

Condom use for preventing STI/HIV and unintended pregnancy among young men in Sub-Saharan Africa

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The condom is the only known method that provides simultaneous protection against unplanned pregnancy and some STIs, including HIV, among sexually active people. Using data from the Demographic and Health Surveys (DHS) from 18 Sub-Saharan African countries, this article examines condom use and reasons for using the method at last intercourse among sexually active young men aged 15-29. Most young men were aware of the condom (73-98%), but its use at last intercourse was quite variable, ranging from 6% in Madagascar to 74% in Namibia. In 10 of the 18 countries, young men reportedly used condoms for preventing STIs alone than they did for preventing pregnancy alone. In 6 countries, at least one-third of the users used the method for both purposes. Use of the condom at last intercourse was associated with union status, education, residence and exposure to television in at least two-thirds of the countries.

Keywords: condoms, young men, sexually transmitted infections, HIV, unintended pregnancy, Sub-Saharan Africa

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Introduction

The high pregnancy rates and associated high levels of unintended births, unsafe abortion, maternal morbidity and mortality in sub-Saharan Africa were the original concerns for the low level of contraceptive use in the region. However, since the emergence of HIV/AIDS in the 1980s and its rapid spread in sub-Saharan Africa, the need for contraception that can protect men and women against both unintended pregnancy and STIs, including HIV and AIDS is now one of great urgency. In fact, the statistics on the impact of the HIV and AIDS epidemic alone portray the urgency of the matter. Almost 30 million people are estimated to be living with HIV and AIDS in Sub-Saharan Africa. The rapid spread of the epidemic in the region has also led to the loss of millions of lives, and left many millions of children without parents. It is evident that finding effective means of stemming the spread of this infection is a matter of great urgency. Apart from HIV and AIDS, other sexually transmitted infections (STIs), such as gonorrhea, syphilis and chlamydia are also common in the region. Given this background, the need to promote the use of the condom for disease prevention in sub-Saharan Africa has never been more urgent.

At the current time, for people who are sexually active, the latex condom is the only method that offers effective protection simultaneously against HIV (and some other STIs) and unintended pregnancy. In the light of this fact, a series of policy and program efforts to promote condom use have been initiated worldwide since the outbreak of the HIV epidemic. Despite these extensive efforts, and despite the high levels of risks of infection and unintended pregnancy, the large majority of sexually active people in sub-Saharan

Africa are not using the condom. And, among all contraceptive users, the proportion using the condom is still very low. This is particularly disturbing given that many studies continue to confirm its efficacy when used correctly and continuously (Davis & Weller, 1999).

As a group, young people are particularly vulnerable to HIV infection because of social, cultural, physiological and economic factors (Hersh, Lane & Feijoo, 1998; Ankrah, 1996). About 1 in 3 people living with HIV and AIDS in Sub-Saharan Africa are young people aged 15-24 and half of all new cases of HIV infection are among young people (Kiragu, 2001). Unless the spread of the epidemic is curtailed in the near future, the consequences for youth and the entire population of the region will be devastating. Clearly, the loss of large numbers of young people who are in their productive years poses a great threat to economic and social conditions and to the political stability of many countries in the region (Summers, Kates & Murphy, 2002). Similarly, young men in sub-Saharan Africa, the large majority of who are unmarried, are at risk of impregnating women unintentionally. Most men in the region become sexually experienced in their teenage years, but the large majority of these sexually active young men do not become married until their mid to late 20s. It is estimated that half of men in the region spend about 6 years being sexually experienced while not yet married (Alan Guttmacher Institute, 2003).

Until recently there has been little or no data for analyzing condom use for protection against STIs in sub-Saharan Africa, with the exception of a few small scale surveys that

focus on groups that are perceived to be at risk of STIs. In the past decade, national surveys of men that include young men, have been increasingly implemented in sub-Saharan Africa. These surveys provide comparable information for a large number of countries in the region. These new data allow examination of the behaviors of young men that put them at risk, the extent to which they are engaging in protective behaviors such as use of the condom, and the degree of relationship between these behaviors and young men's socio-economic characteristics.

A further important reason for using these data is the fact that the recent wave of DHS national surveys of men have asked about condom use not only as a method of family planning, but have also used a broader question on condom use that provides information on use for any reason, including disease prevention and family planning. While this question too has its limitations, it is a much more comprehensive measure of condom use. Where the data allow disaggregation by reason for use, it is evident that a broader question obtains information on use other than for family planning. In Ghana, 15% of men aged 15-59 said they used the condom at last intercourse and about half of this group (7%) said they used the method for reason(s) other than family planning (Ghana Statistical Services & Macro International Inc., 1999).

By analyzing differences and similarities and identifying relationships that are in common across countries, a comparative analysis can yield valuable insights and pertinent information needed for controlling the spread of STIs/HIV and reducing the high level of unintended pregnancy in the region. Presenting comparable evidence also affords

countries the opportunity to compare their situation with others. It can also serve as a motivation for countries to collaborate with or seek assistance from each other, when they find that they are facing similar situations or one finds that another has achieved a greater success than it has in some desirable areas, such as increase in condom use and reduction in exposure to the risk of STIs/HIV and unintended pregnancy.

Findings from existing studies indicate that overall use of the condom is quite low in Sub-Saharan Africa: with the exception of a few countries such as Ghana, Kenya, Zambia and Rwanda, less than 10% of men aged 15-59 are using the condom (Curtis & Neitzel, 1996). However, the limited available data show that use of the method varies, depending on men's characteristics, on the type of relationship and on their own perceptions of risk. For example, condom use is much higher among younger men than among their older counterparts. In Ghana, while 12% of all men reported current use of the condom (based on a question concerning pregnancy prevention), 21% of men aged 20-24 are currently using the method compared with only 6% of men aged 40-44 (Ghana Statistical Services & Macro International Inc., 1999). In addition, condom use tends to be more prevalent among groups who engage in behaviors that put them at higher risks of STIs/HIV and unintended pregnancy. Thus, condom use is relatively high among sexually active unmarried men: in Kenya, 47% of men in this category reported using the condom at last intercourse, in 1998, compared to 8% of married men (National Council for Population and Development (NCPD), Central Bureau of Statistics (CBS) (Office of the Vice President and Ministry of Planning and National Development)[Kenya], & Macro International Inc. (MI), 1999). Also, in Kenya, among men who reported having a

sexually transmitted disease during the 12 months prior to the survey in 1998, 10% said they used condoms in order to avoid infecting their partner(s) (National Council for Population and Development (NCPD), Central Bureau of Statistics (CBS) (Office of the Vice President and Ministry of Planning and National Development)[Kenya], & Macro International Inc. (MI), 1999)

Building on existing knowledge, this paper examines differences in condom use according to sexual risk behavior and social and demographic characteristics that are linked to risks of STIs/HIV and unintended pregnancy and to protective behaviors including condom use. These include age and union status; patterns of sexual behavior and types of relationships; and place of residence and educational attainment. We also include current school attendance status for adolescent men in some analyses, because it is a factor that is relevant for developing interventions to provide information to young people. In addition, we examine the relationship between exposure to the media (radio and television) and condom use, because these are potential mechanisms for providing information to men regarding HIV/STI and unintended pregnancy prevention. For countries for which data is available, we examine reasons that young men give for using the condom and how these vary by their socio-demographic characteristics.

