Published in final edited form as:

J Assoc Nurses AIDS Care. 2009 ; 20(5): 373–386. doi:10.1016/j.jana.2009.06.003.

HIV Risk and Social Networks Among Male-to-Female Transgender Sex Workers in Boston, Massachusetts

Sari L. Reisner, MA,

Epidemiology Projects Manager, The Fenway Institute, Fenway Health, Boston, Massachusetts

Matthew J. Mimiaga, ScD, MPH,

Research Scientist, The Fenway Institute, Fenway Health, Boston; and Instructor, Psychiatry, Harvard Medical School/Massachusetts General Hospital, Boston

Sean Bland, BA,

Research Associate for Epidemiology and Behavioral Science Studies, The Fenway Institute, Fenway Health, Boston

Kenneth H. Mayer, MD,

Co-Director, The Fenway Institute, Fenway Health, Boston; Director, Brown University AIDS Program, Providence, Rhode Island; Professor of Medicine and Community Health, Brown University Medical School, Providence; and Professor of Medicine and Community Health, Brown University, Providence

Brandon Perkovich, and

Undergraduate student, Harvard College, Cambridge, Massachusetts

Steven A. Safren, PhD

Senior Research Scientist, The Fenway Institute, Fenway Health, Boston; Director of Behavioral Medicine, Massachusetts General Hospital, Boston; and Associate Professor of Psychology, Department of Psychiatry at Harvard Medical School, Boston

Abstract

Male-to-female transgender individuals who engage in sex work constitute a group at high risk for HIV infection in the United States. This mixed-methods formative study examined sexual risk among preoperative transgender male-to-female sex workers (N = 11) in Boston. More than one third of the participants were HIV-infected and reported a history of sexually transmitted diseases. Participants had a mean of 36 (SD = 72) transactional male sex partners in the past 12 months, and a majority reported at least one episode of unprotected anal sex. Qualitative themes included (a) sexual risk, (b) motivations for engaging in sex work, (c) consequences of sex work, (d) social networks (i.e., “trans mothers,” who played a pivotal role in initiation into sex work), and (e) potential intervention strategies. Results suggest that interventions with transgender male-to-female sex workers must be at multiple levels and address the psychosocial and environmental contexts in which sexual risk behavior occurs.

Keywords

HIV; intervention development; sexually transmitted diseases; transgender; trans mothers

Twenty-five years into the HIV epidemic, researchers are now beginning to substantiate what the transgender community has been experiencing: HIV remains a serious public health crisis for the male-to-female transgender population, with seropositivity rates ranging from 8% to 35% (Clements-Nolle, Marx, Guzman, & Katz, 2001; Herbst et al., 2008; Kellogg, Clements-Nolle, Dilley, Katz, & McFarland, 2001; Kenagy, 2002; Nemoto,

Operario, Keatley, Nguyen, & Sugano, 2006; Operario, Soma, & Underhill, 2008; Reback & Lombardi, 1999; Simon, Reback, & Bemis, 2000). Rates of HIV infection among transgender women have been reported to be significantly elevated compared with rates in the general population and other groups with high-risk behaviors, including men who have sex with men (MSM) (California Department of Health Services, 2006). Epidemiologic studies have attributed high rates of HIV infection in transgender women to a variety of risk behaviors including unprotected sex with male partners and injection drug use (Elifson et al., 1993; Operario et al., 2008; Simon et al., 2000). In addition, contextual factors such as sex work may influence HIV risk behaviors (Mimiaga, Reisner, Tinsley, Mayer, & Safren, 2009). Given that as many as 44% of transgender women engage in high-risk behaviors (i.e., unprotected anal sex) and 24% to 75% participate in sex work (Herbst et al., 2008), advances in HIV prevention strategies are needed to reduce sexual risk taking among transgender populations (Bockting & Avery, 2005; Bockting, Robinson, Forberg, & Scheltema, 2005; Lombardi, 2001; Mason, Connors, & Kammerer, 1995).

Sex work (i.e., transactional sex) has been consistently associated with HIV seropositivity among male-to-female transgender individuals (Elifson et al., 1993; Operario et al., 2008; Simon et al., 2000). A recent metaanalysis estimated HIV prevalence to be 27.3% in transgender sex workers (TGSW) compared with 15.1% in male sex workers and 4.5% in female sex workers (Operario et al., 2008). Operario et al. (2008) also reported that TGSW experience significantly higher HIV risk than transgender women who do not engage in sex work, but additional research is needed to understand both the risk factors that increase HIV infection and possible protective factors that reduce risk behaviors among transgender individuals.

Previous research has suggested that many trans-gender individuals enter into sex work because of structural-level factors such as social stigma and employment discrimination (Clements-Nolle et al., 2001; Kaufman, 2007; Melendez, 2007; Nemoto et al., 2006; Sausa, Keatley, & Operario, 2007). Sex work can provide transgender women an opportunity to make a living (Bockting, Robinson, & Rosser, 1998; Nemoto et al., 2006; Nemoto, Operario, Keatley, & Villegas, 2004; Sausa et al., 2007) as well as allow them to sustain ongoing drug dependence (Clements-Nolle, Guzman, & Harris, 2008; Reback & Lombardi, 1999). High levels of substance use and psychological distress (e.g., depression, earlier suicide attempts, history of sexual abuse) have been observed among transgender women, including TGSW, which may contribute to elevated HIV sexual risk behavior (Clements-Nolle et al., 2001; Clements-Nolle, Marx, & Katz, 2006; Garofalo, Deleon, Osmer, Doll, & Harper, 2006; Kenagy, 2005; Kenagy & Bostwick, 2005; Stall et al., 2003). Results from other studies have suggested that sex work may allow transgender women to feel part of both a community and social network (Sausa et al., 2007) and even feel safety, affection, and validation from transactional sex partners (Bockting et al., 1998; Melendez & Pinto, 2007).

The purpose of this mixed-methods formative research study was to examine sexual risk among preoperative transgender male-to-female sex workers in Boston, Massachusetts, including the role of social networks in relation to sexual risk. Understanding the role of risk and protective factors underlying sexual behavior may inform providers and researchers regarding how to tailor HIV prevention interventions to this unique and high-risk population.

