

Original article

Overlooked, misunderstood and at-risk: Exploring the lives and HIV risk of ethnic minority male-to-female transgender youth

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Abstract

Purpose: To describe the real life challenges and HIV-risk behaviors of male-to-female (MTF) transgender youth from communities of color.

Methods: A convenience sample ($n = 51$) of ethnic-minority MTF transgender youth aged 16–25 years completed an anonymous questionnaire including demographics, psychosocial measures, and participation in substance use and sexual risk behaviors. Descriptive analyses and analyses of association were used to interpret the data.

Results: The median age of participants was 22 years, and 57% were African-American. Twenty-two percent reported being human immunodeficiency virus positive (HIV+). Prevalence of life stressors among the sample included history of incarceration (37%), homelessness (18%), sex in exchange for resources (59%), forced sexual activity (52%), difficulty finding a job (63%), and difficulty accessing health care (41%). Within the past year, 98% had sex with men, 49% had unprotected receptive anal intercourse, and 53% had sex under the influence of drugs or alcohol. Substance use within the past year was common, with marijuana (71%) and alcohol (65%) most frequently reported. Twenty-nine percent of participants had used injection liquid silicone in their lifetime. Other injection drug use and needle-sharing behaviors were rare. Compared with other racial/ethnic groups, HIV was found in higher rates among African-American youth ($p < .05$). HIV status was not associated with any other demographic characteristic, psychosocial measure, sexual or substance use behavior.

Conclusions: These findings suggest that MTF transgender youth of color have many unmet needs and are at extreme risk of acquiring HIV. Future research is needed to better understand this adolescent subgroup and to develop targeted broad-based interventions that reduce risky behaviors. © 2006 Society for Adolescent Medicine. All rights reserved.

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Transgender refers to a range of individuals with atypical gender characteristics or gender identities discordant from their anatomic sex, including transsexuals, cross-dressers, and androgynists [1]. Appreciating the distinctions and interrelationships among *biologic sex*, *gender*, and *sex-*

ual orientation will help adolescent health care providers better understand the complex world in which transgender youth develop.

Biologic sex is most commonly assigned at birth based upon sexual characteristics of the external genitalia. Typically male (penis) or female (vulva), a binary model of biologic sex fails to consider the disconnection between anatomy, karyotype and phenotype in individuals with intersex conditions. *Gender* however, is a more personal and culturally defined construct based upon one's inner sense of

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being male or female. Gender occurs across a wide continuum and its complexity is not well captured as a binary construct. For transgender individuals, gender identity differs from biologically defined sex [1,2]. Finally, *sexual orientation* is defined by the identity of persons to whom individuals are physically or emotionally attracted [1]. Because sexual orientation varies with both gender and biologic sex—which themselves are complex among transgender individuals—traditional labels of sexual orientation among transgender youth are often difficult to characterize. Generally, transgender individuals are classified as male-to-female (MTF) or female-to-male (FTM). MTF individuals experience discomfort with their male biologic sex and identify with a female gender; FTM individuals experience discomfort with their female biologic sex and identify with a male gender [2].

Due in part to social isolation and limited understanding of their lives or experiences, transgender individuals face many challenges to their health and well-being [2]. Data suggest that particularly MTF transgender individuals, with whom the bulk of available research has been done, are exposed to stressful environments and participate in behaviors that compromise their health and place them at risk for human immunodeficiency virus (HIV) and other sexually transmitted diseases (STDs) [2–12]. Estimates of HIV prevalence among MTF transgender adults range from 11–78% [3–11]. Los Angeles- and San Francisco-based studies reported ethnic differences in HIV seroprevalence among MTF transgender individuals, with African-Americans and Latinas having the highest infection rates [4,10,13]. Although limited data exist on the experiences of transgender youth from communities of color, anecdotal evidence suggests that they are not only at risk of acquiring HIV, but also face enormous challenges navigating adolescent and gender identity development without readily available, culturally appropriate health care and social support services [2]. This study explores the real life challenges, psychosocial environment, and HIV-risk behaviors of ethnic minority MTF transgender youth.

