earlier age than their Eastern or Southern African counterparts. Reported early sex was more common among females compared to males in West Africa, possibly due girls marrying earlier and/or having older sexual partners. In contrast, early sexual debut and sexual activity among never married youth were more commonly reported by males than females in some of the countries of East and Southern Africa. Reporting biases may contribute to these differences, as adolescent sexual activity is often considered socially undesirable or unacceptable. Young people and especially females often under-report sexual behaviour, but males sometimes over-report it (Catania et al., 1990, Nnko et al., 2004, Hewett et al., 2004, Marston and King, 2006, Beguy et al., 2009, Plummer and Wight, 2011).

Countries reporting the highest levels of early marriage did not always report the highest levels of early childbearing and vice versa. Importantly, however, this analysis was unable to determine the sequence of these events. It is possible that the high rates of early sex and pregnancy in West Africa mainly

happened after marriage, and this may represent a different type of risk than early sex and pregnancy out-of-wedlock there or elsewhere.

Condom Education and Use

Young people's reports of condom and other contraceptive use have increased over time in many but not all countries. However, reported condom use within non-marital relationships remained well below 50% in the majority of countries. Reported condom use was highest in the high HIV prevalence countries of Southern Africa and lowest in lower prevalence countries of West Africa. Whether reflecting actual use or reporting bias, higher exposure to condom promotion campaigns in Southern African countries may have led to higher reported condom use.

In national surveys, the commonly used indicator of condom use for young people is the proportion reporting condom use at last sex with a non-marital, non-cohabiting partner in the last 12 months. However, condoms are most effective at reducing risk if they are used consistently over time, and this indicator is limited as a proximate measure of consistency of use (WHO, 2004). Increasingly survey researchers are using additional indicators to better assess the consistency of young people's reported condom use (Ferguson et al., 2004, Sayles et al., 2006, Tassiopoulos et al., 2006, Bankole et al., 2007, Izugbara and Nwabuawele Modo, 2007, Jama Shai et al., 2010). Such studies should be drawn upon to try to improve the condom use indicators in national surveys.

Finally, decreases in the level of adult support for condom education for 12-14 year olds in some countries in West Africa reflect the controversial nature of such education in SSA. Nonetheless, the review finding that two-thirds of adults supported condom education for 12-14 year-olds is an important contribution to existing debates about youth condom education in general and in particular for early adolescents, who may not yet have become sexually active and established sexual risk behaviours.

Partnership Characteristics and Number

In most of the countries reviewed, 2-6% of 15-19 year-old females who had sex in the past year had a partner who was 10 or more years older than them during that time, but it was difficult to examine trends in this practice over time as only four surveys had repeated measurements in the last decade. Males aged 15-19 years were more likely than females to report >1 partner in the previous 12 months in

all countries surveyed, but one promising finding of this review was a decrease in reported multiple partners among males in four countries and among females in two countries.

Risks associated with various types of partnerships have been the subject of intense debate in the field of HIV prevention (Sawers and Stillwaggon, 2010, Lurie and Rosenthal, 2010, Mah and Halperin, 2010, Morris, 2010). The risks for individuals within a particular sexual relationship may be influenced by the partnership's duration, overlap with other partnerships, and the frequency of sexual encounters within it. Currently, the main national survey indicator related to young people's multiple partnerships ('sex with >1 partner in the last 12 months') is insufficient to assess such risks. The characteristics of partners and partnerships can be challenging to measure for many reasons, including social desirability bias, limited recall accuracy, and difficulties semi-literate populations may have calculating large numbers or averages. However, promising work is underway to develop new survey indicators addressing these topics (UNAIDS, 2010, Harrison et al., 2008).

HIV testing

SSA experienced a rapid scale-up of HIV testing and antiretroviral therapy services during the period considered in this review, although the timing and intensity of campaigns have varied widely between and within countries (Padian et al., 2011). Encouragingly, we found that HIV testing among adolescents has increased substantially in many countries in recent years. However, in many countries levels of HIV testing remain relatively low among males, younger youth, those with less education, and those living in rural areas. Routine disaggregation of this and other youth indicators according to socio-demographic variables would allow more careful monitoring of access to services and progress towards the UNGASS goals(United Nations, 2001).

