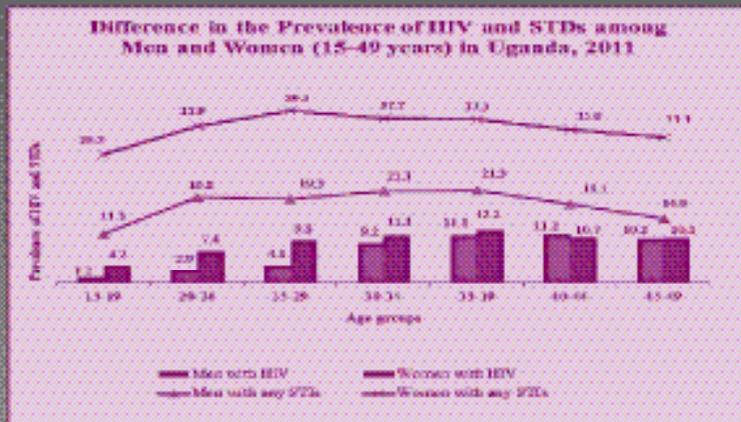


# Socio-cultural correlates and risky sexual behaviour influencing prevalence of HIV/AIDS and STIs in Uganda: A gender perspective



## SOCIOLOGY | RESEARCH ARTICLE

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# Socio-cultural correlates and risky sexual behaviour influencing prevalence of HIV/AIDS and STIs in Uganda: A gender perspective

Shraboni Patra<sup>1\*</sup>

**Abstract:** The present study focuses on the behavioural factors especially risky sexual behaviours along with the other socio-economic correlates of the high prevalence of STIs and HIV infection in Uganda. The Uganda AIDS Indicator Survey (2011) data is used. The total sample is 16,607 of which 7,122 are men and 9,485 are women. HIV prevalence is high among men (33.4%) and women (50.2%) with any sexually transmitted infections (STIs) or STI symptoms. Women are significantly more vulnerable to any STIs and HIV/AIDS than men. The prevalence of HIV and STIs is much higher among widow, divorced and separated. Drinking alcohol and not using a condom during sex, having two or more sexual partners are the contributing factors to high HIV and STIs prevalence. Awareness of preventive methods and transmission of STIs, and changes in sexual behaviour are required. The difference in the prevalence of STIs and HIV among men and women can be minimised by increasing employment opportunity for women, by securing woman's sexual right through legal protection and by targeting men's perception towards women's sexuality.

**Subjects:** Behavioral Sciences; Health and Social Care; Medicine, Nursing & Allied Health; Social Sciences

**Keywords:** socio-cultural correlates; risky sexual behaviour; HIV/AIDS; STIs; Uganda; UAIS, 2011

### ABOUT THE AUTHOR



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Shraboni Patra is a research scholar (PhD) at the International Institute for Population Sciences, India. She has expertise in the public health research particularly in the research on women's reproductive health, child health, gender studies, AIDS, sexually transmitted diseases, etc. She had worked as a research officer in a UNICEF funded project on mother and child nutrition (CNSM 2012) in Maharashtra, India. She has published many research articles in the reputed international journals. She has also presented her research papers at many international conferences and seminars.

### PUBLIC INTEREST STATEMENT

The present paper shows that women are more vulnerable to the risk of HIV infection and sexually transmitted diseases as compared to men in Uganda. Women from the backward sections of the society are more susceptible to the danger of getting HIV and other STIs. High-risk sexual behaviour like drinking alcohol and not using condoms during sex, having two or more sexual partners are the contributing factors to high HIV and STIs prevalence. Hence, the study concludes that women's sexual rights and financial independence need to be prioritised in the Ugandan society to minimise women's vulnerability to STIs and HIV. Women's vulnerability to the risk of HIV and STDs, irrespective of their socio-cultural status, can be minimised by reducing violence against women through legal protection and by targeting men's perception towards women's sexuality.