This paper focuses on young men aged 15-29 as a population group that is at very high risk of STIs/HIV, and as a group that contributes significantly to the high rate of unintended pregnancy among young women, but one whose situation has been relatively poorly documented until recently. Young women are also a group at very high risk and

are even more severely affected by the epidemic - HIV prevalence rates are two times or more as high among young women as among young men – and by consequences of unintended pregnancy and births, such as unsafe abortion and school drop-out (Joint UN Programme on HIV/AIDS (UNAIDS), 2000). However, we focus on young men because we can use newly available data to increase understanding of the situation of this group vis-à-vis HIV and unintended pregnancy risks and prevention, and to contribute to an improved awareness of young men's needs in the areas of information and health care services. The purpose of this paper is to examine condom use among young men in sub-Saharan Africa, using these newly available data, to both increase knowledge of the behaviors of young men as they relate to risks of STIs/HIV infection and unintended pregnancy, and to provide information to guide and inform policy and program in respect to young men's need for information and services.

Specifically, the paper will try to answer the following questions:

- What proportion of sexually active men aged 15-29 is using the condom for any reason?
- What factors are associated with condom use among these men?
- What proportions of these men are using the condom for STIs/HIV prevention, for pregnancy prevention and for both purposes.
- How do reasons for using the condom vary by young men's socio-demographic characteristics?

Data Source and Methodology

Data used for this paper come from the Demographic and Health Surveys among men of reproductive age, conducted by Macro International between 2000 and 2006 in 22 sub-Saharan countries. The countries were selected mainly on the basis of data availability, but their geographic spread covers the various sub-regions of sub-Saharan Africa.

The age range of surveyed men varies somewhat from country to country, with a starting age of 15 and a maximum age between 59 and 64. All countries included here surveyed men aged 15-29. We included a broader age-range than some studies of young men (often men 15-24 are the ones considered when focusing on youth), because men experience many of the same risks and needs at ages 25-29 as at ages 20-24, and in addition for the practical reason, to ensure that we have a sufficiently large sample of young men in all countries. The sample size (unweighted number of interviewed men 15-29) ranges from 1037 in Gabon to 4,448 in Zimbabwe (see Table 1).

Unlike the previous waves of DHS surveys which in most countries obtained use of the condom for family planning purpose, the recent series of DHS surveys, as part of the efforts to provide information that is relevant for understanding risk for HIV/STIs and extent of prevention, have included questions on use of the condom for any reason (that is, including protection against pregnancy and against STIs). For all of the 18 countries included in the paper the surveys obtained information on use of the condom at last sexual intercourse for any reason (Table 3), providing the measure that is the focus of analysis for this paper – use of the condom at last sex in the last 12 months.¹ It is

programmatically relevant to know what young men state as their reason(s) for using the method. This information is available in all 18 countries included in this study. In these surveys, respondents who reported condom use at last intercourse were asked “What was the main reason you used a condom on that occasion?”² For these countries, we present the proportions of sexually active young men who used the condom at last intercourse for either or both purposes. In Ethiopia, Rwanda, Uganda and Zimbabwe, information on reason for condom use at last intercourse was not available in the most recent surveys (2005-2006). In all four countries, analysis of this information was based on information from the penultimate DHS surveys (1999-2001).

Data were obtained on men’s sexual behavior and the number of sexual partners during the 12 month period prior to the survey for married and unmarried men. In this paper, we define “married” to include all forms of marriage or union (sanctioned by law or custom, or living together (cohabiting or consensual union); monogamous or polygynous).

Unmarried men are asked about the number of sexual partners they had during the past year, and married men were asked about the number of sexual partners other than their spouse (or in the case of men in polygynous unions, other than their wives). A key measure of risk for STIs/HIV infection is having 2 or more partners in a relatively short period of time, typically defined to be one year. For married men, this measure is defined to be having one or more extramarital partners in the past year (a spouse and one or more extramarital partners); for unmarried men, the measure is more straightforward, and is equivalent simply to having reported 2 or more sexual partners in the past year.

These DHS surveys also obtained information on a number of characteristics of the respondents, including age, union status, residence, education, school attendance status and exposure to the radio and television. The measures of exposure to radio and television are presented as dichotomous variables: the one on exposure for radio takes on a value of 1 if a man listened to radio daily and 0 otherwise - while the other, on exposure to television, is assigned the value of 1 if a man watched television at least once a week and 0 otherwise. We examine how these background or antecedent variables, as well as the more proximate variable, number of partners, affect reasons for using the method. In addition to bivariate analyses of condom use by selected sub-groups, the net associations of the explanatory variables on reason for using the condom at last intercourse were examined. To determine the predictors of reason for using the condom at last intercourse, a multinomial logit model was estimated because the dependent variable has four categories: did not use, used for STI prevention only, used for pregnancy prevention only and used for both purposes.

All estimates presented in this paper are weighted national estimates. For the regression results, significance tests were conducted to ascertain the statistical significance of the net effects of covariates of condom use at last intercourse. Significance is indicated at the .01, .05 and .10 levels, using two-tailed tests. The standard errors of the estimates were computed using the “svy” procedure in STATA to account for the complex nature of the sampling method used in selecting respondents for the surveys (Stata Corp, 2003).

Results

Background characteristics

The context of men's lives is germane to understanding their attitudes and perceptions about life as well as their behaviors, including those related to their sexual and reproductive health. For example, younger men are likely to have more than one sexual partner in the past year and also more likely to use condoms, compared to older men. Similarly, urban residents are likely to have better access to condoms, and higher education is likely to be linked to better knowledge of the need and ways (including condom use) to prevent STIs/HIV and unintended pregnancy. Higher education is also likely to be associated with higher income and thus better access to condoms. Being in school is linked to greater access to sexual health information, including use of condoms and being in or out of school is relevant for designing and targeting sexual and reproductive health information and services to adolescents. Being in union is associated with a reduced likelihood of risky sexual behavior as well as a lower likelihood of using the condom. Although exposure to mass media is a behavioral characteristic, we include it in this study because of its positive association with access to sexual and reproductive health information and services. We used two variables - whether or not young men listened to radio and to television frequently – as measures of media exposure.

