

Sex Trading and Psychological Distress among Women Recruited from the Streets of Harlem

ABSTRACT

Objectives. This study examines the relationship between sex trading and psychological distress and the implications of that relationship for prevention of human immunodeficiency virus among a sample of young women recruited from the streets of Harlem.

Methods. Interviews were conducted with 346 predominantly drug-using women, aged 18 to 29 years, of whom 176 had exchanged sex for money or drugs in the previous 30 days and were categorized as "sex traders." Psychological distress was measured by using the Brief Symptom Inventory.

Results. Sex traders scored significantly higher than non-sex traders on the General Severity Index and on eight of the nine subscales of the Brief Symptom Inventory. Multivariate analysis indicated that after adjustments were made for age; ethnicity; pregnancy; recent rape; perceived risk for acquired immunodeficiency syndrome; current, regular crack use; and current, regular alcohol use, sex traders scored 0.240 units higher on the General Severity Index than non-sex traders.

Conclusions. Poor mental health and drug dependence may undermine the motivation and ability of these sex traders to adopt safer sex behavior. Therefore, interventions need to be integrated with mental health services and drug treatment to reduce risk behavior in this population. (*Am J Public Health*. 1997;87:66-70)

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Introduction

Previous research suggests that understanding the relationship between sex trading and psychological distress may be critical to designing effective human immunodeficiency virus (HIV) risk reduction strategies for women who exchange sex for money or drugs.¹⁻⁷ Several studies of mentally ill, drug-using, and homeless populations have found that people with multiple sex partners and those engaging in other high-risk sexual behaviors exhibit higher levels of psychological distress and psychiatric symptomatology.¹⁻⁶ One of the first studies to examine the association between psychological status and HIV risk behaviors among sex workers found that injecting drugs and engaging in unprotected intercourse were strongly associated with a high level of depressive symptomatology.⁷

Important questions remain unanswered regarding the epidemiology and etiology of psychological distress among sex traders. Are women who exchange sex for money or drugs more likely to experience psychological distress than non-sex traders who also use drugs and live in poverty? Many sex traders and drug users from poor neighborhoods have experienced homelessness, rape, and other violent events associated with psychological distress.⁸⁻¹⁴ To what extent is the psychological distress they experience in exchanging sex for money or drugs independent of these other stressful events that they encounter? Understanding the extent to which psychological distress is independently associated with sex trading will help guide future interventions aimed at reducing HIV risk behavior among this population.

Among active drug users, however, the relationship between sex trading and psychological distress may be confounded by the effect of drug use on psychological distress. Studies have established an association between cocaine dependence and psychiatric symptomatology—in particular, antisocial and borderline syndromes.^{15,16} Crack-addicted sex workers, who report low rates of condom use and high numbers of sexual partners,¹⁷⁻²² may be especially vulnerable to psychological distress because of the degrading and perilous circumstances they face when exchanging sex for money or drugs.¹⁷⁻²⁴ Previous research has also documented associations between psychological distress and dependence on opiates^{25,26} and alcohol,^{27,28} both of which are also associated with sex trading.²⁹⁻³⁴ Previous studies have also found associations between psychological distress and knowledge of HIV infection³⁵⁻³⁸ and the perception of risk for acquired immunodeficiency syndrome (AIDS).³⁹

In this study we assessed the levels of psychological distress in a street-recruited sample of poor, inner-city women and examined the hypothesis that, after adjusting for other factors that could lead

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to psychological distress, women who trade sex demonstrate higher levels of psychological distress than women in similar circumstances who do not trade sex.

Methods

Study Population

A detailed description of study methods of the Multicenter Study of Crack Cocaine and HIV infection has been presented elsewhere.¹⁷ In this cross-sectional survey, data were collected in New York City's East and Central Harlem, where illicit drug use and sex trading are common. Outreach workers, primarily Latinos and African Americans with extensive personal or professional experience in these neighborhoods, recruited women during 1991 to 1992 from street corners, housing projects, parks, unoccupied buildings, and other public places. These outreach workers initially assessed whether contacts were eligible and then accompanied potentially eligible volunteers to a storefront site where trained interviewers reassessed eligibility. Eligible participants were 18 to 29 years of age and reported either current, regular crack cocaine use (defined as having smoked crack 3 or more days a week in the previous 30 days) or never having smoked crack cocaine. Individuals who had smoked crack but were not current, regular smokers were excluded.

