

The Influence of Stigma and Discrimination on Female Sex Workers' Access to HIV Services in St. Petersburg, Russia

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Abstract Stigma associated with HIV and risk behaviors is known to be a barrier to health care access for many populations. Less is known about female sex workers (FSW) in Russia, a population that is especially vulnerable to HIV-infection, and yet hard-to-reach for service providers. We administered a questionnaire to 139 FSW to better understand how stigma and discrimination influence HIV service utilization. Logistic regression analysis indicated that HIV-related stigma is negatively associated with uptake of HIV testing, while sex work-related stigma is positively associated with HIV testing. HIV-positive FSW are more likely than HIV-negative FSW to experience discrimination in health care settings. While decreasing societal stigma should be a long-term goal, programs that foster inclusion of marginalized populations in Russian health care settings are urgently needed.

Keywords Female sex workers · HIV testing · Stigma and discrimination · Russia

Background

The HIV/AIDS epidemic in Russia continues to grow at one of the fastest rates in the world [1]. St. Petersburg, the second largest city in Russia, has consistently experienced one of the largest HIV prevalence rates within the country [2, 3]. In 2010 there were 46,402 registered cases of HIV in the city, with an additional 18,375 cases in the region around the city (Leningradskaya oblast') [4]. These official statistics represent the number of registered cases, and the numbers are believed to be much higher [5]. UNAIDS [6] estimated that there are 940,000 people living with HIV/AIDS in Russia, a number nearly twice that reported by the Russian government. Approximately 80 % of registered HIV cases in Russia are among injection drug users (IDU) [7]; and half of IDU in St. Petersburg are HIV-positive [8]. The HIV-incidence among IDU in St. Petersburg is 14.1/100 person years, which is indicative of the growing epidemic in the city [9]. Additionally, the sexual transmission of the virus is on the rise, and commercial sex work may be one of the reasons [2, 10].

Throughout Eastern Europe, women are increasingly becoming affected by the growing HIV epidemic [11]. It is estimated that 44 % of registered HIV cases in Russia are among women [12]. In St. Petersburg, an estimated 40 % of IDUs are female [13]. Studies of IDUs based in St. Petersburg have shown that between 32 % [14] and 37 % of female IDU [13] are involved in sex work. Furthermore, the most recent study showed that 48 % of street-based female sex workers in St. Petersburg have HIV [15]. The combination of involvement in injection drug use and commercial sex work increases the susceptibility to HIV-infection among these women. The male clients of sex workers in Russia are a potential bridge population for transmitting HIV-infection to their non-sex worker partners [16].

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While HIV testing services and HIV treatment are available in Russia, it has been shown that these services are not adequately reaching the populations most vulnerable and in need. In 2005, only 47.5 % of people living with HIV/AIDS in St. Petersburg were registered and under dispensary surveillance with the City AIDS Center [5]. HIV testing among IDUs in Russia remains sub-optimal [8, 17, 18]. Approximately one-quarter of IDUs in St. Petersburg have not been tested for HIV and only 36 % of IDUs who are HIV-positive know their status [8]. There is a dearth of information about the reasons for this underutilization. It is important to understand the reasons why the most vulnerable populations are not accessing testing and treatment services in St. Petersburg.

One reason that vulnerable populations may not be accessing needed HIV services is stigma and discrimination. Stigma can be defined as a process of labeling, stereotyping, separating, experiencing loss of status for the stigmatized, and exercising of power [19]. Stigma around HIV in Russia is high and has been shown to inhibit vulnerable populations from seeking HIV prevention and testing services [20, 21]. People living with HIV/AIDS in Russia have reported experiencing discrimination in the health care setting [22]. In addition, discrimination against IDUs from health care professionals has also been shown to adversely influence access to HIV services in Russia [10, 23]. However, to our knowledge, studies have not yet been conducted that look at stigma and discrimination specifically among female injection drug users or sex workers in St. Petersburg, Russia. Given the multiplicity of vulnerabilities that female sex workers may experience and their risk for getting HIV, it is crucial to understand how issues of stigma and discrimination in the health care setting may influence this population's access to HIV testing and treatment services.

The objective of this paper is to examine the extent of female sex workers' perceived stigma and experienced discrimination in the health care setting in St. Petersburg. We aimed to describe the types of stigma and discrimination female sex workers experience in the health care setting, and to determine the association between stigma and discrimination and utilization of HIV testing services.

Methods

The Institutional Review Board at the University of North Carolina at Chapel Hill and the Ethics Review Committee at St. Petersburg State University approved all protocols for the research. Verbal informed consent was obtained from each participant and anonymity of participation was guaranteed.

