Prevalence and Correlates of Exchange Sex among Low Income Heterosexual Women in 21 US Cities

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BACKGROUND

- Heterosexual sex is the primary route of HIV transmission for women in the United States.
- Female sex workers and other women who exchange sex for money or drugs are at increased risk for HIV infection in many countries; however, little is known about exchange sex among women in the United States.

Objectives

- Among a sample of heterosexual women at increased risk for HIV infection
  - Estimate the percentage who had sold sex to a man
  - Compare economic and behavioral indicators of risk for HIV infection among those who had sold sex to a man and those who had not.

METHODS

Data

- 2010 National HIV Behavioral Surveillance (NHBS) system
- Cross-sectional survey of low-income heterosexuals in 21 large US cities
- Recruitment via respondent-driven sampling (RDS)
- Behavioral data collected via Computer-Assisted Personal Interview (CAPI); HIV status determined via rapid testing or standard laboratory testing, and laboratory-confirmation.

Eligibility criteria

- Male or female, aged 18-60 years
- ≥1 opposite-sex partner during the 12 months before interview
- Able to complete interview in English or Spanish

Outcome

- Receipt of things like money or drugs from a man in exchange for sex (oral, vaginal, or anal) during the 12 months before interview.

Analyses

- Limited to female respondents with complete interview data and a positive or negative HIV test result.
- Associations between exchange sex and indicators of HIV risk and HIV status tested using general estimating equations (GEE) to adjust for clustering by recruitment chain.
- Indicators of risk associated with exchange sex at p<.05 entered in multivariable model, adjusting for clustering by recruitment chain, network size, and demographics.

RESULTS

Table 1. Individual and partner characteristics of female participants in the sample and percentage who reported exchange sex.

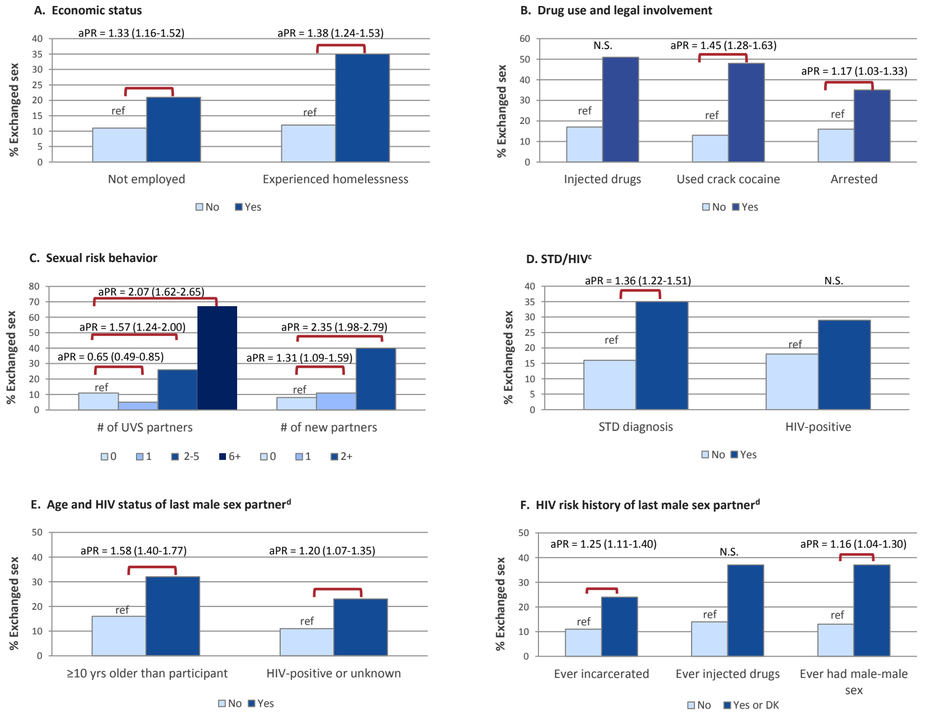
	Total n	Exchanged Sex n	Exchanged Sex (%)	Unadjusted [a] PR (95% CI)
Overall	**5507**	**1017**	**(19)**	**--**
Participant characteristics				
Age*				
18-29	2213	287	(13)	(ref)
30-39	1052	200	(19)	1.43 (1.22-1.68)
40-49	1372	349	(25)	1.89 (1.65-2.17)
50-60	870	181	(21)	1.57 (1.33-1.84)
Race/Ethnicity*				
Black	3926	853	(22)	1.55 (1.22-1.96)
Hispanic[b]	1110	101	(9)	0.66 (0.48-0.91)
Other[c]	466	63	(14)	(ref)
Education*				
< 12th grade	1869	427	(23)	1.63 (1.37-1.93)
High school degree / GED	2417	426	(18)	1.29 (1.11-1.50)
Some college or more	1220	164	(13)	(ref)
Not employed*	3391	851	(21)	1.85 (1.57-2.17)
At or below poverty*	4621	913	(20)	1.68 (1.41-2.00)
Experienced homelessness[d]*	1533	532	(35)	2.73 (2.44-3.04)
Injected drugs[d]*	175	90	(51)	2.85 (2.40-3.39)
Used crack cocaine[d]*	807	389	(48)	3.48 (3.10-3.89)
Arrested[d]*	667	235	(35)	2.11 (1.88-2.38)
Number of UVS partners[d]*				
0	562	62	(11)	(ref)
1	2478	134	(5)	0.51 (0.38-0.66)
2-5	2005	512	(26)	2.29 (1.83-2.88)
6+	452	301	(67)	5.82 (4.64-7.30)
Number of new partners[d]*				
0	2487	192	(8)	(ref)
1	1298	144	(11)	1.45 (1.19-1.77)
2+	1722	681	(23)	4.86 (4.14-5.69)
Diagnosed with an STD[d]*	748	265	(35)	2.13 (1.90-2.39)
Tested for HIV[d]	1948	358	(18)	0.98 (0.87-1.09)
HIV-positive*	158	46	(29)	1.54 (1.21-1.95)
Partner characteristics[e]				
≥10 years older than participant*	754	240	(32)	1.94 (1.73-2.17)
HIV-positive or of unknown status*	3342	779	(23)	2.09 (1.84-2.37)
Ever incarcerated[f]*	3076	748	(24)	2.09 (1.84-2.37)
Ever injected[f]*	1037	382	(37)	2.47 (2.22-2.74)
Ever had male-male sex[f]*	1292	474	(37)	2.72 (2.45-3.02)