Method

Design and Setting

Between August and November 2008, 11 participants completed a one-on-one, in-depth, semistructured qualitative interview and brief quantitative survey. Study activities took place at Fenway Health (FH), a freestanding health care and research facility specializing in HIV care and serving the needs of the lesbian, gay, bisexual, and transgender community in the greater Boston area (Mayer et al., 2001). The FH institutional review board approved the study protocol.

Sample

Individuals were eligible for the study if they: (a) were born biologically male, identified as trans-gender, and were preoperative; (b) were 18 years of age or older; (c) lived in Massachusetts; and (d) reported they had engaged in sex work with a biological male in the 12 months before study enrollment. Sex work was defined as the exchange of sex for money, drugs, housing, protection, or other services.

Participants were recruited via word-of-mouth referrals and study flyers that were distributed in the clinical and medical areas at FH, in known public sex cruising areas, at community events frequented by members of the target population, and at other local community-based organizations in the Boston area. Recruitment continued until interview content reached redundancy, as is typical in qualitative research (Miles & Huberman, 1994). All participants were compensated \$50 for their participation in the study.

Data Collection and Measures

After an informed consent process with one of two trained interviewers, each study participant completed a semistructured qualitative interview and a brief interviewer-administered quantitative psychosocial assessment battery of questionnaires. Data collection lasted approximately 1.5 hours.

Qualitative interview—The qualitative interview guide was developed after a thorough literature review and after gathering input from former sex workers as well as transgender health specialists at FH to ensure cultural relevance of interview questions and survey instruments. The interview included four broad topic areas: (a) experiences with sex work in the past 12 months (e.g., “Tell me about your experiences doing sex work in the past 12 months.”), (b) the impact of sex work (e.g., “How, if at all, do you feel that sex work has affected you?”), (c) HIV/sexually transmitted disease (STD) risk (e.g., “What types of sexual practices do you engage in during sex work encounters?”), and (d) ideas for interventions with transgender individuals who engage in sex work (e.g., “If we were to develop an intervention or program for male-to-female transgender persons who perform sex work, what do you see as the most important areas on which to focus our efforts?”). Each interview was digitally recorded and then transcribed verbatim by a professional transcription company. Interviewers were trained together and regularly met with the research team to discuss emerging themes and issues as well as to minimize bias caused by differential interviewer methods.

Quantitative survey—Several measures were included on the quantitative survey instrument to assess background and HIV risk factors. Questions that addressed demographic characteristics, sexual behavior, and drug use during sex were adapted from the Centers for Disease Control and Prevention’s National HIV Behavioral Surveillance Survey (Sanchez et al., 2006). Items also captured self-reported HIV status and testing history as well as STD history.

Depressive symptoms were assessed with the Center for Epidemiologic Studies Short Depression Scale (CES-D 10) (Andresen, Malmgren, Carter, & Patrick, 1994), a validated measure of clinically significant distress as a marker for clinical depression (Cronbach's $\alpha = .84$). The 10 items were scored on a four-point Likert scale ranging from 0 (*rarely or none of the time*) to 3 (*most or all of the time*). Items 5 ("I felt hopeful about the future") and 8 ("I was happy") were reverse coded (i.e., 3 to 0) before analysis. A score of 10 or greater was indicative of depressive symptoms.

The CAGE questionnaire, a four-item clinical screening instrument for alcoholism (Cronbach's $\alpha = .69$), was used to assess alcohol use (Ewing, 1984; Knowlton, McCusker, Stoddard, Zapka, & Mayer, 1994; Mayfield, McLeod, & Hall, 1974). Items included the following (italicized words form the CAGE acronym):

1. Have you ever felt you should *cut* down on your drinking?
2. Have people *annoyed* you by criticizing your drinking?
3. Have you ever felt bad or *guilty* about your drinking?
4. Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover (*eye-opener*)?

Items were dichotomously scored as 0 (*no*) or 1 (*yes*), and a score of 2 or more indicated a problem with alcohol abuse.

Questions taken from the EXPLORE study (Chesney et al., 2003; Koblin et al., 2003) were adapted to examine early childhood sexual experiences and their association with HIV-related sexual risk. Questions included age at first sexual experience, sexual experiences with someone 5 or more years older before age 13, sexual experience with someone 10 or more years older between the ages of 13 and 17, self-reported sexual abuse, and nonconsensual sex (i.e., rape) as an adult.

Analytic Approach

Qualitative analysis—Qualitative data were analyzed using content analysis (Strauss & Corbin, 1990, 1997). Using a process of allowing concepts and themes to emerge from the data, analysis continued until saturation was reached (Glaser, 1978). Analyses were focused on HIV sexual risk and intervention development and concentrated on emerging themes that were relevant to HIV prevention interventions with TGSW.

Transcripts were reviewed for errors and omissions, including context and content accuracy, and cleaned to focus on the content of what was said. Coding was used as the analytic process through which data were "fractured, conceptualized, and integrated" (Strauss & Corbin, 1990, p. 3), and interconnections between concepts were initiated. A structured codebook was developed that contained the code mnemonic, a brief code definition, definition of inclusion criteria, definition of exclusion criteria, and example passages that illustrated how the code concept might appear in natural language (Mac-Queen, McLellan, Kay, & Milstein, 1998; Silverman, 2000). NVivo qualitative data analysis software, version 7, was used to assist with the coding, organization, and searching of narrative sections from each interview as well as to facilitate the systematic comparison and analysis of themes across interviews. Coded transcripts were regularly reviewed by members of the research team, and data reexamination and ongoing discussion helped resolve coding inconsistencies, further define coding categories, ensure consistency of code application and text segmentation, and make interconnections between codes.

Quantitative analysis—Quantitative data were used to support qualitative results. Univariate and descriptive analyses were conducted for the present report using SPSS (Statistical Package for the Social Sciences) software, version 15.0.

Results

Tables 1 through 3 outline the demographic characteristics, sexual and substance use risks, and psychosocial characteristics of the study sample ($N=11$). Participants ranged in age from 21 to 52 years and had a mean age of 34.6 years ($SD=10.6$). Persons of color represented almost two thirds (63.7%) of the sample. A total of 4 participants (36.4%) were infected with HIV. Other demographic and risk variables will be discussed in the context of qualitative results.