Review Limitations

The use of DHS data available in country reports or the online database, as opposed to analysis of the raw data, restricted the choice of indicators and the degree of disaggregation and level of statistical analysis. As with all household surveys, young people living in boarding schools, on the street and those working in brothels, mines, etc are likely to have been excluded. Our ability to detect differences between subgroups and trends over time was influenced by the varying size of the surveys and length of

time between surveys within each country. In addition, we restricted comparisons over time to the two most recent surveys and there is some evidence that caution should be taken when interpreting trends using only two time points (Curtis and Sutherland, 2004). Recall and social desirability biases may have also reduced the validity of reports and distorted comparisons between subgroups and over time (Catania et al., 1990, Slaymaker, 2004).

In conclusion to better inform the development and to monitor the effectiveness of intervention programmes, more detailed data should be collected on all adolescents, including 10-14 year-olds (WHO, 2004, Dixon-Mueller, 2009). In particular we recommend the collection, where feasible, of more detailed data on the type, duration and overlap of sexual partnerships, as well as the frequency of sex and the consistency of condom use within partnerships. Where possible, data should be disaggregated by small age-sex groups and by demographic characteristics and interpreted alongside data on the economic and social determinants of sexual risk behaviour. Given the challenges with accurate measurement of adolescent sexual behaviours, further research on more appropriate and effective ways to collect valid survey data would also be valuable.

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Table 1: HIV prevalence, legal age of consent, sex before age 15, sex in the past year, marriage before age 15, childbearing and contraceptive use among 15-19 year olds in selected Sub-Saharan African Demographic and Health Surveys, 2005-2010

	HIV prevalence (15-24)[i]		Legal age of consent for sex[ii]	Sex before age 15[iii]		Sex in past year among never married[iv]		Married before age 15	Have children or currently pregnant	Current modern contraceptive use by never married, sexually active females[v]
Country/year	**Male %**	**Female %**	**years**	**Male N (%)**	**Female N (%)**	**Male N (%)**	**Female N (%)**	**Female %**	**Female %**	**Female %**
WEST AFRICA										
Benin 06	0.3	0.7	18*	1010 (13)	3067 (13)	995 (29)	2383 (29)	5	21	28
Cote d'Ivoire 05[vi]	0.7	1.5	15	898 (17)	1232 (20)	877 (40)	971 (51)	7	30	NA
Ghana 08	0.5	1.3	16	911 (4)	1025 (8)	902 (15)	929 (23)	3	13	33
Guinea 05	0.4	0.9	15	664 (18)	1648 (20)	632 (41)	1024 (32)	12	32	31
Liberia 07	0.3	0.7	16	1156 (9)	1312 (19)	1119 (43)	1045 (60)	6	32	20
Mali 06	0.2	0.5	16	876 (6)	3104 (24)	782 (12)	1471 (6)	23	36	22
Niger 06	0.2	0.5	13*	620 (5)	1718 (26)	601 (7)	676 (0.8)	28	39	0
Nigeria 08	1.2	2.9	13	2532 (6)	6493 (15)	2508 (16)	4586 (20)	12	23	37
Senegal 05	0.3	1.5	16*	926 (13)	3556 (9)	848 (16)	2497 (1)	10	19	30
Sierra Leone 08	0.6	1.5	14*	526 (11)	1198 (22)	521 (36)	827 (43)	10	34	21
CENTRAL AFRICA										
Congo 09[vi]	1.2	2.6	NK	1137 (24)	1305 (23)	1116 (54)	1018 (58)	5	NA (27% in 2005)	NA (22% in 2005)
Democratic Republic of Congo 07[vi]	1.7[$]	0.7[$]	18*	988 (18)	2030 (18)	926 (39)	1532 (31)	7	24	23
EAST AFRICA										
Ethiopia 05	0.1[$]	0.7[$]	15	1335 (2)	3266 (11)	1304 (4)	2394 (1)	13	17	56
Kenya 08/9[vi]	1.8	4.1	18	776 (22)	1761 (12)	773 (24)	1535 (17)	1	18	23
Madagascar 08/9[vi]	0.1	0.1	14/21*	1711 (8)	3956 (17)	1472 (32)	2381 (21)	12	32	14

Table 1: cont.

