GENDER DIFFERENCES IN THE FACTORS INFLUENCING CONSISTENT CONDOM USE AMONG YOUNG PEOPLE IN TANZANIA

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Abstract

AIDS has become a major cause of death in Tanzania and young people represent the most vulnerable group. Against this background, this paper examined commonalties and differences in the predictors of condom use among Tanzanian youth in five regions. The findings suggest that an effective intervention for promoting condom use should be differently packaged for men and women. For men, an effective intervention should seek to educate the audience about correct use of condom, promote discussion about condom use with peers, link condom use to longevity and increase the self-efficacy for use of condom with long-term sex partners. For women, interventions should focus on sexual empowerment, increase understanding about the adverse social and health consequences of unplanned pregnancies and promote understanding about the response-efficacy of the condom.

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Background

Since the first cases of acquired immuno-deficiency syndrome (AIDS) were reported in Tanzania in 1983, the epidemic has spread and continues to spread at an alarming rate. Today, HIV/AIDS is the leading cause of death among adults in Tanzania. Current estimates put the adult infection rate at 7.8% with about 1.5 million people living with HIV/AIDS and about 810,000 AIDS orphans (UNAIDS, 2002). Young people aged 15 to 24 years are the group most affected by the epidemic: while representing only 20 percent of the population, youth account for 60 percent of new infections in Tanzania. This is probably not surprising considering that premarital sexual experimentation is common and condom use is limited among youth. According to the 1999 Tanzania Reproductive and Child Health Survey (RCHS), 57% of young men and 39% of young women reported premarital sex during the last 12 months. The same survey shows that only 31% of young men and 19% of young women reported condom use during premarital sex.

In Tanzania, like most of the other countries in the sub-region, young women are more at risk than young men. In 2001, an estimated 6.4% - 9.7% of young women aged 15–24 were living with HIV/AIDS, compared to 2.8% - 4.2% of young men (UNAIDS, 2002). The increased vulnerability of young women is attributable to biological and social factors. First, young women and girls are more biologically susceptible to infections than young men and boys because the cervix is more prone to lesions. Research has suggested that the risk of contracting HIV from an infected sexual partner of the opposite sex is about 12 times greater for women than for men (Padian, Shiboski, & Jewell, 1990). Second, for gender-based reasons, young women have poorer access to education, information, capital and health care than do their male counterparts. This situation has probably been exacerbated by a declining economy that has disproportionately impoverished women. A common result is sexual relationships between older men and adolescent girls that often involve an exchange of money or gifts for sexual favors. It is, therefore, not surprising that Tanzanian women are generally at a disadvantage in sexual decision making and lack the power to negotiate sex successfully.

Against this background of prevalent premarital sexual experimentation, low condom use and higher prevalence of HIV among young women compared to young men, this paper examines gender differences in socio-demographic and ideational variables influencing consistent condom use. Information about the factors influencing condom use among at-risk population groups should help to inform the design of effective prevention strategies and contribute to checking the spread of HIV.

Review of literature

Gender roles and gender differences have a bearing on sexual relationships. Literature suggests that the consideration to use condom for pregnancy or disease prevention is informed by differing expectations, attitudes and habits among men and women (Eagly and Wood, 1991; Hunter, 1998). Ultimately, in condom use as in any other HIV/STI prevention practice, men and women tend to behave consistently with what socially-prescribed gender roles expect of them. Most of the studies that have examined differences in condom use among young men and women found that men are more likely than women to report condom use (e.g. Potsonen and Kontula, 1999; AlRoy, 1998; Pugatch et al., 2000). A few studies have however found higher use rates among women compared to men (e.g., Olley and Rotimi, 2003).

