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The conflation of gender and sex: Gaps and opportunities in HIV data among transgender women and MSM

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Abstract

Historically, HIV studies have conflated men who have sex with men (MSM) with transgender (trans) women, explicitly excluded trans individuals, or included sample sizes of trans people that are too small to reach meaningful conclusions. Despite the heavy burden of HIV among trans women, conflation of this population with MSM has limited the information available on the social and behavioural factors that increase HIV vulnerability among trans women and how these factors may differ from MSM. Using data sets from quantitative studies among MSM (n = 645) and trans women (n = 89), as well as qualitative in-depth interviews with 30 trans women in Baltimore, we explore what these data tell us about similarities and differences in HIV vulnerability between the two groups and where they leave gaps in our understanding. We conclude with implications for data collection and intervention development.

Keywords

HIV; transgender women; MSM; intersectionality; syndemic

Introduction

Globally, transgender (trans) women are one of the most vulnerable populations to HIV. A recent meta-analysis of HIV prevalence among trans women (Baral et al., 2013) found a pooled global prevalence of 19% with approximately 49 times the odds of infection compared to the general population. In the United States, the HIV prevalence was 22% (95% CI: 18.4–25.1) with 34 (95% CI: 31.2–37.5) times the odds of infection versus the general population. This overwhelming disparity highlights the urgent need for research to inform effective and appropriate HIV prevention, care, and treatment interventions for this population.

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Historically, HIV studies have conflated men who have sex with men (MSM) and trans women, explicitly excluded trans individuals, or included sample sizes of trans people that were too small to reach meaningful conclusions. Studies published as recently as 2015, in well-respected peer-reviewed journals, combine MSM and trans women into one category for analysis and presentation of data (Muessig, Baltierra, Pike, LeGrand, & Hightow-Weidman, 2014; Peacock, Andrinopoulos, & Hembling, 2015; Zea et al., 2015).

Leaders in the trans community have called for an end to this conflation and for the recognition of trans women as a unique population, different from MSM. The World Health Organisation's 2014 consolidated guidelines for key populations state 'the high vulnerability and specific health needs of transgender people necessitate a distinct and independent status in the global HIV response' (World Health Organisation, 2014). At the same time, organisations like the US Food and Drug Administration consider trans women to be MSM for the purposes of identifying who should be excluded from donating blood based on elevated risk of HIV (Holden, 2015; The US Food and Drug Administration, 2014). This categorisation of trans women as MSM rests on the assumption that MSM and trans women share anatomy (i.e. penises) and sexual practices (i.e. anal intercourse), and it centres behaviour over identity in the calculation of HIV risk. However, as research among Black MSM has demonstrated, social consequences of oppressed identities may be more significant drivers of HIV disparities than traditional risk behaviours (Millett, Flores, Peterson, & Bakeman, 2007; Peterson et al., 2014). Other scholars have eloquently described how the use of behavioural labels in public health discourse about sexual minorities may undermine self-determined identities, obscure social meanings, and tell us very little about actual sexual practices (Young & Meyer, 2005). The same critiques apply to gender minorities.

These conflicting stances from well-respected health organisations raise not only issues of identity politics but also public health questions: What can currently available data tell us about the similarities and differences in HIV risk and vulnerabilities for trans women compared to non-transgender (cisgender) MSM? What data are missing? What does this mean for how data should be collected and for the appropriateness and effectiveness of current HIV interventions? In order to address these questions, we conducted a secondary analysis of data from three sources in the United States: the 2004–2005 Baltimore National HIV Behavioral Surveillance Survey; the 2004–2005 Baltimore Transgender Supplement Questionnaire (TSQ), and qualitative interviews with transgender adults, conducted as part of a larger study of gender, stigma, and HIV risk in Baltimore in 2010.

Methods

We used Intersectionality and Syndemic Theory to interpret the findings from this analysis. Intersectionality is a theoretical approach that foregrounds the intersection of multiple social identities that result in multiple and interdependent structural inequalities (Bowleg, 2012). Syndemic theory describes how multiple, co-occurring epidemics, concentrated within a specific population, interact and reinforce one another, giving rise to additional health problems (Singer, 2009).

