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Visiting Entertainment Venues and Sexual Health in China

Li Li,
Semel Institute for Neuroscience and Human Behavior, Center for Community Health, University of California at Los Angeles, Los Angeles, CA, USA

Zunyou Wu,
National Center for AIDS/STD Control and Prevention, Chinese Centers for Disease Control and Prevention, Beijing, China

Mary Jane Rotheram-Borus,
Semel Institute for Neuroscience and Human Behavior, Center for Community Health, University of California at Los Angeles, Los Angeles, CA, USA

Jihui Guan,
Fujian Center for Disease Control and Prevention, Fuzhou, China

Yueping Yin,
National STD Reference Laboratory, Nanjing, China

Roger Detels,
School of Public Health, University of California at Los Angeles, Los Angeles, CA, USA

Sheng Wu,
Semel Institute for Neuroscience and Human Behavior, Center for Community Health, University of California at Los Angeles, Los Angeles, CA, USA

Sung-Jae Lee,
Semel Institute for Neuroscience and Human Behavior, Center for Community Health, University of California at Los Angeles, Los Angeles, CA, USA

Haijun Cao,
School of Public Health, University of California at Los Angeles, Los Angeles, CA, USA

Chunqing Lin,
School of Public Health, University of California at Los Angeles, Los Angeles, CA, USA

Keming Rou,
National Center for AIDS/STD Control and Prevention, Chinese Centers for Disease Control and Prevention, Beijing, China

Zhendong Liu, and
National Center for AIDS/STD Control and Prevention, Chinese Centers for Disease Control and Prevention, Beijing, China

The NIMH Collaborative HIV/STD Prevention Trial Group

Abstract

L. Li UCLA Semel Institute, Center for Community Health, 10920 Wilshire Blvd., Suite 350, Los Angeles, CA 90024, USA lililili@ucla.edu.

Entertainment venues in China are associated with risky sexual behavior. Most previous studies related to entertainment venues in China have focused on sex workers and commercial sex, but this study addressed sexual health in a sample of the general urban population. A randomly selected sample of market vendors (n = 4,510) from an eastern city was recruited and assessed to examine relationships between entertainment venue visits and sexual risk. Both behavioral (self-reports of unprotected sex) and biomedical (STD test results) measures were used. About 18% of the sample (26.8% of men and 9% of women) reported visiting entertainment venues in the past 30 days. Those who visited entertainment venues were more likely to be male, younger, single, with higher education, and to have more discretionary income. For both men and women, visiting entertainment venues was a significant predictor for unprotected sex and STD infection. Gender differences were observed in predicting unprotected sex and STD infections. Entertainment venues could be potential sites for place-based intervention programs and out-reach for the general population.

Keywords

China; Behavioral intervention; HIV; STD; Entertainment venues

Introduction

Commercial sex workers have played a major role in the spread of the HIV epidemic in many developing countries (Davis, 1993). Through 2005, heterosexual transmission accounted for 43.6% of cumulative reported HIV/AIDS cases in China (China Ministry of Health, Joint United Program on HIV/AIDS, World Health Organization, 2006). Although commercial sex is illegal in China, there are still many female sex workers who work and find clients at licensed entertainment venues, such as karaoke bars, saunas, night clubs, discos, or massage parlors (Li et al., 2006; Pan, 2004; Qu et al., 2002; Wei et al., 2004). Between 4 and 10 million women were estimated to engage in commercial sex in China, playing a significant role as a "bridge population" (Pan, 2004; Pan, Parish, Wang, & Laumann, 2004; Yang, Li, Stanton, Chen, & Liu, 2005). Sex workers have attracted a great deal of attention, as HIV infections attributable to heterosexual transmission are rising in China (China Ministry of Health & UNAIDS, 2003; Wu, Sullivan, Wang, Rotheram-Borus, & Detels, 2007).