We present in Table 1 the distribution of selected characteristics of men 15-29 that are included in this study as background to later examination of the relationship between men's characteristics and their use of (and need for) the condom. As expected, given that the older age-group spans 10 years (20-29) compared to the 5-year span of the adolescent

group (15-19), a larger proportion of the study population of men 15-29 are in their 20s: ranging from 53% in Burkina Faso to 66% in Madagascar (Table 1, Column 1). In most countries the majority of men 15-29 live in rural areas, and two-thirds or more of men live in rural areas in 16 of the 18 countries. In Gabon and Rwanda 82-83% of men 15-29 are living in urban areas (Table 1, Column 3). Countries show a wide range of educational attainment: in several countries, less than 25% of young men have some secondary schooling or higher, and in a few (Gabon, Ghana, Nigeria and Zimbabwe), 64-72% have this level of education (Table 1, Column 6). Reflecting the fact that in most countries in the region men marry in their mid to late 20s, less than half of 15-29 year-old men are married or in a union in the vast majority of the countries. (Table 1, Column 8). In six countries, however, (Ethiopia, Madagascar, Malawi, Rwanda, Senegal and Uganda) 50% or more young men are in a union by the age of 29. At least half of young men 15-29 reported listening to the radio daily in 13 out of the 18 countries (Table 1, Column 9). Fewer young men had access to the television compared to the radio. The proportion who reported watching television at least once a week is 50% or more only in four countries (Gabon, Ghana, Nigeria and Rwanda). This proportion is less than 15% only in Ethiopia and Uganda. (Table 1, Column 10).

Sexual Behavior

Proportion who ever had sexual intercourse: Although only a tiny proportion (0.2-6%) of men 15-19 are married or in a union, a substantial proportion have had sexual experience. Among those who are not in union, one-third or more have ever had intercourse in 11 of the 18 countries and at least half have done so in 7 of the 18 countries

(Table 2, Column 1). By age 20-29, the proportion of men who are in union has increased, but the majority is still unmarried. (Table 2, Column 5). The proportion in union in this age bracket ranges from 20% in Namibia to 63% in Mozambique. The majority of unmarried men 20-29 in all countries are sexually experienced with exception to Ethiopia where only 30% of them have ever had sex.

Proportion Sexually Active in Recent Period: While it is safe to assume that married men are sexually active, the same cannot be said of unmarried men who have ever had sex, especially the younger ones. It is not uncommon for adolescent men to have sex only sporadically after the first experience (Singh & Bankole, 2001). A measure of recent sexual activity is, therefore, more relevant to the assessment of service needs than that of ever having had intercourse. We assume that men who are in union are currently sexually active, and present measures of recent sexual activity only for men who are not in union. Both in terms of the proportion of men who had sex in the last 12 months and in the last 3 months, the proportion of 15-19 year-old men who are sexually active varies greatly across countries and is relatively low, compared to unmarried men in their 20s (Table 2, Columns 3 and 4 versus 7 and 8). For example, the proportion of 15-19 year-old unmarried men who had sexual intercourse in the 12 months prior to the survey ranges from 4% in Ethiopia to 67% in Gabon (Table 2, Column 3). However, among men 20-29 not in union, a majority of them (53-90%) have had sexual intercourse in 13 of the 18 countries in the past 12 months, and at least 40% have had sex in the 3 months prior to the survey in 14 countries (Table 2, Column 8).

Number of Sexual Partners: Although some societies are more permissive than others in terms of sexual behavior, some men in all societies have two or more sexual partners in a one-year period, in some cases simultaneously or with some overlap in relationships. Having a number of sexual partners close together is believed to be risky, as it tends to promote the transmission of STIs, especially when effective protection is not used correctly and in every act of intercourse. Furthermore, it is evident from other studies that some of these multiple partners are those who themselves engage in sex with other men such as commercial sex workers (Messersmith, Kane, Odebiyi & Adewuyi, 2000).

Among men 15-29, we examine the number of sexual partners (for men who are not in union) and the number of extra marital partners (for men in union) in the 12 months before the survey. Having multiple sexual partners within a one year period is common among young men who are not in union: 20% or more have multiple partners in 10 of the 18 countries. The proportion that had 2 or more sexual partners ranges from about 2% in Rwanda to about 39% in Mozambique (Table 2, Column 9). Among men who are in union, the proportion with one or more extra marital partners in the last 12 months is relatively low in Ethiopia, Malawi and Rwanda (2 – 9%), however in Benin, Gabon, Mozambique, Namibia, Senegal and Tanzania more than 30% of men in union have had recent extramarital relations (Table 2, Column 10).

Given this background of a high level of sexual activity and multiple partnerships, especially among young unmarried men it is important to examine how men protect themselves against unintended pregnancy and STIs. The remaining part of this paper is

devoted at looking at men's use of the condom and reasons for using the method at last intercourse.

Knowledge and use of condoms at last intercourse

Knowledge of the condom: Many studies have shown that most men of all ages tend to know about modern methods of contraception, including the condom (Curtis & Neitzel, 1996). As the saying goes, "knowledge is power". First and foremost, whether or not an individual uses the condom depends on his or her knowledge about the method.

Therefore, as a background to understanding condom use among young men, the level of knowledge is presented for men 15-29. This measure is based on a question that captures awareness of the method, but does not necessarily measure knowledge of how to use a condom. Knowledge about the condom is very high among young men (Table 3, Column 1). At least 90% reported awareness of the method in 12 countries and at least 80% did in 5 countries. The lowest proportion of men 15-29 with knowledge of the condom is 76% in Madagascar.

Use of condoms at last intercourse: Due to frequent discontinuation or switching of methods among couples, far fewer men tend to be using a method at a particular time or period than have ever used the method. The condom is not an exception, as data on use of the condom at last intercourse in the 12 months prior to the survey shows (Table 3). This measure gives a more realistic picture of protection that the condom provides at a given point in time than does ever use of the method.

The proportion of young men 15-29 who were sexually active in the past year who used the condom at last intercourse in the last 12 months is quite low in a few countries: It ranges from 6–13% in Madagascar, Ethiopia and Rwanda (Table 3 Column 2). However it is moderate in the majority of the study countries (20–46%) and quite high in a few countries: Burkina Faso (56 %) and Namibia (74%) (Table 3, Column 2).

Differences in proportions using the condom at last intercourse across subgroups are generally large and they are in the direction that might be expected. Adolescent men are more likely to be using the method (by at least 5 percentage points, but often much more) than men in their 20s in 12 out of the 18 study countries (Table 3, Columns 3 and 4). In all countries with the exception of Benin, Gabon, and Mali young men who are not in union tend to use condoms more than their counterparts who are in union (Table 3, Columns 5 and 6).

Reasons why young men use the condom

Condoms provide dual protection against HIV (and some other STIs) and unintended pregnancy, when used correctly and consistently. For program purposes it is therefore useful to know the reason why people use the method. Stated reasons for using the method may help program people to better understand the nature of the sexual and reproductive health needs of people and how to meet such needs. For example, if people indicate that they use the method for disease prevention more than for pregnancy prevention, this could lead providers to find ways to make the condom more suitable for those who are at risk of contracting STIs. In this section we examine reasons that young men gave for using the condom at last sex in 18 countries for which relevant data are available.