## 1. Introduction

Among the many countries, Uganda was the foremost country in sub-Saharan Africa to reverse its HIV/AIDS epidemic (Ntozi, Mulindwa, Ahimbisibwe, Ayiga, & Odwee, 2013). The rate of HIV prevalence was fallen to 16.3% in 1996 and 14.7% in 1998. By 1999, the HIV prevalence rate had been halved to 8.3% (Ministry of Health, 2002). The registered declines had been attributed to strict anticipatory measures including condom use, public awareness raising campaigns and behaviour amend messages (Low-Beer & Stoneburner, 2003; UNAIDS, 1998). But, the achievements of last two decades are getting eroded rapidly by the growing number of new infections. The country is trailing the fight against HIV/AIDS, with the infection rates steadily rising. Uganda is among the few countries where there are signs of an increase in unsafe sexual behaviours and in the number of sexual partners (Ntozi et al., 2013).

In the underdeveloped countries, risky sexual behaviour is the key factor for STIs and HIV transmission. Ankrah (1996) observed that teenagers are at the higher risk of HIV transmission because of socio-cultural pressures, physical maturity and behavioural factors including early commencing into sexual activity and the risk was aggravated by short-term relationships, repeated partner changes, multiple partners, low rate of condom use and pessimistic attitudes. In another survey, conducted in Zimbabwe, authors had found clear linkage between high-risk sexual behaviour and HIV infection among men of different age groups (Fritz, Woelk, Bassett, & McFarland, 2002). High-risk sexual behaviour was also found as a threat for HIV infection among women with different socio-demographic characteristics in the third world countries (Berhan & Berhan, 2012). It is also evident from the previous study (Patra & Singh, 2015) that women are more vulnerable than men to HIV and STIs in Uganda.

Hence, it is imperative to study sexual behaviour in the different sections of the population, to understand the behavioural influence on the spread of sexually transmitted infections (STIs), which is still the key approach to controlling the outbreak of HIV. Therefore, behavioural factors especially risky sexual behaviours along with the other socio-economic correlates of high prevalence of STIs and HIV infection in Uganda need in-depth investigation.

## 2. Methods

### 2.1. Data and sample

The study is based on data, sourced from Uganda AIDS Indicator Survey (UAIS), 2011. The UAIS, 2011 is a nationally representative, demographic, HIV serological survey. The total sample of 15–49 years age group, who were tested for HIV and have ever had sex, is 16,607 of which 7,122 are men and 9,485 are women.

### 2.2. Variables

The variables used in the present study have been discussed in the following two groups:

*Predictor variables:* The key predictor or independent variables are re-coded as per the requirement of the analysis. The major variables are sex, age group of men and women, marital status, highest education level, worked in last 12 months, type of residence, region, wealth quintile, religion and ethnicity. Other predictor variables related to risky sexual behaviour are age at first sex, number of sex partner, condom used for first sex, condom used at last sex, consume alcohol during sex and higher risk sex (sex with non-marital, non-cohabiting partners).

*Outcome variables:* The principal outcome or dependent variables are prevalence of HIV and any sexually transmitted diseases (STIs) in last 12 months of survey. Since both the variables are dichotomous, hence they are recoded in yes and no.

### 2.3. Statistical analyses

Simple bivariate and multivariate analyses are used. Significance level of the bivariate association has been shown by Pearson’s  $\chi^2$  test, whereas significance level of multivariate association is shown by binomial logistic regression analysis.

In logistic regression model, regression coefficient is interpreted in terms of odds ratio (OR). In the present study, logistic regression model has been used to analyse the effects of selected socio-factors on the prevalence of HIV and any STIs among men and women of age group 15–49 years. It gives the estimates of the adjusted effects of background characteristics as independent variables on HIV and STI status of women and men. Further, in the same model, effects of different sexual behaviours (as independent variables) on the prevalence of HIV and any STIs among women and men are shown.

All the statistical analyses in the present study are performed by using the statistical package SPSS, version 20.

