Men and condom use for dual protection in Sub-Saharan Africa

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Introduction

This paper examines the levels and patterns of knowledge and use of the condom for any reason as well as for pregnancy prevention and for protection against STDs in sub-Saharan Africa. It also identifies some correlates of ever and recent use of the condom. Until recently there has been little or no data for analyzing condom use for dual protection 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 STDs. The main reason was that most national surveys in Africa have usually asked about condom use as a method of family planning. However, as a result of the wide spread prevalence of HIV/AIDS in the region, large scale surveys on reproductive health matters have been asking a series of questions on condom use for disease prevention in addition to condom use for family planning.

The high pregnancy rates and associated high level of maternal mortality and morbidity in sub-Saharan Africa were the original reason for concern about the low level of contraceptive use in the sub-region. However, since the emergence of HIV/AIDS in the 1980s and its spread in sub-Saharan Africa, the need for contraception that can protect men and women against both unintended pregnancy and STDs, including HIV/AIDS is now one of great urgency. As at the time this paper is being prepared, the latex condom is, and probably will be for at least a few more years, the only method that offers effective protection, simultaneously, against unintended pregnancy and STDs. It is, therefore, not a

surprise that a series of policy and program efforts to promote condom use have been initiated, worldwide, since the outbreak of the HIV epidemic. Despite these high efforts, and despite the high levels of risk of infection, the large majority of sexually active people in sub-Saharan Africa are not using a method to protect themselves, and among users, condom use is still very low. This is particularly disturbing given that multiple studies, especially outside of the sub-Saharan Africa where the level of condom use is higher continue to confirm its efficacy when used correctly and continuously.[1]

In recent times, starting with Zimbabwe, Botswana and Kenya, the wave of fertility transition has been sweeping through the countries of sub-Saharan Africa. In some countries where this trend is yet to begin, early indications of its onset are evident. In particular, more and more couples desire a fewer number of children while many want no more children. Thus, as contraceptive use becomes widespread, the fall in fertility is imminent. But, in the absence of a corresponding increase in contraceptive use, the likely outcome is unintended pregnancy, leading to either unintended birth or abortion. According to a report based on DHS data about 14-54 percent of women in sub-Saharan Africa experience unintended births in the last five years before the surveys[2]. Therefore, any effort to encourage the use of the condom will help to mitigate the incidence of unintended pregnancy and abortion, which are likely to increase with rising desire to limit family size in the absence of contraceptive use.

[1] Karen R. Davis and Susan C. Weller. "The effectiveness of condoms in reducing heterosexual transmission of HIV", Family Planning Perspectives, 31(6): 272-279.

[2] Charles F. Westoff and Akinrinola Bankole. *Childbearing Attitudes and Intentions.* DHS Comparative Studies No 17. Calverton, Maryland: Macro International.

HIV/AIDS is most prevalent in sub-Saharan Africa, especially in countries of Southern and Eastern Africa. Statistics show that about 25.3 million people are currently infected with HIV in Africa. In South Africa, which is considered to have one of the highest rates of HIV infection in the world, about 3 million of its approximately 40 million people are estimated to be currently infected with HIV[3]. Similarly, in Kenya about 2 million of the population of 30 million are said to be currently infected with HIV.[4] Although the disease emerged only relatively recently, it has taken a toll on the region like no other disease. For example, 2.4 million people in Africa are estimated to have died in the past year as a result of AIDS.[5] It is also said that about 500 people die of the disease in Kenya every day Apart from HIV/AIDS, other forms of STD, such as gonorrhea, syphilis and chlamydia are not uncommon 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.

With the exception of a few countries such as Botswana, Ghana, Kenya, Zambia and Rwanda, less than 10% of men aged 15-59 are typically using the condom. However, the age pattern of use suggests that use of the method is much higher among younger men than their older counterparts. For instance in Ghana, while 12.4% of all men reported current use of the condom for family planning, 21% of men aged 20-24 are currently

[3] Anonymous. “South Africa plays down faulty condom scare”, AIDS Weekly Plus. January 11, 1999,10-11.

[4] Anonymous “Kenya calls AIDS a national disaster – but vetoes condoms”, AIDS Analysis Africa, February-March, 2000, 10(5): 10.

[5] UN Integrated Regional Information Network 'Wanted - Leadership On AIDS' Johannesburg, December 9, 2000

using the method compared with only 6% of men aged 40-44.[6] As in other regions of the world, condom use is most prevalent among people who engage in behaviors that put them at risk of either unintended pregnancy or STD. 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. Also, there is evidence that condom use for family planning has been increasing over the years in some of the countries for which trend data exist. For example, in Kenya, 12% of men reported current use of the condom in 1993 and this proportion increased to 16% in 1998. [7] It is highly probable that the desire to protect against STDs, especially HIV/AIDS is responsible for most of the observed increase in condom use. In Ghana, in 1998, 15% of men aged 15-59 said they used condoms at last intercourse and 7% said they used the method for reason(s) other than family planning.[8] 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).[9]

As one will expect, condom use among groups who are more susceptible to the risk of STDs tends to be higher than among the general population. For example, a 1995 survey

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[6] Ghana Statistical Services (GSS) and Macro International Inc. (MI). 1999. *Ghana Demographic and Health Survey 1998*. Calverton, Maryland: GSS and MI.

[7] 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], and Macro International Inc. (MI), 1999. *Kenya Demographic and Health Survey 1998*. Calverton, Maryland: NDPD, CBS, and MI.

[8] Ghana Statistical Services and Macro International, 1999, op cit. (see reference 2).

[9] 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], and Macro International Inc., 1999, op. cit. (see reference 3).

of gold miners in South Africa, and its 1997 follow-up show that the proportion of respondents who believed that they are likely to contract STDs increased from 22% in 1995 to 35% in 1997. Correspondingly, sexual activities with causal partners and commercial sex workers and the number of partners declined between the two periods. In addition, condom use with spouse increased from 18% in 1995 to 26% in 1997.

Data Source and method of analysis

Data used for this paper come from the Demographic and Health Surveys among men of reproductive age, conducted by Macro International between 1994 and 1999in 18 sub-Saharan Africa countries. Unlike the women's surveys (DHS) which typically include women aged 15-49 in all countries, the age range in the men's surveys differ from country to country ranging from age 12 in Togo to age 64 in a number of countries. The men included in this analysis are those aged 15-54. However, while the surveys for all countries included in this study have data for men up to age 54, data for Benin do not have information on men under age 20. This fact needs to be borne in mind in comparing results for Benin with those for the other countries. The sample size (weighted N) ranges from 744 in Comoros to 3,706 in Togo. The countries were selected mainly on the basis of data availability, but their geographic spread covers the various sub-regions of sub-Saharan Africa. Unlike the previous waves of the surveys which, mostly, asked only about knowledge and use of the condom for family planning purpose, these surveys, as part of the efforts to provide data for analysis of behaviors associated with HIV/AIDS risks and prevention have included questions on knowledge of STDs and HIV/AIDS as well as knowledge and use of the condom for disease prevention. This paper takes

advantage of this expanded series of questions on use of the condom to examine use of the method for dual protection.

Three measures of condom knowledge and use are of particular importance to this paper. The first is the measure of knowledge of the condom. This indicates whether or not a respondent has ever heard of the condom and the purpose for which it is used. The original variable has five categories namely, never heard condom; know, unclear about purpose; know for family planning; know for STD; and know for family planning and STD. The category "know, unclear about purpose" has no value for some countries (e.g. Cameroon, Ghana Zambia and Zimbabwe) while for the other countries it includes a very small proportion of the respondents (e.g. 0.03% in Kenya and 0.12% in Nigeria). For this reason, where it exists, the category is merged with the category "know for family planning". The second variable defines ever use of the condom and the purpose of use as follows, never used condom; used, unclear why; used for family planning; and used for family planning and STD. Again, the category "used, unclear why", where it exists, includes only a small proportion of men (e.g. 0.20% in Kenya, 0.32% in Ghana, 0.89% in Nigeria and 0.34% in Zimbabwe). This category is collapsed with the "use for family planning" category. The third variable, which is a measure of recent use of the condom for any reason, indicates whether or not a respondent used the condom at last intercourse. This variable, taken along with the variable that indicates current use of the condom for family planning, is used to determine, by definition, whether the respondent used the condom for STD prevention only at the last intercourse. However, there is not sufficient

information to determine whether condom use at last sex was for family planning alone or for both purposes.