Studies into the factors affecting condom use abound in public health literature. The factors that have been identified as being of importance for condom use include knowledge about HIV (Carroll, 1991; Wingood and DiClemente, 1998); attitudes towards condom (Horn and Brigham, 1996; Edem and Harvey, 1995; Sacco, et al., 1991; MacDonald et al., 1990; Pleck, et al., 1991); perceived vulnerability (Hounton, Carabin & Henderson, 2005; Peltzer, 2000; Catania, Coates & Dolcini, 1994; Boyd and Wandersman, 1991); perceived self-efficacy (Pettifor, et al., 2004; Soler, et al., 2000; Kamya, et al., 1997; Malow, et al., 1993), condom efficacy (DiClemente et al., 1992), discussing condom use or AIDS with partner (Pettifor, 2004; Laga, et al., 2001; Catania, Coates & Dolcini, 1994; Horn and Brigham, 1996), and relationship control (Pettifor, et al., 2004; Greig & Koopman, 2003; Pulerwitz, et al., 2002; Wingood and DiClemente, 1998; Cabral, et al., 1998).

A growing body of research in Western countries has examined the behaviors and psychosocial factors associated with condom use and found significant gender differences in the predictors (e.g. von Haeften, et al., 2000; Parsons, et al., 2000; Carter, et al., 1999; Norris & Ford, 1998; AlRoy, 1998; Helweg-Larsen & Collins, 1994). Literature suggests that while the use of condom may depend considerably on motivation and skills among men, these factors are not nearly enough among women. A few studies have identified male partners as a major barrier to condom use among women who desire to use the device (e.g. Cabral, et al., 1998; Gomez & Marin, 1996; Holland, et al., 1992). Indeed, since condom is a male-controlled method, in addition to knowledge and motivation, women need the ability to convince their partners to use the method. Effectively convincing their partners to use condoms would require appropriate sexual negotiation skills and assertiveness on the part of women.

In contrast to the considerable empirical evidence from Western countries, there has been limited research into gender differences in the factors associated with condom use in Africa (Olley & Rotimi, 2003; Peltzer, 2000). Considering the empirical evidence that consistent condom use is a strong predictor of HIV infection, information about the factors associated with condom use among men and women is important for developing effective infection prevention interventions (e.g. Pettifor, et al., 2004; Ghys, et al., 2002).

Data

The data analyzed in this paper derive from a 2004 sample survey among young people aged 15 – 24 years in five regions of Tanzania – Arusha, Dar es Salaam, Dodoma, Mbeya and Mwanza. The survey focused on an urban sample and the sample design involved a three-stage process. Within each region, census enumeration areas (EA) that qualify as urban were randomly selected to serve as the study locations. The number of respondents selected for interview in each region was proportionate to the size of the population in the region. A total of 116 EAs were selected from the five regions: 36 from Dar es Salaam and 20 from each of the other regions. In each selected EA, field staff listed all the households, noting the number of youth aged 15 - 24 years in each household. In each EA, a number of households (56 in Dar es Salaam, 35 in Arusha, 36 in Dodoma, 31 in Mbeya and 30 in Mwanza) was randomly selected and surveyed. All eligible respondents in each selected household were targeted for interview. Overall, the sample included 1309 men and 2452 women between the ages of 15 and 24 years. Howover, considering that the justification for condom use is different for single youth as opposed to married youth, we will focus on single youth in the analyses presented in this paper. The sample on which the analyses in the paper are based includes 1623 single women and 1200 single men.

Methods

In this paper we analyze the predictors of consistent condom use against the background of an ideation framework. A psychosocial model, the ideation framework posits that ideational variables are the proximate determinants of behaviors and mediate the influence of socio-demographic and contextual variables. Ideation refers to the ways of thinking of a people that are transmitted through social interaction and the mass media. The concept has its genesis in demography where it was first proposed in the 1980's as an alternative to the classical demographic transition theory. Ideation has three dimensions – cognitive, emotional and social interaction.