Table 4 presents the percentage distribution of sexually active men 15-29 according to reason for using the method. The analysis excludes a few men who did not indicate the reason or reported that they used the condom at last intercourse because the partner insists or they did not trust the partner. In 12 out of the 18 countries, a higher percentage of young men aged 15-29 report condom use for disease prevention only rather than for pregnancy prevention only (Table 4, Columns 2 and 3). The difference is particularly high in Namibia where 36% of sexually active men use condoms for disease protection only compared to 6% who use them for family planning purposes only. In five countries the two proportions are about the same (Benin, Kenya, Madagascar, Senegal and Zimbabwe), while in Ghana more men use condoms for pregnancy prevention only. In four countries, men 15-29 are as likely to report condom use at last intercourse for

pregnancy prevention only as for both purposes (Ghana, Madagascar, Mali and Uganda) (Table 4, Columns 3 and 4). In only four countries (Burkina Faso, Kenya, Mozambique and Senegal), more men use the condom for dual protection rather than disease or pregnancy prevention only (Table 4, Column 4).

Men in their 20s are almost equally likely to report condom use for disease prevention only and for pregnancy prevention only in 7 of the countries (Benin, Burkina Faso, Madagascar, Malawi, Mozambique, Senegal and Zimbabwe). In the other countries - with the exception of Ghana and Kenya where more men use the condom for pregnancy prevention only - use of the condom at last sex among this group of men is more prevalent for disease prevention only than for pregnancy prevention alone. In three countries (Burkina Faso, Kenya and Senegal) noticeably more men use the condom for dual protection than for one reason only (Table 4, Column 12). However, the percentage of men who did not use the condom at last intercourse is consistently higher in the 20-29 age group compared to the adolescent group, except in Namibia, Nigeria and Senegal where non-use is the same in both age groups. (Table 4, Columns 5 and 9) More adolescent men use the condom for STI prevention only in 10 of the 18 countries while in four countries (Benin, Ghana, Senegal and Zimbabwe) more adolescents use it for contraceptive reasons. In nearly all countries, except Nigeria, a higher percentage of men aged 15-19 compared to men 20-29 used the condom for dual protection. (Table 4, Columns 8 and 12)

As noted earlier, having extra-marital sexual relationships or having more than one sexual partner (among unmarried young men) is not uncommon in sub-Saharan Africa. In a region where the rapid spread of the HIV pandemic is believed to be mostly through unprotected sexual contact, this behavior is believed to expose men and their partners to the risk of STIs/HIV (Craael, Cleland & Ingham, 1994). Along the same line, there is a positive association between having unprotected sexual intercourse with multiple partners and the risk of unintended pregnancy. Therefore, men who have multiple partners will be expected to use the condom in order to protect themselves and/or their partners from both or either of the risks of STIs/HIV and unintended pregnancy. We have shown in Table 4 that this is in fact the case: young men who have extramarital sex or have more than one sexual partner in the 12 months preceding the surveys are more likely to use the condom at last intercourse than those who have one or had no extra marital partner. However, one cannot conclude from the evidence in Table 4 that men who are at greater risks are more likely to use the method for both or for only one of these purposes than those who are not. This analysis of reason for using the method helps to determine this situation.

Table 5 presents reasons for using the condom at last intercourse among men 15-29 by whether or not they engaged in sex with multiple or extra marital partners in the 12 months before the survey. The pattern of reporting across reasons noted in Table 4 for all men 15-29 and for both age groups is also reflected in this case: in most of the countries, young men, whether or not they have multiple partners, are more likely to report using the condom at last intercourse for disease prevention as compared to pregnancy prevention. However, important differences exist between the two groups. With the exception of

Benin, Ghana and Senegal, men who had multiple or extra-marital partners tend to report condom use at last sex for disease prevention only more than those who used condoms for family planning purposes only (Table 5, Columns 2 and 3) . In 7 out of the 15 countries in which this is true, the percentage that reported use of the method for disease prevention only is more than twice as high as the proportion that reported use for pregnancy prevention only.

As expected, men whose partner was the wife/fiancée or girlfriend at last intercourse report less use of condom than men whose partner was a casual friend or sex worker. (Table 6, Columns 1 and 5). However, men with a steady partner still reported STI prevention more often than pregnancy prevention as the reason for condom use in several countries, most notably in Namibia and Mali (41% v 5% and 16% v 4%), Only in Burkina Faso, Kenya and Mozambique did the highest proportion of men with steady partners use condoms for dual protection. (Table 6, Column 4). In all countries but Ghana, condom use as a STI prevention only was reported more than pregnancy prevention only among men with a casual partner. In 3 of the 18 countries (Ghana, Kenya, and Senegal), the highest percentage of men with a casual partner used a condom for dual protection. (Table 6, Column 8)

Multivariate analysis of predictors of reasons for using the condom

For 17 countries for which information is available, the number of cases in the four categories of the measure of reason for using the condom at last sex is large enough to

allow a multinomial model with four categories of the dependent variable. Table 7 presents the relative risks of the effects of characteristic and behavioral variables on reason for using the condom at last intercourse. In the majority of the countries, 4 out of the 7 independent variables included in the model emerged as strong predictors of reason for condom use at last intercourse (Table 7): Union status, educational attainment, exposure to television and number of partners. For lack of space, the description of the findings will focus on these four factors. Number of partners is a strong predictor of reason for using the method in 10 out of the 17 countries (Table 7, Panel 1). In Burkina Faso, Kenya, Rwanda, Senegal, Tanzania, Uganda and Zimbabwe, men 15-29 who have multiple or extra marital partners in the last year are twice to nearly nine times more likely as their monogamous counterparts to use the condom for disease prevention only than to not use the method at all. Similarly, in Burkina Faso, Mali, Senegal and Uganda,, young men who have multiple or extra-marital partners are three to nearly seven times as likely as those who do not to use the method for pregnancy prevention only than to not use it at all. Also in Burkina Faso, Kenya, Senegal, Tanzania and Uganda, engaging in multiple sexual relationships predisposes a young man to using the condom for both disease and pregnancy prevention than to not use the method.

Educational attainment is another important determinant of reason for condom use at last intercourse (Table 7, Panel 4). The effect of this variable is significant in all countries but Madagascar and Rwanda,; In at least 3 of these countries (Benin, Namibia and Zimbabwe), men with secondary or higher education are more likely than their counterparts with less than secondary education to use the method for either as well as

both purposes than to not use the method. In 8 countries, men with secondary education or higher are about 2 to 4 1/2 times as likely as their counterparts with less than secondary education to report using the condom for disease prevention only than to not use the method. In 11 countries, more educated men are also about 2 to 6 times as likely as less educated men to use the method for pregnancy prevention only than to not use it at all. Similarly, in 12 countries, more educated men are from about 2 to nearly 9 times as predisposed as less educated ones to using the condom for both purposes than to not use it at all.

