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Correlates of Current Transactional Sex among a Sample of Female Exotic Dancers in Baltimore, MD

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Abstract

Transactional sex work, broadly defined as the exchange of money, drugs, or goods for sexual services, occurs in a wide range of environments. There is a large body of research characterizing the risks and harms associated with street- and venue-based sex work, but there is a dearth of research characterizing the risk associated with the environment of exotic dance clubs. The current study aimed to: (1) characterize the nature of female exotic dancers' sex- and drug-related risk behaviors, (2) to examine the role of the club environment in these behaviors, and (3) to examine correlates of currently exchanging sex. From June 2008 to February 2009, we conducted a cross-sectional study among women who were aged 18 years or older and reported exotic dancing within the past 3 months ($n = 98$). The survey ascertained socio-demographic characteristics, personal health, medical history, sexual practices, drug use, and employment at clubs on the block. Bivariate and multivariate Poisson regression with robust variance was used to identify correlates of current sex exchange. Participants were a median of 24 years old, and were 58% white; 43% had not completed high school. Seventy-four percent reported ever having been arrested. Twenty-six percent reported having injected heroin and 29% reported having smoked crack in the past 3 months. Fifty-seven percent reported using drugs in the club in the past 3 months. Sixty-one percent had ever engaged in transactional sex, and 67% of those did so for the first time after beginning to dance. Forty-three percent reported selling any sex in the club in the past 3 months. In multiple Poisson regression, factors associated with current sex exchange included: race, ever having been arrested, and using drugs in the club. High levels of both drug use and transactional sex among this sample of exotic dancers were reported. These findings indicate that there are a number of drug- and sex-related harms faced by exotic dancers in strip

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clubs, implicating the environment in the promotion of HIV/STI risk-taking behaviors. Prevention and intervention programs targeting this population are needed to reduce the harms faced by exotic dancers in this environment.

Keywords: Female Sex Workers, Illicit Drug Use, Heroin, Exotic Dancers, Risk Behaviors, HIV/AIDS, Risk Environment

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Introduction

Female sex workers (FSWs) who exchange sex for money, drugs, food, or shelter face a multitude of harms including escalated risk for HIV, sexually transmitted infections (STIs), drug use, and violence.¹⁻⁴ The current study examines transactional sex among female exotic dancers (FEDs), a hidden and understudied high-risk population that is characterized by both sexual risk and drug use.⁵⁻⁸

Transactional sex has consistently been found to be associated with a number of sexual risk factors, such as unprotected sex, high-risk sex partners, and having multiple partners.⁹⁻¹¹ Other STIs, which increase the risk for HIV acquisition and transmission, have also been repeatedly found to be more prevalent among FSWs as compared with other women.¹²⁻¹⁷ Additionally, research has documented high rates of both injection and non-injection drug use among FSWs.¹⁸ The synergistic relationship between drug use and transactional sex is bidirectional. FSWs may turn to drug use to cope with the psychological distress and harsh realities of their occupation, and drug users may turn to prostitution to pay for drugs.³ Lastly, FSWs who inject drugs may be more willing to have unprotected sex for a higher payment to support their drug habit.^{13,19,20}

The context of sex work plays a role in FSWs' risk of HIV transmission.²¹⁻²⁷ In recent years, there has been an increasing acknowledgement of and interest in the role of social and structural factors in influencing risk behaviors and HIV/STI transmission.²⁸⁻³⁰ The person-environment theory and the risk environment heuristic³¹⁻³³ encourage an understanding of the way in which factors exogenous to the individual operate, interact, and affect individual risk behaviors. Scant research has been conducted among exotic dancers in strip club settings. The current study aimed to: (1) characterize the nature of FEDs sex- and drug-related risk behaviors, (2) to examine the role of the club environment in these behaviors, and (3) to examine correlates of currently exchanging sex.

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Data and Methods

Study Design and Participants

In May 2008, the Baltimore City Health Department (BCHD) expanded their needle exchange program to provide evening services on the "block," a 1-block segment of Baltimore Street in Baltimore, MD that is home to approximately 20 strip clubs, bars, and other adult entertainment venues. In collaboration with BCHD, we conducted a cross-sectional survey from July 2008 to February 2009 of FEDs ($N = 98$) identified from a population of FEDs working in 7 of the 20 clubs located on the block. Participants were recruited through targeted outreach by trained study staff. Inclusion criteria were: being at least 18 years of age; reported exotic dancing in the past 3 months; and being a Baltimore city resident. During recruitment, any female appearing to qualify was approached for screening. Potential participants were given a study

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The social structural production of HIV risk among injecting drug users. [Soc Sci Med. 2005]

The social structural production of HIV risk among injecting drug users. [Soc Sci Med. 2005]

description and read the informed consent. Upon providing consent, they were enrolled and were administered a detailed in-person questionnaire. Interviews lasted approximately 20 minutes and focused on socio-demographic characteristics (e.g., age, race, education, living situation, arrest, and incarceration history), drug use and sexual practices both inside and outside of strip clubs, and employment history on the block. The questionnaire was piloted with FEDs before finalization. The study was approved by the Institutional Review Board at the Johns Hopkins Bloomberg School of Public Health.

Study Measures

The study's main outcome measure was current sex exchange defined as self-reported exchange of sex for money, drugs, food, or shelter within the past 3 months. Participants were then categorized as "exchangers," with comparisons made to "non-exchangers."