The variables used to operationalize each of these dimensions are derived from leading behavior change theories. Several variables in each category were tried and only the ones that were significantly related to the dependent variable at the bivariate level were included in the final models. To operationalize the cognitive dimension of ideation, we used the following variables: perceived consequences of unplanned pregnancies, perceived response efficacy of the condom, attitudes towards premarital sex, perceived social approval of condom, and perceived gender roles concerning condom use. For the emotional dimension, we retained perceived self-efficacy for correct condom use, perceived self-efficacy to use condoms with a long-term sex partner, perceived self-efficacy to refuse sex if the partner does not agree to use condoms, and personal ambitions concerning longevity and possession of expensive materials. The social interaction variables that we included in the estimated models were discussion about condom use with spouse, discussion about condom use with friends, and personal advocacy in favor of condom use.

We estimated the models using logistic regression. Considering our working hypothesis that the predictors of consistent condom use differ by gender, we estimated separate models for men and women.

Measures

Dependent Variable

The dependent variable analyzed in this paper is consistent condom use, defined as using condoms for each and every sexual intercourse during the previous 12 months.

Independent Variables

The ideational variables that we examined in this paper are described below:

- *Perceived consequences of unplanned pregnancy*: We assessed this variable through a Likert-scale type attitudinal question that asked the respondents about their level of agreement with the statement that a pregnancy at this stage in their lives would jeopardize the achievement of their professional ambitions;
- *Perceived response efficacy of the condom*: A Likert-scale type question asked the respondents to what extent they agreed or disagreed that male condom was a very effective way to avoid HIV;
- *Attitudes towards premarital sex*: Measured through a Likert-scale type attitudinal question that asked the respondents to what extent they agreed that premarital sex was okay.

- *Perceived social approval for condom use:* We measured this variable through a set of questions that asked the respondents if they believed that specific significant others would approve of their use of male condoms for HIV/STI prevention. The specific others inquired about include spouse/sex partner, friends and neighbors, parents, religious leader, and health provider;
- *Gender roles and condom use*: We measure this item through a question that asked about the level of agreement with the statement the following statement: "a woman would lose a man's respect if she asked him to use a male condom."
- *Perceived self-efficacy for condom use:* Three self-efficacy items were included in the estimated models. The items were assessed through Likert-scale type questions that asked the respondents about their level of confidence to: (1) use a male condom correctly, (2) refuse to have sex if partner will not use a male condom, and (3) use a male condom with a partner with whom they have a long-term, trusting relationship;
- *Life aspirations:* Aspirations were measured through a set of questions that asked the respondents to rate the importance they attach to specific life goals by giving the goal a score from 1 to 7. A score of 7 is interpreted as attaching great importance to the specific life goal. Two life goals are included in the estimated models: living to be at least 80 years old and having very expensive possessions.
- *Personal advocacy in favor of condom use:* The relevant question asked the respondent if they had ever encouraged someone to use condoms in order to avoid HIV and other STIs;
- *Discussion about condom use:* Two discussion-related variables were included in the estimated models. The relevant questions asked the respondents if they discussed condom use with spouse or sex partner and friends and neighbors during the previous 12 months;

Findings

Patterns of Condom Use

The data reveal some significant gender differences in condom use at last sex: 65.5 percent of sexually experienced single men compared to 58.7 percent of women. However, with respect to consistent condom use, the gender differences are only weakly significant: slightly more men (45.5%) than women (40.7%) reported consistent condom use during the past 12 months ($z=1.66$, $p<0.1$).

Gender and the Factors Influencing Consistent Condom Use

Before examining which variables strongly predict consistent condom use among men and women, we look at how men and women differ with respect to some of the variables that have been empirically documented or theoretically posited to influence condom use. The variables that we examine in this section are the ones that we include in the logistical regression models used to assess the predictors of condom use. The results are presented on Table 1.