	HIV prevalence (15-24)[i]		Legal age of consent for sex[ii]	Sex before age 15[iii]		Sex in past year among never married[iv]		Married before age 15	Have children or currently pregnant	Current modern contraceptive use by never married, sexually active females[v]
Country/ year	**Male %**	**Female %**	**Years**	**Male N (%)**	**Female N (%)**	**Male N (%)**	**Female N (%)**	**Female %**	**Female %**	**Female %**
East Africa cont.										
Mozambique 09[vi]	3.1	8.6	16*	901 (27)	948 (23)	849 (55)	484 (47)	13	NA	NA
Rwanda 05	1.3	1.9	18	1102 (15)	2585 (5)	1100 (5)	2510 (3)	0.2	4	0
Tanzania 10[vi]	1.7	3.9	18	645 (8)	2172 (11)	616 (25)	1744 (27)	3	23	35
Uganda 06	2.3	4.8	18	595 (14)	1936 (12)	584 (20)	1502 (19)	3	25	28
Zambia 07	4.2	8.9	16*	1416 (16)	1574 (12)	1399 (29)	1268 (24)	3	28	37
Zimbabwe 05/6	3.3	6.9	12/16	1899 (5)	2152 (5)	1886 (18)	1640 (8)	3	21	37
Southern Africa										
Lesotho 09[vi]	5.4	14.2	14 (M)* 16 (F)*	835 (26)	1785 (9)	820 (47)	1477 (26)	2	20	41
Namibia 06/7	2.3	5.8	16	910 (19)	2246 (7)	907 (37)	2122 (32)	1	15	76
Swaziland 06/7	6.5	15.6	18	1323 (5)	1274 (7)	1320 (15)	1181 (30)	0.3	23	56

NA= Not available; NK= Not known

I. **UNAIDS Report on the Global AIDS Epidemic 2010 (estimated prevalence in 2009) OR where marked with $ (DRC 07 and Ethiopia 05) estimates were taken from DHS reports as there were no point estimate in the most recent UNAIDS report**

II. **Data from http://www.avert.org/age-of-consent.htm and/or, where marked with *, Wikipedia (http://en.wikipedia.org/wiki/Ages_of_consent_in_Africa). If more than one age is given then the law within that country or state varies according to region or circumstances. Some countries may allow sex at an earlier age if certain conditions are met, e.g. parental permission, formal marriage, both partners are of a similar age.**

III. **DHS Indicator 9.1.2 (% of all 15-19 year olds who report having had sex before the age of 15 years) in MEASURE HIV/AIDS Indicator Database; denominator is weighted**

IV. **DHS Indicator 9.2 (% of all never married 15-19 year olds who report having had sex in the previous 12 months) in MEASURE HIV/AIDS Indicator Database; denominator is weighted**