Data for most of these countries' include information about men's sexual behavior and the number of sexual partners, usually for the 12 months period prior to the survey. As measures of exposure to the risks of becoming pregnant and contracting STDs, this information provides both the background for the analysis of condom use as well as the rationale to determining need of the method. Married men or men who are living together with a female partner, were asked about the number of sexual partners other than their wife or the partner with whom they are living. Thus, for these men the original variable, in most countries reflects only the number of extra marital partners. For the purpose of this paper, the variable was adjusted by adding 1 to the number of partners reported for all married men and men who are living together with a woman. In the case of polygynous men, this adjustment does not necessarily reflect the number of women they had sex with in the last 12 months, but it serves as an indicator of risk of STD.

The DHS data also include information on a number of characteristics of the respondents, such as age, residence, education, union status and type of marriage and exposure to the radio and television. The roles of these variables as correlates of ever use of condom for family planning, STD prevention and for both purposes are examined. Furthermore, we examine how these background variables as well as the number of partners affect recent use of the condom (i.e. use at last sex in the last 12 months) for any reason. In addition to

bivariate analysis the net effects of these variables on the likelihood of condom use were examined using logistic regression models.

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 sexual and reproductive health behavior. As background to later examination of the relationship between men's characteristics and their knowledge and use of the condom, we present in Table 1 the distribution of selected characteristics of men that are included in this study. That the populations of sub-Saharan African countries are still very youthful is evident from the age distribution of the men of reproductive age. Among men 15-54, the proportion ranges from 31% in Mali to 48% in Zambia (Table 1, Column 2). This proportion is less than 30% only in Benin and is 40% or more in 5 of the 18 countries. In addition, between 23% in Comoros and 33% in Benin and Central African Republic (CAR) are 25-34 years of age (Table 1, Column 3).

In virtually all of the countries, the majority of men live in rural areas, at least two-thirds of men live in rural areas in 10 of the 18 countries (Table 1, Column 4). While Burkina Faso is the least urbanized (23%), Zambia has the highest proportion (47%) of men living in urban areas (Table 1, Column 5). A substantial proportion of men have no formal education in many of the countries: this proportion ranges from 3% in Zimbabwe to 72% in Burkina Faso (Table 1, Column 6). More than 20% are without formal education in 9 of the 18 countries and this proportion is more than 40% in 5 of the countries. On the

other hand, in Ghana, Nigeria and Zimbabwe, more than 50% of men have a secondary education or more (Table 1, Column 8). The majority of men aged 15-54 are in union (married or living together with a female partner in 14 of the 18 countries (Table 1, Column 9). This proportion is highest in Benin (72%) and lowest in Comoros (45%). Polygyny is relatively high in some of the countries: while the proportion in polygynous union ranges from 4% in Zimbabwe to 30% in Benin, it is higher than 10% in 9 of the 18 countries (Table 1 Column 12).

Sexual behavior

Ever had sexual intercourse: Sexual activity is a common experience in sub-Saharan Africa, even among unmarried men. Most men aged 15-54 have experienced sexual intercourse: the proportion ranges from 75% in Ghana to 97% in Benin (Table 2, Column 2). Among unmarried men, who are by definition younger than the entire sample, between 37% in Niger and 89% in Benin have had sexual intercourse (Table 2, Column 3). In 14 of the 18 countries, the majority of men who are not in union are already sexually experienced and this proportion in more than two thirds in 8 countries. This is not surprising because both men and women initiate sex at an early age in many of the sub-Saharan African countries. For example, in 11 of 16 countries for which data is available, more than 30% of men aged 15-19 have had sexual intercourse. This proportion is 40% or more in Cameroon, CAR, Kenya, Mozambique, Tanzania, Togo, Uganda and Zambia[10].

[10] Susheela Singh and Akinrinola Bankole, Gender Differences in sexual and contraceptive behavior: Young people in Sub-Saharan Africa and Latin America and the Caribbean. Paper to be presented at the 2001 IUSSP meeting in Brazil.

Recent/current sexual activity: While it is safe to assume that married men who have had sex remain sexually active, the same cannot be said of unmarried men, especially the younger ones. It is not uncommon for adolescent men to have had sex only once or quite sporadically after the first experience.[11] A measure of recent or current sexual activity is, therefore, more relevant to the assessment of service needs than that of ever sexually experienced. By definition, men who are in union are expected to be currently sexually active, so recent sexual activity is measured here only among 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, a substantial proportion of men in sub-Saharan African countries are sexually active (Table 2, Columns 3 and 4). For example, the proportion of unmarried men who had sexual intercourse in the 3 months prior to the survey ranges from 19% in Niger to 61% in Benin (Table 2, Column 4). This proportion is more than 50% Benin, Cameroon, CAR, Kenya, Mozambique, Tanzania and Zambia. A measure of the extent to which sexually experienced men continue to have sex is presented in Column 5 of Table 2. This measure which is defined as the proportion of men who had sex in the last 3 months among sexually active men shows that a substantial proportion of men who have initiated sex tend to continue having intercourse. This proportion increases from 38% in Uganda to 81% in Cameroon and is more than two-thirds in 12 of the 18 countries.

Number of sexual partners: Although some societies are more permissive than others in terms of sexual behavior, some men in all societies engage in having more than one

[11] Singh and Bankole, 2001

sexual partner, either simultaneously or with some overlap in relationships. This behavior is believed to be risky, as it tends to promote the transmission of STDs, especially when effective protection is not used correctly and in every act of intercourse. Sub-Saharan African societies are, in particular, often referred to as permissive when it comes to men and sex. Not only in terms of the timing of initiation of sex, but also in terms of the number of sexual partners. While younger men often have multiple partners in the process of searching for a future wife, polygyny and the observance of long period of postpartum abstinence tend to promote this practice even among married men.

We examine the number of sexual partners in the 12 months before the survey among men in union and those who are not in union. Among men who are in union, the proportion that had 2 or more sexual partners ranges from about 8% in Burkina Faso and Mali to about 51% in Mozambique (Table 2, Column 6). Among men who are not in union, the proportion with two or more partners in the last 12 months is lowest in Ghana (34%) and highest in Cameroon (69%) (Table 2, Column 7). In 8 of the 15 countries, for which data are available, at least one-half of unmarried men had at least two sexual partners in the last 12 months column.

While having more than one sexual partner increases the likelihood that a man will impregnate a woman, it also enhances the probability of man contrasting or transmitting STD in the absence of adequate protection. However, multiple partnerships are more associated with the risk of infection partly because, unlike pregnancy, STDs are never desired by anyone and the means of protecting against them is more limited. 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.[12] Given this background of a high level of sexual activity and multiple partnership, especially among young unmarried men, it is important to examine how men protect themselves against unintended pregnancy and STDs. The remaining part of this paper is devoted at looking at men's use of the condom for protection against pregnancy and STDs.

Knowledge and use of the condom

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[13]. However, little is know about men's knowledge of the dual protection (against unintended pregnancy and STDs/HIV) that the condom provides. As the saying goes, "knowledge is power". Whether or not an individual uses the condom for either or both of these purposes depends on his or her knowledge about such use. Therefore, as a background to understanding condom use among men for these reasons, the level of knowledge is presented for all men and among men 15-24 and 25-54.

The proportion of men that have never heard about the condom is less than 10% in 11 of the 18 countries and 10-20 percent in 3 countries. This proportion is, however, high in a couple of the countries: 36% in Chad and 38% in Mozambique (Table 3, Column 2). In

[12] Lisa J. Messersmith et. al. "Who's at risk? Men's STD experience and condom use in Southwest Nigeria", *Studies in Family Planning*, 2000, 31(3): 203-216).