The study design consisted of a cross-sectional, interviewer-administered questionnaire to female sex workers who were over 18 years of age and residing in St. Petersburg. Participants were recruited through two organizations that operate an outreach van service to street-based female sex workers in St. Petersburg. Participants were recruited until we reached a point of sampling saturation, meaning that we were no longer getting any new participants in any of the outreach service destinations. Participants who completed the survey received a cosmetic gift pack valued at 150 roubles (approximately \$5). The first author and two research assistants at each organization administered the questionnaire. Interviews were conducted in a private space on the outreach van or outside, and lasted approximately 15–20 minutes.

Measures of stigma and discrimination were based on previous research from international settings and among Russian IDUs when available. The following measures were included: a scale to measure HIV-related stigma (NIMH Project Accept) [24] (example items were “people living with AIDS should be isolated from other people” and “people living with HIV/AIDS in this community face ejection from their homes by their families”), a scale to measure sex work-related stigma (modified from a subscale for stigma associated with HIV from NIMH Project Accept; example items were “women who engage in sex work in this community face rejection from their peers” and “women who engage in sex work in this community face physical abuse”), the item “have you ever not gone to the doctor because you worried that s/he would not treat you well?”, the item “has a health care provider ever refused to treat you?”, and history of HIV testing and diagnosis. The HIV-related stigma scale was selected because it was designed to be used across multiple cultural settings (for more information, see Genberg et al. [24]). The following information was collected from participants who reported receiving an HIV diagnosis: place of diagnosis, history of receiving HIV services, and perceived stigma after diagnosis. Demographic information was also collected.

Frequency distributions were used to describe the sample. These descriptive data are important given that there has been such little research done with this specific population in St. Petersburg. Cronbach alphas were calculated for each of the scales to assess internal validity and to determine whether or not a composite score could be used. The scale used to measure HIV-related stigma had a Cronbach alpha of 0.75 and included 13 items. The sex work-related stigma scale demonstrated a Cronbach alpha of 0.61 and included five items. Items for both of the scales were scored based on a five-point Likert scale. Therefore, the highest composite score possible for the HIV-related stigma scale was 65 and the highest composite score possible for the sex work-related stigma scale was 25.

Logistic regression was used to determine which factors were significantly associated with the primary outcome variable of interest, HIV testing. Given that nearly all of the participants reported that they received an HIV test at some point, in the logistic regression analysis this variable was dichotomized as recent test versus no recent test. A recent HIV test was defined as having had an HIV test in the previous six months, which was the median amount of time since the most recent HIV test. Observations were excluded in the logistic regression analysis if a participant reported an HIV-positive status and had tested more than six months ago. This was based on the assumption that once diagnosed with HIV, a person would not seek an HIV test. Independent variables included in the regression model were used to measure potential confounders, including age, residency, marital status, time spent in sex work, and the number of years using drugs. Age, time spent in sex work, and time spent using drugs were measured as continuous variables. Logit step tests were used to confirm the assumption of linearity. Based on this, age remained a continuous variable in the logistic regression models. However, the variables of time spent involved in sex work and using drugs violated the assumption of linearity in the logits. Time of sex work was categorized as being involved in sex work for at least five years or being involved in sex work for less than five years. Time of drug use was dichotomized as using drugs for more than four years or for up to four years.

The logistic regression model included the scores on the HIV-related stigma scale and the sex work stigma scale and questions on being discriminated against in the health care setting. Both the HIV-related stigma scale and the sex work stigma scale were checked to ensure that they did not violate the assumption of linearity. All variables were included in the model and backward logistic regression was used to determine the final model. The variables that showed an odds ratio that was significant at the $p = .05$ level in the logistic regression model were considered to be significantly associated with having had a recent HIV test. Finally, descriptive statistical analysis was done to describe the sub-population of the sample who reported a positive HIV serostatus. A bivariate analysis was done to compare perceived stigma level and discrimination in the health care setting between those with a positive HIV serostatus and those with a negative HIV serostatus.

Results

Description of Participants

One hundred thirty-nine female sex workers completed the interviewer-administered questionnaire. The demographic characteristics of our sample are provided in Table 1.

Perceived Stigma and Experienced Discrimination in the Healthcare Setting

Among female sex workers in our study, 31 % of participants agreed that doctors refuse to treat sex workers. Over half (51 %) of the participants agreed that doctors refuse to treat injection drug users. Thirty percent (30 %) of the women reported that they personally had been refused medical care. While the overwhelming majority of women (95 %) reported that they can openly discuss some problems with doctors, they were not necessarily comfortable discussing their involvement in sex work. For example, less than half (49 %) had ever discussed their involvement in sex work with a health care provider. Moreover, 58 % said that they have not gone to a doctor when necessary because they were worried that the doctors would treat them badly.