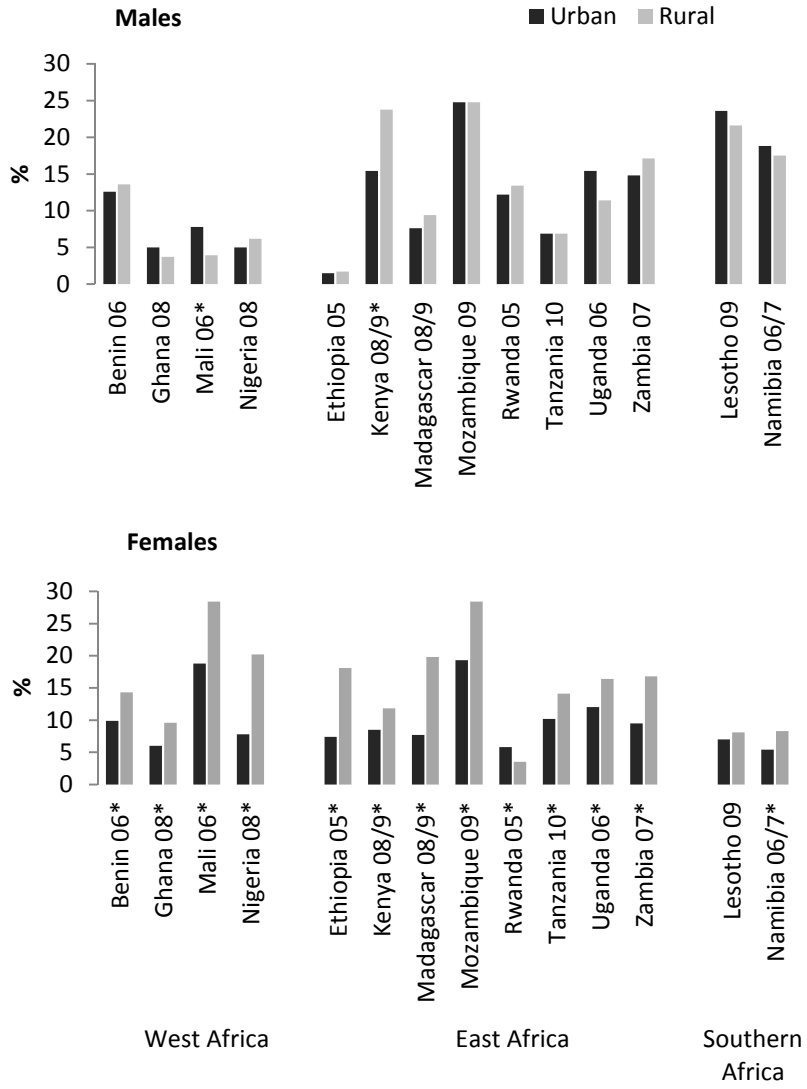
V. **'Sexually active' is defined as women who have had sexual intercourse in the 30 days preceding the survey**

VI. **Data taken directly from final reports as relevant data were not available through DHS statcompiler or MEASURE HIV/AIDS Indicator Database: Democratic Republic of Congo DHS 2007 Final report; Kenya DHS 2008/9 Final report; Congo AIS 2009 Final report; Madagascar DHS 2008/9 Final report; Mozambique AIS 2009 Final report; Lesotho DHS 2009 Final report; Cote d'Ivoire DHS 2005 Final report**