Sexual Risk Behavior and Condom Use

Inconsistent condom use was reported by the majority of participants. Participants reported a mean of 39.4 ($SD=71.9$) male sex partners in the past 12 months; the mean number of transactional male sex partners was 36.1 ($SD=72.3$). All but one participant (90.9%) reported unprotected anal sex, and most of these episodes (72.7%) were with a serodiscordant partner. Almost half (45.5%) of the participants reported unprotected insertive anal sex, and over a third (36.4%) of these episodes were with a serodiscordant partner. A total of 5 participants (45.5%) reported unprotected oral sex with ejaculation in the mouth. Despite these results on sexual risk behaviors and inconsistent condom use, participants had relatively low perceived risk for contracting HIV infection ($M=3.9$, $SD=1.0$ on a 0 to 10 scale), perhaps because more than one third ($n=4$, 36.4%) were already infected. Likewise, despite the fact that the same number of participants ($n=4$, 36.4%) reported a history of one or more STDs, participants perceived themselves to be at only moderate risk for acquiring an STD ($M=4.6$, $SD=2.5$).

Communicating about HIV/STDs in sex work encounters—When asked whether or not and how often the topics of HIV or STDs come up in sex work encounters, participants reported that they rarely discussed sexual health with paying male partners. A 26-year-old Latina participant who was not infected with HIV responded, “Normally, nine times out of ten, clients don’t ask about HIV status. Like, every once and a while, you’ll get a client that will say, ‘Are you clean?’ In other words, are you HIV-positive?” Another uninfected 21-year-old Latina participant elaborated, “Sometimes they’ll react, like, ‘Why are you asking that question? Are you positive?’”

Fear of losing a date and not getting paid were reported to be the most common reasons that participants did not ask a transactional sex partner about his serostatus. A 26-year-old Latina participant who was not infected with HIV explained as follows:

I asked one person one time because he looked like a total AIDS victim, and he got so extremely offended that he got up and left and didn’t pay me. So I decided against doing it from there on out.

A 52-year-old Black HIV-infected participant described her difficulty negotiating safer sex with transactional sex partners.

I try to negotiate, but sometimes you just do what you got to do. I have this thing inside of me when I do things that I don’t want to do—intercourse without rubbers and stuff. And I’m saying, I shouldn’t be doing this because he might contract AIDS.

Condom use related to earning potential—Participants reported being offered more money to have unprotected anal sex with paying male clients. One 33-year-old Latina HIV-infected participant said she often had unprotected sex for more money, both as the receptive and insertive partner.

I usually carry condoms on me, you know. It's just that when you're out there trying to turn tricks and you finally get a trick, if he's going to give you more money for not putting on a condom, it's almost as if you've got to do it.

Similarly, a 26-year-old Latina participant who was not infected with HIV admitted that she would do just about anything she had to for money, including having unprotected anal sex: "It's all about how much they're willing to pay me. If you're willing to pay me \$5,000 to put a noose around your neck and strangle you, then that's what I'm going to do." An uninfected 43-year-old White participant expressed succinctly what seemed to be the predominant attitude among participants about having unsafe sex for more money when she replied, "You do what you have to do and get it over with."

Condom use related to need for validation—Several participants reported that they engaged in unprotected anal sex with transactional male partners out of a need to feel validated and accepted. For example, a 43-year-old White participant who was not infected with HIV discussed self-validation as her reason for having unsafe sex and said, "Having unprotected anal sex just proved to me that I was woman enough to do it. I proved to myself I was a real woman. It was just an ego boost to me." An uninfected 30-year-old Black participant admitted to looking for love and acceptance in transactional sex encounters and commented, "Sometimes I feel dirty afterwards. Like, God, why did I do this? You know. It's like sometimes for me at that time I wanted to be loved, but I was looking for love in the wrong places."

Motivations and Reasons for Engaging in Sex Work

Structural-level factors such as low socioeconomic status, financial need, and discrimination along with individual-level factors such as drug and alcohol addiction were commonly cited by participants as reasons for engaging in transactional sex.

Socioeconomic factors—Participants were a marginalized group of transgender women: all 11 participants (100%) had a high school diploma/General Educational Development or less, 10 (90.9%) earned less than \$12,000 annually, 9 (81.8%) were disabled or unemployed, 8 (72.7%) reported unstable housing in the previous 12 months, and 10 (90.9%) had a history of incarceration. More than half of the sample ($n=6$, 54.5%) had run away from or been kicked out of their home because of being gay or transgender or having a violent or abusive family, and 2 (18.2%) reported having experienced childhood sexual abuse. A 43-year-old White participant who was not infected with HIV explained as follows:

I grew up in the state of Maine. You'd never think that they would grow me up in the state of Maine! But I don't know. I come from mental abuse. I come from domestic violence. I come from alcoholism. One day, I just jumped in a car and left my family.

Another uninfected 36-year-old White participant described the following:

Growing up in Charleston was horrid. They used to beat me up. They used to throw rocks and break my mother's windows and everything. The word is *gay bash*. I could only take so much of the beating, so I had to leave.

Financial need—The most commonly reported motivation or reason for having engaged in sex work in the past 12 months was financial need. All participants mentioned the need for money and “surviving” as their primary reason for doing sex work. A 21-year-old Latina participant who was not infected with HIV explained, “I don’t want to do it, but when you don’t have anywhere to live and you don’t want to live on the street, you can’t quit because you’ve got to make money to put a roof over your head.”

Gender-based discrimination—Difficulty finding a job contributed most strongly to participants’ financial needs. Inability to obtain or maintain a job was often explicitly tied to actual and/or perceived discrimination resulting from being trans-gender. For example, a 34-year-old Latina participant who was not infected with HIV described having to work the streets because of gender-based discrimination.

The reason why a lot of transsexuals are sex workers is because we have to do it. It’s hard for us to go out in society and get jobs and not be discriminated against. A heterosexual or a homosexual man could go out and get a job with no problem. But once transgender women go out and apply, there’s discrimination. It’s kind of like if they find out that you have AIDS, they will treat you differently. It’s the same thing when we walk up to a counter, and we say we want a job. We don’t get jobs, so that makes us go into the street-working industry.

Another uninfected 26-year-old Latina participant relayed that sex work was the most common “job” for trans women because of discrimination and “being judged.”