Methods

Subjects and recruitment

Participants were a convenience sample ($n = 51$) of self-identified ethnic minority MTF transgender youth aged 16–25 years recruited over a 4-month period in the Spring of 2003 from community-based organizations serving transgender youth and advertisements in social venues frequented by transgenders. Participation was limited to ethnic minority youth because funding for the project was specific to substance use and HIV prevention research in communities of color.

Procedures and research design

A cross-sectional survey assessed HIV and substance use risk along with psychosocial constructs including life stressors, social support, depression, self-esteem, and attitudes surrounding safer sex. The survey was administered at two community-based sites in geographically separate Chicago neighborhoods. A *Transgender Youth Working Group* (TYWG) composed of key constituents from six community agencies met regularly for six months to develop the survey and create study procedures. The six community agencies included: two social service organizations serving gay youth; one community-based health center serving the lesbian, gay, bisexual and transgender (LGBT) community; one substance use treatment center, one organization providing support services to transgender individuals of color, and the Chicago Department of Public Health's Office of LGBT Health. The final survey contained items the TYWG felt were significant to MTF transgender youth or to HIV or substance use prevention. To ensure the survey was culturally appropriate, MTF transgender youth provided direct input to the TYWG. Oral consent was obtained and participation was voluntary and anonymous. Onsite TYWG staff members ensured no duplication of participants. The survey required approximately 35 minutes to complete and participants received \$25. The Institutional Review Board of Children's Memorial Hospital approved study procedures before data collection.

Measures

Sociodemographic measures included age, race, birth sex, gender self-identification, sexual orientation, education, employment status, and history of incarceration or arrest. Psychosocial variables were largely measured by previously validated instruments used with adolescents or populations at risk of HIV. Minor modifications were made to some of the original instruments in response to TYWG concerns regarding the cultural appropriateness for MTF transgender youth. Details of our psychosocial measures have been discussed previously and a brief description of each follows:

Social support. The *Social Support for Adolescents Scale* (SSAS) [14] contains items assessing perceived social support from multiple sources (friends, family, service providers, etc.). The SSAS has been used in urban youth with a Cronbach alpha of .80; our sample's alpha was .85.

Life stress. A life stress scale was specifically designed for this study. Ten items assessed potentially difficult life experiences that may have occurred in the past year. Participants were asked, "During the past year, how often would you say that you have had problems: accessing transportation, getting food, getting medical care, finding a safe place to sleep, getting a job, being bothered by police, etc.?" Responses were recorded on a four-point scale from "never" to "often." Our sample's Cronbach alpha was .80.

Sexual risk cognitions. A modified version of the *Sexual Risk Cognitions Questionnaire* (SRCQ) [15] assessed attitudes and beliefs around safer sex. Participants were asked reasons for “not considering” condom use within the past year. Modifications were made to the original instrument and 14 of the 35 original items were selected. Shah et al reported a Cronbach alpha of .91 for the original questionnaire [15]; our scale’s alpha was .91.

Self-esteem. The *Rosenberg Self-Esteem Scale* (RSES) is a 10-item global measure of self-esteem [16]. The RSES has been widely used with adolescents with Cronbach alphas > .70; our sample’s alpha was .87.

Depression. The *Center for Epidemiological Studies-Depression 8* (CES-D8) [17] is widely used in survey research to detect depressive symptoms. Although its original form contains 20 items, this study used a validated short-form for which Cronbach alphas ranged from .85–.90; our sample’s alpha was .87.

HIV and substance use risk behaviors. To assess risk, 26 items adapted from the CDC HIV Risk Assessment data bank were used [18]. Items focused on sexual behavior and substance use within the last year. Sexual risk items asked about the gender and number of sexual partners, type of sexual activity (oral, vaginal, anal), frequency of unprotected intercourse, sex with high-risk partners, sex in exchange for resources, forced sex, and sex while using alcohol or drugs. Substance use items asked about traditional substances (marijuana, alcohol, cocaine, etc.), injection drugs, needle sharing, and use of feminizing hormones and injection silicone. History of STDs and HIV were measured by self-report. A *Sexual Risk Score* (SRS) was constructed to assess the sum number of sexual risk behaviors in which each participant engaged. Six high-risk behaviors comprised the SRS: unprotected oral sex, unprotected anal insertive intercourse, unprotected anal receptive intercourse, sex while using alcohol or drugs, forced sex, and sex in exchange for resources. Each participant’s score ranged from 0 to 6.