As can be seen from the Table, young men are significantly more likely than young women to have post-primary education and to have ever consumed alcohol. While there are no noticeable gender differences in the timing of sexual debut, the proportion from poor households or the frequency of sexual intercourse, the data show that men are significantly more likely to have been exposed to HIV/AIDS-related information from multiple sources. The data also reveal significant gender differences, in favor of men, in the perceived self-efficacy for correct condom use. Men are also more likely to have encouraged someone to use a condom and to attach considerable importance to longevity. Perceived social approval for condom use is more common among men than among women. Finally, while there are no differences between men and women with respect to discussing condom with sex partner, men are more likely than women to report discussing the device with friends.

Factors Influencing Consistent Condom Use among Men and Women

The variables included in the models reported on Table 2 are those that are significantly related to consistent condom use at the bivariate level. For each gender, we estimated two models: one contains socio-demographic and contextual variables only while the other includes ideational variables, as well. All the estimated models fit the data adequately well. The data reveal that some socio-demographic and ideational predictors of consistent condom use are common to both sexes while others are important for one gender but not for the other. We discuss the findings for men and women separately in the following sections.

Men

Results of model A indicate that socio-demographic and contextual variables collectively play a relatively limited role in explaining consistent condom use. Three contextual variables significantly predict condom use in the absence of ideational variables: age at sexual debut, exposure to HIV-related information, and alcohol

Table 1: Description of consistent condom use and predictor variables, by gender, Tanzania, 2004.

Variables	Male	Female
Percent with post-primary education *	34.7	28.7
Age at sexual debut (in years)	16.9	17.0
Percent from low socio-economic status households	34.5	38.0
Percent that have sex at least once a week	30.5	27.8
Percent that have ever taken alcohol ***	39.9	28.1
Percent that are exposed to HIV-related information from at least four sources ***	77.5	63.1
Percent that believe that a pregnancy at this stage in life would jeopardize the achievement of professional aspirations *	86.2	82.5
Percent that believe that condom is effective in preventing HIV	78.9	77.8
Percent that believe that a woman would lose a man's respect if she insisted on use of male condom	13.9	13.6
Percent reporting perceived self-efficacy to use a male condom correctly ***	85.2	67.8
Percent reporting perceived self-efficacy to refuse sex if partner will not use a male condom	60.7	56.7
Percent reporting perceived self-efficacy to use a male condom with a long-term partner	48.2	46.5
Percent that attributed great importance to living to be at least 80 years old **	69.0	62.1
Percent that attributed great importance to having very expensive possessions ‡	34.8	29.7
Score for perceived social approval for condom use (range: 0 - 5) *	2.5	2.3
Percent that ever encouraged someone to use a male condom ***	69.5	57.5
Percent that discussed condom use with romantic partner	57.7	54.9
Percent that discussed condom use with friends ***	61.5	48.0
Number of respondents	574	612

Source: Ishi Youth Survey, March 2004, Tanzania

Notes:

Significance of difference (of mean or proportion between men and women: *** p≤ .001; ** p≤ .01; * p≤ .05; ‡ p≤ .1

consumption. For example, one year increase in the timing of sexual debut increases the odds of consistent condom use by 16 percent while exposure to HIV from at least four sources increases the odds by 88 percent.

When we introduced the psychosocial variables into the estimated model (Model B), its predictive power increased considerably. In the presence of psychosocial variables, age at sexual debut and alcohol consumption maintain their strong relationship with consistent condom use. However, the previously observed strong influence of exposure to HIV-related information disappears, suggesting that the effects of communication on condom use is mediated through the psychosocial variables.

The strongest psychosocial predictor of consistent condom use among men is the perceived self-efficacy for correct use of condom, pointing to the importance of "how-to"

Table 2: Description of consistent condom use and predictor variables, by gender, Tanzania, 2004.