[13] Sian L. Curtis and Katherine Neitzel. Contraceptive Knowledge, Use and Sources. DHS Comparative Studies No. 19, 1996. Calverton, Maryland: Macro International Inc.

most of the countries (13 out of 18), about three-quarter of men know of the condom for dual purpose: for family planning and for disease prevention (Table 3, Column 5). The proportion of men having this knowledge is less than 50% in only two countries: Mozambique (29%) and Ghana (44%). As may be expected, in a number of the countries, men who know about the condom for only one purpose are more likely to know about it for family planning. This is particularly the case in Comoros, Ghana, Mozambique, Benin and Uganda (Table 3, Column 3). When examined by broad age grouping, 15-24 versus 25-54, there is little or no difference in knowledge of the condom and the purpose of its use in most of the countries (comparing Columns 6-9 and 10-13). Thus, the results for each age group show similar patterns as those for the overall sample.

Ever use of the condom: Many sexually experienced men in sub-Saharan Africa have used the condom for one or both of the reasons, although the proportion varies considerable across countries. Ever use of the method is lowest in Chad (14%) and highest in Zimbabwe (72%) (Table 4, Column 2). More than 30% of men aged 15-54 have used the condom for any reason in 14 of the 18 countries in the study. Along with Zimbabwe other countries with more than 50% of men reporting ever use of the method are Cameroon (54%), CAR (56%), Kenya (54%), Mali (51%) and Zambia (54%). In terms of the purpose for which men have used the condom, in most of the countries, more men reported having used the method for both family planning and disease prevention than for just one of the two reasons (Table 4, Columns 3-5). This is the case in 12 of the 18 countries. The countries where this pattern does not hold are Comoros, Ghana, Mali, Mozambique, Niger and Tanzania. In these countries, men who have used the condom are

more likely to have used it for family planning only. When one compares use for family planning only with use for disease prevention only, more men are more likely to express that they have used the method for the former than the latter in 7 of the countries (Comoros, Ghana, Mali, Mozambique, Niger, Tanzania and Zimbabwe (Table 4, Columns 3 and 4). On the other hand, use for STDs only is more prevalent in CAR and Uganda, while there is little or no difference in the proportions in the remaining countries.

When examined by age, ever use of the condom reveals the well-known pattern of more use of the condom among the younger generation. This differential is often attributed to factors such as, the declining tendency among couple to use the condom as the duration of relationship increases, the greater tendency of younger men to have more sexual partners than older men and the rising trend of condom use, probably associated with greater awareness of the risk of contracting HIV. Among men aged 15-24, the proportion reporting ever use of the condom ranges from 20% in Mozambique to 79% in Zimbabwe and this proportion is more than 40% in 14 of the 18 countries in the study (Table 4, Columns 7-9). With regards to men aged 25-54, the proportion of men that have ever used the condom is lowest in Mozambique (18%) and highest in Zimbabwe (68%) (Table 4, Columns 11-13). Only in 9 of the 18 countries is the proportion higher than 40%. In terms of the reason for using the condom, the patterns for both age groups are similar to the one found for all men. In both cases, use of the condom for both purposes is more prevalent than it's use for either family planning or disease prevention only.

Correlates of ever use of the condom: In addition to age there are other factors that are associated with condom use among sexually experienced men. In this section we examine the relationship between a number of men's characteristics and the likelihood that they have used a condom. Using a multinomial logistic regression model, we examine the roles of each of these characteristics as a predictor of condom use, controlling for the effect of the others. The characteristics considered here are age, residence, education, type of marriage/union status and exposure to the radio and television. For the regression analysis, these variables have the same categories as described in Table 1. The dependent variable, ever use of the condom, has four categories namely, never used the condom, used for family planning only, used for STD only and used for family planning and STD (see also Table 4). In the multinomial regression model, we compared never use of the condom with each of the other three categories. In addition to presenting the results for these three levels of comparisons, we also present results comparing use for family planning only with use for STD only. Given that the characteristics were measured as of the time of the survey, it is possible that the dependent variable (ever use of the condom) may precede some of the independent variables in time. However, it is unlikely that the timing of the reported condom use would be farther from the timing of the survey relative to the timing of the observed characteristics. Nevertheless, causal relationship is difficult to establish so some caution is required in interpreting the results. The results are presented in Tables 5a-5e - a table per independent variable with the exception of exposure to the radio and television, which are put together in one table.

Table 5a shows the relative risk ratio of the effects of age of the respondent on the likelihood of ever use of a condom for a particular reason or for both of the reasons. In general, compared with older men, younger men are more likely to have used the condom for one or both of the two reasons. This pattern of the effects of age is more evident in the comparison of used for the dual purposes (for family planning and for STD) with never use (Table 5a, Column 3). In 11 of the 16 countries for which data are available, younger men are more likely than older men to have used the condom for both purposes than to never have used the method. Age also shows up as a significant predictor of condom use for either one of the two purposes in a fewer number of countries. The only countries where age has no effect on ever use of the condom for any of the two reasons or where the relationship may be more of an inverted "U" shape are Comoros, Mozambique, Nigeria, Niger and Tanzania.

Residence is also significantly associated with the likelihood of ever use of the condom (Table 5b). In most of the countries, men in urban areas compared with their rural counterparts are more likely to have used the condom, especially for preventing both pregnancy and STD than to never have used the method. This comparison shows a significant effect of residence in 10 of the 16 countries for which there are data (Table 5b, Column 3). Compared to men in rural areas, urban dwellers are more likely to have used the condom for family planning only or for STD only than to not have used in 6 and 5 countries respectively. The only countries where residence seems to have no effect on condom use are Comoros, Zambia and Zimbabwe.

Education is one of the most powerful predictors of behavior and has shown up in a lot of studies as an important determinant of contraceptive behavior. This is also the case in the present analysis: the more educated a man is, the more likely he is to have used the condom. Even having only a primary school education compared to none shows a positive relationship with ever use of the condom in most of the countries. Compared with men who have no formal education, men who have at least a secondary school education are more likely to have used the condom: for dual protection versus none use in all 16 but one country (Tanzania); for family planning only versus none use in 11 of the 15 countries for which data are available and for disease prevention versus none use in 13 of the 16 countries.[14]

As stated previously, men who are not in union are more likely to have more sexual partners than men who are in union. Since this behavior constitutes a higher risk of infection, it is often found that men who are not in union tend to use the condom more than men who are in union. However, as for the type of the relationship that men who are in union have, it is not clear if being in a monogamous relationship elicits less use of the condom than being in a polygynous union, even though the latter involves having more than one partner? In other to answer this question in this study, apart from distinguishing between men who are in union and those who are not, we also separate those who are in a one-man-one-woman union from those who are in union with more than one woman. The results are presented in Table 5d.

[14] The number of men who reported ever use of the condom for family planning in Chad Republic is 15,

There is a significant relationship between union status and ever use of the condom in many of the countries included in this analysis. As expected, men who are not in union are more likely than men who are not in union to have use the condom for one or both of the two reasons. This relationship is, however, clearly borne out in the use of the condom for the dual purposes of pregnancy and disease prevention. Compared with men in monogamous union, men who are not in union are more likely to have used the condom for both purposes than to never have used the method in 12 of the 16 countries. With regards to use of the condom for a single purpose, men who are not in union, compared with their counterparts in a monogamous union, are less likely to have used the method for family planning than to never have used it in some countries, such as Mali, Niger, Zambia and Zimbabwe. As for use of the condom for disease prevention only versus non-use, men who are not in union are more likely to use the method for this purpose than monogamous men in Nigeria, Tanzania and Uganda. In 10 of the 16 countries, there is no significant difference in this behavior for men in a polygynous relationship as compared with their counterparts in monogamous unions. In the majority of the countries where a difference exists, the tendency is for men in a polygynous union are less likely to use the condom.

The mass media is often considered as an important agent of change, particularly as it acts as a vehicle through which modern, sometimes Western, values are transmitted. And since access to information is key to attitude and behavior change, the mass media can act to undermine traditional norms and values, thereby leading to change attitudes and

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therefore, this category was dropped in the regression for that country.

behavior. With regards to sexual and reproductive behavior, many of programs in several countries are promoting appropriate behaviors, such as prevention of unintended pregnancy and STDs, especially HIV/AIDS, through the radio and television. It is, therefore, conceivable that people who have access to these media are more likely to obtain information that can lead to behavior change.