Data sets

National HIV Behavioral Surveillance—The National HIV Behavioral Surveillance (NHBS) System, a collaboration between the Centers for Disease Control and Prevention (CDC) and 25 state and local health departments, surveys three populations in the United States: MSM, injection drug users, and 'high-risk' heterosexuals. Information is collected from these three populations during rotating 12-month cycles (Gallagher, Sullivan, Lansky, & Onorato, 2007). Recruitment methods vary for each population, but standardised protocols and core questions are the same for each cycle. Participating health departments may include locally specific questions to address local needs. Questionnaires collect information about demographics, sexual behaviour, injection and non-injection drug use, and HIV testing.

During the June 2004 to April 2005 MSM data collection cycle (German et al., 2011), a small number of participants identified themselves as transgender. In order to be eligible, participants had to report being assigned male at birth (natal male), be 18 years of age or older, reside in the city's metropolitan area, and have sex with a man in the previous 12 months. Participants were recruited using venue-based, time-location sampling (TLS). All participants provided verbal informed consent, and data were collected via face-to-face interviews using handheld devices. Structured quantitative interviews lasted approximately one hour. After the interview, HIV-1 testing was done on serum samples that were sent to the state laboratory for analysis. Participants received $25 for completion of the survey and an additional $25 for HIV testing. Among the 694 eligible natal male participants who completed the 2004–2005 NHBS MSM questionnaire, 49 (7.6%) identified as transgender.

Transgender Supplement Questionnaire—TSQ participants were recruited using TLS and purposive sampling. Eligibility criteria were the same as for the NHBS with the additional requirement of a transgender identity. Data collection, HIV testing, and incentive payment were identical to NHBS with the exception of the use of paper questionnaires with several free lists and open-ended questions rather than completely structured questionnaires via handheld computers. The TSQ collected data on sexual behaviour, gender identity, expression, and use of transition-related interventions. Questions about sexual partners included multiple options to describe the gender expression as well as the gender identity of those partners (e.g. 'feminine men' and 'masculine men' were separate response options). It did not include questions about condom use, drug use, or injections of soft-tissue fillers such as silicone. Forty respondents completed the TSQ. Of those, five participants completed both the TSQ and the NHBS survey. Because the number of participants who completed both surveys was small with little overlap in the questions asked, the two samples were analysed separately.

Qualitative IDIs—Sex-stratified purposive sampling was used to identify transgender participants for in-depth interviews (IDIs) about stigma and HIV risk. Efforts were made to achieve variability along lines of race, engagement in medical care, and use of hormone therapy. Inclusion criteria for transgender participants included being 18 years of age or older, residing in the metropolitan area, and identifying as transgender or as a gender

different from their birth sex. For this manuscript, the analysis was limited to participants who were assigned male at birth and identified as women and/or transgender.

One IDI was conducted with each of the 30 trans women participants between January 2011 and July 2011. All participants provided verbal informed consent; all interviews were audio recorded and transcribed verbatim. Each interview lasted between 45 and 180 minutes with an average duration of 90 minutes. The interviews elicited detailed narratives of individual experiences and perceptions. Specifically, participants were asked about their family and social life, gender identity, sexual orientation and practices, health care experiences, as well as experiences of stigma and discrimination. Participants received $25 for participation.

Analyses

NHBS—Data were downloaded daily from handheld devices onto a password protected study computer. The statistical software Stata© (version 11, StataCorp, College Station, TX) was used to calculate descriptive statistics. Chi square was used to test for differences in HIV risk behaviour and HIV test results, comparing trans women to MSM. Logistic regression modelling, controlling for demographic factors, was used to estimate odds ratios.

TSQ—Data from paper questionnaires were hand-entered into an Access database on a password protected study computer. Stata® was used calculate summary statistics. No MSM were included in this sample, therefore no comparative tests of association were conducted.

IDIs—Data for analysis included transcripts of audio recordings from IDIs. The first author coded the transcripts in the software program Atlas.ti® (version 6.2, Scientific Software Development GmbH, Eden Prairie, MN) using an a priori codebook based on the topics addressed in the NHBS and TSQ: sexuality, drug use, and HIV. Using constant comparison techniques (Crabtree & Miller, 1999) for thematic analysis, coded text was examined within and across participant transcripts for recurrent and salient themes. Memos were used throughout analysis to organise and document the analytic process.

