Coerced First Sex and the risk of Sexually Transmitted Infections (STIs) among Adolescent Women in Uganda

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Abstract

Evidence of the relationship between coerced first sex and the risk of STIs among adolescents remains limited. The objective of this paper was to establish the association between coerced first sex and the risk of STIs. A sample of 580 sexually active adolescent women (15-24) were interviewed in the 2006 domestic violence module in Uganda.

Chi-square tests and logistic regressions were used to investigate associations between coerced first sex and the risk of STIs. From the analyses, 23% of adolescents reported that their first sexual intercourse had been coerced. After controlling for socio-demographic characteristics, the odds of self-reported STIs among adolescents coerced at first sex were similar to those who had not been coerced.

Coerced first sex indirectly increases the risk of STIs through risky sexual behavior among adolescents. Interventions to improve their reproductive health should directly address the issue of sexual coercion.

Key Words:

Coerced first sex, sexual behavior, Sexually Transmitted Infections (STIs) and Adolescent women

INTRODUCTION

Sexual coercion refers to a range of experiences that compel a person to have sex against his or her will. These experiences include use of "violence, threats, verbal insistence, deception, cultural expectations or economic circumstances" and the consequence is a "lack of choice to pursue other options without severe social or physical consequences" (Heise and Toubia, 1995).

In Sub-Saharan Africa, coerced first sex ranges from 20% to 30% of all women (Glover et al., 2003; Buga, 1996; Matasha, 1998) and in some cases exceeds 40% (Rwenge, 2000; Caceres et al., 2000). In Zambia and South Africa, 27% and 10% respectively, of ever married women reported sexual abuse in the past 12 months (ZDHS, 2002; SADHS, 1998).

Cross-sectional surveys in Zimbabwe and Ethiopia observed that 26% and 59% respectively, of ever-partnered women have ever been coerced to have sex, with 20% and 40% reporting unwanted sex in the year before the survey (Gossaye, 2003).

Coerced sexual intercourse has a direct or indirect impact on women's reproductive health. Previous studies demonstrate significant associations between coerced sex and risky sexual behaviors, including multiple sexual partnerships, inconsistent condom use, alcohol abuse (Wandera et. al, 2010; Jamila et a.., 2010, Kishor et al., 2004) and Sexually Transmitted Infections (STIs) (Decker et al., 2005; Garcia-Moreno and Watts, 2002; Heise and Toubia, 1995 and Dude, 2006).

The proposed mechanisms linking sexual violence to the engagement of risk behaviors include: heightened sexual behavior, easy arousal, and/or psychopathology (e.g. depression, posttraumatic stress disorder, and low self-esteem) leading to the inability to negotiate safe sexual behaviors (Maman et al., 2000; Gielen et al., 2007). In addition, women who experience sexual coercion are more likely to abuse alcohol and/or drugs as a coping mechanism (Kalichman et a., 1998; Varma et al., 2007). Previous research has identified higher depression scores, lower self-esteem, and lower self-assertiveness among women experiencing verbally coerced sex compared to those experiencing physically forced sex (Varma et al., 2007).

However, findings on the reproductive health implications of sexual violence remain limited. Therefore, data collected during the Uganda Demographic and Health Survey in 2006 provided an opportunity for exploring the relationship between coerced first sex, sexual behavior and sexually transmitted infections.

Objectives of the Paper

In this paper, the general objective was to establish the relationship between coerced first sex and STIs in a sample of 580 adolescent women. More specifically, the paper sought:

1. To establish the prevalence of coerced first sex among adolescent women in Uganda.

2. To establish the relationship between coerced first sex and STIs among adolescent women in Uganda.

METHODOLOGY

Data source

In this paper, we used the 2006 Uganda Demographic and Health Survey (UDHS) data which included a domestic violence module with questions on all forms of violence. The module addressed women's experience of lifetime sexual violence and spousal violence or intimate partner violence (UBOS and Macro International, 2007).

Data were collected on women's demographic characteristics, sexual behaviors and lifetime number of sexual partnerships as well as STIs. The 2006 survey also collected information on condom use at last sex, consistency of condom use in the last six months, and current symptoms of STIs and genital tract morbidity.

Variables selection

These included women's socio-economic and demographic variables such as education level, marital status, region and residence and age group respectively. Dummies were created for all categorical variables for use in multivariate analysis.

Measures of risky sexual behavior included alcohol consumption, total number of life time sexual partners and non-condom use during sexual intercourse. These were recoded into dichotomous variables such that categories of interest were women who did not use a condom during intercourse, had multiple partners in a lifetime and consumed alcohol during intercourse.

Coerced first sexual experience was a measure of lifetime sexual violence in the domestic violence module. Women were specifically asked whether force had been used the first time they had sex. Those who replied affirmatively were asked about the specific conditions that accompanied coercion at first sex such as age at which the experience occurred.

Coerced first sex was a dichotomous variable and is hypothesized to be a predictor of sexually transmitted infections (STIs).