Previous studies on entertainment venues in China have focused on the profiles of female entertainment workers (Ding et al., 2005; Qu et al., 2002; Rogers, Ying, Xin, Fung, & Kaufman, 2002; Yang & Xia, 2006). It was reported that 50–80% of entertainment workers had involved in commercial sex (Wei et al., 2004; Xu et al., 2001; Yang & Xia, 2006), with more than 50% of the female entertainment workers engaging in unprotected sex with their clients, putting both parties at risk of acquiring or transmitting HIV/AIDS and other sexually transmitted diseases (Ding et al., 2005; Liao, Schensul, & Wolffers, 2003; Qu et al., 2002; Rogers et al., 2002; Xia & Yang, 2005; Xu et al., 2001; Yang, Li, Stanton, Fang, et al., 2005; Yuan, 2003; Zhao & Yu, 2001). Although studies examining the profiles of entertainment workers are important, HIV prevention in entertainment venues in China needs to go beyond targeting female entertainment workers. For example, investigating the profiles of the patrons visiting entertainment venues is needed, since they represent the general population and have potential to benefit from preventive intervention programs.

Commercial sex was abolished in China in the 1950s through a national campaign against prostitution and STD, and sex workers and prostitution in China were declared to be eliminated at that time (Burton, 1988; Cohen, Henderson, & Aiello, 1996). In the 1980s, entertainment venues, such as karaoke bars, saunas, night clubs, discos, or massage parlors, which conceal informal and clandestine sex work have ree-merged, mainly due to increased economic freedom, rural-urban migration, increased disposable income, and liberalized attitudes (Gil,

Wang, Anderson, Lin, & Wu, 1996; Huang, 2003; Liao et al., 2003; Smith, 2005). The venues have grown into huge, profitable businesses and owners of these venues often overlook illegal activities (Xinhua News Agency, 2006a). From time to time, the Chinese government launches crack-downs on drug use and prostitution activities in entertainment venues (Xinhua News Agency, 2005, 2006a). Recently, for example, all the owners and managers of the 1,200 entertainment venues in Beijing were required to take part in a special anti-drug program aiming for a safe environment for the 2008 Olympic Games (Xinhua News Agency, 2006b).

The current study was part of a multi-county intervention study evaluating the effectiveness of the Community Popular Opinion Leader (C-POL) intervention in reducing HIV and STDs (NIMH Collaborative HIV/STD Prevention Trial Group, 2007a). In this study, a large, randomly selected sample of citizens who worked at markets ($n = 4,510$) was recruited in China. The rational to choose market vendors was that the population was relatively stable with a sufficient number of venues of manageable size. The objectives of the study were to explore the profile of market workers in terms of their individual characteristics, sexual behavior, and entertainment venue visits, and to examine associations between sexual risk and entertainment venue visits by using both behavioral (self-reports of unprotected sex) and biomedical (STD test results) measures. Potential gender differences in the relationships were also investigated.

Method

Participants

This study was part of a NIMH Collaborative HIV/STD Prevention Trial being conducted with five populations at risk for HIV and STDs in China, India, Peru, Russia, and Zimbabwe. The study phases consisted of an ethnographic study, pilot studies, an epidemiological study, and a randomized controlled trial. This study concerns findings from the epidemiological data collected at baseline.

The study was conducted in a large, eastern city in China where a STD prevalence of more than 10% had been reported (Chen et al., 2005; Detels et al., 2003). Participants were recruited from 40 food markets. Normally a market has 50–150 stalls, with a total of 150–300 stall-owners and employees. Food market workers in China are often stable migrants and they live in the city on and off throughout their lives. Social activities for them usually center within a few blocks of each market, as workers often live close to work and socialize within that area. There were approximately 150 food markets in the study city (NIMH Collaborative HIV/STD Prevention Trial Group, 2007b). The market selection was based on the size and geographic location of the markets. Only the markets with more than 100 vendors were selected, and we selected markets with sufficient distance separation between each other to minimize contamination. All vendors 18–49 years old were invited to participate in the study with a refusal rate less than 8%.

Data collection commenced after meeting with and obtaining agreements from gatekeepers, primarily government officers and market managers. The purpose of the study and the type of recruitment activities were announced in the market the day before data collection began. Selected participants were transported by van to the Institute of Health Education of the Provincial Center for Disease Control and Prevention (CDC) for behavioral risk assessment and collection of biological specimens, after the administration of informed consent. All participants were paid 20 Yuan (U.S.$2.50) for their participation. The study only used materials and procedures that had been approved by both the UCLA IRB and China CDC IRB.

The survey questionnaire for risk behavior assessment contained questions regarding demographics, health status, health service utilization, sexual behavior, and condom use. The questionnaire was administered using a face-to-face personal interview, with interviewers

recording responses on laptop computers. The computer assisted personal interview (CAPI) was developed to automatically incorporate skip patterns and reduce human error.