Abbreviations: CI = Confidence interval; GED = General Education Development certificate; HIV = human immunodeficiency virus; PR = Prevalence ratio; Ref. = Referent category; STD = sexually transmitted disease; UVS = vaginal sex without a condom.

[a] Adjusted only for clustering by recruitment chain.
[b] Hispanic / Latino respondents may be of any race.
[c] Includes respondents who reported more than one racial group.
[d] Within the 12 months before interview.
[e] As reported by the participant.
[f] Includes participants who reported they did not know.
*Prevalence ratio, adjusted only for clustering by recruitment chain, is different from referent category at p<.05.

Figure 1. Individual and partner characteristics independently[a] associated with exchange sex[b] among female heterosexual participants.

Exchange sex was independently associated with women's economic status (Panel A), drug use and legal involvement (Panel B), sexual risk behaviors (Panel C), STD diagnosis; (Panel D), and indicators of involvement in sexual networks in which HIV prevalence is higher (Panels E and F).



Abbreviations: aPR = Adjusted prevalence ratio; HIV = human immunodeficiency virus; Ref. = Referent category; STD = sexually transmitted disease; UVS = vaginal sex without a condom.

[a] Model adjusted for demographics, all variables shown above, personal network size, and clustering by recruitment chain. Time frame for homelessness and all participant behaviors is within the 12 months before interview.
[b] Received things like money or drugs from a man in exchange for sex (oral, vaginal, or anal) during the 12 months before interview.
[c] HIV infection as indicated by laboratory-confirmed HIV-positive result. 29% of women who were HIV-positive had exchanged sex vs. 18% of women who were not HIV-positive.
[d] As reported by the participant.

LIMITATIONS

- Although all participation was anonymous, social desirability may have led to under-reporting of exchange sex or other sensitive information.
- Sampling targeted low-income heterosexuals and was conducted in high-poverty areas of select US cities with high rates of AIDS. Results may not be representative of other heterosexual women.
- Data were not weighted to account for the sampling strategy.

CONCLUSIONS

- Among this sample of low-income heterosexual women, exchange sex was common.
- Exchange sex was even more common among women whose economic circumstances, personal sexual and drug behaviors, and those of their partners suggest increased risk for HIV infection.
- HIV prevention efforts may be enhanced by outreach to heterosexual women with a recent history of exchange sex.

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

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