Results

NHBS

Characteristics—Social and demographic characteristics of the sample are listed in Table 1. Compared to MSM, trans women were younger with an average age of 28 versus 34 years. Trans women were more likely to be Black and have a high school education or less. The two groups showed no statistically significant difference in housing stability. A higher proportion of trans women (25%) had been arrested in the previous 12 months compared to MSM (19%); however, this difference was not statistically significant ($p = .3$). While there was no difference in proportion of trans and MSM respondents who were insured, trans women (21%) were more likely than MSM (8%) to report Medicare as their insurer ($p = .002$).

Sexuality—Trans women were more likely than MSM to describe their sexual orientation as heterosexual or other ($p = .001$). Trans-identified respondents were not asked about condom use at last anal intercourse, and therefore no comparisons with MSM could be

made. A similar proportion of MSM (84%) and trans women (79%) reported receiving free condoms in the previous 12 months (p =.4). Among participants who had received free condoms in the previous 12 months, a greater proportion of trans women reported using them than MSM (92% vs. 79%, p = .07). Similar proportions of trans women (57%) and MSM (61%) reported that receipt of free condoms made it more likely that they would use them (p = .6). There was no significant difference in the proportion of trans women (12%) and MSM (16%) who reported ever being diagnosed with a sexually transmitted disease (p = .5).

Drug use—Twenty-one per cent of the trans women and 17% of MSM reported ever injecting drugs (p = .5). The average age of first injection was 21 years for trans women and 23 years for MSM (p = 0.5). All respondents denied injecting drugs in the preceding 12 months. Forty per cent of trans women and 49% of MSM had used non-injection drugs in the preceding 12 months. There was no difference between the two groups in frequency of non-injection use of amphetamines, crack, cocaine, downers, painkillers, hallucinogens, club drugs, heroin, or poppers. Among non-injecting drug users, 95% of trans women had used marijuana in the prior 12 months compared to 76% of MSM (p = .05). Forty per cent of trans women had used ecstasy in the past 12 months compared to 19% of MSM (p = .02). Power calculations for drug use analyses found 95% power to detect a difference between groups in marijuana use, 89% in ecstasy use, and less than 25% for all other drug use, suggesting that if significant differences existed in the use of these other drugs, our sample size was too small to detect it.

HIV—The majority of respondents (88%) had been previously tested for HIV with no difference in testing between trans women and MSM (p = .9). Twenty-one per cent of trans women and 16% of MSM reported having tested positive for HIV in the past (p = .4). Laboratory testing found 43% trans women and 38% MSM were HIV-positive (p = .5). Sixty-five per cent of trans women and 58% of MSM had unrecognised HIV infection. None of these differences were statistically significant with power less than 10%. In a multivariable logistic regression model that included race, age, gender identity and sexual orientation, transgender identity was not significantly associated with HIV status. Race was the strongest predictor of HIV; Black participants had 10 times the odds of HIV compared to white participants [CI: 6.3, 17.0, p = .0001].

TSQ

Gender affirmation—Demographic information for this sample can be found in Table 1. They are similar to the trans participants in the NHBS in age, race, and educational attainment. When asked what sex they would like to be seen by others, most participants wanted to be seen as female (33/39). When offered the opportunity to freely list as many labels for themselves as they wanted, the top three most commonly listed labels included female (80%), woman (75%), and feminine (75%); 73% also listed transgender. When asked to free list actions they had taken to support their gender transition, the most frequently listed actions included ‘cross dressing’ (80%), casual name change (80%), hormones or surgery (65%), and change of gender marker on legal identification (50%). Only one respondent reported having genital reconstruction surgery. Two-thirds of the respondents

desired future gender transition. Of those who desired future transition, 73% wanted hormones or surgery. Desire for legal name change (55%), psychological counselling (52%), and cross dressing (45%) were also commonly reported. The most commonly listed reason (62%) for not having desired gender transition was lack of money to afford it; the next most common was inability to find providers in their area to help with transition (19%). Seventy-three per cent reported current or past use of feminising hormones; of those, 55% received these hormones by prescription from a licensed medical professional.