Variables	Men		Women	
	Model1[a]	Model2[b]	Model1[a]	Model2[b]
Socio-demographic and contextual				
Education				
None or primary (RC)	1.00	1.00	1.00	1.00
Post-primary education	1.30	1.20	1.18	0.88
Region				
Arusha (RC)	1.00	1.00	1.00	1.00
Dar es Salaam	0.97	0.83	0.60‡	0.57‡
Dodoma	1.70‡	2.27*	1.43	1.51
Mbeya	1.12	0.64	0.86	0.68
Mwanza	0.78	0.70	0.76	0.84
Age at sexual debut (in years)	1.16***	1.17**	1.05	1.03
Socio-economic class				
Low (RC)	1.00	1.00	1.00	1.00
Medium	1.51‡	1.40	1.10	1.40
High	1.54‡	1.28	1.25	1.46
Frequency of sexual intercourse				
Less than once a week (RC)	1.00	1.00	1.00	1.00
At least once a week	0.74	0.82	0.65*	0.82
Exposed to HIV information from four or more sources	1.91**	1.10	2.27***	1.26
Ever taken alcohol	0.58**	0.53**	1.06	0.82
Psychosocial				
Belief that a pregnancy at this stage in life would jeopardize professional goals	--	1.37	--	1.86*
Belief that condom is effective in preventing HIV	--	1.32	--	1.67*
Favor premarital sex	--	0.93	--	0.90
Belief that a woman would lose a man's respect if she insisted on use of condom	--	0.55‡	--	0.63
Perceived self-efficacy for correct condom use	--	4.17***	--	1.48‡
Perceived self-efficacy to refuse sex if partner will not use a condom	--	2.18**	--	2.27**
Perceived self-efficacy to use a condom with a long-term partner	--	1.87**	--	1.33
Attributed great importance to living to be at least 80 years old	--	1.80**	--	1.40
Attributed great importance to having very expensive possessions	--	0.72	--	0.61*
Score for perceived social approval for condom use (range: 0 - 5)	--	1.23*	--	0.95
Ever encouraged someone to use a male condom	--	0.95	--	1.35
Discussed condom use with romantic partner	--	1.18	--	3.66***
Discussed condom use with friends	--	2.44***	--	0.99
Psuedo-R^2	8.2	24.4	6.7	22.7
Log-likelihood test Ratio: X^2/p	--	128.3/ 0.001	--	132.8 / 0.001
Number of respondents	574	574	612	612

Source: Ishi Youth Survey, March 2004, Tanzania

Notes:

Significance: *** p≤ .001; ** p≤ .01; * p≤ .05; ‡ p≤ .1

[a] Model includes socio-demographic and contextual variables only.

[b] Model includes socio-demographic, contextual and ideational variables.

skills for the practice of this HIV-prevention behavior. Indeed, confidence in one's ability

to correctly use the condom increases the odds of reporting consistent condom use more than fourfold among men. Two other self-efficacy measures – the perceived self-efficacy to refuse sex if partner would not agree to use a condom and the perceived self-efficacy to use condoms with a long-term sex partner – are also important predictors among men. Equally very significant in predicting consistent condom use is discussion about condom with friends, which increases the odds of consistent condom use more than twofold. One measure of aspiration – the importance attributed to longevity – strongly predicts condom use. Attaching great importance to living to be at least 80 years old increases the odds of consistent condom use by 80 percent. The data further show that perceived social approval for condom use is another important predictor. In contrast, perceived negative consequences of an unintended pregnancy, perceived response efficacy of the condom, importance attributed to possession of expensive objects, personal advocacy in favor of condom use, and discussion of condom use with a sex partner do not appear to influence consistent condom use among men.

In sum, the data show that the factors that have important bearing for consistent condom use among men relate to condom use skills, peer pressure, commitment to condom use and the desire to live very long.

Women

Among women, the predictors of consistent condom use include a few of the variables documented for men but mostly different ones. In Model A, before the psychosocial variables were introduced into the model, variations by the frequency of sexual intercourse and exposure to HIV information, were very obvious. Specifically, engaging in sexual intercourse at least once a week is associated with reduced odds of consistent condom use while exposure to HIV information from multiple sources increases the odds considerably. The data further reveal that regional variations in consistent condom use are only weakly significant: the odds of reporting consistent condom use are lower in Dar es Salaam than in Arusha.