Sample selection

A total of 2,169 women were selected for the domestic violence module in the 2006 Uganda Demographic and Health Survey. About 58 women were excluded for lack of privacy and 24 women were not interviewed for other reasons. Therefore, only 2,087 women were selected and interviewed (UBOS and Macro International, 2007).

For this paper, our target population was adolescent women aged 15-24 years who had ever had sex. Using this criterion, 580 sexually active adolescent women (15-24) were selected for further data analysis.

Data Analysis

The statistical packages of SPSS 18 AND STATA 11 were used for the analyses. This was conducted at three levels: univariate, bivariate and multivariate analyses.

At univariate level, frequency distributions were made for the socio-economic and demographic characteristics, coerced first sex and STIs among adolescent women.

At a bivariate level, Pearson chi-square tests were done to assess differences in the prevalence of STIs among women. Finally, we used logistic regression to evaluate relationships between coerced first sex and STIs controlling for background factors.

RESULTS

Background characteristics of adolescent women

The sample for our study consisted of 580 sexually active adolescent women (Table 1). Nearly three quarters (70%) of adolescent women were aged 20-24. Most (81%) of the adolescents were rural residents, and more than half (64%) had primary education, followed by those with secondary education (21%). Majority (45%) were poor, followed by those who were rich (41%). All regions were fairly represented as shown in Table 1. Few adolescents (8%) had ever been married.

Table 1: Background characteristics of adolescent women in Uganda

variable	Frequency (N)	Percent (%)
Age		
15-19	173	29.8
20-24	407	70.2
Residence		
Urban	109	18.8
Rural	471	81.2
Education		
No education	70	12.1
Primary	370	63.8
Secondary	119	20.5
Higher	21	3.6
Wealth index		
Poor	263	45.3
Middle	79	13.6
Rich	238	41.0
Region		
Central	185	31.9
Eastern	126	21.7
Western	100	17.2
Northern	169	29.1
Marital status		
Never married	103	17.8
Ever married	48	8.3
Missing	429	74.0
Total	**580**	**100**

Coerced first sex, risky sexual behavior and STIs among adolescent women

According to Table 2, one in five adolescents (24%) experienced coerced first sex. Of those who reported the age at which sexual coercion occurred, nearly a quarter (23%) experienced it before age 19 years.

In addition, few adolescents (18%) had drunk alcohol during their first sexual experiences. Nearly one in four (24%) of the adolescents used a condom at their first sexual encounter.

Interestingly, half (50%) of the adolescents had had only one cumulative sexual partner in their lifetime and nearly one in five (19%) reported STIs in the last 12 months preceding the survey.

Table 2: Coerced first sex, risky sexual behavior and STIs among adolescent women in Uganda

Variable	Frequency (N)	Percent (%)
Experienced coerced first sex		
No	443	76.4
Yes	137	23.6
Age at coerced first sex		
<14 years	40	6.9
15-19 years	93	16.0
20+ years	9	1.6
Missing	438	75.5
Drunk alcohol during first sex		
No	475	81.9
Yes	105	18.1
Used a condom at first sex		
No	440	75.9
Yes	140	24.1
Total lifetime number of sexual partners		
1 partner only	291	50.2
2 partners	167	28.8
3+ partners	122	21.0
Had STIs		
No	469	80.9
Yes	111	19.1
Total	**580**	**100**

Association of background factors and STIs

According to Table 3, only wealth index and region were significantly associated with STIs among adolescent women at a bivariate level.

Self-reported STIs are highest (26%) among rich adolescents compared to the middle (14%) and the poor (15%) adolescents. There was a significant association between wealth index and STIs (p=0.004).

A higher proportion (29%) of adolescents from central reported STIs compared to those from eastern (21%), western (20%) and northern (7%) regions. The association between region and STIs is statistically significant (p=0.000).

Age (p=0.47), residence (p=0.17), education (p=0.42) and marital status (p=0.64) were not significantly associated with STIs among adolescents in Uganda.

Table 3: Association of background factors and STIs among adolescent women

	Reported STIs in the last 12 months preceding the survey			
	No (%)	**Yes (%)**	**Total (N)**	**p-value**
Age				
15-19	82.7	17.3	173	0.47
20-24	80.1	19.9	407	
Residence				
Urban	76.1	23.9	109	0.17
Rural	82.0	18.0	471	
Education				
No education	81.4	18.6	70	
Primary	82.2	17.8	370	0.42
Secondary	75.6	24.4	119	
Higher	85.7	14.3	21	
Wealth index				
Poor	85.2	14.8	263	
Middle	86.1	13.9	79	**0.004***
Rich	74.4	25.6	238	
Region				
Central	71.4	28.6	185	
Eastern	79.4	20.6	126	
Western	80.0	20.0	100	**0.000***
Northern	92.9	7.1	169	
Marital status				
Never married	83.5	16.5	103	
Ever married	83.3	16.7	48	0.64
Missing	80.0	20.0	429	
Total	**81**	**19**	**580**	

Association of sexual behavior and STIs among adolescents in Uganda

The total lifetime number of sexual partners was significantly associated with STIs (p=0.000). Adolescents who had had more than three cumulative sexual partners reported STIs (34%) more than those who had had 2 partners (20%) and only 1 partner (12%). Other measures of sexual behavior and coerced first sex were not significantly associated with STIs as presented in Table 4.