Sexuality and HIV—The great majority (88%) of respondents had sexual partners who were born male and who identified as masculine men, while 12% had feminine female partners. When choosing sexual partners for short-term or long-term relationships about half (n = 17) usually chose those with the same racial/ethnic identity as themselves and half chose those of any race/ethnicity (n = 20). Only two participants preferred partners of a different race or ethnicity. HIV test results were available for 21 of the 40 respondents, and one-third of them tested HIV-positive (33.3%).

IDIs

The average age of the trans women in the study was 39 years (range 21–66). Two-thirds identified as Black or African-American, the remainder identified as white. Most of the Black participants had exclusively male sexual partners, and most of the white participants had exclusively female sexual partners. Half had no more than a high school education. Twenty-six of the thirty trans women had a regular source for medical care. Two-thirds of them had been tested for HIV in the previous year. Of the five trans women who reported having HIV, all of them were Black and had been diagnosed for greater than 10 years.

Sexuality—Relationship challenges were a recurrent theme and were linked to HIV vulnerabilities. Participants described little problem finding sexual encounters but greater difficulty finding committed partners. When they found partners who accepted their gender identity, they feared being abandoned for a cisgender partner. Several participants with male partners described engaging in insertive sex and in condomless sex in order to keep their partner in the relationship.

Some participants felt that families were more likely to reject trans children than gay children. This family rejection with concomitant loss of emotional and financial support led many trans women to sex work. Sex work was able to provide money for livelihood and as well as funds for gender affirming interventions, such as hormone therapy. Street-based sex work, with its attendant risks of detention and incarceration, incurred additional vulnerabilities. One participant described being arrested while with a date who had picked her up in a stolen car. While incarcerated, she was raped by another prisoner and later learned that she had contracted HIV.

Every participant reported using condoms with male partners. Yet, it was unclear how consistently this happened. Trans sex workers asserted using condoms with all clients but were more vague about condom use with other partners. One person in particular expressed relief that she had been HIV-negative every time she was tested, even though she was aware of taking sexual risks. See Table 2 for illustrative quotes.

Other vulnerabilities: enacted stigma and violence—Experiences of enacted stigma (discrimination) and violence were pervasive. When asked directly about experiences of discrimination, 71% of respondents reported being verbally harassed, 60% reported problems getting a job, and 54% reported losing a job because of their gender. Thirty-nine per cent of all participants reported that they had been sexually assaulted, and 29% had been physically assaulted or beaten.

Racial differences in narratives of discrimination were remarkable. Employment discrimination and rejection by former friends or partners were the most common themes in the narratives of white participants. Narratives of Black participants described routine public harassment from strangers as well as police; and reports of emotional and physical abuse were common. Strategies to cope with these challenges ranged from using drugs to seeking social support. Sources of support and resilience included the trans community, accepting friends or family members, and spiritual faith.

Discussion

Using quantitative and qualitative data from one metropolitan area in the United States, we explored similarities and differences in data on HIV vulnerability among trans women compared to MSM. Intersectionality and Syndemic Theory provide useful frameworks to contextualise these findings and explore their implications for addressing HIV among trans women in Baltimore.

In the quantitative analyses, we found the prevalence of HIV to be high among both trans women (33–43%) and MSM (38%). The prevalence for each group was higher than among any other risk group in Baltimore, including injection drug users (23%) and ‘high-risk’ heterosexuals (6%, Flynn, 2013). Notably, in multivariable modelling that included both trans women and MSM, the strongest predictor of positive HIV status was Black race. Indeed, it is possible that the slightly higher prevalence of HIV among trans women compared to MSM in the NHBS study may have been related to the higher proportion of Black participants in the sample of trans women. The significant racial disparity in HIV suggests that experiences of race and racism intersect with homophobia and transphobia to compound existing disparities by risk group.