Sex work is like the main job for the trans community. The main reason is because it’s hard for us to go somewhere and get a job where we’re not going to be judged, where we’re not going to be made fun of, and we’re going to be accepted. It just doesn’t happen nowadays.

A 43-year-old White participant who was not infected with HIV described the impact of structural-level factors in a more personal way, in particular how sex work can often seem like the only option, when she said, “Some trans people can have a courage or mental status to just walk out and apply for a job. You’ve really got to believe in yourself to do that.”

Drug and alcohol addiction—Having a drug habit, most commonly crack cocaine, was mentioned by more than half of the participants as a reason for performing sex work. A 44-year-old Black HIV-infected participant elaborated as follows:

I do sex work to more or less feed my habit. Crack cocaine is my addiction, and I use crack more just to hide away from the pain and all the suffering and to deal with being homeless and not having a job.

In the past 12 months, participants reported having sex while using a variety of substances, most commonly alcohol (“while drunk” some or most of the time) ($n=7$, 63.6%), marijuana ($n=7$, 63.6%), crack ($n=6$, 54.4%), and cocaine ($n=4$, 36.4%). Individual participants also reported using crystal methamphetamine, downers, ecstasy, and sildenafil citrate (Viagra). More than half of the sample ($n=6$, 54.5%) reported having been in drug/alcohol treatment at some time in the past. Several participants talked about how sex work was “fast money,” which made it appealing. For example, a 34-year-old Latina participant who was not infected with HIV explained as follows:

In the sex work industry, we charge for a half an hour, but once they ejaculate, you’re done. You’re out the door. They don’t even get their half an hour. That’s the good thing about sex work—it’s \$150 for half an hour, but it could be for 5 or 10 minutes.

Another uninfected 26-year-old Latina participant confirmed.

I want to quit all the time. I don't want to do this for the rest of my life. But the money's really, really good. I mean, I probably make in one day what you make in 3 weeks on a paycheck.

Consequences of Sex Work

Becoming infected with HIV or STDs—Every participant mentioned the devastating impact of HIV on transgender women, especially among the transgender sex-working community both in the past and currently. A 47-year-old White HIV-infected participant said, “You know, everybody's gone. I can't believe that all my friends are dead from the virus. I'm still here. It's undetectable.” Likewise, a 52-year-old Black HIV-infected participant lamented, “All of my girlfriends are dead that I came from New York back to Massachusetts with. They're all dead except one, and I don't know where she's at, but the rest of them all died from AIDS.”

All four of the HIV-infected participants believed that they had seroconverted during the time that they engaged in sex work. As a 44-year-old Black HIV-infected participant reflected, “I mean, somehow, somewhere along the line, I wasn't using protection, and I contracted HIV.” Likewise, a history of one or more STDs was reported by 4 participants (36.4%). There were 4 reported cases of gonorrhea, 3 cases of syphilis, 3 cases of chlamydia, 2 cases of herpes, and 1 case of hepatitis. However, participants thought that STDs were “no big deal.”

Occupational violence—All participants talked about the dangers and risks involved with sex work. Almost half of the participants ($n=5$, 45.5%) reported having been raped in a sex work encounter. Often, occupational violence was closely connected to being a preoperative transgender woman and being found out during a transactional sex encounter. A 21-year old Latina participant who was not infected with HIV reported as follows:

It's kind of scary, because when I streetwalk as a transgender, I don't disclose what I am to guys. I also make more money by doing it. But it's kind of scary for me, because I don't tell guys what I am, and if somebody finds out, I can possibly get killed or something like that.

Participants also described specific situations in which they experienced violence as a result of not disclosing being transgender in a sex work encounter. An uninfected 26-year-old Latina participant vividly recalled the following:

As the session proceeded, he found something he wasn't looking for when he put his hand down my pants, and really, really got angry. Now, I've had a gun put to my head because I didn't tell the person that I was a transgendered woman. Since then, I've made it a point to make sure that the clients know. But unfortunately in this episode, I didn't. He put a knife to my throat.

Changes to intimacy—Participants also often reported that sex work made them feel differently about having sex in general as well as in how they connected or desired others. A 26-year-old Latina participant who was not infected with HIV explained.

I just do it [sex work], I'm like a robot. It used to be a lot different, but now it's to the place where I've done it so much that I don't need to think about it. It just happens. I go into robot mode. When I had my last boyfriend, he had to stop me on a few occasions and tell me, “I'm not a client. Treat me like your boyfriend.”

Gay or Trans “Mothers”: The Role of Transgender Social Networks in Sex Work

For all participants, older and more experienced transgender women played a pivotal role in introducing them to the world of transactional sex. In describing her first transactional sex encounter after leaving home at age 16, a 36-year-old White participant who was not infected with HIV described the role of a more experienced trans woman she knew.

I went to Boston. I kind of knew one of the girls already from being at her house a lot. She’s another trans, and she hooked me up. It was scary and hard, but it’s not like she didn’t teach me the ropes. She taught me what to do and not to do.

Another uninfected 26-year-old Latina participant described as follows an older transgender friend helping her arrange her first date:

Well, she had run me an ad, and I got my first client. I’ll never forget it. My knees were knocking. I was shaking like a leaf. I didn’t know what was going on. I guess I was thrown in head first. But that’s how it was for her, too.

In the context of talking about social networks and sex work, all participants used the terms *gay mother* or *trans mother* to describe older and more experienced transgender women, which illuminated the central role that older trans women play in mentoring and supporting younger girls. A 36-year-old White participant who was not HIV-infected defined the term when she asked, “You ever hear the term *gay mother*? A gay mother is somebody who is up there, like middle, late 50s, who has surely been through what I’ve been through and somebody who takes care of me.” Moreover, several participants described being a gay or trans mother, explaining what it means to have this relationship with other trans women.