Qualitative information. During a brief exit interview, informal open-ended questions developed by the TYWG allowed youth to elaborate on feelings regarding research participation, personal experiences, and HIV and prevention activities.

Statistical analyses

Frequencies of sociodemographic and psychosocial data as well as the prevalence of HIV and substance use risk behaviors were generated for descriptive purposes. Composite scores were calculated for psychosocial measures and mean scores were compared with population norms whenever available. Exploratory analyses determined factors associated with HIV using self-reported HIV status as the dependent variable (DV). Chi-square, and for small cell

counts, Fisher’s exact test statistics determined correlations between the DV and dichotomous independent variables (IV). Nonparametric testing determined correlations between the DV and scaled IV measures (CESD-8, SSAS, RSES, SRCQ) and also examined SRS scores between HIV+ and HIV– individuals. A *p* level of < .05 was used to test all analyses.

Results

Demographics

Fifty-one youth (*n* = 51) completed the survey. The median age of participants was 22 years (range 16–25); 57% were African-American and 18% were homeless. All participants were born anatomically male; 53% self-identified their gender as transgender and 37% as female. Although virtually all (*n* = 50) participants reported having sex with other men, with regards to sexual orientation, 47% considered themselves to be homosexual, 26% heterosexual, and 16% bisexual. Participants’ wide range of responses to gender and sexual orientation items highlighted the complexity of these issues among transgender youth. Table 1 summarizes the sociodemographic characteristics of the sample.

Psychosocial measures

Social support. Friends, rather than family, were the most frequently cited sources of social support, with 98% of participants stating that friends were “somewhat” or a “great deal” helpful for emotional support and 80% reporting that friends were at least “somewhat” helpful for “money or other things.” In contrast, only 68% of participants reported that mothers were at least “somewhat” helpful for emotional support and 69% reported that fathers were unavailable for emotional support. Over 60% of participants indicated that physicians or case managers were at least “somewhat” helpful for emotional support.

Life stressor. Participants reported problems with numerous day-to-day activities in the past year. General transportation was the most commonly reported problem, with 65% of youth reporting “sometimes” or “often” experiencing difficulty in this area; 63% trouble finding a job; 53% being frequently bothered by police; 46% having difficulty finding safe places to sleep, and 41% difficulty getting medical care.

Sexual risk cognitions. Youth offered multiple reasons for unsafe sex (Figure 1). On average 15–21% “agreed” or “strongly agreed” that they considered *not* using condoms for reasons related to HIV knowledge deficits (e.g., “my partner looks too healthy to be HIV+”), sexual partners pressures (e.g., “my partner may get upset if I suggest using one”), or general safe sex fatigue (e.g., “it is a hassle to use one”). An additional 10–15% of participants were “neutral” on each of these items. In contrast, 92% “disagreed” or

Table 1
Sociodemographic of transgender youth respondents (n = 51)

Variable	Number (%)
Age (years)	
16–19	12 (24%)
20–22	15 (29%)
23–25	24 (47%)
Anatomic sex	
Male	51 (100%)
Gender identification	
Male	4 (8%)
Female	19 (37%)
Transgender	27 (53%)
Both male and female	1 (2%)
Sexual orientation	
Heterosexual	13 (26%)
Homosexual	24 (47%)
Bisexual	8 (16%)
Not sure/other	6 (12%)
Race/ethnicity	
African-American	29 (57%)
Latino/a	8 (16%)
Asian or Pacific Islander	1 (2%)
Multi-racial	11 (22%)
Other	2 (4%)
Currently in school	13 (26%)
Currently employed	17 (33%)
Current housing status	
Apt/house, alone	11 (22%)
Apt/house, roommate	8 (16%)
Living with parents/family	12 (24%)
Living with partner	3 (6%)
Group/residential facility	8 (16%)
No permanent address	9 (18%)
History of arrest	34 (67%)
History of incarceration	19 (37%)