### 3. Results

#### 3.1. Difference in the prevalence of HIV and any STIs in among men and women in Uganda

Tables 1A and 1B represent the prevalence of HIV and the prevalence of any sexually transmitted infections in the last 12 months of the survey among men and women of 15–49 years age group in Uganda. The prevalence of HIV is 7 and 9.3% for men and women, respectively, whereas the prevalence of any STIs among men and women is 18.6 and 36%, respectively. Here it is clear that, women are disproportionately infected by HIV ( $p < 0.001$ ) and STIs ( $p < 0.001$ ) as compared to men. Further, it is also evident that, HIV prevalence is high among women (50.2%) as compared to men (33.4%) who had any STIs or STI symptoms.

#### 3.2. Prevalence of HIV and any STIs by background characteristics

Women are more (18.6%) HIV infected and have higher rate of (36%) STIs than men are. Prevalence of HIV and STIs is significantly higher among young women than among young men (15–24 years age). Prevalence of HIV and any STIs is also higher among widow, divorced and separated than those who were never in an union; among uneducated and among Batoro ethnic group (see Table 2).

**Table 1A. Prevalence of HIV positive and had any STIs in last 12 months of the survey among men and women of 15–49 years, (N = 16,607), Uganda, 2011**

Prevalence	Men		Women		Total		$\chi^2$ (p values)
	%	N	%	N	%	N	
Any STIs	18.6	1,322	36.0	3,412	28.5	4,734	605.004***
HIV	7.0	499	9.3	882	8.3	1,381	29.341***

\*\*\*Level of significance at  $p < 0.001$ .

**Table 1B. Prevalence of HIV among men and women of 15–49 years with any STIs in last 12 months of survey (N = 4,734)**

Prevalence	Men		Women		Total	
	%	N	%	N	%	N
Had any STIs	33.4	1,322	50.2	3,412	44.1	4,734
$\chi^2$ (p values)	82.828***		85.255***		182.823***	

\*\*\*Level of significance at  $p < 0.001$ .

**Table 2. Prevalence of HIV and any STIs by background characteristics of men and women (15–49 years), Uganda, 2011**

Background characteristics		HIV prevalence				Prevalence of any STIs			
		Men		Women		Men		Women	
		%	$\chi^2$	%	$\chi^2$	%	$\chi^2$	%	$\chi^2$
Age	15–24	2.3	106.392***	6.2	51.976***	16.5	17.676***	33.5	21.027***
	25–39	7.9		10.9		20.5		38.3	
	40 and above	10.8		10.6		16.7		34.2	
Marital status	Never in Union	2.1	134.224***	6.4	315.485***	13.5	43.845***	29.4	28.710***
	Married and living with partner	7.7		7.3		19.6		37.3	
	Widowed/divorced/no longer living together or separated	16.5		22.1		24.7		34.8	
Highest education level	No education	8.9	14.612**	9.6	17.194**	20.6	14.534**	31.1	31.784***
	Primary	7.7		9.9		19.8		37.5	
	Secondary	5.9		8.5		16.9		36.9	
	Higher	4.7		4.4		14.8		29.0	
Worked in last 12 months	No	4.8	5.867*	7.7	11.504**	12.1	21.404***	35.9	0.019
	Yes	7.3		10.0		19.3		36.0	
Residence	Urban	7.2	0.104	12.2	24.690***	17.2	2.11	38.9	8.876**
	Rural	7.0		8.5		18.9		35.2	
Region	Central 1	8.9	26.640***	13.8	90.163***	25.2	145.999***	50.8	498.878***
	Central 2	9.0		10.2		23.6		43.4	
	Kampala	5.1		11.1		17.1		40.1	
	East Central	5.1		7.5		22.5		41.5	
	Mid Eastern	4.7		4.7		15.5		19.1	
	North East	6.3		5.7		12.2		22.8	
	West Nile	5.9		5.2		9.0		16.6	
	Mid Northern	7.6		11.3		9.6		28.6	
	South Western	8.1		10.7		20.5		37.1	
	Mid Western	7.9		10.4		22.5		46.2	
Wealth quintile	Poorest	6.7	6.034	7.2	29.624***	13.3	50.314***	27.3	109.023***
	Poorer	6.0		8.0		17.3		31.6	
	Middle	7.1		8.3		20.3		38.2	
	Richer	8.4		10.7		23.6		41.0	
	Richest	6.9		11.3		18.2		39.7	
Religion	Catholic	7.7	19.646**	9.5	2.627	17.3	11.915***	34.0	19.685**
	Anglican/Protestant	7.7		9.5		18.7		36.9	
	SDA	6.4		9.1		16.4		40.6	
	Pentecostal	5.1		9.3		20.4		35.0	
	Other Christian	5.3		10.2		24.3		36.1	
	Moslem	4.1		8.2		21.0		39.0	
	Other/none	10.3		11.4		16.7		49.3	
Ethnicity	Baganda	6.9	30.208**	12.2	103.757***	21.9	159.809***	44.2	406.100***
	Banyankore	8.6		12.1		23.6		47.9	
	Iteso	7.2		6.9		18.4		26.2	
	Lugbara/Madi	4.1		5.0		10.2		19.4	
	Basoga	5.1		6.9		21.1		44.0	