Data Collection

Interviewers administered the closed-ended questionnaire to 824 volunteers (346 women and 478 men). Psychological distress was measured by a modified version of the Brief Symptom Inventory, a 53-item scale of self-reported symptoms of psychological distress experienced during the previous 7 days.^{40,41} Each item of the inventory was rated on a 5-point scale (0 to 4) ranging from "never" to "always." The Brief Symptom Inventory measures nine primary symptom dimensions on individual subscales. The General Severity Index, a weighted frequency score based on the sum of the ratings of all items, measures current distress levels by combining information on the numbers of symptoms and the intensity of perceived distress. Derogatis and Melisaratos⁴⁰ have reported a mean General Severity Index score of 1.32 (SD = 0.72) among a sample of 1002 psychiatric outpatients and 1.36 among a sample of 313 psychiatric inpatients; the nonpatient norm was

0.30 (SD = 0.31). Previous studies have found the test-retest and internal consistency reliabilities to be very good, and correlations with the comparable dimensions of the SCL-90-R are quite high.^{40,41}

Data Analysis

This analysis was restricted to women (n = 346). "Sex traders" were defined as women who had exchanged vaginal, oral, or anal sex for money or drugs during the 30 days prior to the interview (n = 176). Thus, women who traded sex for money or drugs only once during the 30 days were considered sex traders, just as were women who sold sex as a full-time profession. Women who had never exchanged sex for money or drugs (n = 130) were categorized as "non-sex traders," as were women who had exchanged sex for money or drugs in the past but not in the 30 days prior to the interview (n = 40). The latter were classified as non-sex traders because the Brief Symptom Inventory focuses on current, not past, symptoms.

In the univariate analysis, sex traders and non-sex traders were compared on demographic characteristics, drug use, and the experience of stressful life events without the effects of sex trading being isolated from those of other associated variables.

Multiple linear regression analysis was used to assess the association between sex trading, the independent variable, and psychological distress, the dependent variable, with adjustment made for potentially confounding variables. The 22 participants who had missing data for any of the variables were excluded from the multivariate analyses. Among those excluded were eight women who reported being HIV positive and did not respond to the perceived AIDS risk item. Nine White non-Hispanic women and one listed as "other" were also excluded in the multivariate analysis so that differences between African Americans and White and Black Hispanics could be compared.

The independent variables that were considered to potentially confound the association between sex trading and psychological distress were age; ethnicity; marital status; education; children; current pregnancy; recent rape; current homelessness; perceived AIDS risk; current, regular use of crack; current and ever regular use of alcohol; current, regular use of intranasal heroin; and current injection drug use. These variables were selected based on theoretical considerations or previous research mentioned earlier. Eth-

nicity was represented by two indicator variables reflecting three racial/ethnic categories: African Americans and White and Black Hispanics. Each potentially confounding variable was individually entered with sex trading in a separate multiple linear regression model with the General Severity Index as the dependent variable. If inclusion of a variable changed the estimate of the association between the General Severity Index and sex trading by more than 5%, the variable was considered to be a confounder. The confounder that resulted in the greatest change was included in subsequent models in which the remaining variables were then reevaluated as confounders. This process was repeated until the inclusion of no additional variable changed the estimate of the association between sex trading and the General Severity Index by 5% or more. The change-in-estimate method⁴² resulted in the inclusion of the following variables in the final model: age; ethnicity (defined as African American vs Black and White Hispanic); pregnancy; perceived AIDS risk; recent rape; current, regular crack use; and current and ever regular alcohol use.

Collinearity diagnostics were performed for all independent variables, and no near dependency was detected. The presence of the first-order interactions between sex trading and each of the independent variables was assessed with the use of the maximum likelihood method,⁴² and no important interactions were detected. Data were analyzed with SPSS (version 6.1).

Results

For both groups, the mean age was 26 years and the mean education level was 11 years. Overall, 195 (56.4%) were African American, 141 (40.8%) were Hispanic, 9 (2.6%) were White, and 1 (0.3%) listed herself as "other." Sex traders were more likely than non-sex traders to identify themselves as African American and less likely to be married or living with a common-law partner. Similar proportions of sex traders and non-sex traders had children and were pregnant when interviewed. More than half of the sex traders reported sex trading as their major source of income, and sex traders were less likely than non-sex traders to report public assistance as their major source of income. Sex traders were also more likely to be homeless and to report having been raped in the last year (Table 1).