Well, I’m a gay mother, and I’ve got a gay daughter. And to me it’s like helping this boy grow up to a woman and, you know, helping to get his shots and get himself all prettied up and stuff like that, you know. It’s just helping somebody out. It’s like when you have a kid, you help that kid to develop and grow up and be a good person. (33-year-old Latina HIV-infected participant)

What I have upstairs needs to be passed on. If I don’t pass it on, then no one’s going to be helped. A lot of trans women can be reached through other trans women. I’m a trans mother of two. Trans mother means that I’m over the age where I’ve survived an epidemic, and these are younger trans women that need an older trans woman’s knowledge and experience and guidance to go through this world. We adopt younger children and we hope that we can deal with them [laughs]. (43-year-old White participant who was not infected with HIV)

Escorting: Setting up dates for other girls—In addition to engaging in transactional sex themselves, many participants reported escorting (i.e., fixing up other trans women, including their “daughters,” on dates with paying male sex partners). Participants saw this as an easier way to make money than working on the streets themselves. A 36-year-old White participant who was not infected with HIV explained.

I was hustling, and then I went to escorting. I would get paid for it. Whatever the girls paid for their price—like, if it was \$1,000—I would get \$500 just for bringing the men to them. It’s easier than being out on the street.

However, participants had mixed feelings about their role in fixing girls up on dates. This ambiguity was particularly true when they felt they were putting people at risk for HIV infection. For example, in the context of talking about a man for whom she regularly “scores” girls, an uninfected 43-year-old White participant described setting him up with several HIV-infected trans women and feeling like she should say something to him, but not knowing how.

This guy calls me up and wants me to get a hold of a girl for him. He don't care whether he's getting HIV or AIDS or whatever, just bang, bang, bang. He calls me and asks me to score for him, calls me to set him up with other girls. He's been with two of my friends that are HIV-positive. Third one, she's HIV-positive. I mean, I just want to say something to him sometime. That's how we died. That's how my community died. Queens went with queens, johns and johns had the disease. They passed it, passed it, passed it. And some people caught it, and some didn't.

These mixed feelings were even more present when participants were talking about their own “daughters.” For instance, a 43-year-old White participant who was not HIV-infected elaborated as follows:

You want me to tell you something really bad, something we haven't discussed? It's the simple fact that you know when your trans son or daughter is HIV-positive and they're running around with men having sex with no protection. You know what's going on—she's passing HIV. And just knowing it and then having to keep it in your head, know that they're going to pass this HIV to these guys, it's hard.

Potential Areas for Prevention Intervention

Participants were asked what they thought would be helpful in terms of programs or interventions for themselves or other transgenders who engaged in sex work and were at risk for HIV and STDs. Responses centered around the areas of HIV/STD testing, condoms and education/information, mental health services, and support groups and peer networks.

HIV/STD testing—Several participants discussed the importance of accessible HIV/STD testing and the need to make these services available for trans women. A 44-year-old Black HIV-infected participant explained.

Having AIDS myself now, I know about the risk of contracting HIV. I feel that it's a must that you should get yourself tested—make sure you're healthy and take care of yourself. The girls need to always use condoms and stuff like that to protect themselves.

Condoms, education, and information—Participants seemed to have good overall knowledge of HIV and STDs. With respect to condoms, education, and information, they most often mentioned the importance of making condoms readily available and free. Participants also emphasized the importance of the availability of detailed information about sexual health and HIV/STD transmission. A 43-year-old White participant who was not infected with HIV commented, “I think that more details on diseases would help. I had exposure to hepatitis C, and there was no literature. We had no information.”

Mental health services—A majority ($n=7$, 63.6%) of the sample screened positive for clinically significant depressive symptoms (CES-D 10 score ≥ 10) at the time of the study, and 9 (81.8%) of the study participants reported that they had been diagnosed with depression by a physician or other health care or mental health professional in the past. Many transgender sex workers mentioned experiences of trauma and abuse as children and in adulthood, further underscoring the need for mental health services including therapy and counseling to intervene in sexual risk-taking behaviors. A 21-year-old Latina participant who was not infected with HIV conveyed the following:

Sometimes they do give out condoms in outreach. But just because we're in the sex industry doesn't mean that we don't need someone to talk to, especially someone that we don't know, so we kind of sometimes open up to outreach workers more.

We need to find out more information on different places, like different places that we can go get help and talk to people.

Substance abuse treatment was also identified as a mental health need, particularly among trans women who connected engaging in sex work with using drugs. As advised by a 44-year-old Black HIV-infected participant, “Don’t do drugs. It’s not worth it. And if you can get off the streets and the drugs, try to better your life.” Participants commonly talked about the need for prevention interventions focused on substance use to help trans-gender women reduce the odds of becoming addicted to substances while they were engaging in sex work.

Support groups and peer networks—Participants overwhelmingly discussed support groups or other avenues of networking/meeting up with other trans-gender women as an area of interest for interventions. Involving peers and other sex workers in interventions was frequently mentioned as an important intervention component, especially because the grapevine was described as being an integral part of transgender social networks. A 43-year-old White participant who was not infected with HIV explained.

I hear a lot of stuff, as we call it, grapevine news. It’s what we call it—trans community grapevine news. Talk, talk, talk. Talk, talk, talk. From me to Sophia to Rene to Erica to whoever to whoever, whoever. And we’ll talk. Grapevine. You have to get information into the grapevine.

One participant talked about having been involved in outreach to TGSW including condoms, information, and resource distribution and how this work was mutually beneficial for both her and the individuals she reached.

Legal advice—Several participants indicated that legal advice or counsel would be helpful to them in understanding their rights and in determining what was and was not legal. Moreover, several trans women mentioned legalizing prostitution as being an important structural change that would benefit them. A 26-year-old Latina participant who was not infected with HIV stated the following:

In the U.S.A., sex work is forbidden. So you don’t get any help, you know? I mean, when we go to jail for sex work, they put it under prostitution or call it night walking. We’re just trying to live our lives. I mean, the court industry is not going to put money in our pockets. So what do you expect us to do? We can’t get jobs. So, I mean, they say that they want to help us. If you want to help sex workers, pass a law saying that it’s legal—and not illegal.