Figure 1. Proportion of young people who reported sex before age 15 years

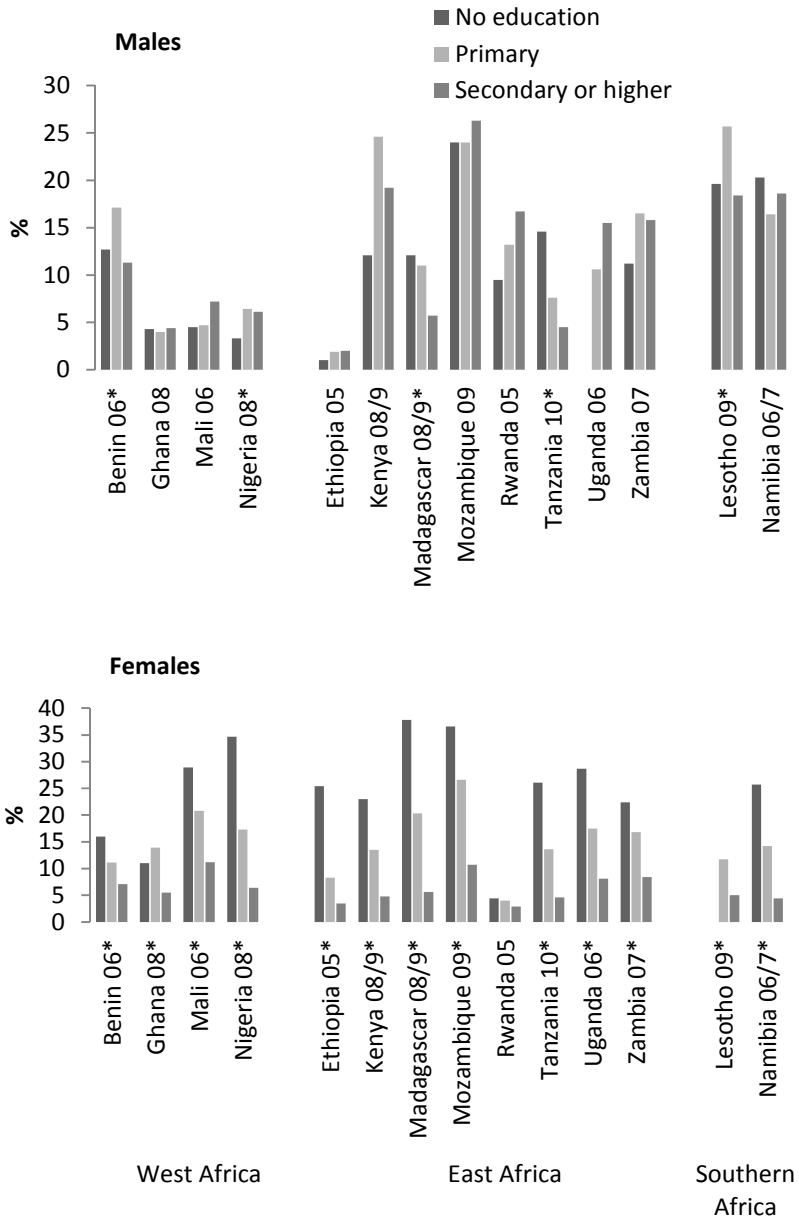
(a) 15-24 year olds according to residence

** Difference between subgroups significant at p<0.05*



(b) 15-24 year olds according to highest level of education

** Difference between subgroups significant at p<0.05*



(c) 15-19 year olds

** Difference over time significant at p<0.05 in both sexes, or only males (M) or females (F)*

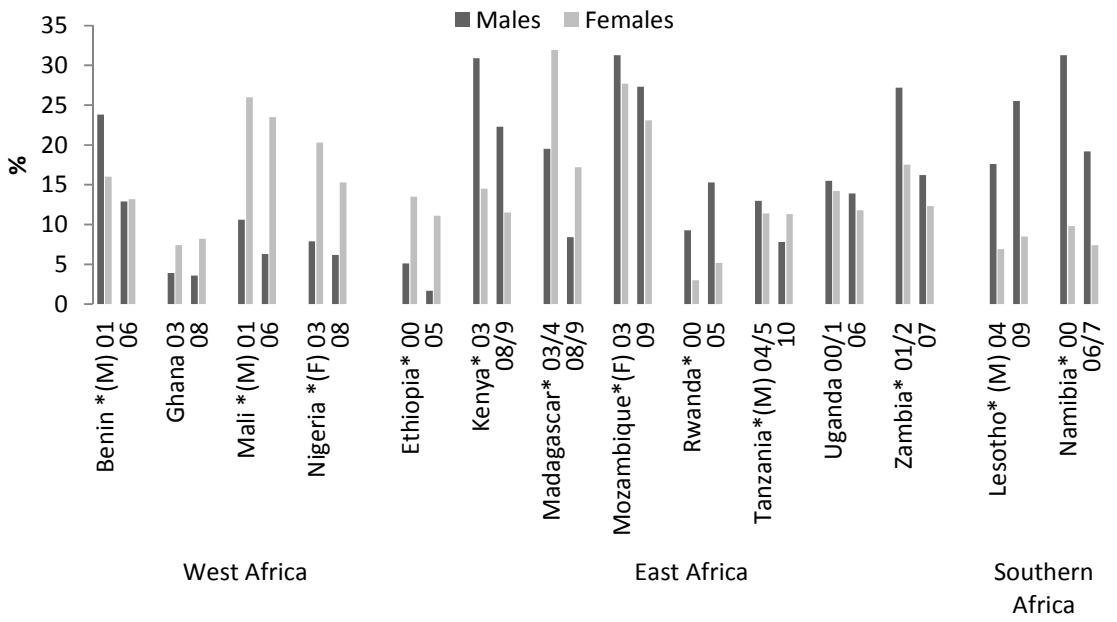


Figure 2: Proportion of 15-19 year olds who had sex in the past year and who had more than one partner during that time