How does listening to the radio daily or watching television at least once a week relate to ever use of the condom? Table 5e shows the relative risk ratios of the relationships between ever use of the condom and exposure to the radio and television. The findings in this study confirm the existence of a strong and positively relationship between exposure to the mass media and condom use. With the exception of Ghana and Zimbabwe, men who listen to the radio frequently are more likely, compare to those who do not, to have used the condom for the dual purposes of pregnancy and disease prevention than to have not. Similarly, in Burkina Faso, Comoros, Mali, Mozambique, Niger and Zambia, exposure to the radio is positively associated with ever use of the condom for family planning purpose only versus none use. In the same vein, compared with men who do not listen to the radio regularly, men who do are more likely to have used the condom for disease prevention only as opposed to never used in Mali, Nigeria, Tanzania and Uganda.

With regards to exposure to television the observed patterns and directions of the association with ever use of the condom for family planning, for disease prevention or for both reasons are similar to those described for exposure to the radio. For example, compared with men who do not watch television regularly, men who do at least once a

week are more likely to have used the condom for both pregnancy and disease prevention in all but 4 countries. The exceptions are Burkina Faso, Guinea, Tanzania and Uganda - the only four countries where exposure to television shows no significant association with the use of the condom for any of the two reasons.

Use of the condom at last intercourse: Due to frequent discontinuation or switching of methods among couples for several reasons, fewer men use a method at a particular time or period than have ever used the method. Condom use is not an exception and, therefore, there is need to examine recent use of the method. This measure allows a more realistic assessment of the level of protection that men get from using the condom and can be used along with other information to determine the level of unmet need for condoms and service provision requirements. For this purpose we look at condom use at last intercourse in the 12 months prior to the survey among. First, we present the proportion that used the method for any of the two reasons or both. Second, among condom users at last intercourse we determined the proportion that used the method for disease prevention only, as compared with condom use for family planning only or for both purposes. Unlike in the case of ever use of the condom, we could not separate use for family planning alone from use for both reasons in the present analysis. We examine this behavior by number of sexual partners in the last 12 months (Table 6). The proportion of men who used the condom at last intercourse in the last 12 months is low in all of the countries. It ranges from 6% in Niger to 28% in Zimbabwe (Table 6, Column 1). In addition to Zimbabwe, this proportion is 20% or more in 4 other countries out of the 18 countries for which data are available, namely Burkina Faso (22%), Comoros (22), Kenya (21%) and Zambia

(21%). Along with Niger, the other countries with very low proportion of men who used the method at last sex are Chad Republic (7%), Mozambique (7%) and Uganda (9%). Given that use of the condom at last intercourse is this low in many of the countries, it is clear that use of the method among currently sexually active men (typically men who had sexual intercourse in the last 3 months) would even be lower.

Among users of the condom at last intercourse in the 12 months before the survey, a substantial proportion of men used the method for disease prevention only. The proportion of men that used the method solely for this purpose increases from 27% in Togo to 77% in Mozambique (Table 6, Column 2). In 8 of the 17 countries for which data exist, this proportion is more than 40% and is above 50% in 3 countries (Chad, Comoros and Mozambique). Given that some fraction of users who did not report use of the method for disease prevention only may have used the method for both pregnancy and disease prevention, it seems clear that quite a sizable proportion of users are preventing themselves against STDs, including HIV/AIDS. However, it not possible to determine in this study how well these men are doing in terms of correct and consistent use of the condom.

Use of the condom at last intercourse is associated with the number of partners that a man has over the one-year period. Among men who reported having only one partner, the proportion reporting use of the condom at last intercourse is very low, ranging from 2% in Chad Republic to just 16% in Zambia (Table 6, Column 3). This proportion is between 10 and 16 percent in 10 of the 15 countries for which data are available and is much lower in the others: 5% in Benin Republic, 6% in Mali and 3% in Mozambique and Niger. On the

other hand, among men who had 2 or more partners in the 12 months prior to the survey, the lowest proportion of men reporting condom use at last sex is found in Mozambique (10%) while the highest is in Burkina Faso (54%) (Table 6, Column 5). This proportion is 20% or more in 12 of the 15 countries for which we have data. The few countries where the proportion is less than 20% are Benin and Guinea (16%) and Mozambique (10%). Thus, having more than 1 sexual partner is clearly positively associated with condom use. In fact, in 12 of the 15 countries, the proportion of condom users at the last intercourse among men with 2 or more partners at least doubled that for men with only one partner in 12 of the 15 countries.

Among men with one partner who use the condom at last intercourse, a substantial proportion used the condom for STD prevention only. This proportion increases from 24% in Togo to 70% in Mozambique and is more than 30% in 11 of the 15 countries for which data are available (Table 6, Column 4). In addition to Mozambique, which records the highest proportion of users who used the method for STDs only, this proportion is at least 50% also in Chad and Niger. Similarly, among men who had 2 or more sexual partners in the last 12 months, many of those who used the condom reported that it was used for STDs only. This proportion ranges from 20% in Guinea to 79% in Mozambique (Table 6, Column 6). With the exception of Cameroon, Guinea and Togo, this proportion is higher than 30% in all countries and higher than 50% in four countries including Chad (59%), Comoros (61%), Mozambique (79%) and Nigeria (51%).

Ideally, one will expect the proportion of users of the condom who reportedly used the method for STDs to be higher among men with 2 or more partners than among men with only one partner. This trend is indicated for only 8 of the 15 countries, while the reverse is the case in the remaining seven countries. Even in the countries where condom use for STDs tends to be higher among men with 2 or more partners, the difference is somewhat less than what one might expect. However, there is need for more information before one can draw a definitive conclusion on this issue. For example, one will need to know the proportion users who did not report use of the method for STDs alone who used it for both pregnancy and STD prevention. In the absence of use of other effective methods, the risk of impregnating a woman is also higher for men with 2 or more partners. Therefore, a greater percentage of them may be using the condom for both purposes than men who have only one partner.

Correlates of recent use of the condom: As shown *in* Table 6, number of sexual partner is positively correlated with recent use of the condom for any of the two reasons. This is indeed good news, even if some of the men who use the method do not intend to use it for disease protection, as long as they use it correctly and consistently, it will provide that protection nevertheless. We further examine this relationship the relationship between number of sexual partners and condom use at last intercourse, using a logistic regression model and controlling for the effects of other variables. The model is based on men who had sexual intercourse in the last 12 months.

In addition to number of sexual partners, categorized as 1, 2 and 3 or more, the other variables included in this model are age, residence, education, marriage type/union status and exposure to the radio and television. The dependent variable, use of the condom (for any of the two reasons) in the last 12 months, has a value of 1 if a man used the method in that one-year period and 0 otherwise. Since the dependent variable reflects a recent behavior, the possibility of it preceding the characteristic variables in time is less likely in this case than in the case of ever use of the condom. This provides a better opportunity to infer a causal relationship between the independent and dependent variables. The results are presented in Tables 7a through 7c.

Table 7a presents the effects of number of partners on use of the condom in the 12 months prior to the survey. Evidently, the number of partners is a major predictor of recent use of the condom. Men who have 3 or more sexual partners in the 1-year period are more likely to use the condom at last sex in 11 of the 14 countries for which information is available[15]. Even having two partners as compared to one partner exerts a significant effect on the likelihood that a man will use the condom at last sex in about one-half of the countries. The only two countries where the number of sexual partners seems to have no impact on the likelihood of condom use at last intercourse are Mali and Nigeria.

With regards to the relationship between the characteristic variables, the patterns of association observed are similar to those noted between these variables and ever use of

the condom. We present the results for age, residence and type of union in Table 7b. Age tend to exert a negative impact on use of the condom at last sex in many of the countries, especially Burkina Faso, Cameroon, Ghana, Kenya, Mali, Mozambique, Togo and Zambia. Only in four countries (Chad, Comoros, Guinea and Nigeria) does age seems to have no effect on recent use of the condom. Similarly, men who live in urban areas are more likely to use the condom at last sex than their counterparts in rural areas. This fact emerges in 10 of the 14 countries, with Chad, Comoros, Kenya and Mozambique being the exceptions. Clearly, men who are not in union are more likely to use the condom at last sex than those who are in union. In all 14 countries but one (Mozambique), men who are not in union have greater odds of using the condom at last sex than those who were in a monogamous relationship. On the other hand, the behavior of men in a polygynous union with respect to condom use at last sex is very similar to that of their monogamous counterparts in all countries.