The study's exposure variables of interest included drug use and sexual practices. Past and recent (within the past 3 months) use of a range of drugs as well as questions regarding route of drug administration (e.g., smoke, inject), frequency of drug use, and the role of the club context (specific questions included "Did you [{inject, smoke, sniff/snort} {drug type}] before you began dancing?") were ascertained. Sexual history and recent practices with specific types of partners (primary, casual, and sex trade) were ascertained. Recent condom use with partners during different sexual acts (oral, vaginal, and anal) as well as recent sexual activity and risk behaviors in the club (specific questions included "On the nights you have worked in the last 3 months, how often did you have oral sex with a client?") were reported.

Statistical Analysis

Proportions are reported for categorical variables and differences were tested using 2-tailed Chi-square tests. Medians and interquartile ranges (IQR) are reported for continuous variables and differences were tested using Wilcoxon rank-sum test. LOWESS nonparametric regression was used to visualize the observed distribution of continuous variables, and categories were subsequently modeled as appropriate according to natural cut points in the data. Multivariate analysis was conducted using Poisson regression with robust variance estimates to examine correlates of current sex exchange. Selected variables of theoretical interest were included in the multivariable model. To check for collinearity among the covariates in the Poisson regression models, multiple linear regression was performed to assess the variance inflation factors, all of which were below 10. Regression diagnostic tools were used on the final multivariable model, including Peasons's goodness of fit test and plots of observed versus predicted counts. All statistical analyses were conducted using STATA statistical software version 10 (College Station, TX, USA, 2006).

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Results

Demographic Characteristics of Current Sex Exchangers and Non-exchangers

Demographic characteristics are displayed in Table 1. Participants' median age was 24 years old (IQR: range, 20–28), were 58% white, and 30% African American. Almost half (43%) of the participants did not complete high school and exchangers were significantly less likely to have completed high school as

compared with non-exchangers (42% vs. 69%, respectively; $p = 0.007$). The majority (75%) of participants reported ever having been arrested and exchangers were significantly more likely to have ever been arrested as compared with non-exchangers (93% vs. 60%; $p < 0.001$)

Table 1

Demographic characteristics

Risk factor	Total population ($n = 98$)			Chi-square (p values)
	Total sample (n (%)) $N = 98$	Non-exchangers (n (%)) $N = 55$	Exchangers (n (%)) $N = 43$	
≥ 24 (median) years of age	50 (51.02)	23 (41.82)	27 (62.79)	0.039
Race				
White	57 (58.16)	24 (43.64)	33 (76.74)	0.002
Black	29 (29.59)	24 (43.64)	5 (11.63)	
Other	12 (12.24)	7 (12.73)	5 (11.63)	
Graduated high school	56 (57.14)	38 (69.09)	18 (41.86)	0.007
Number of residences in the past year				0.125
1	38 (38.78)	25 (45.45)	13 (30.23)	
2 or more	60 (61.22)	30 (54.55)	30 (69.77)	
<6 months (median) at current residence	46 (46.94)	22 (40.00)	24 (55.81)	0.120
Current main partner	72 (73.47)	44 (80.00)	28 (65.12)	0.098
Health insurance or coverage	42 (42.86)	33 (60.00)	9 (20.93)	<0.001
Ever arrested	73 (74.49)	33 (60.00)	40 (93.02)	<0.001
Have children	58 (59.18)	29 (52.73)	29 (67.44)	0.141
Never married	75 (76.53)	46 (83.64)	29 (67.44)	0.060

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Forty-three percent reported having health insurance or coverage. Exchangers were significantly less likely to have health insurance as compared with non-exchangers (21% vs. 60%, respectively; $p < 0.001$). Seventy-seven percent of participants had never been married, but 73% reported a current sexual partner and 59% reported having children. The median number of residences lived at in the past year was 2, and the median length of time at current residence was 6 months (IQR, 1–24).

Drug History and Practices

Drug use and history is reported in Table 2. Alcohol consumption was

frequent, with 22% reporting daily drinking. Exchangers were significantly more likely to report daily drinking as compared with non-exchangers (33% vs. 15%, respectively; $p = 0.03$). Seventy-two percent reported current illicit drug use. Exchangers were significantly more likely to report current illicit drug use as compared with non-exchangers (98% vs. 53%; $p < 0.001$). Exchangers were more likely to report ever injecting (60% vs. 24%, respectively; $p < 0.001$ [data not shown]), current injection (47% vs. 9%, respectively; $p < 0.001$), current cocaine sniffing/snorting (21% vs. 5%, respectively; $p = 0.02$), current crack smoking (51% vs. 11%, respectively; $p < 0.001$), current club drug use such as ecstasy, ritalin, or GHB ((26% vs. 4%, respectively; $p = 0.001$ [data not shown]), and current pill use (40% vs. 9%, respectively; $p < 0.001$) compared with non-exchangers. Polydrug use was common: 64% of heroin injectors reported smoking crack, and 57% of crack smokers reported injecting heroin (data not shown). Exchangers were significantly more likely to report any drug use in the dance clubs, as compared with non-exchangers (88% vs. 32%, respectively; $p < 0.001$). Additionally, current exchangers were significantly more likely to report initiating drug use after beginning to dance compared with non-exchangers (58% vs. 15%, respectively; $p < 0.001$).