While almost half of MSM in the NHBS had high school or less education, a remarkable 86% and 75% of trans women in the NHBS and TSQ, respectively, had no more than a high school education. In other ways, the two groups were similar. Trans women and MSM in the NHBS reported comparable housing stability, injection drug use rates, STI diagnosis histories, and access to free condoms. These similarities may be attributable to the use of a venue-based, time-location sampling strategy that was designed to recruit MSM. These venues may cater to individuals from the same community contexts, regardless of gender identity. Trans women who frequent MSM-focused venues may also meet partners and share sexual networks with the men at these venues, leading to overlapping interpersonal risks and similar prevalence of STIs and HIV. Trans women from these venues were marginally more likely than MSM to report use of the free condoms they received. It is possible that trans women were more likely than MSM to use condoms overall. However, given ubiquitous

employment discrimination against trans women (Grant et al., 2010) and the low educational attainment of trans participants, it is also possible that trans women were more likely to use free condoms due to financial constraints that limited their ability to purchase condoms or a greater need for condoms to use during sex work. The omission of questions about sexual practices and condom use at last sex among trans participants in the NHBS preclude a comparison between the two populations. However, data from the TSQ and IDIs provide some insights into trans women's sexual experiences.

Whereas most of the white trans women in the IDIs had female partners, all of the Black participants described male partners. The majority of the TSQ participants were Black and most commonly reported ‘masculine men’ as their sexual partners. Since HIV acquisition is much more efficient from male partners, this androphilia may account for some of the racial disparities seen among trans women. Many participants in the TSQ expressed preference for partners of the same race. Previous research has demonstrated that such assortative partnership patterns are associated with higher risk for HIV among cisgender Black men and women with male sexual partners (Adimora, Schoenbach, & Floris-Moore, 2009; Fujimoto & Williams, 2014). Also, trans women in the IDIs described perceived competition with cisgender women for partners. They noted that the desire to keep male partners compelled them to engage in unwanted sexual practices for the purposes of maintaining the relationship.

Trans women who participated in the TSQ reported a clear desire to be seen by others as women and listed multiple steps taken to express their gender to others, including the use of hormones from unlicensed providers. However, only one of the 40 participants had undergone genital reconstruction surgery. The most common reason for not having undergone desired gender affirmation interventions was the inability to afford it. As described by participants in the IDIs, sex work is a frequent source of income both to pay for gender interventions and to provide income after loss of family support. While not explicit in these narratives, sex work has also been described as a consequence of employment discrimination (Sausa, Keatley, & Operario, 2007) as well as one way that trans women may feel affirmed in their gender (Sevelius, 2013). Sex work is criminalised in the vast majority of the United States and puts trans women at risk for street violence (Poteat et al., 2015) as well as incarceration where they face an additional risk of sexual violence from men at high risk for HIV (Beck, Berzofsky, Caspar, & Krebs, 2013; Maruschak, 2005).

Enacted stigma was frequently described by trans women during the IDIs. The private nature of interpersonal rejection and lack of job promotion salient to the narratives of white trans women stood in stark contrast to the public violence and police harassment common to the narratives of Black trans women. These racial differences in patterns of stigma and discrimination have implications for HIV vulnerability. Public incidents and police encounters place Black trans women into greater contact with the criminal justice system. Engagement with criminal justice has been associated with HIV infection (Reisner, Bailey, & Sevelius, 2014). National data suggest that one in five trans women has been in jail or prison, with the highest prevalence among Black trans women compared to other races (Reisner et al., 2014). However, published data comparing arrest or incarceration rates between MSM and trans women are lacking. While 25% of trans women in the NHBS

reported a history of arrest in the prior year, the difference from the proportion of MSM arrested (16%) was not statistically significant. This lack of significance may be due to low statistical power in the small sample of trans women. Alternatively, trans women may share risk factors for arrest with MSM. During the period of data collection, most arrests in Baltimore city were linked to drug offenses (Schiraldi & Ziedenberg, 2003). Similarities in arrests between trans women and MSM in this study may have been related to similarities in patterns of drug use. The NHBS did not collect data on the reason for arrests or on the proportion of arrests that resulted in time in jail or prison. Therefore, it is possible that there were differences in incarceration despite similar rates of arrest.