Education emerges again as an important predictor of condom use at last intercourse. As noted earlier, the more educated a man is, the more likely he is to use the condom. This is the case, especially for men who have a secondary or more education. In the present study, men with at least a secondary education are more likely than men with no formal education to use the condom at last intercourse in 10 of the 14 countries (Table 7c). Furthermore, in 6 of the countries, men with only primary education are significantly more likely to use the condom that men without formal education. No effect of education on use of the condom at last intercourse is discernible in Ghana, Kenya, Mali and

[15] Countries with no information on number of partners namely CAR, Uganda, Zimbabwe, while Benin was

Zambia. At least one of the mass media variables shows up as an important determinant of condom use at last sex in 11 of the 14 countries in the current analysis, with listening to the radio exerting the more prominent effects. Men who listen to the radio once a day are more likely to use the condom at last intercourse than men who do not in 8 of the countries. As for watching television at least once a week, men who engage in this behavior are more likely than men who do not to use the condom at last intercourse in 5 of the 14 countries. The three countries where no significant effect of either or the media variables is seen are Ghana, Niger and Zambia).

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 behavior that are capable of preventing STDs, including HIV/AIDS 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.

Findings from this study indicate that most men of reproductive age in sub-Saharan Africa are sexually experienced and a substantial proportion of them remains sexually active. Furthermore, not all of these sexual activities occur in a union, neither do all sexually active men have only one partner. Therefore, many men are at risk of contracting and transmitting STDs. It is also evident from the present study that the need for

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excluded for lack of information on exposure to the radio and television.

protection against STDs among men in this region is real. In the same vein, studies have shown that many men of reproductive ages, though most want to have children, are desiring fewer number of children, and in many countries a substantial proportion of couples either want no more children or want to space their births. This situation calls for the use of a method of pregnancy prevention among men who desire to limit or postpone having children. It is for these reasons that condom use is currently widely promoted since it is the only known method that offers an effective protection against STDs while also being an effective contraceptive if use correctly and consistently.

Findings from this paper show that most men of reproductive age in sub-Saharan Africa are aware of the condom as a method that can be used to prevent both unintended pregnancy and STDs. However, the well-known demographic concept termed the KAP-gap is clearly evident. While most men know about the condom, the majority of sexually experienced men have never used the method in most of the countries included in this study. More importantly, evidence of recent use of the condom indicates that the majority of those who reported ever use of the condom did not use the method recently, implying that current use must be even lower than the reported use at last intercourse in the 12 months preceding the survey. This is a matter for concern in a region where the transmission of HIV is spreading like wild fire.

One positive finding, however, is that a substantial proportion of men who have used the condom have used it for both pregnancy and disease prevention, meaning that once people adopt the use of the method, they are likely to be consciously taking advantage of

its dual purpose while using it. This suggests that efforts to promote the understanding that condom protects against STDs in addition to its contraceptive efficacy is working. However, individuals and the society will benefit more from this good news if the number of condom users increases. Thus, where more concerted effort needs to be made is in getting people to see the need to use the method. On the other hand, analysis of recent use of the condom suggests that more information is needed to have a better understanding of recent or current use of the method for the two reasons. In the present study we were unable to separate use of the condom for family planning from use of the method for both reasons. Evidence from the proportion of men that reported recent use of the method for STDs only shows smaller differences than one would expect for men who have only one partner compared with men who have more than one. There is, therefore, the need for more information that would allow further breakdown of condom use by reason.

Back to the issue of low prevalence of condom use, several reasons have been advanced for non-use of condoms. These include myths such as perceptions that the condom is supposed to be used in extra-marital relationships, that condom use reduces sexual pleasure and that it may cause men to lose an erection. Others have complained about the cost of obtaining the method as well as its accessibility, while some see going to the store to obtain a packet of condoms as a shameful behavior. All these factors must be critically examined with a view to addressing them. There should be more targeted efforts to countering these myths and rumors and to replace them with correct information. As for accessibility, much can be done on the information side by assuring people that it is all

right to buy condoms in the stores and by educating providers to be more sensitive, tolerant and friendly to clients, especially young adults.

This paper also shows a substantial differential in need for and use of the condom by socio-demographic sub-groups. Policy makers and program managers should carefully study these relationships with a view to knowing which sub-groups to pay more attention to. For example, younger men, men who are not in union, and men who have more than one sexual partners are more susceptible to the risk of both unintended pregnancy and STDs. Although these groups of men tend to use the condom than older men, men who are in union and men with one partner, the number of users in each group remains very small relative to the number in need of the method. This means that there is a substantial level of unmet need for the condom. More efforts to promote change in behavior among these groups, including condom use for those who choose to be sexually active, are needed. Young men, in particular must be given special attention in order to help them to understand the various ramifications of their sexual and reproductive behavior as well as other behaviors that put them at risk of unintended pregnancy and STDs. It is also important to equip them with information about how to protect themselves against these outcomes and where to obtain reproductive health counseling and services when they need them.

Education remains a powerful force for changing behavior. But a substantial proportion of men in sub-Saharan Africa are illiterate. Efforts to promote literacy level in these countries should be intensified, by providing means for educating people through both the

formal and informal sectors. Along the same line, the provision of IEC through both modern and traditional media should be encouraged and promoted. Use of the radio and television remains an important option that is clearly effective in changing attitudes and sometimes behavior. Because of its ability to reach a wider audience and to transit information quickly and repeatedly, more time and money should be committed to understanding how programs aimed at diffusing information that promote use of the condom and awareness of its availability can better utilize the mass media.

It is not very clear how much cost is an issue in sub-Saharan Africa, but a recent report suggests that condoms may be in short supply in the region may be low. 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[16]. Both donors and national governments should continue to make effort to make the condom available in these countries. As noted by Shelton and Johnson "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"[17]

[16] James D. Shelton and Beverly Johnson, "Condom gap in Africa: evidence from donor agencies and key informants", British Medical Journal, 2001, 323: 139.

[17] Ibid

Table 1. Percentage distribution of men aged 15-54 by country according to selected backgound characteristics: DHS, 1994-1999

		Age			Residence		Education			Union status[a]		Type of marriage		Total	
Country	Year of Survey	<25	25-34	35-54	Urban	Rural	None	Primary	Secondary+	In union	Not in union	Monogamy	Polygyny	Weighted Number	Percent
Benin Republic	96	n.a	33,4	45,3	40,1	59,9	45,2	32,4	22,4	72,0	28,0	49,1	22,9	1 388	100
Burkina Faso	99	39,8	27,3	32,9	22,5	77,5	72,4	14,6	13,0	54,8	45,2	38,4	16,4	2 500	100
Cameroon	98	43,2	26,0	30,8	38,5	61,5	13,7	39,3	47,0	50,0	50,1	41,5	8,4	2 469	100
Central African Republic	94	36,5	32,7	30,8	44,8	55,3	18,7	50,0	31,4	56,7	43,3	50,2	6,6	1 636	100
Chad Rep.	96	38,8	29,2	32,0	30,4	69,6	53,0	29,7	17,3	62,4	37,6	47,9	14,5	2 221	100
Comoros	96	43,4	22,9	33,7	32,4	67,6	34,4	35,1	30,5	45,3	54,7	37,4	7,9	7 440	100
Ghana	98	39,1	29,2	31,7	35,6	64,4	15,5	12,3	72,2	51,1	48,9	44,9	6,2	1 470	100
Guinea	99	37,0	25,6	37,4	37,2	62,8	52,7	21,0	26,3	54,0	46,0	37,1	16,8	1 863	100
Kenya	98	41,1	25,9	33,1	26,8	73,2	3,8	55,4	40,8	52,6	47,4	47,4	5,1	3 407	100
Mali	95	31,3	25,3	43,4	33,3	66,7	67,9	16,2	16,0	64,4	35,6	48,3	16,1	2 323	100
Mozambique	97	33,6	28,0	38,5	29,0	71,0	17,4	71,2	11,4	69,2	30,8	57,9	11,3	2 127	100
Niger	98	37,3	24,6	38,1	24,1	75,9	69,8	16,7	13,6	64,1	35,9	49,6	14,6	3 375	100
Nigeria	99	33,8	29,0	37,2	31,0	69,0	22,1	26,5	51,4	57,0	43,0	44,9	10,7	2 460	100
Tanzania	99	39,5	27,2	33,4	27,1	72,9	13,1	79,5	7,4	56,6	43,4	51,8	4,8	3 371	100
Togo	98	39,4	28,7	31,9	36,7	63,3	21,6	36,8	41,6	51,0	49,1	39,1	11,9	3 706	100
Uganda	95	37,8	30,9	31,3	14,1	85,9	11,6	63,1	25,3	62,7	37,3	53,3	9,4	1 996	100
Zambia	96	48,1	26,7	25,2	46,7	53,3	6,5	50,4	43,1	49,8	50,2	45,8	4,0	1 797	100
Zimbabwe	94	46,7	24,7	28,4	41,8	58,2	2,5	31,8	65,7	47,5	52,5	43,4	3,7	2 609	100

n.a = Not available.