Table 2
Substance use among transgender youth (n = 51)

	Number (%)
Traditional substances of use: any reported substance use in past 12 months	
Marijuana	34 (71%)
Alcohol	32 (65%)
Ecstasy (MDMA)	11 (23%)
Cocaine	10 (21%)
Methamphetamine (crystal meth)	2 (4%)
Heroin	2 (4%)
Benzodiazepines (i.e., Valium, Xanax, etc.)	2 (4%)
Ketamine	1 (2%)
Gamma hydroxy butyrate (GHB)	1 (2%)
Any injection drug use (IDU)—Non-hormone	4 (8%)
Shared needles for IDU	1 (2%)
**Shared needles as % of overall IDU = 25%	
Transgender-specific substances of use: any reported substance use — lifetime	
Hormones (i.e. Estrogen, Progesterone, etc.)	31 (61%)
Where do you get hormones? (n = 31)	
Doctor or other medical provider	9 (29%)
Friends	15 (48%)
Internet	1 (3%)
Other	6 (19%)
Injection Hormones	22 (44%)
Injection Silicone	15 (29%)
Where do you inject? (n = 15)	
Face	9 (60%)
Breasts	11 (73%)
Hips	11 (73%)
Buttocks	9 (60%)
Shared needles for injection hormones/silicone	4 (8%)
Any needle use (IDU/hormones/silicone)	24 (47%)
**Shared needles as % overall needle use = 17%	

“strongly disagreed” that they considered having unsafe sex because “the success of the new HIV medicines makes me less concerned about getting HIV.”

Self-esteem. Participant’s mean score on the *RSES* was 21.5 (range: 9–30); within the general population’s normal range of 15–25.

Depression. On average, participants reported similar rates

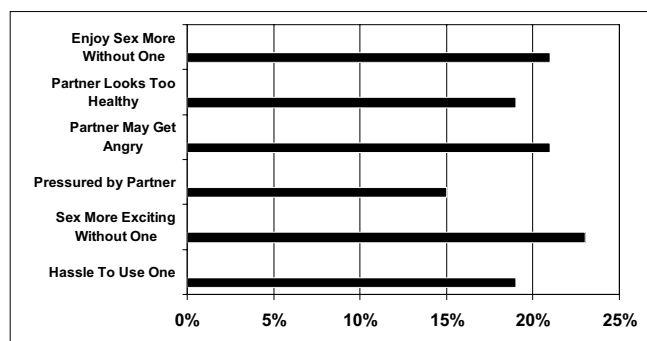


Fig. 1. Sexual risk cognitions: reasons for inconsistent condom use.

of depressive symptoms as the general population. The sample’s mean CES-D was 3.9 (range: 0–15); below the cutoff of 7 used to suggest high levels of psychological distress. Ten youth (19.2%) scored above the cutoff; 20% of the general population would be expected to score in this range.

Substance use and sexual risk behaviors. Participants’ high rates of substance use and sexual risk taking are summarized in Tables 2 and 3. No substance use or sexual risk taking varied significantly by age of participant ($p > .05$). Marijuana and alcohol were most commonly reported, with 71% and 65% of participants, respectively, reporting use in the past year. Traditional injection drugs (e.g., heroin) were used uncommonly. However, 29% reported lifetime use of injection silicone. Less than 10% reported needle sharing in conjunction with injection drug use. Sixty-one percent of participants reported using feminizing hormones (i.e., estrogen), but only 29% got hormones from a medical provider.

With regards to sex, virtually all participants (50/51) reported sex with men within the past year. Fifty-five percent of study youth had a main sexual partner; 61% of them also reported sex with casual partners and 57% reported

Table 3
Sexual risk of transgender youth (n = 51)

