

HETEROSEXUAL ANAL INTERCOURSE AMONG COMMUNITY AND CLINICAL SETTINGS IN CAPE TOWN, SOUTH AFRICA

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XVIII International AIDS Conference, July 2010



HUMAN SCIENCES RESEARCH COUNCIL

ABSTRACT

Background: Anal intercourse is an efficient mode of HIV transmission and may play a role in the heterosexual HIV epidemics of southern Africa. However, little information is available on the anal sex practices of heterosexual individuals in South Africa.

Purpose: To examine the occurrence of anal intercourse in samples drawn from community and clinic settings.

Methods: Anonymous surveys collected from convenience samples of 2593 men and 1818 women in two townships and one large city sexually transmitted infection (STI) clinic in Cape Town. Measures included demographics, HIV risk history, substance use and 3-month retrospective sexual behaviour.

Results: A total of 14% (n = 360) men and 10% (n = 172) women reported engaging in anal intercourse in the past 3 months. Men used condoms during 67% and women 50% of anal intercourse occasions. Anal intercourse was associated with younger age, being unmarried, having a history of STI, exchanging sex, using substances, having been tested for HIV and testing HIV positive.

Conclusions: Anal intercourse is reported relatively less frequently than unprotected vaginal intercourse among heterosexual individuals. The low prevalence of anal intercourse among heterosexual individuals may be offset by its greater efficiency for transmitting HIV. Anal sex should be discussed in heterosexual HIV prevention programming.

BACKGROUND

- Heterosexually transmitted HIV infections have resulted in the catastrophic AIDS epidemic in southern Africa.
- Vaginal intercourse accounts for most of Africa's HIV infection.
- Anal intercourse is an efficient mode of HIV transmission and may play a role in the heterosexual HIV epidemics of southern Africa.

OBJECTIVE

To examine the occurrence of heterosexual anal intercourse in relation to vaginal intercourse, condom use and risk-related history factors.

METHODS

- Anonymous surveys were collected from convenience samples of 2593 men and 1818 women in two townships and one large city sexually transmitted infection (STI) clinic in Cape Town, South Africa.
- Thirty-seven venues were sampled across the two townships.
- Measures included demographics, HIV risk history, substance use and 3-month retrospective sexual behaviour.

RESULTS

- A total of 14% (n = 360) men and 10% (n = 172) women reported engaging in anal intercourse in the past 3 months.
- Forty-four percent of participants who engaged in anal sex did so for less than half of all intercourse occasions; 28% engaged in anal sex half the time and the remaining 28% engaged in anal intercourse more than half of the time.
- Men used condoms during 67% and women 50% of anal intercourse occasions.
- Table 1 shows the demographic, substance use and sexual behaviours of participants sampled in the township communities and the STI clinic.
- The two samples differed along several demographic and risk history characteristics.
- STI clinic patients reported significantly more sex partners and frequencies of sexual behaviours in the previous 3 months compared with community members.
- Groups did not differ on the proportion of anal intercourse occasions protected by condoms.

Table 1: Demographic characteristics and sexual behaviours of township communities and STI clinic participants

Characteristic	Township Communities		STI Clinic		OR	p Value
	n	%	n	%		
Men	1489	49	1104	82		
Women	1562	51	256	18	0.22	0.001
Black	1452	49	1330	98		
Coloured	1438	49	2	<1		
Other race	49	2	22	1	0.03	0.001
Not employed	2068	69	390	29	0.18	0.001
Married	1105	36	292	22	0.50	0.001
Never used a condom	1101	34	205	15	5.02	0.001
History of STI	428	14	604	45	3.96	0.001
Received material for sex	198	7	55	4	14.30	0.001
Given money for sex	160	5	76	6	0.18	0.001
Alcohol use	1581	53	722	53	1.02	0.719
Cannabis use	629	22	348	26	1.27	0.001
Other drugs	41	1	16	1	0.83	0.549
Tested for HIV	1269	43	544	40	0.90	0.120
Tested HIV positive	142	9	68	9	1.05	0.717
	Mean	SD	Mean	SD	OR	p Value
Age (in years)	32.30	12.20	28.80	7.80	0.97	0.001
No of partners	1.32	1.88	1.96	1.01	1.27	0.001
Unprotected vaginal intercourse	2.97	8.72	9.95	11.64	1.08	0.001
Protected vaginal intercourse	2.34	6.37	6.55	9.23	1.09	0.001
Total vaginal intercourse	5.21	11.55	16.46	14.16	1.08	0.001
% Condom use in vaginal intercourse	46.29	40.23	41.25	34.24	0.70	0.001
Unprotected anal intercourse	0.31	2.47	0.64	3.96	1.03	0.002
Protected anal intercourse	0.52	3.65	1.01	4.93	1.02	0.001
Total anal intercourse	0.82	4.65	1.64	7.90	1.02	0.001
% Condom use in anal intercourse	61.96	39.60	59.99	36.43	0.87	0.586

All sex behaviours reported for the past 3 months; community/clinic sample. OR odds ratio; SD standard deviation; STI, sexually transmitted infection.