Table 2

Drug use and sexual history

Risk factor	Total population ($n = 98$)			p values
	Total sample (n (%)) $N = 98$	Non-exchangers (n (%)) $N = 55$	Exchangers (n (%)) $N = 43$	
Daily alcohol consumption	22 (22.45)	8 (14.55)	14 (32.56)	0.034
Any drug use (within past 90 days)	71 (72.45)	29 (52.73)	42 (97.67)	<0.001
Current injector (within past 90 days)	25 (25.51)	5 (9.09)	20 (46.51)	<0.001
Inject weekly (% subset)	24 (96.00)	4 (80.00)	20 (100.00)	0.041
Currently sniff/snort cocaine	12 (12.24)	3 (5.45)	9 (20.93)	0.02
Current crack smoker	28 (28.57)	6 (10.91)	22 (51.16)	<0.001
Current pill use	22 (22.45)	5 (9.09)	17 (39.53)	<0.001
Began using drugs after dancing	33 (33.67)	8 (14.55)	25 (58.14)	<0.001
Ever in drug treatment	36 (36.73)	14 (25.45)	22 (51.16)	0.01
Lifetime male partners	15 (7, 90)	10 (4, 20)	90 (17, 300)	<0.001 ^a
Ever exchanged sex	60 (61.22)	17 (30.91)	43 (100.00)	<0.001
Exchanged sex for first time after beginning to dance (% subset)	40 (66.67)	13 (76.47)	27 (62.79)	0.311

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^aWilcoxon rank-sum test

Among injection drug users (IDUs), the median age participants began injecting was 20 (IQR, 17–23), and the majority of those who reported current injection did so weekly (96%). The use of unclean syringes was not commonly reported, with 72% reporting never using unclean syringes, and 16% always using someone else's unclean syringes. However, the passing on of unclean syringes to another person was more commonly reported: 28% reported never passing on their unclean syringes and 32% always passing on their unclean syringes (data not shown).

Sexual Practices and Dancing History

Sexual history and practices are reported in Table 2. Close to two thirds (61%) reported ever exchanging sex for money, drugs, food, or shelter, and 67% of exchangers reported having done so for the first time after beginning to dance. Ninety-seven percent reported any recent sexual activity (vaginal, oral, or anal), with 96% reporting any oral sex, 97% reporting any vaginal sex, and 38% reporting any anal sex. Eighty-five percent reported any sex with a main partner, 18% reported any sex with a casual partner, and 44% reported any sex with an exchange partner. Recent condom use with main partners was reported as follows: 17% reported always using condoms during oral sex; 27% reported always using a condom during vaginal sex; and 20% reported always using a condom during anal sex. Among exchangers, recent condom use was reported with sex exchange partners as follows: 77% reported always using a condom during oral sex, 84% reported always using a condom during vaginal sex with sex exchange partners, and 63% reported always using a condom during anal sex with exchange partners (data now shown).

Dancing history is reported in Table 3. The median age at which this sample began exotic dancing was 18 (IQR, 18–21), and participants reported dancing a median of 3 years (IQR, 1.5–8). The majority (51%) of participants were introduced to dancing by a friend. Regarding the primary reason why they began dancing, exchangers, as compared with non-exchangers, were significantly more likely to report dancing for money for drugs (35% vs. 15%, respectively; $p = 0.02$) or for money for basic necessities (91% vs. 75%, respectively; $p = 0.04$). Transactional sex and drug use in the clubs was common, with 43% reporting selling oral or vaginal sex and 57% reporting any illicit drug use in the clubs.

Table 3

Dancer and exotic club characteristics

	Total sample (<i>n</i> (%)) <i>N</i> = 98)	Non-exchangers (<i>n</i> (%)) <i>N</i> = 43)	Exchangers (<i>n</i> (%)) <i>N</i> = 43)	<i>p</i> values
Median age began dancing (IQR)	18 (18, 21)	18 (18, 21)	18 (17, 21)	0.29 ^a
Median years dancing over lifetime (IQR)	3 (1.5, 8)	3 (1, 5)	4 (2, 12)	0.01 ^a

Introduced to dancing by (%)				
Friend	49 (50.52)	25 (46.30)	24 (55.81)	0.43
Fellow dancer	7 (7.22)	5 (9.26)	2 (4.65)	
Club staff	2 (2.06)	2 (3.70)	0 (0.00)	
Other	39 (40.21)	22 (40.74)	17 (39.53)	
Began dancing for money for drugs (%)				
Began dancing for money for basic necessities (%)	80 (81.63)	41 (74.55)	39 (90.70)	0.04
Median number of clubs worked at in past 3 months (IQR)	2 (1, 3)	1.5 (1, 3)	2 (1, 3)	0.05 ^a
Median number of shifts per week (IQR)	4.5 (3, 6)	4 (3, 5)	5 (4, 7)	0.001 ^a
Median amount of money made per shift (IQR)	150 (95, 250)	120 (80, 250)	150 (100, 250)	0.50 ^a
Sold any sex (vaginal, anal, oral) in the club (%)	42 (42.86)	5 (9.09)	37 (86.05)	<0.001
Any reported drug use in clubs in past 3 months (%)	56 (57.14)	18 (32.73)	38 (88.37)	<0.001

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^aWilcoxon rank-sum test

Multivariable Model

Table 4 displays a multivariable model examining correlates of current sex exchange. Statistically significant variables identified in bivariate analyses and theoretical variables of interest identified in previous research were included in the multivariable model to identify independent risk factors associated with current sex exchange among this population. In the presence of other variables, significant correlates of current sex exchange were: African American race (prevalence ratio (PrR), 0.43; $p = 0.04$), ever having been arrested (PrR, 2.97; $p = 0.03$), and using drugs in the club (PrR, 3.90; $p = 0.002$).

