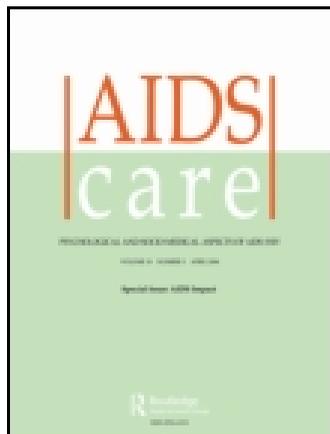


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### Condom use within marriage: an assessment of changes in South Africa and Uganda

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## Condom use within marriage: An assessment of changes in South Africa and Uganda

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The aim of the study is to measure trends in condom use in marital and cohabiting relationships in South Africa and Uganda. The data for the study come from two cross sectional surveys conducted in 1998 and 2008 among adult men and women and their partners in KwaZulu-Natal, South Africa and the Jinja district, Uganda. The findings suggest that consistent condom use has risen substantially in both countries. The percentage reporting consistent condom use in the South African sample of husbands increased from 2.5% in 1998 to 12% in 2008 and from 5.5 to 12.5% among wives. In Uganda, the corresponding trends are 1.1–8.3% for husbands and 4–8.6% for wives. In both countries, condom use was considerably higher among the minority of couples where one or both partners were thought to be HIV positive. Increasingly, in both countries condoms are also used for contraceptive purposes. Condoms play a role in preventing HIV infection but the challenge is for prevention programs to broaden their focus toward meeting the needs of married and cohabiting couples.

**Keywords:** condoms; HIV prevention; couples; South Africa; Uganda

### Introduction

Although HIV prevention efforts in sub-Saharan Africa have focused largely on sexual behavior before, and outside of, marriage, a growing body of evidence shows that, in mature generalized HIV epidemics, an appreciable percentage of new infections are caused by intra-partner transmission in cohabiting couples. This evidence includes: empirical studies in Uganda and Tanzania (Carpenter, Kamali, Ruberantwari, Malamba, & Whitworth, 1999; Hugonnet et al., 2002); data from nationally representative samples showing that the majority of HIV-affected couples are discordant (de Walque, 2007); molecular analysis of individuals in originally discordant couples who sero-converted (Trask et al., 2001); and results from mathematical modeling (Colvin, Gorgens-Albino, & Kasedde, 2008; Dunkle et al., 2008). Protection against infection by a spouse is thus destined to become an increasingly high priority for HIV-control programs in countries with severe epidemics.

For the sexually active, correct, and consistent use of male condoms is the only widely available and cost-effective method of protecting against HIV. While condom use by single persons has increased for both contraceptive and disease-prevention purposes, it has changed little for married or cohabiting couples (Ali, Cleland, & Shah, 2004; Cleland, Ali, & Shah, 2006). Similarly, use of condoms at most recent

coitus among married women in Africa has remained virtually unchanged. Large differences in condom use by type of partner have been documented in many studies (example: de Walque & Kline, 2011). The only positive evidence of increased condom use in African couples comes from intensive condom promotion as part of couple-based voluntary testing and counseling in Zambia and the Democratic Republic of Congo (Allen et al., 2003; Kamenga et al., 1991).

Resistance in Africa to condom use within marriage is well understood. In contrast to the situation in other regions, condoms never gained acceptance as a method of contraception in sub-Saharan Africa. Rather, they are associated with disease-prevention, appropriate for use in non-marital, casual partnerships (Camlin & Chimbwete, 2003; Myer, Morroni, Mathews, & Little, 2002). Family planning services have done little to legitimize condoms as a respectable method of dual protection while HIV programs, by reinforcing the link between condoms and illicit, high risk sex, may have unwittingly stiffened resistance to their use within marriage. Gender inequalities further shape barriers to condom use.

In contrast to the huge body of research on condom use among young, sexually active, unmarried men and women, the topic of protective behavior among married couples has been neglected by researchers. Some argue that the barriers within marriage are so severe that condom use is unlikely to increase. However, results from a study conducted in

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six eastern and southern African countries in 1998/1999 show that while consistent use was below 5% among cohabiting couples in the study sites of all six countries, occasional use was much higher at about 20% (Maharaj & Cleland, 2005; Muhwava, 2004; Pullum, Cleland, & Shah, 2004). In South Africa, a high contraceptive use setting, condoms were nearly always used in conjunction with a non-barrier method of contraception, such as injectables. Conversely, in Uganda (a low contraceptive use setting) condoms were typically used without additional contraceptive protection.