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. Percent of men aged 15-54 who are sexually experienced and number of sexual partners in the last 12 months

	% ever had sexual intercourse		Not in union			% having 2 or more sexual partners in the last 12 months	
Country	All men	Unmarried men	Had sex in last 12 months	Had sex in last 3 months	Continuity of sexual activity	Married	Unmarried
Benin Republic	96,8	88,7	73,2	61,2	69,0	32,0	63,3
Burkina Faso	76,7	48,5	40,2	35,1	72,3	8,4	46,8
Cameroon	86,3	72,6	65,5	58,4	80,5	36,1	68,5
Central African Rep.	88,9	74,3	66,7	58,5	78,6	n.a	n.a
Chad Rep.	80,9	49,3	40,9	34,0	68,9	14,7	62,6
Comoros	77,6	59,0	52,3	44,7	75,8	20,4	63,0
Ghana	74,9	48,9	33,7	25,6	52,4	25,4	34,1
Guinea	86,5	70,7	59,1	51,0	72,1	28,3	44,6
Kenya	87,2	73,0	61,7	51,8	70,9	16,8	50,7
Mali	84,3	55,8	46,4	36,7	65,7	7,7	41,5
Mozambique	92,9	77,0	63,8	57,2	74,2	50,7	66,2
Niger	77,5	37,2	26,2	19,4	52,0	6,5	61,9
Nigeria	77,9	48,7	40,8	33,8	69,4	25,5	48,9
Tanzania	87,7	71,6	64,4	54,4	75,9	30,2	38,9
Togo	83,8	66,9	54,6	44,1	65,9	20,8	41,4
Uganda	87,1	65,5	35,8	25,0	38,2	n.a	n.a
Zambia	88,7	77,5	61,5	52,4	67,6	20,1	53,7
Zimbabwe	75,5	53,4	42,0	31,7	59,4	n.a	n.a

Table 3. Percentage distribution of men, by country, according to age and knowledge of the condom and the purpose of its use

	All men				Men aged 15-24				Men aged 25-54			
Country	Never heard	Heard for family planning	Heard for disease prevention	Heard for both purposes	Never heard	Heard for family planning	Heard for disease prevention	Heard for both purposes	Never heard	Heard for family planning	Heard for disease prevention	Heard for both purposes
Benin Republic	10,8	13,9	1,4	74,0	7,1	9,4	0,7	82,8	11,8	15,1	1,6	71,6
Burkina Faso	7,8	6,2	2,6	83,4	11,0	8,6	3,0	77,3	5,7	4,5	2,4	87,4
Cameroon	9,9	3,6	2,7	83,8	9,0	3,4	2,3	85,4	10,5	3,9	3,1	82,6
Central African Republic	6,8	1,8	4,8	86,6	7,6	1,3	3,2	88,0	6,4	2,1	5,7	85,8
Chad Rep.	36,2	7,5	2,4	53,8	38,5	5,5	2,6	53,4	34,8	8,7	2,3	54,1
Comoros	4,2	28,5	0,8	66,5	5,0	25,1	0,6	69,4	3,6	31,1	1,0	64,4
Cote D'Ivoire	10,4	35,0	2,0	52,7	6,1	24,4	3,4	66,2	13,2	41,8	1,0	44,0
Ghana	6,5	48,7	0,5	44,3	8,3	46,9	0,6	44,2	5,3	49,9	0,4	44,4
Guinea	16,7	6,5	2,8	74,0	17,5	5,1	1,7	75,6	16,2	7,3	3,5	73,0
Kenya	2,1	6,1	1,0	90,8	3,2	6,3	1,2	89,3	1,3	6,0	0,8	91,9
Mali	14,3	5,3	4,2	76,2	15,6	6,0	4,7	73,7	13,7	4,9	4,0	77,4
Mozambique	38,5	31,3	1,1	29,1	35,6	36,5	2,4	25,6	39,9	28,7	0,5	30,9
Niger	18,6	7,7	2,4	71,3	22,1	8,7	1,7	67,6	16,6	7,1	2,8	73,5
Nigeria	25,0	9,9	3,5	61,6	26,0	9,4	4,0	60,6	24,5	10,2	3,2	62,1
Tanzania	7,1	7,5	1,7	83,8	12,8	7,8	2,8	76,6	3,3	7,2	1,0	88,5
Togo	4,3	5,9	1,4	88,4	4,3	4,9	1,3	89,6	4,4	6,6	1,5	87,5
Uganda	6,0	16,5	5,6	71,9	6,6	13,9	6,7	72,8	5,6	18,1	4,9	71,4
Zambia	3,1	2,1	1,6	93,2	5,3	1,9	1,5	91,4	1,0	2,3	1,8	94,9
Zimbabwe	1,3	2,3	2,5	93,9	2,0	2,8	4,4	90,7	0,6	1,8	0,8	96,8

Table 4. Percentage distribution of sexually experienced men, by country, according to age and ever used the condom and the purpose of its use

	All men				Men aged 15-24				Men aged 25-54			
Country	Never used	Used for family planning	Used for disease prevention	Used for both purposes	Never used	Used for family planning	Used for disease prevention	Used for both purposes	Never used	Used for family planning	Used for disease prevention	Used for both purposes
Benin Republic	67,9	5,9	2,8	23,4	58,4	2,1	2,6	37,0	70,2	6,8	2,9	20,2
Burkina Faso	60,8	3,3	3,1	32,9	42,9	1,9	4,1	51,1	66,2	3,7	2,8	27,3
Cameroon	45,7	5,1	4,0	45,2	33,8	5,4	5,3	55,5	52,1	5,0	3,3	39,7
Central African Rep.	44,5	0,7	24,4	30,4	27,4	0,0	28,7	43,9	51,5	1,0	22,6	24,8
Chad Rep.	86,4	0,9	1,7	11,0	77,2	1,0	2,1	19,8	89,6	0,8	1,5	8,0
Comoros	53,9	14,6	9,7	21,8	39,8	18,1	6,6	35,5	59,6	13,1	11,0	16,3
Ghana	54,7	29,1	3,8	12,4	39,4	28,3	8,2	24,1	58,7	29,3	2,6	9,4
Guinea	66,0	1,4	4,8	27,9	52,5	0,4	5,7	41,3	71,2	1,7	4,4	22,6
Kenya	46,2	9,3	8,9	35,6	34,6	6,1	7,2	52,1	51,9	10,9	9,7	27,6
Mali	48,4	2,9	22,5	40,9	14,8	7,6	36,7	50,2	29,1	1,7	19,0	19,0
Mozambique	81,0	3,1	6,9	80,3	10,7	1,2	7,8	81,2	8,5	3,8	6,5	6,5
Niger	71,8	14,7	2,4	11,1	68,7	5,8	5,1	20,4	72,5	17,0	1,8	8,7
Nigeria	64,5	4,4	6,3	24,0	48,9	4,1	7,9	38,3	67,9	4,4	5,9	20,9
Tanzania	75,9	14,2	8,3	1,7	67,9	16,6	11,9	3,7	79,5	13,1	6,7	0,8
Togo	51,6	5,6	3,3	39,4	36,8	3,2	4,5	55,6	57,5	6,6	2,9	33,0
Uganda	73,5	3,0	10,2	13,3	59,8	3,3	13,9	23,0	79,2	2,9	8,6	9,3
Zambia	46,5	6,2	8,9	38,4	42,7	3,3	9,3	44,7	49,2	8,2	8,7	33,9
Zimbabwe	28,2	11,9	5,2	54,7	20,7	5,8	4,0	69,6	31,8	14,9	5,7	47,6