Table 4

Factors associated with ever exchanging sex: results from Poisson regression models

Risk factor	Total population ($n = 98$)	
	Univariate PrR (95% CI)	Multivariate PrR (95% CI)
≥24 years of age	1.62 (1.01, 2.61)*	0.86 (0.57, 1.30)
Race		

White	1.0	1.0
Black	0.30 (0.13, 0.68)*	0.43 (0.19, 0.97)*
Other	0.72 (0.35, 1.46)*	0.72 (0.42, 1.23)
Ever arrested	4.57 (1.54, 13.55)*	2.97 (1.13, 7.78)*
Smoke crack	2.62 (1.74, 3.94)*	1.16 (0.82, 1.63)
Inject heroin	2.54 (1.71, 3.76)*	1.14 (0.82, 1.57)
Use drugs in the club	5.7 (2.44, 13.29)*	3.90 (1.63, 9.35)*

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* $p < 0.05$

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Discussion

This study describes the extent of HIV/STI risk behaviors among exotic dancers and the risk inherent to strip clubs. To our knowledge, this small study is the first to quantify sex- and drug-related risks among this population. High levels of transactional sex and drug use were reported both within and outside the clubs, with low levels of reported consistent condom use. A range of drug use was reported, with crack being the most prevalent drug. Drug use in the club was significantly correlated with transactional sex in the presence of other variables. Among those who reported illicit drug use in the clubs, the majority also reported selling sex in the club. These findings point to the synergism between drug use and transactional sex and points to the potential role of the club context.

Dual use of heroin and crack was commonly reported. Those who both inject drugs and smoke crack are at an elevated risk for HIV/STIs.^{19,34,35} Women who both inject and smoke crack are more likely to exchange sex for money or drugs, have unprotected sex, and inject more frequently compared with non-injecting crack smokers and IDUs who do not smoke crack.^{11,19,36} A larger and more rigorously designed study is needed to characterize the relationship between sexual risk behaviors, drug use, and HIV/STIs in the context of exotic dance clubs.

Unsafe injection practices were common as participants reported passing on unclean syringes more frequently than using someone else's unclean syringes. Among those who inject in the clubs, both distributive and receptive sharing was reported as well. This finding underscores the need for harm reduction promotion and practice within the clubs, as dancers may not be able to leave the club during a shift when in need of clean tools.

The majority of participants had engaged in transactional sex and the majority of current sex exchangers reported engaging in transactional sex in the club. Condom use was inconsistent and varied by type of sex, type of sexual partner, and location, as has been previously found.³⁷⁻³⁹ Condom use was less frequent with main partners as compared with exchange partners, and less frequent with exchange partners during oral as compared with vaginal sex. However, participants appear to have delineated an additional hierarchy of risk in that condoms were used less frequently with exchange partners inside the club versus outside the club, which could indicate lack of access to condoms in the club or a false sense of safety with club patrons compared with clients

Sex related HIV risk behaviors: differential risks among injection drug users, crack smokers, and inj [Drug Alcohol Depend. 2000]

Smoking of crack cocaine as a risk factor for HIV infection among people who use injection drugs. [CMAJ. 2009]

Surviving the sex trade: a comparison of HIV risk behaviours among street-involved women in two Canadi [AIDS Care. 2003]

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Intimate relationship characteristics associated with condom use among drug users and their se [Drug Alcohol Depend. 2001]

Determinants of condom use among intravenous drug users.

outside of the club.

These data support the notion that risks can be associated and produced by specific environments, deemed “risk environments.”³⁰ A number of finding point to the role of the club environment in generating and promoting HIV/STI risk: the majority of exchangers and drug users reported doing so for the first time after beginning to dance, and drug use in the club was significantly associated with sex exchange in the presence of other variables. This study points to the importance of targeting the strip club environment, rather than individual FEDs, in HIV prevention interventions. Such environmental-structural interventions have been shown to be effective in reducing HIV/STI risk among female sex workers in other settings.^{40,41}

This study is subject to several limitations. Firstly, the measure of current sex exchange included sex in exchange for money, drugs, food, or shelter. There may be unique motivations and risks associated with sex in exchange for each of these goods and future studies are needed to isolate the unique risk factors associated with each. Secondly, sensitive data was gathered by self-report through face-to-face interviews, which may have resulted in under-reporting of risk behaviors due to social-desirability bias. In addition, we did not collect data on HIV/STI testing or results, but rather relied on self-reported risk behaviors for HIV/STI transmission. This study was a non-random sample so the results are not generalizable to all exotic dancers. The small study sample ($n = 98$) may have limited the power to detect associations in the multivariable model. Finally, this was a cross-sectional analysis, so temporal sequences of events cannot be properly identified, limiting the ability to draw causal inferences.