** difference over time significant at p<0.05 in both sexes or only male (M) or only females (F)*

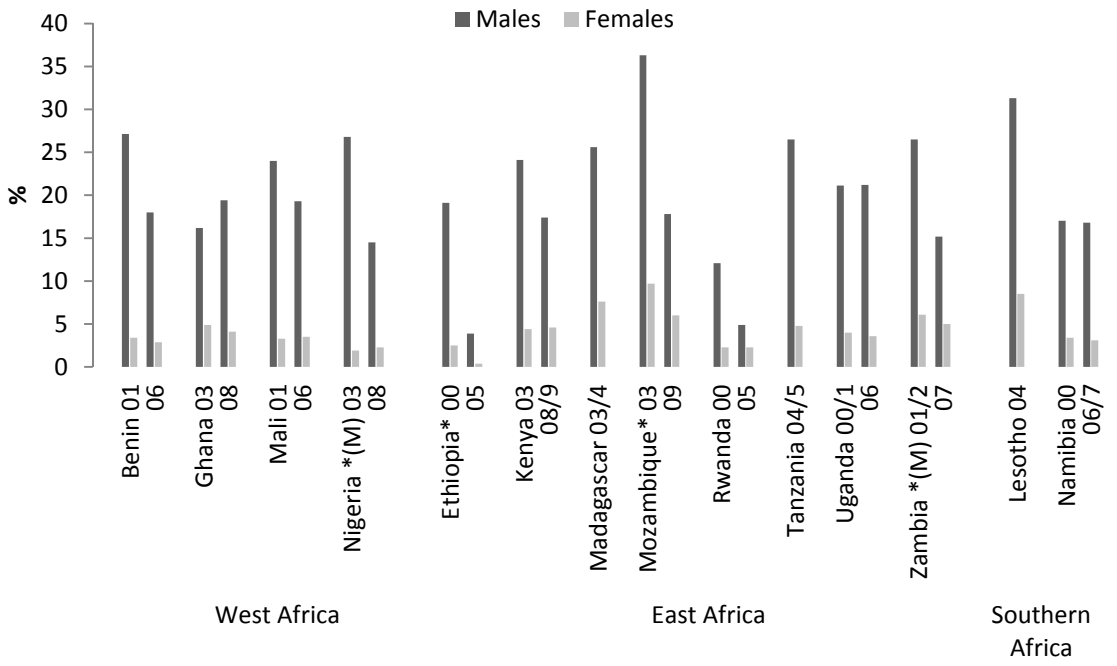


Figure 3: Proportion of 15-19 year old women who had sex in the past year and who had a partner who was 10 or more years older than them during that time