Union status is the strongest predictor of reason for condom use at last intercourse (Table 7, Panel 5). In 16 of the 17 countries, men who are in union (married or living together with a woman) are at least 4 times less likely than their counterparts who are not in union to use the condom for disease prevention only than to not use the method. In 8 countries (Ghana, Kenya, Malawi, Mozambique, Rwanda, Senegal, Uganda and Zimbabwe), men in union were 2 to 19 times less likely than those who are not in a union to use the condom for pregnancy prevention only than to not use the method. Again, in all countries but two (Nigeria and Burkina Faso), being in union makes it considerably less likely (at least 4 times) to use the method for both disease and pregnancy prevention than to not use it at all. In Burkina Faso, men in a union are more than 2 times more likely to use a condom for dual protection than not to use it. (Table 7, Panel 5, Column 3)

The last of the prominent determinants of reason for condom use at last intercourse is exposure to television (Table 7, Panel 7). In 6 of the 17 countries, men who watch the

television at least once a week are about 2 to 5 times more likely than men who are not regularly exposed to the television to use the condom for disease prevention only compared to not using the method. Only in Senegal young men who are exposed to television are significantly less likely to use the method than not to use it. (Table 7, Panel 7, Column 1) In Madagascar, Malawi, Mali, Mozambique, Namibia and Nigeria men who watch television are 2 to 5 times as likely as those who do not to use the method for pregnancy prevention only than to not use it at all. Again, only in one country, Zambia, television exposure results in significantly less use for pregnancy prevention than not using the method. (Table 7, Panel 7, Column 2). In Burkina Faso, Gabon, Madagascar, Malawi and Mozambique regular exposure to television predisposes young men to using the condom (about 2 to 6 times more likely than those with no or little exposure) for both disease and pregnancy prevention than to not use the method.

The effects of the other three variables – age, residence and exposure to the radio - are each significant in more than half of the countries. The effect of age is significant in 10 of the 17 countries (Table 7, Panel 2). For example, in Senegal, men in their 20s are about 3.5 times as likely as adolescent men to use the condom for disease prevention only and about twice more likely for both purposes than to not use the method. In Malawi, 20-29 men are over 4 times more likely than adolescents to use the method for pregnancy prevention only than not to use it. Similarly, in Nigeria, the older men are nearly 4 times more likely to use a condom for dual protection than not to use it. The effect of residence is strong in Benin, Burkina Faso, Madagascar, Mozambique, Nigeria, Rwanda, Senegal and Uganda (Table 7, Panel 3). In Rwanda, urban residents are nearly 9 times more

likely than their rural counterparts to report condom use for pregnancy prevention only as well as nearly 4 times more likely for dual protection than to not use the method. In Burkina Faso, urban residence predisposes young men to using the method for both disease and pregnancy prevention only and for dual protection than to not use it at all. Frequent exposure to the radio is a significant predictor of reason for condom use in many countries (Table 7, Panel 6) but less often than exposure to television. For example, only in Uganda and Gabon, young men who listen to the radio are more likely to use the condom for pregnancy prevention only than not to use it.

Discussion

With the current high prevalence of HIV in sub-Saharan Africa, the need to understand more about the factors that are associated with adopting behaviors that are capable of preventing HIV/STIs is unquestionable. Until vaccines against HIV/AIDS are developed, their efficacy established and they become widely available and used, attempts to stem the spread of HIV in the region must include efforts to promote correct and consistent use of the condom among sexually active people. Furthermore, the fact that condom, when used appropriately, also offers effective protection against pregnancy makes it an ideal method to promote in sub-Saharan Africa where unintended pregnancy, especially for women at both ends of the childbearing age, is also a major reproductive health concern.

Findings from this paper indicate that the majority of young men aged 15-29 in sub-Saharan Africa have initiated sexual intercourse, a substantial proportion of them

continue to be sexually active, and most sexually active young men are not in a union. Furthermore, many men have had two or more sexual partners in the past year, thereby putting themselves and their partners at increased risk of contracting and transmitting STIs. Not only that, having more than one sexual partner puts a man also at a greater risk of contributing to the high level of unintended pregnancy in the region. It is evident from the findings presented here that the need for protection against STIs and unintended pregnancy among men in this region is real. It is for this reason that condom use (C) is currently widely promoted as one of the three components of the ABC approach to HIV prevention – the other two being abstinence (A) and mutual monogamy (B, for be faithful). Or alternatively as a single method that simultaneously offers dual protection – against STI and unintended pregnancy (Smith, McFeyden, Harrison & Zuma, 2002; Adeokun, Mantell, Weiss, Delana & Jagha, 2002).

Findings from this paper indicate that most young men in sub-Saharan Africa know about the condom as a method of family planning. Other sources have indicated that knowledge of condom use for STI/HIV prevention is also high (Bankole & Singh, 2001). However, the well-known demographic concept termed the KAP-gap is clearly evident in regard to condom knowledge and use. While most young men know about the condom in all of the study countries, in all but two of these countries (Burkina Faso and Namibia) the majority of those who are sexually experienced have not used the method at last intercourse in the last 12 months. This is a matter for concern in a region where the transmission of HIV is spreading rapidly, and where the risk of contracting other STIs or the risk of experiencing unintended is also very high.

One positive finding, however, is that young men who are more at risk of contracting or transmitting STIs or experiencing unintended pregnancy, by having sexual intercourse with two or more partners, are more likely to use the condom than men who have had one partner in the past year. This suggests that these men are probably aware of these risks and are trying to minimize its occurrence by using the method to protect themselves and /or their partners. For example, a number of studies have found that while use of the condom is hardly tolerated within marriage or in a steady relationship, it is more frequently used in extra marital or casual relationships - to prevent STIs or unintended pregnancy (Maharaj, 2001).

The fact that those who need the condom for disease and pregnancy prevention are more likely to be using the method indicates that the effort to promote the understanding that condom protects against STIs and/or unintended pregnancy is working at least to some extent, in terms of making the information and/or the method available. Furthermore, that evidence from men's stated reasons for using the condom also confirms that those who are more at risk of STIs and/or unintended pregnancies are more likely to report using the method for both purposes and those who are less at risk is reassuring. But this good news does not disguise the fact that many men who need the condom are not using it. This is evident from the fact that 39 to 94% of men 15-29 did not use the method at last intercourse (Table 4, Column 1). Men who continue to have unprotected intercourse can contribute significantly to the continued spread of the HIV epidemic and unintended

pregnancy. Furthermore, among those who are using the condom, it is not known how correctly or consistently these men are using the method. More concerted effort is, therefore, needed to get more young people to use the method. Research is needed to find out more about the extent of incorrect and inconsistent use, in order to assess need for programs and information to improve men's knowledge of how to use the condom.