In light of these limitations, this study indicates that there are a number of sex and drug-related harms faced by FEDs in strip clubs. Most importantly, we found that the very environment within the club may promote HIV/STI risk-taking behaviors and increase individuals’ HIV/STI risk. Future studies that focus on the risk environment associated with the club itself will point to opportunities for intervention and prevention programs geared toward sex workers and FEDs in the club setting.

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Correlates of Current Transactional Sex among a Sample of Female Exotic Dancers in Baltimore, MD

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Abstract

Transactional sex work, broadly defined as the exchange of money, drugs, or goods for sexual services, occurs in a wide range of environments. There is a large body of research characterizing the risks and harms associated with street- and venue-based sex work, but there is a dearth of research characterizing the risk associated with the environment of exotic dance clubs. The current study aimed to: (1) characterize the nature of female exotic dancers' sex- and drug-related risk behaviors, (2) to examine the role of the club environment in these behaviors, and (3) to examine correlates of currently exchanging sex. From June 2008 to February 2009, we conducted a cross-sectional study among women who were aged 18 years or older and reported exotic dancing within the past 3 months ($n = 98$). The survey ascertained socio-demographic characteristics, personal health, medical history, sexual practices, drug use, and employment at clubs on the block. Bivariate and multivariate Poisson regression with robust variance was used to identify correlates of current sex exchange. Participants were a median of 24 years old, and were 58% white; 43% had not completed high school. Seventy-four percent reported ever having been arrested. Twenty-six percent reported having injected heroin and 29% reported having smoked crack in the past 3 months. Fifty-seven percent reported using drugs in the club in the past 3 months. Sixty-one percent had ever engaged in transactional sex, and 67% of those did so for the first time after beginning to dance. Forty-three percent reported selling any sex in the club in the past 3 months. In multiple Poisson regression, factors associated with current sex exchange included: race, ever having been arrested, and using drugs in the club. High levels of both drug use and transactional sex among this sample of exotic dancers were reported. These findings indicate that there are a number of drug- and sex-related harms faced by exotic dancers in strip

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clubs, implicating the environment in the promotion of HIV/STI risk-taking behaviors. Prevention and intervention programs targeting this population are needed to reduce the harms faced by exotic dancers in this environment.

Keywords: Female Sex Workers, Illicit Drug Use, Heroin, Exotic Dancers, Risk Behaviors, HIV/AIDS, Risk Environment

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Introduction

Female sex workers (FSWs) who exchange sex for money, drugs, food, or shelter face a multitude of harms including escalated risk for HIV, sexually transmitted infections (STIs), drug use, and violence.¹⁻⁴ The current study examines transactional sex among female exotic dancers (FEDs), a hidden and understudied high-risk population that is characterized by both sexual risk and drug use.⁵⁻⁸

Transactional sex has consistently been found to be associated with a number of sexual risk factors, such as unprotected sex, high-risk sex partners, and having multiple partners.⁹⁻¹¹ Other STIs, which increase the risk for HIV acquisition and transmission, have also been repeatedly found to be more prevalent among FSWs as compared with other women.¹²⁻¹⁷ Additionally, research has documented high rates of both injection and non-injection drug use among FSWs.¹⁸ The synergistic relationship between drug use and transactional sex is bidirectional. FSWs may turn to drug use to cope with the psychological distress and harsh realities of their occupation, and drug users may turn to prostitution to pay for drugs.³ Lastly, FSWs who inject drugs may be more willing to have unprotected sex for a higher payment to support their drug habit.^{13,19,20}

The context of sex work plays a role in FSWs' risk of HIV transmission.²¹⁻²⁷ In recent years, there has been an increasing acknowledgement of and interest in the role of social and structural factors in influencing risk behaviors and HIV/STI transmission.²⁸⁻³⁰ The person-environment theory and the risk environment heuristic³¹⁻³³ encourage an understanding of the way in which factors exogenous to the individual operate, interact, and affect individual risk behaviors. Scant research has been conducted among exotic dancers in strip club settings. The current study aimed to: (1) characterize the nature of FEDs sex- and drug-related risk behaviors, (2) to examine the role of the club environment in these behaviors, and (3) to examine correlates of currently exchanging sex.

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Data and Methods

Study Design and Participants

In May 2008, the Baltimore City Health Department (BCHD) expanded their needle exchange program to provide evening services on the "block," a 1-block segment of Baltimore Street in Baltimore, MD that is home to approximately 20 strip clubs, bars, and other adult entertainment venues. In collaboration with BCHD, we conducted a cross-sectional survey from July 2008 to February 2009 of FEDs ($N = 98$) identified from a population of FEDs working in 7 of the 20 clubs located on the block. Participants were recruited through targeted outreach by trained study staff. Inclusion criteria were: being at least 18 years of age; reported exotic dancing in the past 3 months; and being a Baltimore city resident. During recruitment, any female appearing to qualify was approached for screening. Potential participants were given a study

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description and read the informed consent. Upon providing consent, they were enrolled and were administered a detailed in-person questionnaire. Interviews lasted approximately 20 minutes and focused on socio-demographic characteristics (e.g., age, race, education, living situation, arrest, and incarceration history), drug use and sexual practices both inside and outside of strip clubs, and employment history on the block. The questionnaire was piloted with FEDs before finalization. The study was approved by the Institutional Review Board at the Johns Hopkins Bloomberg School of Public Health.