(Continued)

**Table 2. (Continued)**

Background characteristics		HIV prevalence				Prevalence of any STIs			
		Men		Women		Men		Women	
		%	$\chi^2$	%	$\chi^2$	%	$\chi^2$	%	$\chi^2$
	Langi	5.8		10.9		7.5		29.7	
	Bakiga	8.9		11.0		24.7		38.1	
	Karimojong	3.8		3.5		6.7		11.1	
	Acholi	8.7		11.9		12.3		26.7	
	Bagisu/Sabiny	5.0		6.1		14.4		21.4	
	Alur/Jopadhola	5.9		5.3		14.5		23.7	
	Banyoro	7.3		7.7		27.9		44.9	
	Batoro	11.7		17.0		29.1		46.5	
	Others	7.7		7.9		15.7		36.6	
Total		7.0		9.3		18.6		36.0	

\*\*\*Level of significance at  $p < 0.001$ .

\*\*Level of significance at  $p < 0.01$ .

\*Level of significance at  $p < 0.05$ .

### 3.3. Prevalence of HIV and any STIs by risky sexual behaviour

Table 3 represents the results from logistic regression analysis. The prevalence of HIV (OR = 2.578,  $p < 0.001$ ) and STIs (OR = 2.677,  $p < 0.001$ ) are significantly two times higher among women than among men. The HIV prevalence (OR = 2.036,  $p < 0.05$ ) and the prevalence of any STIs (OR = 3.695,  $p < 0.001$ ) are found also higher among those who have two or more sexual partners as compared to those who had less number of sexual partner. Drinking alcohol during sex is also found as a key factor, significantly influencing the prevalence rate of HIV and any STIs.

### 4. Discussions

Worldwide public health researchers, programmers and policy-makers are keenly interested to find out the factors influencing the recent increase in the prevalence of HIV and STIs in Uganda. The present study has shown that men and women from the disadvantaged background are much more vulnerable to STIs and HIV than their counterparts. Further, it is also evident that women are much more vulnerable than men to the risk of acquiring sexually transmitted diseases and HIV. Findings of the previous study also support that vulnerability to the risk of HIV infection is much higher among those who already have any other sexually transmitted diseases (Kim et al., 2005). The present study shows that young women are much more susceptible to STIs and HIV than young men. This finding emerged from the present study can be validated by the findings of a previous study (Patra & Singh, 2015). Besides women's physiologic vulnerability via heterosexual sex, several investigators recognised unemployment and lack of education as revealing factors for women's susceptibility to HIV infection as compared to men (Holtgrave & Crosby, 2003). Hence, protection of financial right as well as sexual right of women can be helpful to shield them from any sexually transmitted diseases (Gable, Gostin, & Hodge, 2008).