Several reasons have been advanced for non-use of the condom: these include the perception that the condom is supposed to be used in extra-marital relationships and that condom use reduces sexual pleasure and that it may cause men to lose an erection (Ghana Social Marketing Foundation et al., 2000). Others have complained about the cost of obtaining the method as well as its accessibility. Some attach embarrassment and shame to going to the store to buy condoms. All these factors must be critically examined with a view to addressing them. In the case of accessibility, a lot can be done on the information side to assure people that it is all right to buy condoms and to educate providers to be sensitive, tolerant and friendly. It is not very clear how much cost is an issue in sub-Saharan Africa, but a report from 2001 suggests that condoms may be in short supply in the region (Shelton & Johnson, 2001). The report indicates that the overall provision of condoms was about 4.6 per man aged 15-59 per year. According to the report, if the supply in the 6 countries with the highest levels, which amounts to an average of about 17 condoms per man, is taken as the standard for the entire region, another 1.9 billion condoms will need to be made available per year. Both donors and national governments should continue to make effort to make the condom available in these countries. As noted by Shelton and Johnson (2001) "Relative to the enormity of the HIV/AIDS pandemic in

Africa, providing condoms is cheap and cost effective. All aspects of HIV control are important, but a first priority must be prevention”.

This paper shows substantial differentials in the prevalence of condom use as well as reason for using the method across socio-demographic sub-groups. The association is particularly striking for education, union status, number of partners and exposure to either television or radio. Therefore, more efforts to promote change in behavior especially among groups with very low use and high risk of HIV/STI and/or unintended pregnancy, including condom use for those who choose to be sexually active, are clearly needed. Policy makers and service providers in each country should pay more attention to identifying the sub-groups who need special attention, as the situation varies across countries.

Education remains a powerful force for changing behavior (Ankrah, 1996). For example, young men who are in school have better access to sexual and reproductive health information and services and they are less likely than their counterparts who are out of school to have multiple partners and more likely to use the condom. Efforts that are ongoing in most countries to increase educational attainment will clearly also benefit young men's health, and school-based programs about HIV/STI and unintended pregnancy prevention provide a mechanism for further improving the preventive behaviors of in-school youth. In addition, however, policy makers need to pay particular attention to providing information and improving access for the out-of-school group of adolescents. Along these same lines, the provision of IEC through all forms of media should be encouraged and promoted. The targeted use of the radio and television is an important

option given that these media are linked to higher condom use in many of the study countries. This finding suggests that the radio and television are potentially useful means for increasing knowledge and for changing attitudes and behavior.

¹ The two questions that elicit this information are: “When was the last time you had sexual intercourse?” “The last time you had sexual intercourse, was a condom used?”.

² The response categories provided were: “own concern to prevent STD/HIV”, “own concern to prevent pregnancy”, “own concern to prevent both STD/HIV and pregnancy”, “did not trust partner/feel partner has other partners”, “partner insisted” and “don’t know”.

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Table 1. Percentage distribution of men aged 15-29 by country according to selected background characteristics: DHS, 2000-2006

Country	Year of Survey	Age		Residence		Educational attainment		Union status ^a		Media exposure		Total	
		15-19	20-29	Urban	Rural	None/primary	Secondary+	Not in union	In union	Listen to radio daily	Watch TV weekly	Unweighted #	
												15-19	20-29
Benin Republic	2001	37	63	44	56	67	33	72	28	61	40	494	849
Burkina Faso	2003	47	53	26	74	78	22	78	22	49	36	878	1,019
Ethiopia	2005	43	58	15	84	80	20	43	57	27	11	1,278	1,869
Gabon	2000	38	62	82	18	28	72	80	20	88	70	422	615
Ghana	2003	44	56	48	52	31	69	79	21	72	57	1,095	1,419
Kenya	2003	42	58	25	75	67	33	78	22	78	40	829	1,188
Madagascar	2004	34	66	24	76	65	35	37	63	51	27	414	772
Malawi	2004	35	65	21	80	72	19	36	64	72	19	650	1,200
Mali	2001	42	58	39	61	76	24	76	24	58	42	670	884
Mozambique	2003	46	54	49	51	79	21	64	36	73	30	681	815
Namibia	2000	40	60	40	60	43	57	87	13	56	43	640	1,003
Nigeria	2003	38	62	39	61	36	64	83	17	64	53	453	777
Rwanda	2005	41	59	83	17	88	12	48	52	45	55	1,070	1,598
Senegal	2005	44	56	44	56	70	30	50	50	82	48	1,008	1,131
Tanzania	2004	42	58	28	72	89	11	72	28	56	27	675	856
Uganda	2006	44	56	17	84	70	30	43	58	66	14	582	748
Zambia	2002	39	61	41	59	57	43	68	32	36	34	475	699
Zimbabwe	2006	43	57	41	59	29	71	52	48	47	44	1,978	2,470

a = In union refers to men who are legally married or are living together with a female partner, while not in union include men who were formerly married or never married men

Table 2. Measures of sexual experience and current sexual activity by union status, men 15-29

Country	15-19			20-29			15-29	
	% currently in union ^a	Not in union		% currently in union	Not in union		Of sexually experienced men not in union, % who had 2+ partners in the last 12 months	Of men in union, % who had extra-marital sex in the last 12 months
		% ever sexually active	% had sex in the last 12 months		% had sex in the last 3 months	% ever sexually active	% had sex in the last 12 months	
Benin Republic	1	51	40	44	33	88	76	30
Burkina Faso	1	26	22	40	17	71	56	22
Ethiopia	2	5	4	41	2	30	16	4
Gabon	2	77	67	30	59	95	89	30
Ghana	1	19	14	37	11	72	53	15
Kenya	1	50	29	37	21	86	59	17
Madagascar	6	41	38	56	35	81	75	34
Malawi	2	51	33	62	25	82	56	11
Mali	1	34	24	41	21	79	65	21
Mozambique	5	67	61	63	54	96	90	39
Namibia	2	64	45	20	36	96	79	21
Nigeria	1	24	17	27	13	62	50	26
Rwanda	0	23	5	36	3	53	17	2
Senegal	6	27	18	31	12	61	35	13
Tanzania	1	47	33	48	23	85	66	25
Uganda	2	34	20	54	15	83	56	16
Zambia	2	63	44	51	36	91	72	24
Zimbabwe	0	27	18	40	13	74	50	14
								16

a = In union refers to men who are legally married or are living together with a female partner, while not in union include men who were formerly married or never married men.

Table 3. Knowledge and use of condoms among men 15-29, by country, according to age and union status

Country	% of 15-29 year old men who know about the condom	% of sexually active men who used condoms at last intercourse				
		15-29	Age		Union status ^a	
			15-19	20-29	Not in union	In union
Benin Republic	94	25	34	23	11	34
Burkina Faso	89	56	57	56	67	39
Ethiopia	85	12	30	10	45	2
Gabon	98	41	47	39	21	47
Ghana	97	34	46	32	49	16
Kenya	96	31	39	29	48	5
Madagascar	73	6	11	5	11	2
Malawi	94	24	34	22	48	9
Mali	86	20	22	20	7	30
Mozambique	97	22	29	19	35	6
Namibia	99	74	56	81	74	71
Nigeria	88	31	31	31	45	8
Rwanda	96	13	36	11	42	1
Senegal	88	44	43	44	56	30
Tanzania	94	32	38	30	49	11
Uganda	97	29	46	25	53	10
Zambia	96	30	32	30	43	15
Zimbabwe	98	39	53	37	68	8

a = In union refers to men who are legally married or are living together with a female partner, while not in union include men who were formerly married or never married men.