Study Measures

The study's main outcome measure was current sex exchange defined as self-reported exchange of sex for money, drugs, food, or shelter within the past 3 months. Participants were then categorized as "exchangers," with comparisons made to "non-exchangers."

The study's exposure variables of interest included drug use and sexual practices. Past and recent (within the past 3 months) use of a range of drugs as well as questions regarding route of drug administration (e.g., smoke, inject), frequency of drug use, and the role of the club context (specific questions included "Did you [{inject, smoke, sniff/snort} {drug type}] before you began dancing?") were ascertained. Sexual history and recent practices with specific types of partners (primary, casual, and sex trade) were ascertained. Recent condom use with partners during different sexual acts (oral, vaginal, and anal) as well as recent sexual activity and risk behaviors in the club (specific questions included "On the nights you have worked in the last 3 months, how often did you have oral sex with a client?") were reported.

Statistical Analysis

Proportions are reported for categorical variables and differences were tested using 2-tailed Chi-square tests. Medians and interquartile ranges (IQR) are reported for continuous variables and differences were tested using Wilcoxon rank-sum test. LOWESS nonparametric regression was used to visualize the observed distribution of continuous variables, and categories were subsequently modeled as appropriate according to natural cut points in the data. Multivariate analysis was conducted using Poisson regression with robust variance estimates to examine correlates of current sex exchange. Selected variables of theoretical interest were included in the multivariable model. To check for collinearity among the covariates in the Poisson regression models, multiple linear regression was performed to assess the variance inflation factors, all of which were below 10. Regression diagnostic tools were used on the final multivariable model, including Peasons's goodness of fit test and plots of observed versus predicted counts. All statistical analyses were conducted using STATA statistical software version 10 (College Station, TX, USA, 2006).

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Results

Demographic Characteristics of Current Sex Exchangers and Non-exchangers

Demographic characteristics are displayed in Table 1. Participants' median age was 24 years old (IQR: range, 20–28), were 58% white, and 30% African American. Almost half (43%) of the participants did not complete high school and exchangers were significantly less likely to have completed high school as

compared with non-exchangers (42% vs. 69%, respectively; $p = 0.007$). The majority (75%) of participants reported ever having been arrested and exchangers were significantly more likely to have ever been arrested as compared with non-exchangers (93% vs. 60%; $p < 0.001$)

Table 1

Demographic characteristics

Risk factor	Total population ($n = 98$)			Chi-square (p values)
	Total sample (n (%)) $N = 98$	Non-exchangers (n (%)) $N = 55$	Exchangers (n (%)) $N = 43$	
≥ 24 (median) years of age	50 (51.02)	23 (41.82)	27 (62.79)	0.039
Race				
White	57 (58.16)	24 (43.64)	33 (76.74)	0.002
Black	29 (29.59)	24 (43.64)	5 (11.63)	
Other	12 (12.24)	7 (12.73)	5 (11.63)	
Graduated high school	56 (57.14)	38 (69.09)	18 (41.86)	0.007
Number of residences in the past year				0.125
1	38 (38.78)	25 (45.45)	13 (30.23)	
2 or more	60 (61.22)	30 (54.55)	30 (69.77)	
<6 months (median) at current residence	46 (46.94)	22 (40.00)	24 (55.81)	0.120
Current main partner	72 (73.47)	44 (80.00)	28 (65.12)	0.098
Health insurance or coverage	42 (42.86)	33 (60.00)	9 (20.93)	<0.001
Ever arrested	73 (74.49)	33 (60.00)	40 (93.02)	<0.001
Have children	58 (59.18)	29 (52.73)	29 (67.44)	0.141
Never married	75 (76.53)	46 (83.64)	29 (67.44)	0.060

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Forty-three percent reported having health insurance or coverage. Exchangers were significantly less likely to have health insurance as compared with non-exchangers (21% vs. 60%, respectively; $p < 0.001$). Seventy-seven percent of participants had never been married, but 73% reported a current sexual partner and 59% reported having children. The median number of residences lived at in the past year was 2, and the median length of time at current residence was 6 months (IQR, 1–24).

Drug History and Practices

Drug use and history is reported in Table 2. Alcohol consumption was

frequent, with 22% reporting daily drinking. Exchangers were significantly more likely to report daily drinking as compared with non-exchangers (33% vs. 15%, respectively; $p = 0.03$). Seventy-two percent reported current illicit drug use. Exchangers were significantly more likely to report current illicit drug use as compared with non-exchangers (98% vs. 53%; $p < 0.001$). Exchangers were more likely to report ever injecting (60% vs. 24%, respectively; $p < 0.001$ [data not shown]), current injection (47% vs. 9%, respectively; $p < 0.001$), current cocaine sniffing/snorting (21% vs. 5%, respectively; $p = 0.02$), current crack smoking (51% vs. 11%, respectively; $p < 0.001$), current club drug use such as ecstasy, ritalin, or GHB ((26% vs. 4%, respectively; $p = 0.001$ [data not shown]), and current pill use (40% vs. 9%, respectively; $p < 0.001$) compared with non-exchangers. Polydrug use was common: 64% of heroin injectors reported smoking crack, and 57% of crack smokers reported injecting heroin (data not shown). Exchangers were significantly more likely to report any drug use in the dance clubs, as compared with non-exchangers (88% vs. 32%, respectively; $p < 0.001$). Additionally, current exchangers were significantly more likely to report initiating drug use after beginning to dance compared with non-exchangers (58% vs. 15%, respectively; $p < 0.001$).