Medicare is a federal health insurance programme available to people who are 65 or older and to younger people with disabilities. Therefore, it is surprising that one in five of the insured trans women in NHBS (average age 28 years) reported Medicare as their insurer, compared to 1 in 12 MSM (average age 34 years). One possible explanation is that trans people with HIV in this study had more advanced disease and qualified for disability-related Medicare on that basis. This interpretation is consistent with other research indicating significant barriers to trans women's engagement in HIV care (Sevelius, Patouhas, Keatley, & Johnson, 2014) as well as national data indicating disparities in HIV care by race, age, and gender (Hall et al., 2013). For the trans women in this study, disadvantage based on youth, Black race, feminine gender, and trans identity may intersect to form formidable barriers to early and effective HIV prevention and care.

Implications for data collection

The quantitative analysis was limited by the small number of trans participants and biased towards the null by recruitment of MSM and trans women at the similar venues. Neither the TSQ nor the 2004–2005 NHBS included questions about sexual risk behaviour or condom use among trans women, leaving important gaps in the understanding of how these may differ between MSM and trans women. Soft-tissue filler injections with loose silicone and other substances are believed to be common among trans women (Wilson, Rapues, Jin, & Raymond, 2014); however, none of the data sets asked questions about soft-tissue filler use. Data about the sexual partners of trans women were quite limited in all data sets. While the number of HIV studies among male partners of trans women is growing (Gamarel et al., 2015; Operario, Nemoto, Iwamoto, & Moore, 2011a, 2011b; Reisner et al., 2012; Wilson, Chen et al., 2014), they remain limited, leaving an important gap in our understanding of sexual networks among trans women and how these networks may impact HIV vulnerability.

These data limitations offer important lessons for future research with trans populations. The NHBS chose to include trans women in data collection, providing an important estimate of HIV prevalence among trans women in Baltimore. However, the recruitment strategies, sampling methods, and behavioural questionnaire had been designed for MSM. As a result, the number of trans participants was small and the study inadequately powered for some comparative analyses. To avoid inappropriate questions, all questions about sexual behaviour were omitted from NHBS interviews with trans women, leaving important gaps in our understanding of trans women's sexual risk factors and limiting our ability to directly compare correlates of risk between trans women and MSM. Importantly, the TSQ, designed

specifically for trans participants, also did not include questions about condom use or questions about use of injectable soft-tissue fillers. Future quantitative HIV research should strive not only to include trans people but also to use sampling strategies designed to reach trans participants. These strategies should aim to achieve sample sizes large enough to power substantive quantitative analyses. Questionnaires should be developed in partnership with trans communities to ensure that all questions, including about sexual behaviour, are appropriate for trans participants and include trans-specific questions about factors such as such as hormone and silicone use.

Implications for interventions

Overall, these data paint a picture of unique and overlapping HIV vulnerabilities. HIV prevalence is remarkably high among both MSM and trans women in Baltimore. Sexual partnerships with men are likely a shared risk behaviour for both groups. However, trans women face specific vulnerabilities related to trans discrimination, sex work, and desire for gender affirmation. These factors necessitate a different approach to HIV prevention interventions among trans women, particularly Black trans women who are particularly vulnerable to HIV. In order to be relevant to the realities of trans women's lives, ideal HIV prevention efforts should affirm trans identities, address self-esteem, improve access to safe, affordable, gender affirming interventions, support resilience to racism and transphobia, and address poverty, discrimination and violence.

Syndemics of poverty, substance use, discrimination, and violence among racial, sexual, and gender minorities have been associated with increased prevalence of HIV (Oldenburg, Perez-Brumer, & Reisner, 2014; O'Leary, 2014; Operario & Nemoto, 2010). Data from our analyses support a syndemic production of HIV among trans women in Baltimore. Research to better understand how intersectional experiences of oppression (Jefferson, Neilands, & Sevelius, 2013; Operario, Reisner, Iwamoto, & Nemoto, 2014) interact to produce the syndemics that increase HIV vulnerability among trans women is critical for the development of effective interventions for this population.

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Table 1

Select characteristics of participants in NHBS and TSQ.