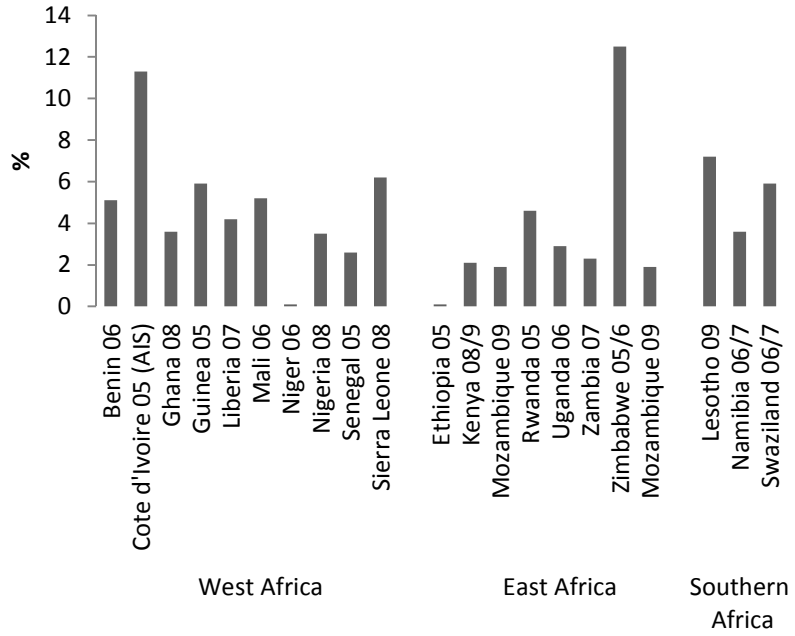


Figure 4: Proportion of never married 15-19 year olds who had sex in the past year and who used a condom at last sex

** Difference over time significant at p<0.05 in both sexes, or only males (M) or females (F)*

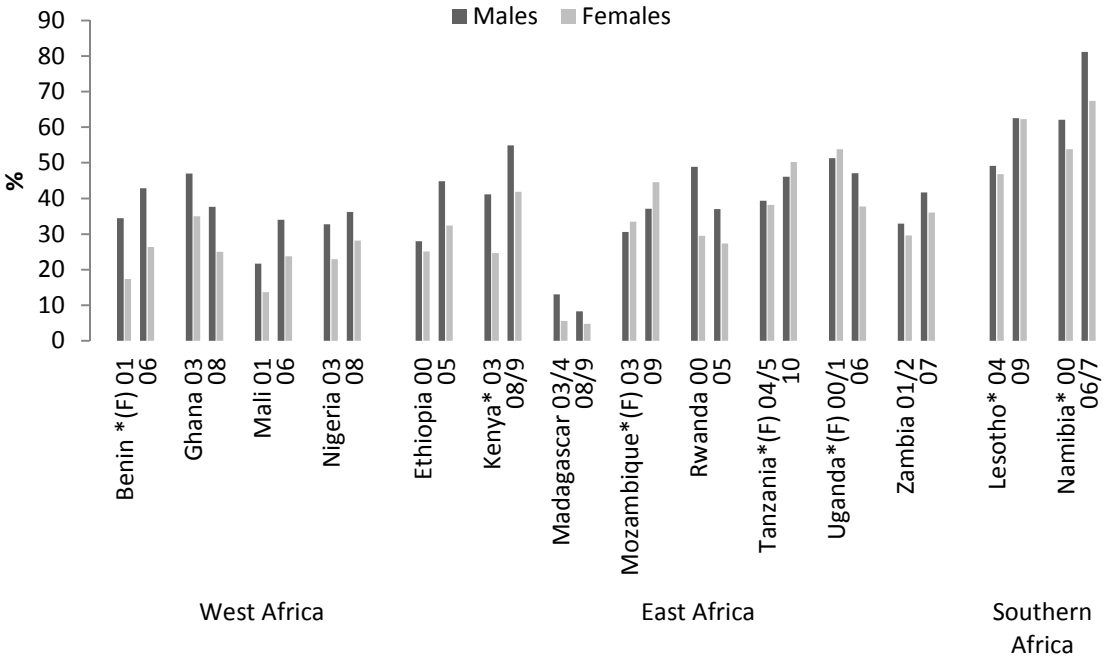


Figure 5: Proportion of 15-19 year olds who had sex in the past year and who had a HIV test and received their results during that time