Participants were tested for chlamydia and gonorrhea using urine specimens collected from men and vaginal swabs collected from women. Following the trial protocol, Trichomonas testing was performed on women only. Venous blood was collected from all participants for testing for syphilis, herpes simplex virus type 2 (HSV-2), and HIV. Participants who had non-viral STDs received treatment and counseling at no cost. HIV-positive participants received treatment and counseling through the local CDC, and HSV-2 positive participants received treatment referrals and counseling. All treatment procedures followed appropriate China CDC guidelines.

Measures

STD diagnoses were obtained from the study laboratory tests for chlamydia, gonorrhea, syphilis, Trichomonas, herpes, and HIV following standardized laboratory protocols. Chlamydia and gonorrhea were tested using polymerase chain reaction. The MRL Diagnostics HSV-2 IgG test was used to identify specimens with positive HSV-2 antibody. HIV testing was performed using EIA or ELISA and repeated with another EIA/ELISA. Positives were confirmed using Western blot analysis. Syphilis testing was performed by rapid plasma reagin and confirmed using the Treponema pallidum particle agglutination test. Vaginal swabs were cultured for *Trichomonas vaginalis* using the InPouch TV test (Biomed Diagnostics, Santa Clara, CA).

Risky sexual behavior was measured by the combination of several questions. Participants were asked about (1) number of partners in the past 6 months; participants reporting more than one partner were considered as having multiple partners; for those participants with multiple partners, we further queried (2) how many times the participant had sex with each non-primary partner and (3) how many times he/she used condoms within the past 6 months. If the number of times of having sex was greater than the number of times using condoms within the past 6 months with any non-primary sexual partners, the participant was defined as having unprotected sex within the past six months.

Entertainment venue visits, the main predictor of interest, was defined as "having visited karaoke bars, discos, or massage parlors at least once in the past 30 days." *Alcohol use* was defined as drinking alcohol at least once a month. *Demographic characteristics* included respondent's age, gender, marital status, education, and amount of discretionary income per month.

Data Analysis

All analyses were performed using SAS statistical software. First, descriptive analyses were performed to examine market vendor characteristics as they related to entertainment venue visits. Second, predictors of entertainment venue visits using multiple logistic regression analysis were examined. Last, multiple logistic analysis was conducted to examine associations between unprotected sex, STD diagnosis, and entertainment venue visits, adjusting for significant market vendor characteristics. Multiple logistic regression analyses were stratified by sex because significant differences in entertainment venue visits by sex were observed.

Results

The characteristics of the market vendors by entertainment venue visits are presented in Table 1. About 18% of the respondents reported visiting entertainment venues in the past 30 days. Market vendors visiting entertainment venues were more likely to be male, younger, and single,

with higher education and more discretionary money per month. In addition, those visiting entertainment venues were significantly more likely to report alcohol use, multiple sexual partners, and unprotected sex with someone other than their spouse. The relationship between STD diagnosis and visiting entertainment venues was also significant.

Following the analysis of respondent characteristics by entertainment venue visits, we examined the associations by using multiple logistic regressions (Table 2). Consistent with the bivariate analysis, significant predictors of entrainment venue visits were: being male (OR = 2.06; $p < .001$); age 30 years or younger (OR = 1.40; $p < .0001$); single (OR = 1.64; $p < .0001$); higher education (OR = 2.36; $p < .0001$); higher discretionary income (OR = 3.55; $p < .0001$); and alcohol use in the past 30 days (OR = 2.12; $p < .0001$).

The main dependent variables consisted of behavioral (reporting unprotected sex in the past 6 months) and biological (positive STD diagnosis) outcomes. We examined the associations between entertainment venue visits and risky sex, adjusting for significant market vendor profiles. Given that we observed significant gender differences on entertainment venue visits, we examined the associations stratified on gender (Table 3).

Among male market vendors, those who were single (OR = 5.66; $p < .001$) and those who reported more discretionary income (OR = 2.32; $p < .0001$) were significantly more likely to report engaging in unprotected sex with someone other than a spouse in the past 6 months. Among female market vendors, those who were younger (OR = 2.49; $p = .0043$), single (OR = 3.22; $p = .0003$), and those who reported alcohol use (OR = 2.32; $p = .0026$) were significantly more likely to report engaging in unprotected sex with a non-spouse in the past 6 months. Entertainment venue visits were significant predictors of unprotected sex for both male (OR = 5.66; $p < .0001$) and female (OR = 1.95; $p = .05$) market vendors. For men, those who reported visiting entertainment venues in the past 30 days were more than five times more likely to report unprotected sex than those who did not report such visits.