In view of these moderately encouraging findings, a re-survey was conducted in 2008 in two of the six countries (South Africa and Uganda) that participated in the 1998/1999 enquiry with the purpose of measuring trends over a decade in protective behavior and related attitudes and perceptions. The intention was to gain new insights into the process of behavioral change and thereby provide programmatic guidance. This paper presents the key changes that have occurred over the decade.

### Context

The results of a national survey conducted in South Africa in 2008 indicate that the HIV prevalence is 11% (Shisana et al., 2009). Condom use outside of marriage has increased dramatically. Among males and females aged 15–49 years who reported more than one sexual partner in the last 12 months before the survey, condom use at last sex was over 70% (Shisana et al., 2009). There was also an increase in the percentage of people who know their HIV status from 12% in 2005 to 25% in 2008 (Shisana et al., 2009). In Uganda, HIV/AIDS prevalence peaked at 15% in 1991 and was estimated to be 6.4% in 2005 (UBOS & Uganda DHS, 2007). One in 20 married or cohabiting couples are HIV-discordant and about 36% of all new infections occur among discordant couples who have lived in mutually monogamous relationships for 12 months (UBOS & Uganda DHS, 2007). As in South Africa, condom use at last sex with casual partners has increased steadily (Kirungi et al., 2006). However, condom use within marriage remains low. According to the 2006 DHS, only 5.8% of men and 3.3% of women reported use at most recent coitus with a cohabiting partner (UBOS & Uganda DHS, 2007).

### Methods

In both countries, the data for this analysis were derived from two cross-sectional household surveys

conducted in 1998/1999 and again in 2008 in the same locations. In each country, the study was conducted in one rural area and one urban area, selected purposively on the basis of relatively high contraceptive use and importance as foci of HIV epidemics. Both sites were located in the province of KwaZulu-Natal in South Africa and the Jinja district in Uganda. Twenty rural and the same number of urban enumeration blocks were selected and a household listing conducted. In randomly selected households co-resident couples were eligible for interview if the wife was aged 18–39 years. In 1998, interviews were conducted with eligible individuals before the partner had been approached and informed consent obtained. This approach resulted in a serious shortfall of matched couples, particularly in South Africa where men were difficult to contact because of their mobility. In 2008, informed consent was obtained from each partner before interviewing proceeded and, in addition, the re-visit schedule was intensified to ensure that the target sample size was achieved. The participation rate for couples in South Africa increased from 84% in 1998 to 92% in 2008. In 2008, the participation rate for couples in Uganda was 86%. In some instances, one partner was absent from the household – often the male partner and it was not possible to locate them even after three visits. There were few refusals – about three on average in both countries. Independent interviews were conducted with men and women by specially trained field staff, matched by sex to respondents.

While the questionnaires used in 1998 and 2008 were not identical, all the indicators of change reported in this paper are derived from identical questions in both rounds. Measurement of most variables used in this paper is consistent with internationally recognized protocols such as the Demographic and Health Surveys and thus does not require description. Condom use with the partner was measured by an ordinal scale (always, occasionally, beginning of the relationship only, and never). Because of the subjectivity of the ordinal scale, additional, more precise measures were obtained in the 2008 survey. Respondents were asked whether they used a condom at most recent sex act and how many times a condom had been used in the most recent 10 acts. Perceived risk of HIV infection from spouse was elicited by the question “During your relationship with <NAME OF PARTNER> have you ever been concerned that you might contract AIDS from him/her?” If yes, “very or somewhat concerned?” Analysis was done with Statistical Package for the Social Sciences (SPSS). Ethical approval was obtained from the Research Ethics Review

Committee (ERC) of the World Health Organization, and from local ERCs.

**Results**

**Trends: 1998–2008**

In 1998, 238 and 379 matched couples were interviewed in South Africa and Uganda, respectively. In 2008, 800 couples were interviewed in both countries. Table 1 and 2 summarize the key changes in sample composition and condom-related variables between 1998 and 2008, for the South African and Uganda sites, respectively. In South Africa the percentage of respondents with upper secondary schooling or higher rose appreciably while in Uganda the main change in sample composition was an increase in the percentage living in areas designated as urban. In the earlier round, the coverage of HIV testing was considerably higher in the South African than in the Uganda sites. Coverage rose sharply in both countries

Table 1. Trends in sample characteristics and condom-related indicators, 1998 and 2008, South African sites.