Behavior (Past 12 months)	Number (%)
Sexually active	50 (98%)
Gender of sexual partners	
Males only	43 (84%)
Both males and females	7 (14%)
Females only	0 (0%)
Do you have a main sexual partner?	28 (55%)
Also sexually active with casual/ non-main partner 17/28 (61%)	
UAI with main partner 16/28 (57%)	
Frequency of unprotected sex	
Oral sex — unprotected (any)	43 (84%)
UAI — Insertive (any)	19 (37%)
UAI — Receptive (any)	25 (49%)
Other high-risk sexual behaviors	
Sex in exchange for resources (i.e., money, drugs, shelter)	30 (59%)
Sex against will (forced sex)	26 (51%)
Sex with known HIV + individual	17 (33%)
Sex while intoxicated with drugs/alcohol	27 (53%)
Self-reported history of STD and HIV infection	
Diagnosed with STD in past year	6 (12%)
Diagnosed with HIV — lifetime	11 (22%)

UAI = unprotected anal intercourse.

unprotected anal intercourse (UAI) with their main partners. Overall, UAI was common among participants; 37% reporting insertive UAI and 49% reporting receptive UAI within the past year. Sexual victimization was also common; 52% of participants reported forced sexual intercourse and 59% reported sex in exchange for money, drugs or shelter in their lifetimes. Eleven participants (22%) reported being HIV+.

Statistical analyses: dependent variable = HIV status

Ten of 11 (91%) HIV+ individuals in the study were African-American. Thirty-four percent of the study's African-American youth reported being infected with HIV. In comparison with other ethnic minority groups, our sample's African-American youth were eight times more likely to report being HIV+ ($p < .01$). No other demographic variable, risk behavior, or psychosocial measure was associated with being HIV+. On the SRS, the sum number of sexual behaviors each participant engaged in was not significantly associated with HIV status ($p = .41$). The mean number of behaviors reported by HIV+ participants was 3.0, compared with 3.5 among HIV- participants.

Qualitative comments

Qualitative comments were offered by > 80% of youth during the brief exit interview. Regarding research participation, all responding youth stated having a positive experience and many reported hoping it might improve understanding of their community. More than 20% of the sample cited experiencing discrimination from medical and social services agencies insensitive to transgender issues (e.g.,

being critical about appearances, using male personal pronouns instead of female, or asking for their "real name"). Comments regarding HIV risk detailed the complex environment in which transgender youth develop and the challenges facing HIV preventions efforts, including:

- "I hope surveys like these help people to understand the problems we have. It's not just HIV although that's a big part of it."
- "I hope you all can develop services for us. There aren't many people or places for us to turn to."
- "Of course I am worried that I might get it [HIV]. But it seems to be all people talk about."
- "We are exposed due to sex trade, usually with married men. Trans[gender] girls, particularly the young ones, have no idea of the risk turning tricks—people offer more money not to use condoms."
- "Preventing HIV in us girls is complicated. We need jobs, places to stay, doctors. HIV is just one of the many problems we deal with."

Discussion

This study indicates that ethnic minority MTF transgender youth experience an adolescence complicated by a broad range of psychosocial and environmental challenges inclusive of, but not limited to HIV. Our participants reported high rates of unstable housing, economic hardships, legal troubles, and difficulty accessing culturally competent health care [8,10,12,19]. In addition, youth reported limited familial support and high rates of substance use and risky sexual activities.

Although all participants were born biologic males, the majority (90%) self-identified as either transgender or female. Although 100% of sexually active youth reported sex with men, only 63% considered themselves homosexual or bisexual. Twenty-six percent considered themselves heterosexual, identifying their sexual orientation with a female gender as opposed to their male anatomic sex. Remaining cognizant of these complexities and the fluidity of sexual identity development among some adolescents and young adults enables clinicians caring for transgender youth to provide nonjudgmental health care services. Intake forms and medical history-taking should be inclusive of youths' preferred terminology because the use of "incorrect" labels or impersonal pronouns may be considered culturally inappropriate. Providers' perceived lack of sensitivity toward transgender issues may alienate at-risk youth most in need of prevention and other health care services. For youth in our sample, access to care may be complicated by the dual stigma associated with being an ethnic, as well as sexual minority. Transgender youth, particularly of color, may feel disconnected from the larger gay, lesbian and bisexual (GLB) community, which is often seen as predominantly white and not supportive of transgenders [19–22].