	NHBS: MSM *N* = 645	NHBS: Trans women *N* = 49	TSQ[a] *N* = 40
Mean age (range)*	34.3 (18–69)	28.3 (18–57)	28.8 (18–58)
Race,%*			
Black	62.5	79.6	75.0
White	31.1	18.4	22.5
Other	6.4	2.0	2.5
Education, %*			
Post-graduate	6.3	0.0	2.5
Any college	44.7	14.3	22.5
High school or less	49.0	85.7	75.0
Sexual orientation, %*			
Heterosexual or ‘straight’	3.3	25.0	50.0
Homosexual, Gay, or Lesbian	63.1	35.4	32.5
Bisexual	31.8	10.4	17.5
Other	1.8	29.2	52.5
Condoms, %			
Received free condoms in last 12 months	83.8	78.7	
Used free condoms in last 12 months	79.4	91.9	
More likely to use if free	60.9	56.8	
Drug use, %*			
Ever injected drugs	17.2	20.8	
Non-injection drugs in last 12 months	49.0	39.6	
Amphetamine	17.4	20.0	
Crack cocaine	26.2	20.0	
Heroin	15.7	5.0	
Marijuana*	76.0	95.0	
Ecstasy*	18.6	40.0	
HIV, %			*N* = 21
Ever tested	86.8	87.8	–
Self-report HIV-positive	15.9	20.8	–
Laboratory confirmed HIV-positive	37.7	42.5	33.3
Unaware of HIV+ status	58.4	64.7	–

[a]TSQ participants were allowed to select more than one sexual orientation, therefore sum may be >100%.

*p≤.05 for differences between MSM and transwomen in NHBS.

Table 2

Illustrative quotes from IDIs with trans women.

Themes	Illustrative quotes
Relationship challenges	*Its rare that you can really get a guy to really want to stay with you, you know what I'm saying. They'll deal with you, but I mean as far as you're in a* ***committed relationship, no they won't.***
	I got involved with a guy. And he was like, Well, I already know what you are and who you are and I'm going to love you regardless.' And I will never find that ever again. I don't think I'll ever find a guy like him ever again. And we stayed in a relationship for eight years. He decided he wanted to get out of the relationship because ***he wanted to be with a real female*** *so I said okay.*
Sexuality	*Then I'd go ahead and do it and* ***not really want to do it,*** *you know what I'm saying? I'm just doing it just to please them. And then, when I'm doing it, I'm not putting my heart into it. I'm, like, okay, whatever, you know?* ***Just so he won't go with nobody else.***
	... they the man and everything, you know what I'm saying, but when they're in the bedroom, sometimes the tables turn. They want to be the one, you know, ***they want you to dominate them,*** *you know? So that ain't always true that you'll be a bottom all the time.*
	I don't really care for me penetrating anybody or anything like that. I don't really care for all of that. But I've had boyfriends thatve wanted it, so me being the lady that I am, I always would give into it, ***because I don't want them to go anywhere else.*** *This is someone I'm dating, so I would do it.* ***But I really don't care for it.***
HIV vulnerabilities	*I think it's higher because people in community, like I said earlier, some people get kicked out, some people's families disown them, they don't have anything to do.* ***Transitioning is expensive.*** *It's not free and it's not free and it's not cheap. So I think a lot of girls and lot of men, as well, they turn to* ***sex work.*** *So they're doing all this sex work and they're sleeping with these different men and women for money, so they can be able to survive, to live, to be able to transition and everything like that ... And the risk of HIV and gonorrhoea is extremely high, compared to just a biological female or male who can work a regular job, who the family supports them and still loves them.* ***Even if they were gay biological male or gay biological females, their families still is more accepting*** *of that compared to gender identity.*
	I was like oh my God you locked me up for driving on a date in a car with somebody. I didn't even know the car was stolen, you know, what I'm saying. I wouldn't have got in there. They ***locked me up*** *for six months. And while I was in there* ***a guy raped me.***
	... They came to me like a week later and told me to come up to the infirmary and they told me that, ***The guy that did that to you, he was infected with HIV.****'*
	Like I said, I've been transgendered for almost 11 years now, which is a really good thing to me, because I know a lot of homosexuals and transsexuals and bisexuals- just all types of people- that have contracted AIDS and HIV, and all this time I have not contracted it. I took my test and I was negative ... ***It's a blessing every time I go to take that test, even though I know what I do as far as sexual-wise.***