	Husbands		Wives	
	1998	2008	1998	2008
Mean age (years)	37.7	38.5	32.9	33.0
Urban (%)	51.3	50.0	51.3	50.0
Upper secondary school or more (%)	47.8	65.3*	49.6	61.2*
Mean number of living children	2.24	2.35	2.18	2.00
Ever had a HIV test (%)	28.2	41.6*	41.8	77.8*
Perceived themselves at risk of HIV infection from partner (% <sup>a</sup> )	19.1	65.9*	56.5	80.3*
Belief in condom efficacy in preventing HIV infection (%)	89.1	75.3*	83.2	84.6
Acceptable for a married couple to use condoms (%)	39.9	63.5*	49.6	69.1*
Acceptable for a married woman to ask her husband to use a condom (%)	44.1	57.8*	64.3	73.2
Discussed condoms with spouse (%)	50.9	67.1*	54.1	69.1*
Frequency of condom use%				
Always	2.5	12.0*	5.5	12.5*
Occasionally	15.5	32.7	16.0	31.3
Beginning only	6.7	11.4	4.6	13.4
Never	75.2	43.9	73.9	42.8
N	238	800	238	800

<sup>a</sup>Asked only of respondents who were not HIV positive or unsure. \*Significant change at 95% confidence.

Table 2. Trends in sample characteristics and condom-related indicators, 1998 and 2008, Ugandan sites.

	Husbands		Wives	
	1998	2008	1998	2008
Mean age (years)	33.9	35.5*	27.1	27.7
Urban (%)	34.1	50.0*	34.1	50.0*
Upper secondary school or more (%)	18.7	23.7	9.8	9.6
Mean number of living children	3.4	4.2*	3.5	3.4
Ever had a HIV test (%)	13.3	55.1*	24.3	74.5*
Perceived themselves at risk of HIV infection from partner (% <sup>a</sup> )	24.9	38.7*	24.8	80.2*
Belief in condom efficacy in preventing HIV infection (%)	68.8	78.1*	70.1	64.6
Acceptable for a married couple to use condoms (%)	59.7	68.1*	55.7	68.4*
Acceptable for a married woman to ask her husband to use a condom (%)	61.5	70.5*	63.1	67.5*
Discussed condoms with spouse (%)	43.0	62.6*	40.6	64.9*
Frequency of condom use%				
Always	1.1	8.3*	4.0	8.6*
Occasionally	22.7	31.5	11.2	25.6
Beginning only	5.5	15.8	15.8	17.9
Never	70.7	44.5	78.9	47.9
N	379	800	374	800

<sup>a</sup>Asked only of respondents who were not HIV positive or unsure. \*Significant change at 95% confidence.

but more so in Uganda with the consequence that, in 2008, more husbands in the Uganda sample reported ever testing than in the South African one: 55% vs. 42%. In both countries, about three-quarters of wives in 2008 reported testing.

In South Africa, wives were more likely to report that they perceived themselves at risk of HIV infection from their spouse than vice versa. Between 1998 and 2008, the gender gap narrowed but concern rose appreciably in both sexes. In 2008, two-thirds of husbands and four-fifths of wives expressed concern. In Uganda, about 25% of both husbands and wives reported concern in the earlier round. Among wives a huge increase to 80% is recorded and, among husbands, the increase to 39% is less marked but nevertheless substantial.

Belief in the efficacy of condoms to prevent HIV did not change significantly over the decade among wives in either country. Among husbands, a decline occurred in the South African sample but an increase was observed in Uganda. Nevertheless, large majorities of both sexes and in both sites endorsed condom

efficacy. In Uganda, there was a significant but modest increase in the percentage of husbands and wives who considered that condom use by married couples was acceptable. The trend in the proportion considering it acceptable for a married woman to ask her husband to use a condom was similar. In South Africa, the trend toward greater acceptability of condom use in marriage was more pronounced. South African husbands were significantly more likely to find it acceptable for a married woman to ask her husband to use a condom in 2008 than in 1998 but no similar significant trend was apparent among wives. In both countries discussion of condoms with the spouse increased substantially and, in 2008, about two-thirds of husbands reported discussion.