HIV-Related Stigma and Discrimination

The female sex workers in this study were asked about their opinions of people living with HIV. Six percent (6 %) said that people with HIV should be punished, and 9 % agreed that they should be isolated from society. The majority (67 %) of participants thought that people with HIV deserve compassion. The belief is strong that the health care setting is a place where discrimination should not take place due to a patient's HIV status, as 92 % of the women agreed that people with HIV should be treated the same as other patients.

Results suggest that the women would not feel comfortable disclosing a positive HIV serostatus and were concerned about doctors' confidentiality in regard to HIV testing. Nearly half (47 %) of the female sex workers felt that they would be afraid to tell other people if they found out they were infected with HIV. Less than one-quarter (24 %) of participants were completely confident that their doctors would not tell others if they received an HIV test.

Stigma and discrimination were reported by the female sex workers living with HIV. Most of the women with HIV (64 %) reported that they were afraid to tell others that they were afflicted with the virus. Thirty-seven percent (37 %) said that they started to feel socially isolated once they learned that they had HIV. Among the female sex workers in this study, those who had HIV were more likely to have been refused medical care than those who were HIV-negative (40 vs 24 %, $\chi^2 = 4.20$, $p = .04$). Also, female sex workers who have HIV are more likely to be afraid of going to the doctor than the female sex workers who are HIV-negative (72 vs 52 %, $\chi^2 = 5.42$, $p = .02$).

Perceived Stigma as a Barrier to Uptake of HIV Testing

The mean score on the HIV-related stigma scale was 33 of a possible 65 points (scores ranged from 13–58). The mean

Table 1 Sociodemographic characteristics of street-based sex workers ($N = 139$)

	%	<i>N</i>
Marital status		
Unmarried	61.87	86
Married	17.27	24
Civil marriage	10.07	14
Divorced	8.63	12
Widowed	2.16	3
Living situation		
Own apartment	44.20	61
Rent room	17.39	24
Live with friends	17.39	24
Live with relatives	10.14	14
Rent apartment	7.97	11
No place to live	2.90	4
Birthplace		
St. Petersburg	87.05	121
Leningradskaya oblast'	2.88	4
Other Russian city	6.47	9
Central Asia	2.16	3
Ukraine	0.72	1
GDR	0.72	1
Children		
Yes	51.08	71
No	48.92	68
Drug use		
Lifetime use	99.28	138
Current use	98.56	137
Never used	1.44	2
Age	Mean = 28.9 years	Range = 19–41 years
Years of using drugs	Mean = 8.86 years	Range = .67–25 years
Years in sex work	Mean = 5.26 years	Range = .04–20 years

score did not differ significantly between participants with HIV and participants without HIV (mean scores were 31 and 33 respectively, $p = 0.33$). The mean score on the sex work-related stigma scale was 19 of a possible 25 points. Again, the mean score did not differ between participants with HIV and participants without HIV (mean scores were 20 and 19 respectively, $p = 0.46$). Table 2 provides information from the logistic regression model on how female sex workers' perceived stigma and discrimination correlated with HIV testing. These results indicate that the odds of having had a recent HIV test decreased 10 % for every one unit increase on a 65-point scale in perceived stigma associated with HIV [adjusted OR = 0.90, 95 % CI (0.84, 0.97)]. The odds of having had a recent HIV test increased 33 % for every one unit increase on a 25-point scale in perceived stigma associated with sex work [adjusted OR = 1.33, 95 % (1.10, 1.60)]. Experienced discrimination, measured as having been refused medical care, was positively correlated with having had a recent

HIV test. And fear of discrimination, measured as avoided medical care because of fear of how one would be treated, was also positively correlated with having had a recent HIV test. However, neither of these associations was significant. Age and the length of time using drugs were the only covariates found to be significantly associated with recent HIV testing. The odds of having had a recent HIV test decreased 12 % for every one unit change in age [adjusted OR = 0.88, 95 %CI (0.78, 0.98)]. Similarly, sex workers were 74 % less likely to have had a recent HIV test if they had been using drugs for a longer period of time rather than a shorter period of time.

Discussion

Female sex workers in St. Petersburg reported high levels of perceived stigma within the health care setting related to sex work, injection drug use, and HIV. Female sex workers

who were HIV-positive were more likely than HIV-negative sex workers to have experienced discrimination in the health care setting. HIV-related stigma was negatively correlated with getting a recent HIV test. These findings are consistent with previous studies on HIV-related stigma as a barrier to services both among other populations in Russia [10, 20, 23] and among female sex workers in other countries [25, 26]. Sex work-related stigma was positively correlated with getting a recent HIV test. Our unexpected finding was similar to a recent study of female sex workers in India, which found that prior utilization of health care services increased sex work-related stigma in the community [27]. One explanation may be that sex workers may feel that they can better hide involvement in sex work from health care providers, but it is more difficult to hide an HIV status. Therefore, perceived stigma specific to sex work is not making women less likely to go for an HIV test. It is possible that there are other variables, that we did not measure, which are confounding the association shown in this study. It could also be that during HIV testing and counseling they have disclosed that they are sex workers and have been treated poorly, thus increasing their levels of perceived sex work-related stigma. Further studies are needed to more fully explain the relationship between higher perceived stigma related to sex work and greater probability of having had a recent HIV test. More research is also needed to understand if and how stigmas associated with injection drug use, sex work, and HIV are distinct or related in regard to how they influence utilization of services.