Discussion

Results from this study suggest that transgender women who exchange sex for money, drugs, housing, and other services are a population at high risk for HIV acquisition and transmission. In qualitative interviews, inconsistent condom use with offers of more money for unsafe sex and low rates of HIV status disclosure were commonly reported. A majority of the sample reported unprotected anal sex with transactional male sex partners of unknown or different serostatus in the past 12 months, and all participants reported that HIV was not a topic of discussion in sex work encounters. Financial need, gender-based discrimination, lack of access to education and jobs, and drug/alcohol addiction were the central motivations and reasons that participants engaged in sex work. HIV seroconversion, occupational violence, and changes to intimacy with nonpaying partners were frequently reported as consequences of transactional sex. In alignment with results from prior studies with transgender women (Clements-Nolle et al., 2001; Clements-Nolle et al., 2006; Kenagy, 2005), high levels of substance use and psychological distress were observed among participants. Other risk factors included depression, history of childhood sexual abuse,

gender-based discrimination, history of incarceration, and history of psychiatric inpatient hospitalization. Together, quantitative and qualitative study results suggest that HIV sexual risk behaviors among TGSW are occurring within the context of intertwined syndemics (Singer & Snipes, 1992; Stall & Purcell, 2000), and that interventions need to incorporate these multiple risk dynamics to be effective.

Interviews with TGSW showed that social networks play an especially vital role in the lives of transgender women, many of whom are alienated from their families of origin, face ongoing stigma and discrimination in negotiating their identities, and remain socioeconomically disadvantaged. The trans or gay mother was highlighted in some of the discussions and seems to occupy an important location in the social networks of transgender women. According to participants, elements essential to the mother identity are older age, having been through and survived what the younger generation is going through, having knowledge and experience to share, and taking care of or helping trans women on the streets, which included escorting and fixing them up with dates. Given that participants in the current study as well as in prior studies of transgender women (Nemoto, Operario, Keatley, Han, & Soma, 2004; Nemoto et al., 2004) believed that health interventions for transgender women should be delivered by transgender peers, it seems that involving and educating the system of trans and gay mothers that is currently in place within the transgender community may be important to successfully intervening and reducing sexual risk among transgender women. In fact, delivering information through the grapevine may be shown to be an effective strategy for risk reduction among this population. Additional research is warranted with larger samples to examine the social network characteristics of TGSW in greater detail.

There are limitations of this study that bear mention. First, HIV serostatus was self-reported by participants. Because the study team did not conduct HIV confirmatory testing to verify participants' self-reports, participants may have potentially been unaware of having seroconverted since their last test, or it is possible they had not been tested for HIV at all. Second, the nonprobability sampling method used means the possible introduction of sampling bias, a nonrepresentative sample of the population, and limited generalizability of results. However, to the best of the authors' knowledge, this study was the first of its kind conducted in Massachusetts, and results provided helpful formative data to inform the development and implementation of HIV prevention programs for this vulnerable population. Finally, even though qualitative interviews were stopped after reaching redundancy in responses, as typical in qualitative research, the transgender women interviewed in this study comprised only a subset of TGSW at risk for HIV infection.

Limitations notwithstanding, study results suggest that to be effective and intervene in the complex and multifaceted issues associated with HIV risk behavior among transgender male-to-female individuals, interventions must address contextual and psychosocial issues including substance abuse, depression, gender-based discrimination, and other aspects surrounding HIV risk behavior such as condom use and negotiated safety with transactional sex partners among TGSW. Structural and financial issues, such as being unable to refuse more money for unsafe sex, also need to be taken into consideration. Results can be used to generate hypotheses for designing and providing tailored primary and secondary prevention interventions for this at-risk population. Increased research efforts aimed at effective intervention development should not only continue to examine HIV/STD risk but also recognize protective factors and how individual characteristics and the social environment affect sexual behaviors and transactions. Multilevel interventions that focus on the individual (e.g., mental health counseling, HIV/STD testing) as well as the community (e.g., group level interventions that incorporate peer health navigation and/or peer support groups) may be effective in curbing rising rates of infection among TGSW.

Acknowledgments

The project described in this article was supported by The Center for Population Research in Lesbian, Gay, Bisexual, and Transgender Health at The Fen-way Institute and by the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) under Award Number R21HD051178. Some of the investigator time on this project was also supported by grant number R03DA023393 from the National Institute on Drug Abuse (NIDA) and from the Lifespan/Tufts/Brown University Center for AIDS Research grant P30 AI42853 from the National Institutes of Health. Content is solely the responsibility of the authors and does not necessarily represent the official views of the NICHD, NIDA, or the NIH.

The authors thank Benny Vega for contributing time and energy to this project.

References

- Andresen EM, Malmgren JA, Carter WB, Patrick DL. Screening for depression in well older adults: Evaluation of a short form of the CES-D (Center for Epidemiological Studies Depression Scale). *American Journal of Preventive Medicine*. 1994; 10:77–84. [PubMed: 8037935]
- Bockting, WO.; Avery, E., editors. *Transgender health and HIV prevention: Needs assessment studies from transgender communities across the United States*. Vol. 8. Binghamton, NY: Hayworth Medical; 2005.
- Bockting WO, Robinson BE, Forberg J, Scheltema K. Evaluation of a sexual health approach to reducing HIV/STD risk in the transgender community. *AIDS Care*. 2005; 17:289–303. [PubMed: 15832877]
- Bockting WO, Robinson BE, Rosser BR. Trans-gender HIV prevention: A qualitative needs assessment. *AIDS Care*. 1998; 10:505–525. [PubMed: 9828969]
- California Department of Health Services. *California HIV counseling and testing annual report: January-December 2003*. Sacramento, CA: California Department of Health Services, Office of AIDS; 2006. Retrieved May 24, 2009, from <http://www.dhs.ca.gov/AIDS/Reports/PDF/2006/27862003HIVCTAnnRept120106.pdf>
- Chesney MA, Koblin BA, Barresi PJ, Husnik MJ, Celum CL, Colfax G, et al. An individually tailored intervention for HIV prevention: Baseline data from the EXPLORE study. *American Journal of Public Health*. 2003; 93:933–938. [PubMed: 12773358]
- Clements-Nolle K, Guzman R, Harris SG. Sex trade in a male-to-female transgender population: Psychosocial correlates of inconsistent condom use. *Sexual Health*. 2008; 5:49–54. [PubMed: 18361854]
- Clements-Nolle K, Marx R, Guzman R, Katz M. HIV prevalence, risk behaviors, health care use, and mental health status of transgender persons: Implications for public health intervention. *American Journal of Public Health*. 2001; 91:915–921. [PubMed: 11392934]
- Clements-Nolle K, Marx R, Katz M. Attempted suicide among transgender persons: The influence of gender-based discrimination and victimization. *Journal of Homosexuality*. 2006; 51:53–69. [PubMed: 17135115]
- Elifson KW, Boles J, Posey E, Sweat M, Darrow W, Elsea W. Male transvestite prostitutes and HIV risk. *American Journal of Public Health*. 1993; 83:260–262. [PubMed: 8427336]
- Ewing JA. Detecting alcoholism. The CAGE questionnaire. *Journal of the American Medical Association*. 1984; 252:1905–1907. [PubMed: 6471323]
- Garofalo R, Deleon J, Osmer E, Doll M, Harper GW. Overlooked, misunderstood and at-risk: Exploring the lives and HIV risk of ethnic minority male-to-female transgender youth. *Journal of Adolescent Health*. 2006; 38:230–236. [PubMed: 16488820]
- Glaser, BG. *Theoretical sensitivity*. Mill Valley, CA: Sociology Press; 1978.
- Herbst JH, Jacobs ED, Finlayson TJ, McKleroy VS, Neumann MS, Crepaz TJ. Estimating HIV prevalence and risk behaviors of transgendered persons in the United States: A systematic review. *AIDS and Behavior*. 2008; 12:1–17. [PubMed: 17694429]
- Kaufman, R. Introduction to transgender identity and health. In: Makadon, HJ.; Mayer, KH.; Potter, J.; Goldhammer, H., editors. *The Fenway guide to lesbian, gay, bisexual, and transgender health*. Philadelphia, PA: American College of Physicians; 2007. p. 331-363.