Consistent with increased discussion and acceptability, condom use with the cohabiting partner has increased substantially in both sites. In 1998, only about 25% had ever used condoms with their current spouse. This figure has risen to about 55% and this trend is strikingly similar in both countries. A minority reported use only at the beginning of the relationship. "Occasional" use rose and about one-third in 2008 reported this pattern, with little difference between the sexes or sites. The percentage who reported "always" using condoms rose from 2.5 to 12% in the South African sample of husbands and from 5.5 to 12.5% among wives. The corresponding trends for Uganda are 1.1–8.3% for husbands and 4–8.6% for wives. Standardization on the composition of the 1998 samples by education in South Africa and by residence in Uganda made essentially no difference to estimated trends in condom use (results not shown). Table 3 summarizes the increase in the percent reporting that they always used condoms with their partner (i.e., consistent condom use) between 1998 and 2008 for sub-groups of the sample. In the Ugandan sites, the overall impression is that increases were relatively uniform across demographic and socio-economic strata and differed little by experience of HIV testing or by risk perception. By contrast, in the South African sites, increases in consistent use were essentially confined to the urban sample and were more pronounced among cohabiting than among married couples.

#### *Consistency of condom use reports*

In 2008, 80% of respondents in South Africa who reported always using condoms also reported use in all of the last 10 acts. In Uganda, this figure was 83% for husbands and 71% for wives. Among always users, over 90% in South Africa also reported use at last coitus: in Uganda, the figure was 86% for

Table 3. Absolute percent point change in consistent condom use, 1998 and 2008, for sample sub-groups.

	South African sites		Ugandan sites	
	Wives	Husbands	Wives	Husbands
	%	%	%	%
Age (years)				
Less than 35	7.6*	9.6*	4.8*	5.7
35 or more	6.2	8.7*	2.6	9.0*
Residence				
Rural	1.0	1.7	4.4	6.6*
Urban	15.2	16.6*	3.7	8.0*
Level of education				
Less than upper-secondary	6.1	8.1	2.7	6.5*
Higher	7.1*	9.6	2.7	6.5*
Marital status				
Married	3.3	4.5	4.9*	6.3*
Cohabiting	9.1	14.1*	2.3	6.9
HIV test				
Yes	5.2	13.9*	6.9	3.9
No	3.3	5.7*	5.9*	2.1
HIV risk perception				
Medium-high	1.9	5.9*	0.5	8.0*
Low	3.3*	5.7	5.9*	2.1
Overall	7.0	9.5	4.6	7.2

husbands and 68% for wives. Aggregate consistency between reports of husbands and wives was high in both settings. In South Africa, individual consistency was also high. Among husbands who reported always using condoms, 80% of wives gave the same response. In Uganda, this level of consistency was only 32%.

#### *Condom use, HIV status, and family planning*

In the 2008 survey, but not in 1998, questions were asked about respondents' HIV status and the perceived status of their spouse. In South Africa, 6% of wives reported infection and 5% thought that their husband was infected. Among these minorities, consistent condom use was very much higher (about 45%) than among those who gave other answers or refused to answer (Table 4). The link between HIV status and condom use is even more pronounced for husbands; about 70% who reported themselves or their spouses to be HIV positive were consistent users. In the Uganda sample, only about 3% reported themselves or spouses to be infected. Among wives and husbands who considered themselves infected, the level of consistent use was a little over 40% and among those who thought their spouse was HIV positive, use was 44% for women and 31.5% for men. It is of interest to note that over half of individuals in

Table 4. Percentage reporting consistent condom use by self-reported HIV status and perceived status of spouse, 2008.

	South African sites		Ugandan sites	
	<i>N</i>	%	<i>N</i>	%
Wives' self-reported HIV status				
HIV positive	51	45.1	29	41.3
Do not know	167	11.4	191	5.4
HIV negative	537	10.6	565	8.1
Refused	45	2.2	4	–
Wives' perception of husbands' HIV status				
HIV positive	37	45.9	25	44.0
Do not know	255	14.1	414	5.3
HIV negative	408	9.6	367	10.0
Refused	100	8.0	0	–
Husbands' self-reported HIV status				
HIV positive	31	67.7	23	43.4
Do not know	211	8.0	283	7.4
HIV negative	480	10.0	479	7.1
Refused	77	13.0	15	–
Husbands' perception of wives' HIV status				
HIV positive	26	73.1	19	31.5
Do not know	196	9.7	284	10.9
HIV negative	520	10.6	490	5.9
Refused	58	5.1	7	–

both countries who self-reported as HIV positive also thought that their partner was positive but the small numbers of HIV positive respondents prevented comparison of perceived concordant and discordant couples. Nevertheless, HIV infection, whether concordant or discordant, accounts for only a minority of use. In South Africa only about 20% of all consistent users reported themselves or their spouse to be HIV positive. The equivalent figure in Uganda is about 15%.