The present study has found that widowed, divorced and separated women are more vulnerable to HIV and any STIs as compared to women who are married or living with partners. The reason is the married women and the women who are living with their partners are less exposed to high-risk sex as compared to unmarried and divorced or separated women (Ndinya-Achola et al., 1997).

Further, the study has shown that risky sexual behaviours, like early sexual debut, multiple sexual partners, consuming alcohol during sex and not using condoms during sex are the most influencing factors for the high rate of prevalence of HIV and STIs in Uganda. This finding is consistent with those recent studies which showed that men and women who reported alcohol use during their sexual

**Table 3. Results from logistic regression analysis for prevalence of HIV and any STIs by risky sexual behaviour among men and women (15–49 years), Uganda, 2011**

Risky sexual behaviour	OR for HIV positive (95% CI)	OR for any STIs positive (95% CI)
Sex		
Men <sup>®</sup>	1.0	1.0
Women	2.578*** (1.787–3.720)	2.677*** (2.275–3.150)
Age at first sex#		
Below 15 <sup>®</sup>	1.0	1.0
15–17	0.861 (0.603–1.230)	0.837* (0.706–0.993)
18–20	0.979 (0.654–1.465)	0.826 (0.679–1.006)
Above 20	0.365 (0.087–1.533)	0.820 (0.525–1.282)
No. of sex partner		
0 <sup>®</sup>	1.0	1.0
1	1.067 (0.634–1.795)	1.545** (1.204–1.981)
2 and above	2.036* (1.096–3.782)	3.695*** (2.725–5.010)
Condom used at first sex		
No <sup>®</sup>	1.0	1.0
Yes	1.207 (0.888–1.640)	1.049 (0.904–1.217)
Condom used at last sex		
No <sup>®</sup>	1.0	1.0
Yes	0.804 (0.509–1.269)	0.716** (0.579–0.885)
Consume alcohol during sex		
No alcohol used <sup>®</sup>	1.0	1.0
Either partner was drunk	1.509* (1.025–2.223)	1.291* (1.058–1.576)
Neither was drunk	0.697 (0.094–5.182)	0.847 (0.375–1.912)
Higher risk sex		
Had higher risk sex <sup>®</sup>	1.0	1.0
Had sex but not higher risk	1.079 (0.752–1.548)	1.148 (0.969–1.359)

Note: <sup>®</sup> Reference categories.

# Excludes missing cases.

\*\*\*Level of significance at  $p < 0.001$ .

\*\*Level of significance at  $p < 0.01$ .

\*Level of significance at  $p < 0.05$ .

intercourse were likely to engage in unprotected sex (Asiimwe-Okiror et al., 1997; Fritz, Woelk, Bassett, McFarland, et al., 2002; Simbayi et al., 2004). From the findings of the present study, it is also clear that use of condoms during sex is also a vital determinant to the risk of getting infected by HIV and STIs. Despite having knowledge of the risk of HIV transmission during unprotected sex, sometimes the use of condoms is compromised by women when their anticipated monetary gain is higher than their usual earning (Ntozi et al., 2013). Hence, in African society women's economic empowerment is not always able to improve their negotiation on safer sex (Tenkorang, 2012).

### 5. Conclusions and recommendations

Stigma associated with STIs and lack of awareness is the main hindrance to reduce the STI prevalence in Uganda. Prevalence of any STIs is much higher than the prevalence of HIV. Moreover, it is evident that preventive methods, understanding of the spread of STIs and changes in the sexual behaviour are also obligatory. Hence, treatment for any STIs is an urgent requirement along with the HIV prevention programmes. Woman's sexual rights need to be prioritised in the Ugandan society to minimise women's vulnerability to STIs and HIV. Difference in the prevalence of STIs and HIV

between men and women can be minimised by increasing employment opportunity for women, reducing violence against woman through legal protection and by targeting men's perception towards women's sexuality. Therefore, effective strategy and programmes are required at the national level.

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