- Kellogg TA, Clements-Nolle K, Dilley J, Katz MH, McFarland W. Incidence of human immunodeficiency virus among male-to-female transgendered persons in San Francisco. *Journal of Acquired Immune Deficiency Syndromes*. 2001; 28:380–384. [PubMed: 11707676]
- Kenagy GP. HIV among transgendered people. *AIDS Care*. 2002; 14:127–134. [PubMed: 11798412]
- Kenagy GP. Transgender health: Findings from two needs assessment studies in Philadelphia. *Health and Social Work*. 2005; 30:19–26. [PubMed: 15847234]
- Kenagy, GP.; Bostwick, WB. Health and social service needs of transgender people in Chicago. In: Bockting, WO.; Avery, W., editors. *Transgender health and HIV prevention: Needs assessment studies from transgender communities across the United States*. Binghamton, NY: Hayworth Medical; 2005. p. 57-66.
- Knowlton R, McCusker J, Stoddard A, Zapka J, Mayer K. The use of the CAGE questionnaire in a cohort of homosexually active men. *Journal of Studies on Alcohol*. 1994; 5:692–694. [PubMed: 7861797]
- Koblin BA, Chesney MA, Husnik MJ, Bozeman S, Celum C, Buchbinder S, et al. High-risk behaviors among men who have sex with men in 6 US cities: Baseline data from the EXPLORE Study. *American Journal of Public Health*. 2003; 93:926–932. [PubMed: 12773357]
- Lombardi E. Enhancing transgender health care. *American Journal of Public Health*. 2001; 91:869–872. [PubMed: 11392924]
- MacQueen KM, McLellan E, Kay K, Milstein B. Codebook development for team-based qualitative analysis. *Field Methods*. 1998; 10:31–36.
- Mason, T.; Connors, M.; Kammerer, C. *Transgenders and HIV risks: Needs assessment*. Boston, MA: Gender Identity Support Services for Transgenders (GISST); 1995. [Prepared for the Massachusetts Department of Public Health, HIV/AIDS Bureau]
- Mayer K, Appelbaum J, Rogers T, Lo W, Bradford J, Boswell S. The evolution of the Fenway Community Health model. *American Journal of Public Health*. 2001; 91:892–894. [PubMed: 11392929]
- Mayfield D, McLeod G, Hall P. The CAGE questionnaire: Validation of a new alcoholism screening instrument. *American Journal of Psychiatry*. 1974; 131:1121–1123. [PubMed: 4416585]
- Melendez, RM. No place to call home: Transgender persons, discrimination and HIV. In: Howe, C.; Herdt, G., editors. *21st century sexualities: Contemporary issues in health, education and rights*. New York: Routledge; 2007. p. 107-109.
- Melendez RM, Pinto RM. 'It's really a hard life': Safety, gender and HIV risk among male-to-female trans-gender persons. *Culture, Health and Sexuality*. 2007; 3:233–245.
- Miles, MB.; Huberman, AM. *Qualitative data analysis*. 2. Newbury Park, CA: Sage; 1994.
- Mimiaga MJ, Reisner SL, Tinsley JP, Mayer KH, Safren SA. Street workers and internet escorts: Contextual and psychosocial factors surrounding HIV risk behavior among men who engage in sex work with other men. *Journal of Urban Health*. 2009; 86:54–66. [PubMed: 18780186]
- Nemoto T, Operario D, Keatley J, Han L, Soma T. HIV risk behaviors among male-to-female transgender persons of color in San Francisco. *American Journal of Public Health*. 2004; 94:1193–1199. [PubMed: 15226142]
- Nemoto T, Operario D, Keatley J, Nguyen H, Sugano E. Promoting health for transgender women: Trans-gender Resources and Neighborhood Space (TRANS) program in San Francisco. *American Journal of Public Health*. 2006; 95:382–384. [PubMed: 15727962]
- Nemoto T, Operario D, Keatley J, Villegas D. Social context of HIV risk behaviours among male-to-female transgenders of colour. *AIDS Care*. 2004; 16:724–735. [PubMed: 15370060]
- Operario D, Soma T, Underhill K. Sex work and HIV status among transgender women: Systematic review and meta-analysis. *Journal of Acquired Immune Deficiency Syndromes*. 2008; 48:97–103. [PubMed: 18344875]
- Reback, CJ.; Lombardi, EL. HIV risk behaviors of male-to-female transgenders in a community-based harm reduction program; *International Journal of Transgenderism*. 1999. p. 3 http://www.symposion.com/ijt/hiv_risk/reback.htm Retrieved May 24, 2009, from
- Sanchez T, Finlayson T, Drake A, Behel S, Cribbin M, Dinunno E, et al. Human immunodeficiency virus (HIV) risk, prevention, and testing behaviors—United States, National HIV Behavioral