Table 2

Drug use and sexual history

Risk factor	Total population ($n = 98$)			
	Total sample (n) (%) $N = 98$	Non-exchangers (n) (%) $N = 55$	Exchangers (n) (%) $N = 43$	p values
Daily alcohol consumption	22 (22.45)	8 (14.55)	14 (32.56)	0.034
Any drug use (within past 90 days)	71 (72.45)	29 (52.73)	42 (97.67)	<0.001
Current injector (within past 90 days)	25 (25.51)	5 (9.09)	20 (46.51)	<0.001
Inject weekly (% subset)	24 (96.00)	4 (80.00)	20 (100.00)	0.041
Currently sniff/snort cocaine	12 (12.24)	3 (5.45)	9 (20.93)	0.02
Current crack smoker	28 (28.57)	6 (10.91)	22 (51.16)	<0.001
Current pill use	22 (22.45)	5 (9.09)	17 (39.53)	<0.001
Began using drugs after dancing	33 (33.67)	8 (14.55)	25 (58.14)	<0.001
Ever in drug treatment	36 (36.73)	14 (25.45)	22 (51.16)	0.01
Lifetime male partners	15 (7, 90)	10 (4, 20)	90 (17, 300)	<0.001 ^a
Ever exchanged sex	60 (61.22)	17 (30.91)	43 (100.00)	<0.001
Exchanged sex for first time after beginning to dance (% subset)	40 (66.67)	13 (76.47)	27 (62.79)	0.311

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^aWilcoxon rank-sum test

Among injection drug users (IDUs), the median age participants began injecting was 20 (IQR, 17–23), and the majority of those who reported current injection did so weekly (96%). The use of unclean syringes was not commonly reported, with 72% reporting never using unclean syringes, and 16% always using someone else's unclean syringes. However, the passing on of unclean syringes to another person was more commonly reported: 28% reported never passing on their unclean syringes and 32% always passing on their unclean syringes (data not shown).

Sexual Practices and Dancing History

Sexual history and practices are reported in Table 2. Close to two thirds (61%) reported ever exchanging sex for money, drugs, food, or shelter, and 67% of exchangers reported having done so for the first time after beginning to dance. Ninety-seven percent reported any recent sexual activity (vaginal, oral, or anal), with 96% reporting any oral sex, 97% reporting any vaginal sex, and 38% reporting any anal sex. Eighty-five percent reported any sex with a main partner, 18% reported any sex with a casual partner, and 44% reported any sex with an exchange partner. Recent condom use with main partners was reported as follows: 17% reported always using condoms during oral sex; 27% reported always using a condom during vaginal sex; and 20% reported always using a condom during anal sex. Among exchangers, recent condom use was reported with sex exchange partners as follows: 77% reported always using a condom during oral sex, 84% reported always using a condom during vaginal sex with sex exchange partners, and 63% reported always using a condom during anal sex with exchange partners (data now shown).

Dancing history is reported in Table 3. The median age at which this sample began exotic dancing was 18 (IQR, 18–21), and participants reported dancing a median of 3 years (IQR, 1.5–8). The majority (51%) of participants were introduced to dancing by a friend. Regarding the primary reason why they began dancing, exchangers, as compared with non-exchangers, were significantly more likely to report dancing for money for drugs (35% vs. 15%, respectively; $p = 0.02$) or for money for basic necessities (91% vs. 75%, respectively; $p = 0.04$). Transactional sex and drug use in the clubs was common, with 43% reporting selling oral or vaginal sex and 57% reporting any illicit drug use in the clubs.

Table 3

Dancer and exotic club characteristics

	Total sample (<i>n</i> (%)) <i>N</i> = 98)	Non-exchangers (<i>n</i> (%)) <i>N</i> = 43)	Exchangers (<i>n</i> (%)) <i>N</i> = 43)	<i>p</i> values
Median age began dancing (IQR)	18 (18, 21)	18 (18, 21)	18 (17, 21)	0.29 ^a
Median years dancing over lifetime (IQR)	3 (1.5, 8)	3 (1, 5)	4 (2, 12)	0.01 ^a

Introduced to dancing by (%)				
Friend	49 (50.52)	25 (46.30)	24 (55.81)	0.43
Fellow dancer	7 (7.22)	5 (9.26)	2 (4.65)	
Club staff	2 (2.06)	2 (3.70)	0 (0.00)	
Other	39 (40.21)	22 (40.74)	17 (39.53)	
Began dancing for money for drugs (%)				
Began dancing for money for basic necessities (%)	80 (81.63)	41 (74.55)	39 (90.70)	0.04
Median number of clubs worked at in past 3 months (IQR)	2 (1, 3)	1.5 (1, 3)	2 (1, 3)	0.05 ^a
Median number of shifts per week (IQR)	4.5 (3, 6)	4 (3, 5)	5 (4, 7)	0.001 ^a
Median amount of money made per shift (IQR)	150 (95, 250)	120 (80, 250)	150 (100, 250)	0.50 ^a
Sold any sex (vaginal, anal, oral) in the club (%)	42 (42.86)	5 (9.09)	37 (86.05)	<0.001
Any reported drug use in clubs in past 3 months (%)	56 (57.14)	18 (32.73)	38 (88.37)	<0.001

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^aWilcoxon rank-sum test

Multivariable Model

Table 4 displays a multivariable model examining correlates of current sex exchange. Statistically significant variables identified in bivariate analyses and theoretical variables of interest identified in previous research were included in the multivariable model to identify independent risk factors associated with current sex exchange among this population. In the presence of other variables, significant correlates of current sex exchange were: African American race (prevalence ratio (PrR), 0.43; $p = 0.04$), ever having been arrested (PrR, 2.97; $p = 0.03$), and using drugs in the club (PrR, 3.90; $p = 0.002$).