Entertainment venue visits were also significant predictors of positive STD diagnosis for both male (OR = 1.87; $p < .0001$) and female (OR = 1.70; $p = .0019$) respondents. Among men, those aged 30 years or younger were less likely to have a positive STD diagnosis (OR = 0.68; $p = 0.0414$). Among women, those who were single (OR = 0.54; $p = .0048$) with higher education (OR = 0.73; $p = .0041$) were significantly less likely to have a positive STD diagnosis. Gender differences were observed when STD diagnosis was examined in the context of marital status and education.

Discussion

Female sex workers in entertainment venues are an important “bridge population” who transmit HIV/STD between high-risk groups and the general population through unprotected sex. The danger that the HIV/STD epidemic could make a quick inroad to the general population through sexual transmission underscores the need to study individual characteristics and structural factors attributed to such transmission. In China, entertainment venues and their associated commercial sex are considered relevant to the spread of STDs, including HIV/AIDS (Chen et al., 2005; Fang et al., 2007; Hesketh, Zhang, & Qiang, 2005). Given that commercial sex in China is illegal, it is very difficult to implement prevention efforts directly targeting the clients of commercial sex workers. Nearly 27% of men and 9% of women in our sample reported entertainment venue visits in the past 30 days, and their patronage of entertainment venues did increase the probability of unprotected sexual practices and STD infection. Understanding entertainment venue visitation, patrons’ individual characteristics, and their relationships with unprotected sex and STD infection can be a proxy for measuring risky sexual behavior and commercial sex in China.

Data showed that having more discretionary income was the most significant predictor of visiting entertainment venues, followed by higher education, alcohol use, youth, being male, and being single. These results were consistent with findings from previous studies that unmarried men and women earning a high income were likely to engage in commercial sex (Parish et al., 2003; Wang et al., 2007). Despite the lack of general profiles of those visiting entertainment venues, there is little doubt that financial stability plays a role. With the rapid economic development that has occurred in China over the past two decades, behavioral norms have changed, including consumption and leisure activity patterns. The marketplace provides opportunities to buy virtually anything for people with higher incomes, and being able to do so becomes a symbol of success. As discretionary money becomes available to be drawn into the world of entertainment, risk behaviors associated with commercial sex and substance use also become inevitable (Smith, 2005).

For both men and women, visiting entertainment venues was correlated with both unprotected sex and STD infection. Other factors revealed that male market vendors having more discretionary money were more likely to engage in unprotected sex, but this factor did not necessarily predict STD infections. One explanation could be that higher income not only allows people to visit entertainment venues, where they may engage in risky behaviors, but also provides opportunities to access healthcare and effective treatment. HIV/STD prevention programs need to take these factors into consideration to design messages that specifically target groups with different socioeconomic backgrounds.

Our study investigated gender differences in predicting unprotected sex and STD infections. For instance, having discretionary money was a significant predictor of unprotected sex for men, but not for women. It might be because men and women are engaging in different activities in entertainment venue: men are more likely to visit karaoke bars to pay for sex (or at least to increase their chances of a sexual encounter), while women go to venues with groups for karaoke singing and less frequently involve in commercial sex activities. Being younger was associated with unprotected sex for women, but not for men. The most interesting finding was that married women were more likely than their single counterparts to have STD infection, yet marital status was not a significant factor for men. One interpretation is that some married women acquired STDs through their spouses who engaged in high-risk behaviors, which is further complicated by women's economic dependency on their male counterparts. Furthermore, women with little or no education were associated with STD infection, raising the possibility that women with lower economic status have less power to negotiate safe sex practices with their sexual partners and may become more vulnerable to the infection.