Table 4. Percent of currently sexually active^a men 15-29, who used the condom at last intercourse by country, according to age and reason for using the method

Country	Year of survey	15-29				15-19				20-29			
		% who used condom for:				% who used condom for:				% who used condom for:			
		% who did not use condom	STI prevention only	pregnancy prevention only	both STI & pregnancy prevention	% who did not use condom	STI prevention only	pregnancy prevention only	both STI & pregnancy prevention	% who did not use condom	STI prevention only	pregnancy prevention only	both STI & pregnancy prevention
Benin Republic	2001	75	9	10	7	66	10	16	7	77	8	8	6
Burkina Faso	2003	52	14	9	25	40	20	4	36	55	13	11	22
Ethiopia ^b	2000	89	8	0	2	75	20	0	5	91	7	1	2
Gabon	2000	61	18	8	13	55	18	10	18	63	18	7	12
Ghana	2003	66	4	15	14	55	7	18	20	67	4	15	14
Kenya	2003	71	4	6	18	62	5	5	28	74	4	7	16
Madagascar	2004	94	1	2	2	89	3	3	4	95	1	2	2
Malawi	2004	76	11	7	5	66	24	3	6	79	8	8	5
Mali	2001	80	11	4	4	78	14	4	5	81	10	4	4
Mozambique	2003	79	7	4	10	72	11	4	13	82	4	5	8
Namibia	2000	39	36	6	19	40	28	10	21	39	39	4	18
Nigeria	2003	69	13	7	11	69	12	10	9	69	13	6	12
Rwanda ^b	2000	83	9	2	6	60	23	2	15	86	7	2	5
Senegal	2005	57	8	9	26	57	5	10	28	57	9	8	26
Tanzania	2004	70	17	4	9	65	24	3	9	72	15	4	7
Uganda ^b	2001	74	14	6	6	59	23	6	12	78	12	6	4
Zambia	2002	72	16	8	4	68	21	4	7	73	14	10	3
Zimbabwe ^b	1999	58	15	16	12	42	19	23	15	61	14	14	11

a = Currently sexually active refers to those who had sexual intercourse in the last 12 months before the survey.

b = Data on reason for condom use at last intercourse is not available for the most recent surveys in Ethiopia (2005), Rwanda (2005), Uganda (2006) and Zimbabwe (2006). We used data from the most recent prior survey for these countries.

Table 5. Percent of currently sexually active^a men 15-29, who used the condom at last intercourse by country, according to number of partners in the last 12 months and reason for using the method.

Country	Had multiple/extra marital partners				Monogamous in the last 12 months			
	% who used condom for:				% who used condom for:			
	% who did not use condom	STI prevention only	pregnancy prevention only	both STI & pregnancy prevention	% who did not use condom	STI prevention only	pregnancy prevention only	both STI & pregnancy prevention
Benin Republic	70	10	10	11	77	8	11	4
Burkina Faso	29	24	14	33	42	17	22	19
Ethiopia ^b	68	25	0	8	93	6	1	1
Gabon	63	17	8	12	59	18	8	14
Ghana	61	6	18	16	67	4	15	14
Kenya	61	7	6	26	74	3	6	16
Madagascar	91	3	3	4	96	1	2	2
Malawi	66	18	6	9	78	10	7	4
Mali	70	14	10	7	84	10	3	3
Mozambique	74	8	5	12	82	6	4	8
Namibia	67	17	8	8	85	5	9	2
Nigeria	69	14	6	12	69	12	7	11
Rwanda ^b	29	55	1	16	86	7	2	6
Senegal	38	10	13	39	66	7	6	20
Tanzania	64	21	5	10	74	14	3	8
Uganda ^b	57	22	12	9	80	11	5	5
Zambia	66	19	10	5	74	15	7	4
Zimbabwe ^b	50	24	13	13	60	12	17	11

a = Currently sexually active refers to those who had sexual intercourse in the last 12 months before the survey.

b= Data on reason for condom use at last intercourse is not available for the most recent surveys in Ethiopia (2005), Rwanda (2005), Uganda (2006) and Zimbabwe (2006).

Table 6. Percent of currently sexually active^a men 15-29, who used the condom at last intercourse by country, according to type of partner the last 12 months and reason for using the method.

Country	Partner was wife or fiancée/girlfriend				Partner was casual friend or commercial sex worker			
	% who used condom for:				% who used condom for:			
	% who did not use condom	STI prevention only	pregnancy prevention only	both STI & pregnancy prevention	% who did not use condom	STI prevention only	pregnancy prevention only	both STI & pregnancy prevention
Benin Republic	77	7	11	5	68	14	6	12
Burkina Faso	56	11	9	24	22	38	9	31
Ethiopia ^b	94	4	1	1	76	19	0	4
Gabon	69	11	10	10	48	27	6	19
Ghana	67	4	16	13	59	7	10	23
Kenya	74	4	7	15	58	4	4	33
Madagascar	95	1	2	2	90	4	1	5
Malawi	78	9	7	4	59	25	3	11
Mali	75	16	4	5	62	22	5	11
Mozambique	80	5	5	10	77	10	3	10
Namibia	33	41	5	21	23	45	6	26
Nigeria	72	9	7	11	53	29	8	10
Rwanda ^b	94	4	1	1	41	28	5	25
Senegal	94	0	2	4	43	11	11	35
Tanzania	76	12	5	8	55	31	2	11
Uganda ^b	79	10	6	5	37	47	6	9
Zambia	74	13	10	4	63	27	4	6
Zimbabwe ^b	61	11	18	10	34	38	5	23

a = Currently sexually active refers to those who had sexual intercourse in the last 12 months before the survey.

b = Data on reason for condom use at last intercourse is not available for the most recent surveys in Ethiopia (2005), Rwanda (2005), Uganda (2006) and Zimbabwe (2006). We used data from the most recent prior survey for these countries.