FACTORS ASSOCIATED WITH ENGAGING IN HETEROSEXUAL ANAL SEX

- Table 2 presents the characteristics and behaviour of the sample partitioned by whether participants had engaged in anal intercourse in the past 3 months.
- Anal sex was associated with younger age, being unmarried, a lifetime history of condom use.
- Individuals who practised anal intercourse were more likely to report a history of all HIV risk factors, including a history of STI, sexual exchange, substance use and testing HIV positive.

Table 2: Characteristics and behaviours of persons who did not and did engage in anal intercourse

Characteristic	Did not engage in anal intercourse		Engaged in anal intercourse		OR	p Value
	n	%	n	%		
Men	2111	59	360	68	ref	
Women	1474	41	172	32	0.84	0.114
Black	2306	66	422	82	ref	
Coloured	1150	33	83	16	0.78	0.376
Other race	52	1	7	2	0.46	0.710
Not employed	1973	56	311	59	1.16	0.827
Married/living together	1147	32	122	23	0.62	0.001
Never used a condom	1011	29	72	14	1.79	0.001
History of STI	837	24	167	32	1.64	0.001
Received material for sex	174	5	66	12	1.77	0.001
Given material for sex	180	5	52	10	1.70	0.001
Alcohol use	1835	52	365	70	2.16	0.001
Cannabis use	760	22	181	35	1.97	0.001
Other drugs	34	1	14	2	2.84	0.001
Tested for HIV	1479	42	266	51	1.44	0.001
Tested HIV positive	136	9	61	22	2.62	0.001
	Mean	SD	Mean	SD	OR	p Value
Age	31.30	11.20	28.90	10.8	0.97	0.001
No of sex partners	1.40	1.46	2.30	2.6	1.26	0.001
Unprotected vaginal sex	5.50	10.50	3.50	9	0.97	0.001
Vaginal intercourse with condoms	3.30	6.80	6.50	11.5	1.04	0.001
Total vaginal intercourse	8.80	13.20	9.90	15.8	1.01	0.039
% Condom use in vaginal intercourse	40.20	37.40	65.20	33.7	5.61	0.001

All sex behaviours reported for the past 3 months; all comparisons control for sampling venue; OR odds ratio; SD standard deviation; STI, sexually transmitted infection

GENDER DIFFERENCES AMONG PERSONS WHO PRACTISED ANAL INTERCOURSE

- Sexual behaviour differences reported by men and women who engaged in anal sex are shown in table 3.
- Men who engaged in anal intercourse reported more sex partners than women.
- They also reported greater condom use during vaginal and anal intercourse.
- Men engaged in proportionally more anal sex relative to vaginal sex than did women did.

Table 3: Characteristics of women and men who reported anal intercourse in the past 3 months

Behaviour	Women (n=172)				Men (n=360)				OR	p Value
	Sum	Median	Mean	SD	Sum	Median	Mean	SD		
No of sex partners	296	1	1.73	1.51	936	2	2.60	3.05	1.24	0.001
Unprotected vaginal intercourse	767	2	4.56	10.41	1084	1	3.04	8.26	0.98	0.064
Protected vaginal intercourse	846	3	5.03	7.77	2568	3	7.15	12.83	1.01	0.125
Total vaginal intercourse	1613	5	9.43	13.66	3652	5	10.14	16.81	1.00	0.942
% Condom use in vaginal intercourse		57	57.34	33.27		80	69.13	33.36	2.69	0.001
Unprotected anal intercourse	614	1	3.61	9.49	1106	1	3.11	7.08	0.99	0.310
Protected anal intercourse	543	1	3.21	5.97	2241	3	6.27	11.79	1.05	0.006
Total anal intercourse	1157	3	6.72	12.51	3347	4	9.29	15.28	1.01	0.127
% Condom use in anal intercourse		50	54.69	39.07		75	64.49	38.02	1.94	0.006
% Intercourse that was anal		42	42.66	21.46		50	51.11	23.48	5.52	0.001

All sex behaviours reported for the past 3 months; all comparisons control for sampling venue; OR odds ratio; SD standard deviation; STI, sexually transmitted infection

DISCUSSION

- Anal intercourse is reported relatively less frequently than unprotected vaginal intercourse among heterosexual individuals.
- The low prevalence of anal intercourse among heterosexual individuals may be offset by its greater efficiency for transmitting HIV.

CONCLUSIONS

- Heterosexual anal intercourse may be an important factor in facilitating HIV transmission risks among a minority of heterosexual men and women in South Africa.
- Practising heterosexual anal sex is associated with younger age, being unmarried, a history of STI, sexual exchange, substance use and testing HIV positive.
- HIV prevention interventions for heterosexual men and women in South Africa should address risks of HIV posed by anal intercourse.

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