** Difference over time significant at p<0.05 in both sexes, or only males (M) or females (F)*

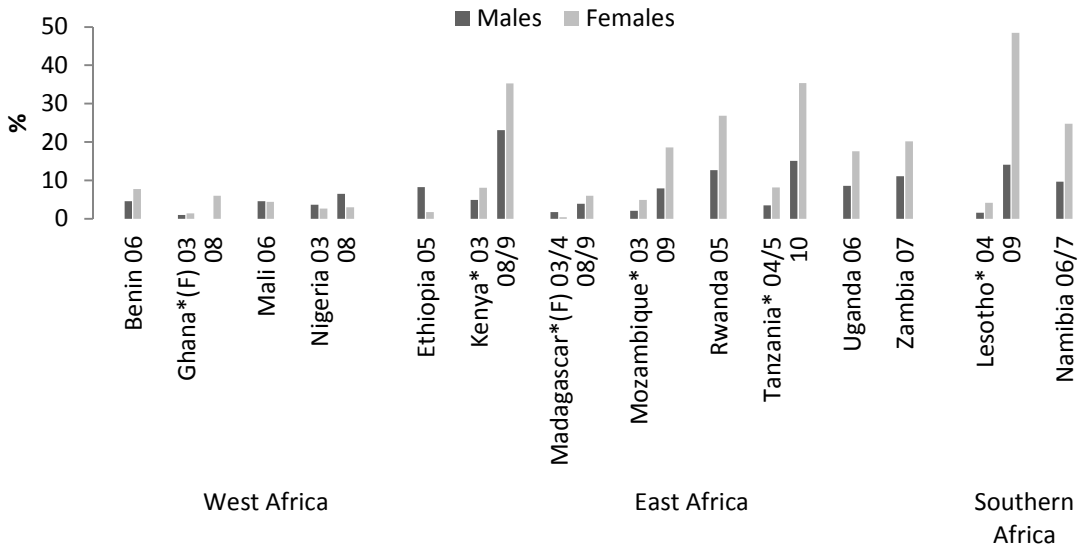
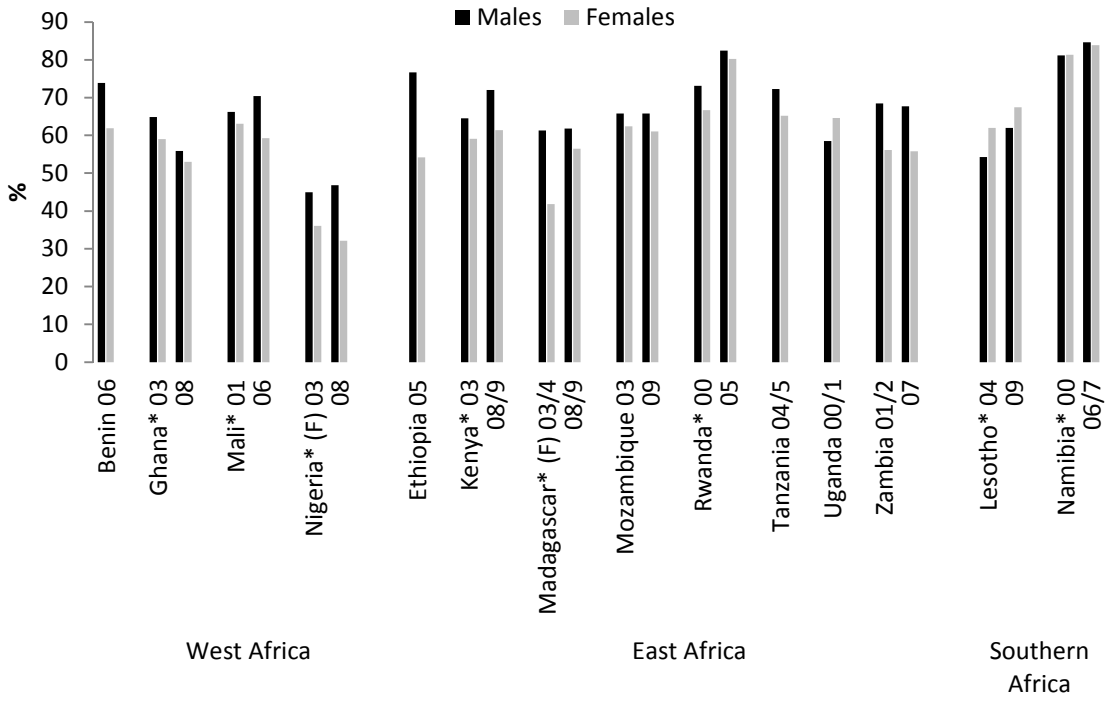


Figure 6: Proportion of adults aged 18-49 years who supported condom education for 12-14 year olds

** Difference over time significant at p<0.05 in both sexes, or only males (M) or females (F)*



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