Our study adds to the growing body of research on HIV-related stigma in Russia. Recent research in St. Petersburg demonstrated that HIV-related stigma is very high and can be a major barrier in access to treatment and care services for injections drug users [28]. It has been noted that stigma and discrimination are challenges to providing effective and comprehensive HIV treatment for sex workers living with HIV in Russia [29]. The results of our study provide more specific information on the correlation between perceived stigma and discrimination and the utilization of HIV services for the highly vulnerable population of

street-based female sex workers in St. Petersburg. We recognize the need for more precise measures of stigma among highly vulnerable populations, including injection drug users and sex workers. One measure that has been developed for use in Russia since the time we conducted our study is the People Living with HIV Stigma Index. In 2010, research using the People Living with HIV Stigma Index was conducted among 660 people living with HIV (7 % were sex workers) across Russia. This research showed that 35 % of people with HIV in Russia had experienced stigmatization or discrimination in the past year, and 21 % had experienced HIV-related discrimination within an institution or organization [30]. This research also showed that 10 % of people with HIV had been refused medical care in the past year. Our findings are consistent with these studies. Our study fills two important gaps in the growing body of knowledge on stigma and HIV in Russia because it focused specifically on female sex workers and included both women who are living with HIV and women who are HIV-negative.

Study limitations should be mentioned. This study was cross-sectional and therefore, explicit conclusions could not be drawn regarding the casual pathway between the hypothesized factors and being tested for HIV. Self-reported information is subject to potential social desirability bias and recall bias in reporting perceptions of stigma, experienced discrimination, and HIV status. Numerous measures were taken to minimize these biases including creating a comfortable and private atmosphere, forming questions in a non-judgmental manner, establishing trust between the interviewer and participants, and reassuring participants of confidentiality and anonymity. There were some limitations in the recruitment process that are unique to working with vulnerable populations. Recruitment was extremely difficult given that sex work is not legal in Russia and the stigma associated with this profession. There are female sex workers who do not access outreach services, and these women were not included in this study. Given that participation was entirely voluntary and no information was collected on women who declined an invitation to participate, no conclusions can be

Table 2 Associations between perceived stigma and recent HIV testing among female street-based sex workers ($N = 105$)

Factor	Unadjusted OR	Adjusted OR	95 % CI	<i>p</i> value
Stigma related to HIV	0.95	0.9	(0.84, 0.97)	<i>p</i> = .006
Stigma related to sex work	1.16	1.33	(1.10, 1.60)	<i>p</i> = .004
Refused medical care	1.19	1.37	(0.47, 3.99)	<i>p</i> = .56
Fear of being treated badly at the doctor	1.87	2.45	(0.92, 6.55)	<i>p</i> = .07
Amount of time using drugs	0.39	0.26	(0.07, 0.91)	<i>p</i> = .04
Age	0.89	0.88	(0.78, 0.98)	<i>p</i> = .02

Likelihood ratio estimate = 28.03 ($p < .0001$, with 6° of freedom)

drawn as to whether or not there were any differences between those who chose to participate and those who declined participation. A larger sample size may allow for stratified analyses to determine if there are subgroups of sex workers based on age or length of time involved in sex work that might be less likely to utilize HIV services because of fear of stigma and discrimination. Further research recommendations include conducting research with other sex workers, who may be even more difficult to reach (such as indoor or brothel-based sex workers, victims of sex trafficking, and male sex workers).

Our study adds to the growing body of evidence that particularly vulnerable populations, such as female sex workers and injection drug users in Russia may not feel comfortable accessing health services, discussing their social and behavioral risks for HIV with providers, or testing for HIV in settings where their identity is known. Laws and policies should be developed that promote the universal acceptance of people seeking HIV testing, prevention and treatment services. This is especially pertinent in Russia where free HIV testing in state-run facilities requires a person to relinquish anonymity and a person living with HIV will need to register into the state system in order to access state-sponsored treatment and care. Increased efforts to improve the knowledge and sensitivity of Russian health care providers should be implemented. Given the current situation, more options, such as outreach services and places for anonymous HIV testing, should be expanded in Russia. The rights of vulnerable populations to be protected from stigma and discrimination in all health care settings must be promoted now in order to get more people to prevent HIV-infection of themselves and others, learn their HIV status, and access available treatment and care.

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