Table 4: Association of CFS, sexual behavior and STIs among adolescents in Uganda

	Reported STIs in the last 12 months preceding the survey			
	No (%)	**Yes (%)**	**Total (N)**	**p-value**
Experienced coerced first sex				
No	81.0	19.0	443	0.85
Yes	80.3	19.7	137	
Age at coerced first sex				
<14 years	75.0	25.0	40	
15-19 years	83.9	16.1	93	0.16
20+ years	55.6	44.4	9	
Missing	81.3	18.7	438	
Drunk alcohol during first sex				
No	81.1	18.9	475	0.80
Yes	80.0	20.0	105	
Used a condom at first sex				
No	82.5	17.5	440	0.08
Yes	75.7	24.3	140	
Total lifetime number of sexual partners				
1 partner only	87.6	12.4	291	
2 partners	79.6	20.4	167	**0.000***
3+ partners	66.4	33.6	122	
Total	**81**	**19**	**580**	

Multivariate analysis

In order to assess the exact effect of background and sexual behavior factors on STIs, only those factors which were significant at bivariate analysis and coerced first sex are included in the model. With the exception of region and total lifetime number of sexual partners, no other background and sexual behavior factors significantly predict STIs among adolescent women in Uganda as presented in Table 5.

Adolescents who had more than three cumulative lifetime number of sexual partners were more than twice more likely to report STIs compared to those who had had one partner only (OR = 2.7, p = 0.000).

Women from central region were nearly five times more likely to report STIs compared to those from northern region (OR = 4.5, p = 0.000). Those from eastern region were nearly three times more likely to report STIs, compared to those from northern Uganda (OR = 2.8, p =0.01). Adolescents from western region were three times more likely to report STIs compared to those from northern region (OR = 3.3, p =0.004).

Table 3: Correlates of self-reported Sexually Transmitted Infections (STIs) among adolescent women in Uganda: adjusted odds ratios estimated using logistic regression

Background factors	Odds Ratio	Std. Errors	P-value	[95% Confidence Interval]	
Total lifetime number of sexual partners					
2 partners	1.48	0.41	0.155	0.86	2.54
3+ partners	2.71	0.75	**0.000**	1.58	4.66
1 partner only (rc)	1.00				
Region					
Central	4.46	1.79	**0.000**	2.03	9.81
Eastern	2.82	1.10	**0.008**	1.32	6.05
Western	3.30	1.38	**0.004**	1.46	7.47
Northern (rc)	1.00				
Wealth index					
Poor	1.14	0.32	0.656	0.65	1.99
Middle	0.70	0.27	0.362	0.33	1.49
Rich (rc)	1.00				
Experienced coerced first sex					
Yes	1.18	0.30	0.525	0.71	1.96
No	1.00				

rc means reference category

DISCUSSION

In a summary, 24% of adolescents experienced coerced first sex and 19% reported STIs in the last 12 months preceding the survey. At bivariate analysis, wealth index, region and total lifetime number of sexual partners were significantly associated with STIs among adolescent women in Uganda. At multivariate level, region and total lifetime number of sexual partners significantly predicted STIs among adolescents in Uganda.

Coerced first sex (even though not significant at bivariate analysis) was not a significant predictor of STIs in multivariate analysis (Table 5). This could have been as a result of underreporting which could have led to underestimation of the prevalence of coerced first sex and STIs during data collection since these are stigmatizing experiences in society. Besides, forced first sex is a life time event which was far apart from STD self reporting.

Several studies have established indirect links between CFS and STIs through risky sexual behavior such as lifetime multiple sexual partnerships (Wandera et. al, 2010; Jamila et al., 2010, Kishor et al., 2004; Decker et al., 2005; Garcia-Moreno and Watts, 2002). The proposed mechanisms linking sexual violence to the engagement of risk behaviors include: heightened sexual behavior, psychopathology (e.g. depression, posttraumatic stress

disorder, and low self-esteem) leading to the inability to negotiate safe sexual behaviors (Maman et al., 2000; Gielen et al., 2007).

Secondly, the correspondence between self-reported STIs and clinically identified or laboratory-confirmed gynecological morbidity has been shown to be quite low (Jejeebhoy et al., 2003). In addition, assuming causality in the relationships between sexual coercion and STIs is difficult in this study. Before assumptions of causality can be attributed to these associations, further quantitative and qualitative research is required to elucidate the specific pathways through which sexual coercion increases young women's vulnerability to adverse reproductive health outcomes.

In conclusion, coerced first sex is an important social and public health problem that has direct and indirect negative implications on women's sexual behavior and reproductive health including STIs. Interventions to improve women's reproductive health should address the issue of sexual coercion.

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