Table 7. Relative risk ratios of the effects of selected socio-economic and behavioral characteristics on reason for condom use at last intercourse^a

Panel 1: Effect of number of partners

Country	Used for STI prevention only vs Did not use	Used for pregnancy prevention only vs Did not use	Used for pregnancy & STI prevention vs Did not use
Benin	1.124	1.23	1.661
Burkina Faso	3.703***	2.799***	2.118***
Gabon	1.118	1.055	0.937
Ghana	1.426	1.230	1.300
Kenya	1.917*	1.173	1.809***
Madagascar	2.121	1.257	1.339
Malawi	1.560*	0.925	1.848
Mali	1.498	3.416***	2.025
Mozambique	1.347	1.057	1.401
Namibia	1.605**	1.221	1.137
Nigeria	0.603	0.701	0.645
Rwanda ^c	8.742***	1.058	3.395
Senegal	6.390***	6.974***	7.397***
Tanzania	2.116***	1.820	1.636*
Uganda ^c	2.350***	3.195***	2.704**
Zambia	1.037	1.469	1.143
Zimbabwe ^c	1.897**	0.799	1.174

Panel 2: Effect of age

Country	Used for STI prevention only vs Did not use	Used for pregnancy prevention only vs Did not use	Used for pregnancy & STI prevention vs Did not use
Benin	1.630	0.624	1.764*
Burkina Faso	0.989	1.956	1.025
Gabon	1.322	0.687	0.761
Ghana	0.773	0.867	1.131
Kenya	1.745	0.742**	1.067
Madagascar	0.457	0.496	0.692
Malawi	1.267	4.151***	3.110***
Mali	1.429	0.982	1.822
Mozambique	0.747	2.095**	0.900
Namibia	2.174***	0.406***	1.351
Nigeria	2.442**	0.971	3.622***
Rwanda ^c	1.613	2.176	1.347
Senegal	3.521***	1.536	1.861**
Tanzania	1.144	1.319	2.235**
Uganda ^c	1.284	1.691	0.972
Zambia	1.656**	2.120*	0.776
Zimbabwe ^c	1.964**	1.507	1.817*

Panel 3: Effect of residence

Country	Used for STI prevention only vs Did not use	Used for pregnancy prevention only vs Did not use	Used for pregnancy & STI prevention vs Did not use
Benin	0.661	0.808	3.402***
Burkina Faso	3.293***	3.129***	5.295***
Gabon	1.149	2.402*	0.897
Ghana	1.982*	1.735***	1.081
Kenya	2.375**	1.212	1.262
Madagascar	2.471	2.990*	1.913
Malawi	1.116	1.337	0.952
Mali	0.455*	0.791	2.249
Mozambique	1.061	3.319**	1.128
Namibia	1.103	1.103	0.831
Nigeria	1.538	1.384	2.806***
Rwanda ^c	0.682	8.945**	3.715**
Senegal	1.945	2.270*	1.587
Tanzania	1.278	1.377	1.336
Uganda ^c	1.892*	3.384***	0.982
Zambia	0.671	1.256	1.290
Zimbabwe ^c	1.116	1.370	1.601

Panel 4: Effect of educational attainment

Country	Used for STI prevention only vs Did not use	Used for pregnancy prevention only vs Did not use	Used for pregnancy & STI prevention vs Did not use
Benin	2.601***	1.767*	4.472***
Burkina Faso	1.169	3.710***	2.439***
Gabon	1.036	4.228***	1.233
Ghana	2.049	3.536***	1.982***
Kenya	0.745	1.628*	1.788***
Madagascar	1.020	1.933	0.927
Malawi	1.461	1.792**	1.889*
Mali	4.650***	4.111**	2.186
Mozambique	1.228	5.824***	8.664***
Namibia	2.117***	2.093**	3.521***
Nigeria	4.599***	1.013	4.491***
Rwanda ^c	1.206	1.099	0.908
Senegal	3.001***	1.023	1.732**
Tanzania	0.970	4.051***	2.665**
Uganda ^c	2.096**	1.582	2.538**
Zambia	1.884**	2.045**	1.339
Zimbabwe ^c	1.733*	1.961**	3.398***

Panel 5. Effect of union status^b

Country	Used for STI prevention only vs Did not use	Used for pregnancy prevention only vs Did not use	Used for pregnancy & STI prevention vs Did not use
Benin	0.051***	0.645	0.222*
Burkina Faso	0.082***	0.793	2.439***
Gabon	0.136***	0.715	0.321***
Ghana	0.175***	0.542***	0.059***
Kenya	0.037***	0.189***	0.004***
Madagascar	0.000	0.736	0.063***
Malawi	0.256***	0.314***	0.003***
Mali	0.140***	1.962	0.056***
Mozambique	0.216***	0.186***	0.130***
Namibia	0.047***	0.616	0.050***
Nigeria	0.022***	0.793	0.000
Rwanda ^c	0.002***	0.126**	0.005***
Senegal	0.090***	0.297***	0.171***
Tanzania	0.107***	0.605	0.037***
Uganda ^c	0.014***	0.145***	0.022***
Zambia	0.017***	0.879	0.191***
Zimbabwe ^c	0.020***	0.054***	0.002***

Panel 6. Effect of exposure to radio

Country	Used for STI prevention only vs Did not use	Used for pregnancy prevention only vs Did not use	Used for pregnancy & STI prevention vs Did not use
Benin	1.991**	1.248	3.496***
Burkina Faso	2.131***	1.513	1.690**
Gabon	1.750	4.116*	1.138
Ghana	4.306**	0.856	1.850**
Kenya	1.661	1.736	1.345
Madagascar	2.292	1.821	1.727
Malawi	1.234	0.669	2.598**
Mali	0.764	1.395	1.467
Mozambique	2.644**	0.847	2.212**
Namibia	1.653***	1.228	0.857
Nigeria	1.816	0.369***	0.713
Rwanda ^c	1.532	0.603	1.403
Senegal	1.347	1.045	1.150
Tanzania	1.869***	1.043	1.656
Uganda ^c	2.179**	2.166*	1.225
Zambia	1.694**	1.161	2.338*
Zimbabwe ^c	0.822	1.122	1.156

Panel 7. Effect of exposure to television

Country	Used for STI prevention only vs Did not use	Used for pregnancy prevention only vs Did not use	Used for pregnancy & STI prevention vs Did not use
Benin	1.501	1.619	0.985
Burkina Faso	1.156	0.844	1.690**
Gabon	1.189	1.273	2.074**
Ghana	0.933	0.958	1.098
Kenya	1.080	0.818	1.177
Madagascar	2.000	4.218**	5.980**
Malawi	1.13	2.064***	1.763*
Mali	4.872***	4.496***	0.763
Mozambique	2.901***	2.042*	2.604***
Namibia	1.928***	5.285***	1.010
Nigeria	1.750*	3.097***	1.704
Rwanda ^c	5.021**	2.497	0.983
Senegal	0.283**	2.378	1.932
Tanzania	2.473***	1.464	1.160
Uganda ^c	1.608	0.882	1.563
Zambia	1.263	0.510*	1.170
Zimbabwe ^c	1.382	1.276	1.579

* = Significant at 0.10; ** = Significant at 0.05; *** = Significant at 0.01

a = The reference categories are 1 partner (if not in union) or 0 extra marital partner (if in union), age 15-19, rural, no/primary

b = In union refers to men who are legally married or are living together with a female partner, while not in union include men who were formerly married or never married men.

c = Data on reason for condom use at last intercourse is not available for the most recent surveys in Rwanda (2005), Uganda (2006) and Zimbabwe (2006). We used data from the most recent prior survey for these countries.