TABLE 1—Selected Characteristics of Street-Recruited Women in Harlem, 1992: Sex Traders vs Non-Sex Traders

	Sex Traders (n = 176), %	Non-Sex Traders (n = 170), %
Race/ethnicity**		
African American	64.7	47.7
White	4.0	1.2
Black Hispanic	9.7	14.7
White Hispanic	21.0	36.5
Marital status**		
Single	73.3	59.4
Married	13.1	31.2
Separated, divorced	13.6	9.4
Major source of income		
Public assistance**	14.8	51.2
Sex work	56.3	0
Other illegal activity	14.8	21.2
Spouse, alimony, child support	10.8	22.4
Legal employment	2.8	3.5
Selling or bartering goods	0	1.2
Other	0	0.7
Have child(ren)	80.1	78.2
Currently pregnant	8.9	11.3
Currently homeless**	29.6	14.7
Raped in last year**	32.4	7.1
Current, regular crack use***	92.6	61.8
Current and ever regular alcohol use ^{b*}	36.4	21.8
Current and ever regular intranasal heroin use ^{b*}	13.6	21.6

^aCurrent, regular use of crack was defined as the use of crack 3 or more days per week in the last 30 days.

^bCurrent and ever regular use of alcohol and heroin was indicated if subject reported ever using these substances 3 or more days per week in the past and within the last 30 days.

P* < .05; *P* < .01.

TABLE 2—Psychological Distress Scores of Street-Recruited Women in Harlem, 1992: Sex Traders vs Non-Sex Traders

Brief Symptom Inventory Subscales	Sex Traders (n = 171) ^a		Non-Sex Traders (n = 163) ^a	
	Mean	SD	Mean	SD
1. Somatization	0.72	0.05	0.67	0.05
2. Obsessive-compulsive*	1.46	0.88	1.10	0.85
3. Interpersonal sensitivity*	1.79	1.02	1.26	0.90
4. Depression*	1.76	1.02	1.21	0.94
5. Anxiety*	1.47	0.88	0.96	0.81
6. Hostility*	1.50	0.96	1.21	0.94
7. Phobic anxiety*	1.21	0.90	0.74	0.81
8. Paranoid ideation*	2.00	1.05	1.51	0.98
9. Psychoticism*	1.54	0.87	1.04	0.87
General Severity Index*	1.52	0.73	1.09	0.71

^aBrief Symptom Inventory data were missing for 12 participants. Scores are unadjusted.
**P* < .01.

traders also reported current and ever regular alcohol use, but fewer sex traders than non-sex traders indicated current and ever regular intranasal heroin use (Table 1).

Sexual Behaviors of Sex Traders

Among the sex traders, 98.9% (174) reported having exchanged vaginal sex for money or drugs during the previous month, 78.4% (138) reported having exchanged oral sex, and 9.1% (16) reported having exchanged anal sex. Sex traders exchanged vaginal sex for money or drugs with a mean of 30 partners (median = 7, mode = 3) for a mean of 35 times (median = 10, mode = 10). Of the sex traders, most (174, 98.9%) had exchanged sex for money, about half (91, 51.7%) had exchanged sex for crack, and only 4.0% (7) had exchanged sex for other drugs. Half of the sex traders (83, 47.2%) indicated that they had had vaginal sex in the previous month with nonpaying partners. Seventy-three sex traders (41.5%) reported that they had always used condoms during vaginal sex with paying partners during the previous month. However, among those sex traders who had vaginal sex with non-paying partners (n = 116), only 17.2% (n = 20) reported always using condoms.

Perceived AIDS Risk and Self-Reported HIV Status

Fewer than half of the respondents had ever taken an HIV test. Sex traders (99, 56.3%) were more likely than non-sex traders (70, 41.2%) to have ever been tested for HIV (*P* < .005). Among those who had been previously tested (n = 126), 117 (92.9%) reported being HIV negative and 9 (7.12%) reported being HIV positive. Sex traders (39, 22.2%) were more likely than non-sex traders (11, 6.5%) to perceive themselves at high risk for acquiring the AIDS virus (*P* < .001).