Questions on fertility preferences and family planning preceded those focused on HIV and condom use. This arrangement permits estimation of the fraction of overall condom use that is motivated at least in part by pregnancy prevention and to measure double method protection. To measure the latter, respondents were asked a standard question on

current use of contraception followed by a supplementary question to ascertain whether another method was also being used. In the South African sites, among women who were consistent condom users, 36.7% reported current use of condoms for pregnancy prevention, an additional 15.6% reported using condoms for family planning together with another (non-barrier) contraceptive method and 21.1% reported hormonal methods or sterilization (but not condoms) as their current contraceptive method (Table 5). Thus, the level of double-method protection is identical ( $15.6 + 21.1 = 36.7\%$ ) to the proportion using condoms alone. In Uganda, the percent of consistent condom users reporting use of this method for contraception is slightly lower at 34.8% and double-method protection is also very similar at 37.6%. In the total sample of both countries, condoms (used without another method) are the second most prevalent contraceptive method, after sterilization in South Africa and after hormonal methods in Uganda.

## Discussion

Trends in condom use are best assessed by large nationally representative surveys, such as the Demographic and Health Surveys. This study was confined to small areas and thus generalizations from the results must be cautious. Rather the purpose of the study was to examine in greater detail than is possible in national enquiries the extent of change in the perceived need, willingness, and ability of couples to use condoms with their cohabiting partner.

The results are encouraging. Concern about HIV infection from a cohabiting partner has increased substantially in the study sites over the past decade. Clearly, a subjective need for protection from possible infection from the partner is widely felt, perhaps as a result of greater uptake of voluntary testing. Attitudes toward condom use within marriage have become more positive and spousal discussion of condoms was much more prevalent in 2008 than a decade earlier. In comparison with the major changes in concern and attitudes, increases in condom use are more modest but nevertheless appreciable. Taking the testimony of wives, consistent use has doubled in the study areas of both countries. For husbands, the reported increase has been more marked because of lower levels of reported use in 1998. In the South African sites, increases in use were essentially confined to the urban population and were more pronounced among couples who defined themselves as cohabiting but not married than among the married. Further analysis is needed to determine the

Table 5. Current contraceptive use of wives by reported condom use, 2008.

Current contraceptive use	South African sites			Ugandan sites		
	Consistent condom users %	Inconsistent or non-users %	All %	Consistent condom users %	Inconsistent or non-users %	All %
Condoms	36.7	15.7	18.0	34.8	2.2	5.0
Condoms + other method	15.6	4.5	5.8	10.1	2.9	3.5
Hormonal	2.2	15.0	13.5	23.2	32.8	32.0
Sterilization	18.9	20.5	20.3	2.9	1.5	1.6
Other	0	2.7	2.4	1.4	3.6	3.4
No method	26.7	41.7	40.1	27.5	57.0	54.5
Total	100	100	100	100	100	100
N	100	700	800	69	731	800

reason for this result but it may reflect heightened concern about infidelity among cohabiting couples, as found in a study in Kampala and Lusaka (Carael, Ali, & Cleland, 2001). In Uganda, increases were relatively even across sub-groups. In both countries condom use was very much higher among the small minority of couples where one or both partners were thought to be HIV positive. Nevertheless, the majority of users did not report themselves to be infected.

The epidemiological significance of a 10% level of consistent condom use by married or cohabiting couples remains uncertain but it is sufficient to rebut the prevailing and pessimistic view that condoms can play no role in HIV prevention in this sector of the population because social and psychological barriers to their use within marriage or cohabiting unions are intractable.

The importance of these results depends critically on the validity of self-reported condom use. Skepticism is justified because of the risk of socially desirable answers. In the South African survey, the high levels of internal consistency between the different measures of condom use and the consistency between reports of matched husbands and wives strongly suggest that reported behavior is reliable. In Uganda consistency was lower, perhaps a reflection of low levels of education, and thus results should be interpreted with more caution.

From a policy and programmatic perspective, one of the most relevant findings is the high level of condom use for contraceptive purposes. In both countries, condoms, used without another non-barrier method, were the second most prevalent method in 2008. In Uganda slightly over one-third of women who reported themselves as consistent condom users had earlier reported current use of condoms for family planning and the corresponding figure in South Africa is 37%. The implication is that the contraceptive motive in condom promotion should be

given much greater prominence, in terms of social marketing, mass media promotion, and counseling. The needs of the married population have been badly neglected. It is time to address the imbalance.

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