Table 4

Factors associated with ever exchanging sex: results from Poisson regression models

Risk factor	Total population ($n = 98$)	
	Univariate PrR (95% CI)	Multivariate PrR (95% CI)
≥24 years of age	1.62 (1.01, 2.61)*	0.86 (0.57, 1.30)
Race		

White	1.0	1.0
Black	0.30 (0.13, 0.68)*	0.43 (0.19, 0.97)*
Other	0.72 (0.35, 1.46)*	0.72 (0.42, 1.23)
Ever arrested	4.57 (1.54, 13.55)*	2.97 (1.13, 7.78)*
Smoke crack	2.62 (1.74, 3.94)*	1.16 (0.82, 1.63)
Inject heroin	2.54 (1.71, 3.76)*	1.14 (0.82, 1.57)
Use drugs in the club	5.7 (2.44, 13.29)*	3.90 (1.63, 9.35)*

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* $p < 0.05$

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Discussion

This study describes the extent of HIV/STI risk behaviors among exotic dancers and the risk inherent to strip clubs. To our knowledge, this small study is the first to quantify sex- and drug-related risks among this population. High levels of transactional sex and drug use were reported both within and outside the clubs, with low levels of reported consistent condom use. A range of drug use was reported, with crack being the most prevalent drug. Drug use in the club was significantly correlated with transactional sex in the presence of other variables. Among those who reported illicit drug use in the clubs, the majority also reported selling sex in the club. These findings point to the synergism between drug use and transactional sex and points to the potential role of the club context.

Dual use of heroin and crack was commonly reported. Those who both inject drugs and smoke crack are at an elevated risk for HIV/STIs.^{19,34,35} Women who both inject and smoke crack are more likely to exchange sex for money or drugs, have unprotected sex, and inject more frequently compared with non-injecting crack smokers and IDUs who do not smoke crack.^{11,19,36} A larger and more rigorously designed study is needed to characterize the relationship between sexual risk behaviors, drug use, and HIV/STIs in the context of exotic dance clubs.

Unsafe injection practices were common as participants reported passing on unclean syringes more frequently than using someone else's unclean syringes. Among those who inject in the clubs, both distributive and receptive sharing was reported as well. This finding underscores the need for harm reduction promotion and practice within the clubs, as dancers may not be able to leave the club during a shift when in need of clean tools.

The majority of participants had engaged in transactional sex and the majority of current sex exchangers reported engaging in transactional sex in the club. Condom use was inconsistent and varied by type of sex, type of sexual partner, and location, as has been previously found.³⁷⁻³⁹ Condom use was less frequent with main partners as compared with exchange partners, and less frequent with exchange partners during oral as compared with vaginal sex. However, participants appear to have delineated an additional hierarchy of risk in that condoms were used less frequently with exchange partners inside the club versus outside the club, which could indicate lack of access to condoms in the club or a false sense of safety with club patrons compared with clients

Sex related HIV risk behaviors: differential risks among injection drug users, crack smokers, and inj [Drug Alcohol Depend. 2000]

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Determinants of condom use among intravenous drug users.

outside of the club.

These data support the notion that risks can be associated and produced by specific environments, deemed “risk environments.”³⁰ A number of finding point to the role of the club environment in generating and promoting HIV/STI risk: the majority of exchangers and drug users reported doing so for the first time after beginning to dance, and drug use in the club was significantly associated with sex exchange in the presence of other variables. This study points to the importance of targeting the strip club environment, rather than individual FEDs, in HIV prevention interventions. Such environmental-structural interventions have been shown to be effective in reducing HIV/STI risk among female sex workers in other settings.^{40,41}

This study is subject to several limitations. Firstly, the measure of current sex exchange included sex in exchange for money, drugs, food, or shelter. There may be unique motivations and risks associated with sex in exchange for each of these goods and future studies are needed to isolate the unique risk factors associated with each. Secondly, sensitive data was gathered by self-report through face-to-face interviews, which may have resulted in under-reporting of risk behaviors due to social-desirability bias. In addition, we did not collect data on HIV/STI testing or results, but rather relied on self-reported risk behaviors for HIV/STI transmission. This study was a non-random sample so the results are not generalizable to all exotic dancers. The small study sample ($n = 98$) may have limited the power to detect associations in the multivariable model. Finally, this was a cross-sectional analysis, so temporal sequences of events cannot be properly identified, limiting the ability to draw causal inferences.

In light of these limitations, this study indicates that there are a number of sex and drug-related harms faced by FEDs in strip clubs. Most importantly, we found that the very environment within the club may promote HIV/STI risk-taking behaviors and increase individuals’ HIV/STI risk. Future studies that focus on the risk environment associated with the club itself will point to opportunities for intervention and prevention programs geared toward sex workers and FEDs in the club setting.

Go to: 

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