Several limitations must be noted. Data on sexual behavior were from self-reports and subject to social desirability biases. Thus, data on engaging in unprotected sexual activities were likely to be underreported. Since the data were collected in only one geographic region of China and with only market vendors, generalization of findings to other populations is limited. Also, we assessed the visit of multiple types of entertainment venues in a single question, which didn't allow us to further investigate each of the venues and their different clients and potential relationships to risk behavior. Nonetheless, the study has important implications for prevention and intervention in China, as entertainment venues can clearly be important sites for place-based intervention programs and outreach to the general population. Recently, the Chinese government launched programs to purchase condoms to distribute at entertainment venues at no cost and made the provision of condoms at entertainment venues an official requirement (Wu et al., 2007; Xinhuanet, 2005). Further studies focused on the effectiveness of such efforts and their impacts on visitors' sexual practices will be needed.

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Table 1

Sample description by entertainment venue visits (n = 4,510)

Characteristics	Total (n = 4,510) (%)	Visited entertainment venues		p
		Yes (n = 787) (%)	No (n = 3,723) (%)	
Gender				
Male	47.3	26.8	73.2	<.0001
Female	52.7	9.0	91.0	
Age				
25 or younger	19.1	32.1	67.9	<.0001
26–30	15.9	22.6	77.4	
31–35	20.1	15.8	84.2	
36 or older	44.8	10.1	89.9	
Marital status				
Married/live with partner	82.4	13.6	86.4	<.0001
Single/widowed/separated/divorced	17.6	35.4	64.6	
Education				
No schooling	8.4	1.9	98.2	<.0001
Primary school	37.0	9.4	90.6	
Junior high	41.7	23.4	76.6	
Senior high	12.3	30.7	69.3	
College and higher	0.6	44.0	56.0	
Discretionary money (Yuan) per month				
≤200	35.4	6.0	94.0	<.0001
201–500	38.0	16.6	83.4	
501–1000	20.1	32.9	67.1	
≥1000	6.5	37.3	62.7	
Alcohol use (at least once a month)				
Yes	41.2	28.1	71.9	<.0001
No	58.8	10.0	90.0	
More than one sexual partner in the past 6 months				
Yes	5.4	70.0	30.0	<.0001
No	94.6	13.9	86.1	
Any unprotected sex with non-spouse in past 6 months				
Yes	7.5	56.5	43.5	<.0001
No	92.5	14.3	85.7	
Positive STD diagnosis				
Yes	16.6	20.5	79.5	.0164
No	83.5	16.9	83.1	

Table 2

Logistic regression examining predictors of entertainment venue visits

Predictors	Odds ratio	95% Confidence intervals		
		Lower	Upper	p
Male	2.06	1.68	2.52	<.0001
Age (30 years or younger)	1.40	1.14	1.73	<.0001
Single	1.64	1.30	2.06	.002
Education (>primary school)	2.36	1.93	2.88	<.0001
Money (>300 Yuan)	3.55	2.95	4.26	<.0001
Alcohol use	2.12	1.75	2.57	<.0001

Table 3

Logistic regression examining predictors of risky sex, stratified on gender

Outcomes	Unprotected sex								Positive STD diagnosis							
	Males (*n* = 2,132)				Females (*n* = 2,378)				Males (*n* = 2,132)				Females (*n* = 2,378)			
	Odds ratio	95% C.I.			Odds ratio	95% C.I.			Odds ratio	95% C.I.			Odds ratio	95% C.I.		
Predictors		Lower	Upper	p		Lower	Upper	p		Lower	Upper	p		Lower	Upper	p
Age (30 years or younger)	0.83	0.55	1.26	ns	2.49	1.33	4.66	.0043	0.68	0.47	0.99	.0414	0.88	0.69	1.13	ns
Single	5.66	3.81	8.41	<.0001	3.22	1.70	6.10	.0003	1.10	0.73	1.65	ns	0.54	0.35	0.83	.0048
Education (>primary school)	0.85	0.60	1.19	ns	0.94	0.52	1.71	ns	0.83	0.62	1.12	ns	0.73	0.59	0.90	.0041
Money (>300 Yuan)	2.32	1.68	3.19	<.0001	1.16	0.68	1.99	ns	1.18	0.88	1.57	ns	1.15	0.94	1.42	ns
Alcohol use	1.05	0.76	1.46	ns	2.32	1.34	4.01	.0026	1.07	0.80	1.44	ns	1.27	0.98	1.63	.0673
Visited entertainment venues	4.25	3.15	5.73	<.0001	1.95	0.99	3.81	.0523	1.87	1.37	2.55	<.0001	1.70	1.21	2.37	.0019