Table 5a. Relative risk ratio of the effects of age on ever use of the condom among ever sexually active men for dual purposes[a]

Country/Age[b]		Used for FP only versus Did not use	Use for STD only versus Did not use	Use for FP & STD versus Did not use
Burkina Faso				
	<25	0,905	2.511*	2.511***
	25-34	1,287	2.012*	3.590***
Cameroon				
	<25	2.147*	2.162*	1.746***
	25-34	2.398***	2.067*	2.253***
Chad				
	<25	n.a	1,214	1.972*
	25-34	n.a	1,493	1.808*
Comoros				
	<25	1,65	0,618	1,393
	25-34	2.530**	1,045	2.552**
Ghana				
	<25	2.067**	5.894***	3.341***
	25-34	1.608**	1,023	1,315
Guinea	<25	0,575	1,05	1.890**
	25-34	1,153	1,111	2.299***
Kenya				

	<25	0,75	1.830**	1.756***
	25-34	1,276	1.820***	1.983***
Mali				
	<25	1,102	2,503	2.288***
	25-34	1,206	1,266	3.279***
Mozambique				
	<25	1,569	0,422	1,544
	25-34	1,501	1,153	1.980**
Nigeria				
	<25	0,638	0,781	0,643
	25-34	0,841	1,083	0,977
Niger				
	<25	.418***	1,516	0,999
	25-34	1,009	1,266	1.870**
Togo				
	<25	0,747	2.528**	2.303***
	25-34	0,914	1,178	2.246***
Tanzania				
	<25	1,159	1,159	2,257
	25-34	1,162	1.904***	1,138
Uganda				
	<25	3.548**	2.081**	2.749***
	25-34	1,901	1.782**	1.688*
Zambia				
	<25	1,855	1,461	2.875***

	25-34	2.465***	1,471	3.030***
Zimbabwe				
	<25	1,039	1,065	1.885***
	25-34	1.754**	1,135	2.239***

n.a = Not available.

* = Significant at 0.05

** = Significant at 0.01

*** = Significant at 0.001

a = Other variables included in the model are residence, education, type of marriage and exposure to radio and television.

b = The reference category is age group 35-54.

Table 5b. Relative risk ratio of the effects of residence on ever use of the condom among ever sexually active men for dual purposes[a]

Country/Residence[b]	Used for FP only versus Did not use	Use for STD only versus Did not use	Use for FP & STD versus Did not use
Burkina Faso			
Urban	1,706	1,921	2.993***
Cameroon			
Urban	1.834**	1.986**	1.582***

Chad				
	Urban	na.	3.696**	1.759**
Comoros				
	Urban	1,239	0,817	1,395
Ghana				
	Urban	1.403*	.242**	1,322
Guinea	Urban	3.710*	1,812	1.972***
Kenya				
	Urban	1.497**	1.826***	1.248*
Mali				
	Urban	0,961	1,575	2.194***
Mozambique				
	Urban	1.944**	1,662	0,917
Nigeria				
	Urban	1,452	1,544	1.832***
Niger				
	Urban	1.820***	1,853	3.117***
Togo				
	Urban	1,332	1,475	1.809***
Tanzania				
	Urban	1,308	1.584**	1,109
Uganda				

	Urban	1,823	1,536	2.817***
Zambia				
	Urban	1,367	1,288	1,145
Zimbabwe				
	Urban	0,999	1,396	0,932

n.a = Not available.
* = Significant at 0.05

** = Significant at 0.01

*** = Significant at 0.001

a = Other variables included in the model are age, education, type of marriage and exposure to radio and television.

b = The reference category is rural.

Table 5c. Relative risk ratio of the effects of education on ever use of the condom among ever sexually

active men for dual purposes[a]

Country/education[b]		Used for FP only versus Did not use	Use for STD only versus Did not use	Use for FP & STD versus Did not use
Burkina Faso				
	Primary	2.115*	1,536	1.903***
	Secondary+	6.946***	3.413*	4.794***
Cameroon				
	Primary	10.231**	6.423*	5.102***
	Secondary+	26.133***	10.612**	11.650***
Chad				
	Primary	n.a	6.173***	4.499***
	Secondary+	n.a	4.934**	12.392***
Comorons				
	Primary	2.112*	1,618	1,912
	Secondary+	4.169***	2,141	6.003***
Ghana				
	Primary	1,447	0,959	1,784
	Secondary+	4.698***	1,278	2.433*
Guinea	Primary	0,803	2.288**	2.135***
	Secondary+	0,896	4.271***	5.211***

Kenya				
	Primary	2,292	2.494*	2.242**
	Secondary+	4.076**	3.144**	3.746***
Mali				
	Primary	1.532**	2.119*	1.665**
	Secondary+	3.728***	2.969**	8.833***
Mozambique				
	Primary	.481**	1,638	13.666*
	Secondary+	1,874	11.372***	74.687***
Nigeria				
	Primary	5.308**	2.654**	3.985***
	Secondary+	7.498***	3.739***	8.549***
Niger				
	Primary	1.765***	3.430***	3.466***
	Secondary+	4.851***	11.766***	14.866***
Togo				
	Primary	2.379***	3.027**	1.978***
	Secondary+	4.771***	5.350***	5.683***
Tanzania				
	Primary	1,49	2.949**	4,793
	Secondary+	0,698	3.660**	4,077
Uganda				
	Primary	2,179	1,205	1,964
	Secondary+	6.017*	2.236**	4.785***

Zambia				
	Primary	1,63	1,552	1,411
	Secondary+	3.815*	2,224	3.052***
Zimbabwe				
	Primary	0,665	2,124	1,376
	Secondary+	1,718	4.848*	2.869***

n.a = Not available.

* = Significant at 0.05

** = Significant at 0.01

*** = Significant at 0.001

a = Other variables included in the model are age, residence, type of marriage and exposure to radio and television.

b = The reference category is no formal education.

Table 5d. Relative risk ratio of the effects of type of marriage on ever use of the condom among ever sexually active men for dual purposes[a]

Country/type of marriage[b]		Used for FP only versus Did not use	Use for STD only versus Did not use	Use for FP & STD versus Did not use
Burkina Faso				
	Polygynous	0,773	0,462	1,025
	Not in union	0,746	0,955	2.864***
Cameroon				
	Polygynous	1,528	0,306	.656*
	Not in union	0,737	1,087	1.487**
Chad				
	Polygynous	n.a	0,427	0,92
	Not in union	n.a	1,146	2.057**
Comoros				
	Polygynous	2,372	2,04	0,961
	Not in union	2.170*	1,502	7.437***
Ghana				
	Polygynous	1,143	1,605	0,708
	Not in union	0,716	0,583	1,468

Guinea	Polygynous	0,234	1,106	.569*
	Not in union	0,235	1,609	1.795***
Kenya				
	Polygynous	.381*	2.177***	1.493*
	Not in union	1,367	0,869	3.271***
Mali				
	Polygynous	.756*	0,99	.509**
	Not in union	.286***	2.584*	1,087
Mozambique				
	Polygynous	0,818	6.992***	1,34
	Not in union	0,763	1,7	0,912
Nigeria				
	Polygynous	0,978	0,924	0,991
	Not in union	1,675	2.853***	5.199***
Niger				
	Polygynous	1.515**	0,983	0,872
	Not in union	.486**	1,622	2.704***
Togo				
	Polygynous	1,067	0,909	0,761
	Not in union	0,695	0,793	1.964***
Tanzania				

	Polygynous	0,726	1,619	1,383
	Not in union	1,339	4.171***	4.086**
Uganda				
	Polygynous	2,047	0,788	1,153
	Not in union	0,635	2.039***	2.784***
Zambia				
	Polygynous	2,034	1,716	1,424
	Not in union	.282***	1,147	1,177
Zimbabwe				
	Polygynous	0,984	1,306	1,152
	Not in union	.374***	0,767	1.716***

n.a = Not available.