- Surveillance System: Men who have sex with men, November 2003-April 2005. Morbidity and Mortality Weekly Report Surveillance Summaries. 2006; 55:1–16. [PubMed: 16826162]
- Sausa L, Keatley J, Operario D. Perceived risks and benefits of sex work among transgender women of color in San Francisco. Archives of Sexual Behavior. 2007; 36:768–777. [PubMed: 17674180]
- Silverman, D. Doing qualitative research: A practical handbook. Thousand Oaks, CA: Sage; 2000.
- Simon P, Reback C, Bemis CC. HIV prevalence and incidence among male-to-female transsexuals receiving HIV prevention services in Los Angeles County. AIDS. 2000; 14:2953–2955. [PubMed: 11153683]
- Singer M, Snipes C. Generations of suffering: Experiences of a treatment program for substance abuse during pregnancy. Journal of Health Care for Poor and Under-served. 1992; 3:222–234.
- Stall R, Mills TC, Williamson J, Hart T, Greenwood G, Paul J, et al. Association of co-occurring psychosocial health problems and increased vulnerability to HIV/AIDS among urban men who have sex with men. American Journal of Public Health. 2003; 96:939–942. [PubMed: 12773359]
- Stall R, Purcell DW. Intertwining epidemics: A review of research on substance use among men who have sex with men and its connection to the AIDS epidemic. AIDS and Behavior. 2000; 4:181–192.
- Strauss, A.; Corbin, J. Basics of qualitative research: Techniques and procedures for developing grounded theory. 2. Thousand Oaks, CA: Sage; 1990.
- Strauss, A.; Corbin, J. Grounded theory in practice. Thousand Oaks, CA: Sage; 1997.

Clinical Considerations

- Male-to-female transgender individuals who exchange sex for money, drugs, housing, or other services are a population at high risk for HIV acquisition and transmission.
- Financial need, gender-based discrimination, lack of access to education and jobs, and drug/alcohol addiction may motivate TGSW to engage in sex work (i.e., transactional sex).
- Inconsistent condom use with offers of more money for unsafe sex and low rates of HIV status disclosure are common among TGSW, and HIV is rarely a topic of discussion in sex work encounters.
- Engaging in transactional sex may result in harmful consequences for transgender women, including HIV seroconversion, occupational violence (e.g., physical and sexual), and changes to intimacy with nonpaying partners.
- Social networks play an especially vital role in the lives of transgender women, many of whom are alienated from their families of origin, face ongoing stigma and discrimination in negotiating their identities, and remain socioeconomically disadvantaged. These factors may impact access to clinical care and/or disclosure of behavioral HIV risks to medical and mental health providers.
- Multilevel interventions that focus on the individual (e.g., mental health counseling, HIV/STD testing) as well as the community (e.g., group level interventions that incorporate peer health navigation and/or peer support groups) may be effective in curbing rising rates of infection among TGSW.

Table 1Demographic Characteristics of the Transgender Male-to-Female Sex Worker Sample ($N=11$)

Demographic Characteristic		
Age	$M = 534.6$ ($SD = 10.6$)	
	n	%
Race/ethnicity		
Hispanic/Latina	4	36.4
Black/African American	3	27.3
White/Caucasian	4	36.4
Socioeconomic status		
High school diploma/GED or less	11	100.0
Unemployed	2	18.2
Disabled	7	63.6
Earn, \$12 K annually	10	90.9
Unstable housing	8	72.7
Sexual Identity		
Heterosexual	5	45.5
Bisexual	3	27.3
Homosexual	3	27.3
HIV-Infected (self-reported)	4	36.4

NOTE: GED =general educational development.

Table 2Sexual and Substance Use Risks of the Transgender Male-to-Female Sex Worker Sample ($N=11$)

Sexual or Substance Use Risk	<i>N</i>	%
History of one or more STDs	4	36.4
Sexual risk behavior in past 12 Months		
Number male sex partners	<i>M</i> = 539.4 (<i>SD</i> = 71.9)	
Number transactional male sex partners	<i>M</i> = 36.1 (<i>SD</i> = 72.3)	
Unprotected receptive anal sex	10	90.9
Serodiscordant unprotected receptive anal sex	8	72.7
Unprotected insertive anal sex	5	45.5
Serodiscordant unprotected insertive anal sex	4	36.4
Unprotected receptive oral sex with ejaculation in mouth	5	45.5
Self-perceptions of HIV/STD risk		
Self-perceived risk for HIV (scale 0 to 10)	<i>M</i> = 3.9 (<i>SD</i> = 1.0)	
Self-perceived risk for STDs(scale 0 to 10)	<i>M</i> = 4.6 (<i>SD</i> = 2.5)	
Substance use during sex in past 12 Months		
Alcohol (while drunk) “some” or “most” of the time	7	63.6
Marijuana	7	63.6
Crack	6	54.5
Cocaine	4	36.4
Crystal methamphetamine	1	9.0
Downers	1	9.0
Ecstasy	1	9.0
Sildenafil citrate (Viagra)	1	9.0

NOTE: STD =sexually transmitted disease.

Table 3Psychosocial Risks of Transgender Male-to-Female Sex Worker Sample ($N=11$)

Psychosocial Risks	<i>n</i>	%
Current psychosocial issues		
Depressive symptoms (CES-D 10 score = 10)	7	63.6
CES-D 10 depressive symptoms scores	$M = 13.5$ ($SD = 6.8$)	
CAGE score = 2	2	18.2
Currently enrolled in needle exchange program	5	45.5
Lifetime psychosocial issues		
History of incarceration/jail	10	90.9
Self-report diagnosis of clinical depression	9	81.8
Psychiatric hospitalization	7	63.6
Drug/alcohol treatment	6	54.5
Sexual abuse history		
Age of first sexual experience	$M = 14.3$ ($SD = 2.9$)	
Before age 13, sexual experiences with someone 5 years or more older	6	54.5
Between 13 and 17, sexual experiences with someone 10 years or more older	8	72.7
Consider sexual abuse	2	18.2
Nonconsensual sex as adult (rape)	5	45.5

NOTE: CAGE =clinical screening instrument for probable alcohol dependence, CES-D 10 = Center for Epidemiologic Studies Short Depression Scale.