Sex Trading and Psychological Distress

Sex traders had significantly higher mean scores of psychological distress as measured by the General Severity Index and eight of the nine Brief Symptom Inventory subscales (Table 2). When results were unadjusted for confounding factors, sex traders scored 0.43 units higher on the General Severity Index than non-sex traders (*P* < .001). After adjusting for confounding factors of age; ethnicity; pregnancy; perceived AIDS risk; rape; current and ever regular alcohol use; and current, regular crack cocaine

Drug Use

Nearly all sex traders (175, 99.4%) and non-sex traders (149, 87.6%) indicated that they had used illicit drugs in the

last 30 days, and 163 sex traders (92.6%) reported current, regular crack use, compared with 105 non-sex traders (61.8%) (*P* < .01). More sex traders than non-sex

use, sex traders scored 0.24 units higher on the General Severity Index than non-sex traders ($P < .012$). Higher perceived AIDS risk, rape in the last year, younger age, and Hispanic (Black and White) ethnicity were significantly associated with psychological distress; current, regular crack use and current pregnancy were not.

Discussion

The results of this study confirm the hypothesis that, after adjustment for differences in age, ethnicity, pregnancy, perceived AIDS risk, rape, and crack and alcohol use, sex traders are more likely than non-sex traders to exhibit psychological distress. Sex traders also had significantly higher scores than non-sex traders on eight of the nine subscales of the Brief Symptom Inventory. Indeed, sex traders in this sample had a higher mean General Severity Index score than did samples of psychiatric outpatients and inpatients.^{40,41} Even non-sex traders in this sample had substantially higher distress levels than the population norm.^{40,41} Although other recent studies have found an association between sexual risk behaviors and psychological distress among persons in medical and mental health facilities,¹⁻⁴ this study is the first to identify a significant association between sex trading and psychological distress among a street-recruited sample of inner-city women, most of whom are active drug users.

Our finding that sex traders had higher scores than non-sex traders on the subscales of psychosis and depression is consistent with previous research linking hypersexuality, indiscriminate sexual activity, and impulsive sexual behavior with schizophrenia, bipolar illness, and borderline disorder.⁵ Other studies have documented an association between sex trading and multiple traumas, drug use, and other characteristics associated with psychological distress.⁸⁻¹² These associations notwithstanding, the question as to what extent psychological distress is a precursor or sequela of sex trading remains unanswered by this study. Prospective studies are needed to evaluate the temporal relationships between the two.

Our findings should be viewed in the light of three limitations. First, because recruitment was neither random nor systematic, our conclusions may not be representative of all women in these neighborhoods. Street recruitment methods undersample people with conventional jobs or responsibilities, and the

large number of crack users among sex traders in our sample may limit the generalizability of results to all sex traders. Second, all sex and drug use behaviors were self-reported and thus probably underestimated in our data. Finally, this study did not consider many stressful life events, such as childhood abuse, domestic violence, and incarceration, that could confound the relationship between sex trading and psychological distress among this population.

Notwithstanding these limitations, this study has implications for assessing and treating the mental health problems of sex traders from poor urban communities. First, the higher level of psychological distress among sex traders underscores the need to assess and treat their psychiatric symptomatology. The feeling they have of being stigmatized because of the nature and illegal status of their work likely contributes to their psychological distress.⁸ Addressing that distress with a respectful, nonjudgmental approach is likely to be integral to the success of HIV prevention efforts among this population. Sex traders should therefore be involved in the design of interventions for their community. Second, adopting and maintaining safer sex behaviors requires the motivation to change, the ability to anticipate risky situations, and the problem-solving and social skills needed to negotiate condom use—all of which might be impeded by psychological distress. HIV prevention programs targeted for inner-city, drug-using women should consider how psychological distress may hinder such women from reducing their HIV risk behavior. Third, HIV prevention programs should also consider how the high rates of crack use, rape, and homelessness may influence sexual risk behavior among this population. Fourth, for the majority of sex traders, commercial sex constitutes their major source of income. Women who are ready to leave sex trading must not only reduce their dependence on drugs but also secure an alternative, viable source of income. Gaining access to public assistance may enable some women to reduce their dependency on sex trading. Those who are not willing or able to leave sex trading need training to develop strategies to reduce the dangers of their work.

Finally, the high number of partners and inconsistent condom use documented among these sex traders indicate that these women will continue to become infected. Thus, public health planners and providers must redouble their efforts to reduce

drug use and HIV risk behaviors in impoverished neighborhoods. Our success in establishing a rapport, albeit brief, with this population indicates that outreach methods may be applied to approach these women as other studies have suggested.⁴³ Public health interventions to reduce HIV risk behavior and drug use among sex traders are likely to fail unless they are integrated with mental health and other basic services such as housing, public assistance, education, viable employment opportunities, and drug abuse treatment. □

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