In the presence of psychosocial variables, all the initially observed significant differentials in socio-demographic and contextual variables disappear. The pattern of relationship between consistent condom use and the psychosocial variables is different from what we observed among men in many respects.

Of note is the finding that the most significant self-efficacy item among women is not the perceived self-efficacy for correct condom use, as we observed for men, but the perceived self-efficacy to refuse sex if sex partner refuses to use a condom. Moreover,

discussion about condom with sex partner is a very strong predictor increasing the odds of consistent condom use almost fourfold.

Whereas the perceived response efficacy of condom has no noticeable effects among men, it is a strong predictor among women. Finally, attribution of great importance to material possession is associated with reduced odds of condom use among women although it has no significant effects among men.

Some variables are important predictors among men but are of no consequence for women. These variables include the perceived self-efficacy for correct condom use, the perceived self-efficacy for condom use with a long-term partner, the importance attributed to longevity, perceived social approval for condom use, and discussion about condom use with friends. The ideational variables that significantly predict consistent condom use among women are connected with sexual empowerment and the ability to safely negotiate the use of the method with the sex partner.

Conclusion

The foregoing has examined gender variations in the factors associated with consistent condom use among a sample of Tanzanian youth selected from five regions. The results reveal significant differences in the predictors of consistent condom use among men and women. This finding calls for different approaches to promote consistent condom use among men and women.

The data show that the strongest predictors of consistent condom use among men are the perceived self-efficacy for correct condom use and the discussion of condom use with friends. The implication of this finding for behavior change programming is that an effective strategy should emphasize condom use skills development and address the issue of negative peer pressure and group norm around condom. In this respect, interventions that seek to teach youth how to wear and dispose of condoms are relevant. Similarly, interventions that seek to change negative group norm about condom use are important. Illustrative interventions in this regard are those that employ the positive deviance approach and seek to provide increased visibility to consistent condom users while encouraging them to be vocal about their behavior and advocate for condom use among their peers. Two other important predictors of consistent condom use among men are the perceived self-efficacy for condom use with a long-term partner and the perceived self-efficacy to refuse sex if sex partner refuses to use a condom. This finding underscores the importance of building personal commitment to condom use among men. Literature on the Stages of Change Theory suggests that efforts that foster understanding of the

benefits of an action while increasing the self-efficacy to deal with the challenges associated with the action can help to build commitment to the action (Proschaska, DiClemente & Norcross, 1992; Proschaska, 1994). In addition, the Theory of Reasoned Action suggests that positive attitudes towards a behavior and favorable subjective norms help to foster commitment (Fisher, Fisher, Williams et al., 1994; Fishbein & Middlestadt, 1989). On the premise of these theoretical view points, appropriate interventions could include modeling a typical youth who consistently uses condoms in spite of the odds militating against the practice.

For women, the most significant predictors are discussion about condom with sex partner and the perceived self-efficacy to refuse sex if the partner refuses to use a condom. This finding indicates that interpersonal factors are key determinants of condom use among women and points to the importance of taking gender relations into consideration in the design of appropriate strategies for promoting condom use among women. Relevant interventions should address the relative powerlessness of women in sexual relationships and empower them to engage in health protective sexual communication with their sex partners, including sexual negotiation, sexual assertiveness and discussion about HIV prevention.

Perceived response efficacy of condom is another strong predictor of consistent condom use among women, pointing to the need for interventions that emphasize condom effectiveness. The negative role of aspirations for expensive material possession is not surprising. It is possible that women that attach great importance to material possession tend to engage in sexual relationships characterized by economic dependence and relative powerlessness, which fosters non-use of condoms.

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