* = Significant at 0.05

** = Significant at 0.01

*** = Significant at 0.001

a = Other variables included in the model are age, residence, education and exposure to radio and television.

b = The reference category is monogamous.

Table 5e. Relative risk ratio of the effects of type of exposure to mass media on ever use of the condom among ever sexually active men for dual purposes[a]

Country/exposure to radio/TV[b]		Used for FP only versus Did not use	Use for STD only versus Did not use	Use for FP & STD versus Did not use
Burkina Faso				
	Listen to the radio daily	2.707***	1,408	2.808***
	Watch TV weekly	1,237	1,042	1,269
Cameroon				
	Listen to the radio daily	1,234	1,14	1.729***
	Watch TV weekly	1,328	1.689*	1.796***
Chad				
	Listen to the radio daily	n.a	1,354	1.514*
	Watch TV weekly	n.a	0,869	2.831***
Comoros				
	Listen to the radio daily	2.808**	0,981	3.059***
	Watch TV weekly	1.944*	1,441	2.478**
Guinea	Listen to the radio daily	1,681	0,989	1.619***
	Watch TV weekly	2,608	1,005	1,087
Ghana				
	Listen to the radio daily	1,538	1,367	1,698
	Watch TV weekly	1,379	1,956	1.702*

Kenya				
	Listen to the radio daily	1,337	1,349	1.475***
	Watch TV weekly	1.598***	0,966	1.438***
Mali				
	Listen to the radio daily	1.616**	3.559*	3.316***
	Watch TV weekly	1,108	1,305	2.898***
Mozambique				
	Listen to the radio daily	2.039***	0,801	2.948***
	Watch TV weekly	1.746**	0,485	2.413***
Nigeria				
	Listen to the radio daily	2,073	3.609**	1.591*
	Watch TV weekly	2.762***	1,458	2.377***
Niger				
	Listen to the radio daily	2.136***	1,865	2.109*
	Watch TV weekly	1.837***	1,812	2.683***
Togo				
	Listen to the radio daily	1,162	0,9118	1.861***
	Watch TV weekly	1,007	3.774***	1.458*
Tanzania				
	Listen to the radio daily	1,274	1.763***	2.173**
	Watch TV weekly	2,071	0,882	1,088
Uganda				
	Listen to the radio daily	1,899	2.393***	1.619**
	Watch TV weekly	1,024	0,922	1,624
Zambia				

	Listen to the radio daily	1.716*	1,034	1.593***
	Watch TV weekly	0,953	1,362	1.448*
Zimbabwe				
	Listen to the radio daily	1,039	1,46	1,211
	Watch TV weekly	1,423	0,904	1.454**

n.a = Not available.

* = Significant at 0.05

** = Significant at 0.01

*** = Significant at 0.001

a = Other variables included in the model are age, residence, education and type of marriage.

b = The reference categories are does not listen to the radio daily and does not watch TV weekly respectively.

Table 6. Percent of men who had sex in the last 12 months, by country according to number of partners

in the last 12 months and condom use and purpose of use

	All men		One partner		2 or more partner	
Country	Percent used	% of users who used for STD prevention only	Percent used	% of users who used for STD prevention only	Percent used	% of users w used for STI prevention o
Benin Republic	9,4	29,7	5,1	25,9	16,1	
Burkina Faso	22,4	31,8	15,1	25,4	54,4	
Cameroon	16,4	30,0	9,8	33,4	23,2	
Chad Rep.	6,6	56,4	2,4	50,4	19,8	
Comoros	22,2	56,7	10,3	46,9	45,6	
Ghana	16,2	38,9	14,4	41,1	21,2	
Guinea	15,1	22,0	14,0	24,4	16,1	
Kenya	20,6	32,8	14,2	33,3	36,2	
Mali	10,4	38,7	6,4	41,3	33,9	
Mozambique	6,5	77,0	2,7	69,5	9,8	
Niger	6,1	43,0	3,0	55,4	25,4	
Nigeria	14,8	48,2	10,9	45,4	23,4	
Tanzania	16,7	35,2	15,1	38,1	19,9	
Togo	19,2	26,7	14,3	23,9	31,8	
Uganda	9,0	47,7	n.a	n.a	n.a	
Zambia	20,9	43,5	16,0	41,6	30,9	
Zimbabwe	27,7	42,9	n.a	n.a	n.a	

Table 7a. Odds ratio of the effects of number of partners on use of the condom at last intercourse in the last 12 monthsa

	Number of partners in the last 12 months		
Country	1 partner	2 partners	3+ partners
Burkina Faso	1,000	2.424***	2.699***
Cameroon	1,000	1.749**	1.669***
Chad	1,000	1,017	4.894***
Comorons	1,000	4.048***	3.717***
Ghana	1,000	1,300	1.654*
Guinea	1,000	1,318	2.266***
Kenya	1,000	2.590***	1.534**
Mali	1,000	1,102	1,206
Mozambique	1,000	1.462***	2.993***
Nigeria	1,000	1,400	1,433
Niger	1,000	2.097*	2.638***
Togo	1,000	1.907***	1.688***

Tanzania	1,000	1,201	1.396*
Zambia	1,000	1.567*	1,229

* = Significant at 0.05

** = Significant at 0.01

*** = Significant at 0.001

a = Other variables included in the model are age, residence, education, type of marriage and exposure to the radio and television.

b = The reference category is 1 partner.

Table 7b. Odds ratio of the effects of age, residence and type of marriage on use of the condom at last intercourse in the last 12 months[a]

	Age[b]		Residence[b]	Type of marriage[b]	
Country	<25	25-34	Urban	Polygynous	Not in union
Burkina Faso	2.440***	3.160***	2.162***	0,89	5.008***
Cameroon	1.569*	1,131	2.080***	0,684	2.583***
Chad	1,224	1,564	1,403	0,859	4.704***
Comorons	0,833	1,007	0,927	0,713	10.376***
Ghana	2.108**	1,122	1.564*	1,514	2.480***
Guinea	1,380	1,694	2.393***	0,46	5.890***
Kenya	2.071***	1.730***	1,159	0,904	4.210***
Mali	3.259***	3.438***	2.084***	0,714	2.713***
Mozambique	2.125*	1,066	0,702	1,524	1,345
Nigeria	0,823	0,879	1.542**	1,111	7.304***
Niger	0,977	1,020	2.823***	1,502	10.059***

Togo	2.065***	1.398*	1.462**	0,648	4.067***
Tanzania	0,906	1.530**	1.793***	0,641	6.639***
Zambia	2.120**	1.551*	1.687**	0,896	3.732***

* = Significant at 0.05

** = Significant at 0.01

*** = Significant at 0.001

a = Other variables included in the model are education, exposure to the radio and television
and number of partners in the last 12 months.

b = The reference categories are age 35-54, rural and monogamous respectively..

Table 7c. Odds ratio of the effects of education and exposure to the radio and television on use of the condom at last intercourse in the last 12 months[a]

	Education[b]		Exposure to the radio and television[b]	
Country	Primary	Secondary+	Listens to the radio daily	Watch TV weekly
Burkina Faso	1,444	3.035***	1.754***	1,191
Cameroon	2.749**	2.279*	1.384*	1,095
Chad	2.674**	5.311***	2.204**	1.818*
Comorons	1,416	2.575*	2,227	3.232***
Ghana	1,374	1,635	1,132	1,46
Guinea	1.607*	2.022**	1.434*	0,945
Kenya	1,005	1,560	2.104***	1,053
Mali	1,354	1,451	1,459	2.706***
Mozambique	0,941	4.306***	1.628*	2.165**
Nigeria	2.463*	3.694***	1,296	1.925**
Niger	2.157**	4.688***	1,844	1,368

Togo	1,299	2.680***	1.618***	0,979
Tanzania	2.494***	3.920***	1.596***	1,282
Zambia	0,946	1,514	1,239	1,206

*= Significant at 0.05

** = Significant at 0.01

*** = Significant at 0.001

a = Other variables included in the model are age, residence, type of marriage and number of partners in the last 12 months.

b = The reference categories are no formal education, does not listen to the radio daily and does not watch television weekly respectively.