With regard to stigma and social support, many transgender youth experience family conflict at a time when parental support plays a critical role in healthy adolescent development [2,20]. Although participants reported self-esteem and depression scores similar to the general population, many cited limited social support from parents or siblings. Familial conflict can lead to homelessness, as was reported by 18% of our sample. Highlighting that housing difficulties were common among MTF transgender youth, 46% reported difficulty finding safe places to sleep. Housing struggles among transgender youth are further complicated by discrimination based upon female gender identity or presentation. Physical or sexual exploitation may occur when young MTF transgender individuals are placed in male residential facilities regardless of their female gender identity or appearance.

An additional stressor complicating the lives of our participants is economic instability, with the majority of our youth reported difficulty finding both food and jobs. Unable to maintain gainful employment, many turn to prostitution or other forms of commercial sex work (stripping, dancing) to earn money and provide financial support [3,4,10,12,20]. Sex work is particularly troubling as it can be difficult to alter or stop. Although sex work may help youth achieve otherwise elusive financial stability and simultaneously affirm their female gender identity, it places participants at extreme risk for HIV and other STDs [3–12]. Legal difficulties further complicate commercial sex work. Of participants engaged in commercial sex, over 90% reported a history of incarceration or arrest.

Substance use and risky sex while were common among study participants and may signify mechanisms to cope with sex work or other psychosocial stressors [12,22]. Although few participants injected traditional drugs, injection hormone use and injection silicone to manipulate and feminize physical appearance were common. The majority of participants using feminizing hormones obtained them from non-medical providers, and the health consequences (mood swings, hepatic disease, thromboembolic disease, etc.) of hormone use in transgender youth have not yet been fully explored [2]. Perhaps more troubling, unlike silicone implants (also banned by the Food and Drug Administration) where liquid silicone is encased in specially designed plastic before being surgically implanted, transgender individuals typically have silicone, or adulterated substances such as oils or paraffin injected directly into cheekbones, lips, breasts and other body parts. These activities can have serious medical consequences, and deaths have been reported in association with the illegal use of injection silicone in transgenders [23–25].

Within the past year, participants reported high rates of unsafe sex with multiple partners. Inconvenience and fear of anger or rejection from sexual partners were raised by youth as rationale for inconsistent condom use. Others reported knowledge deficits with regards to HIV transmission or

believed that prior unsafe behavior made the use of condoms at this point unnecessary. Although the success of antiretroviral medications has been postulated in adults as a reason for inconsistent condom use owing to “HIV optimism,” this was largely discounted by our youth [26,27]. Alarming, 22% of our participants were HIV+, higher than the 14% prevalence reported in a CDC study on young men having sex with other men [28]. Similar to data on MTF transgender adults and consistent with U.S. infection rates where African-Americans account for over half of new HIV/AIDS diagnoses, our sample’s African-American youth were more likely than other ethnic minority groups to report being HIV+ ($p < .05$). This suggests that this subpopulation may benefit from transgender-specific HIV interventions targeting the African American community [28,29]. Although no other sociodemographic characteristic, interpersonal or environmental factor was associated with being HIV+, more detailed investigation into these areas may prove helpful in identifying predictors and/or correlates of risk. In addition, both HIV+ and HIV– youth reported similar rates of substance use and risky sex. These findings have public health implications for the development of primary and secondary transgender-youth-specific HIV prevention efforts. The qualitative comments provide insight into the complexity of HIV risk among the MTF transgender population, particularly youth of color. HIV is one of many interpersonal and environmental stressors facing this community and the potential benefit of broader-based interventions that address needs on a holistic level should not be overlooked.

This study has several limitations. As a descriptive study with a relatively small sample, caution should be used interpreting the identified frequencies, associations, and lack of associations. The data collected were cross-sectional and therefore, we can only examine associations without drawing conclusions about causality. Although self-report of sexual behaviors and substance use tend to be reliable; it cannot be determined whether respondents tended to minimize or over-report risk behaviors [30,31]. Our reliance on a community-based sample from one geographic area may limit generalizability to other samples of MTF transgender youth. Our population’s experiences and needs may not accurately reflect a more culturally diverse group of transgender youth. Finally, although many of our measures (i.e., CES-D, RSES, etc.) have been used extensively in adolescent/young adult populations, they have not been tested with transgender youth and the validity and normative values presented here should be interpreted with caution.

Conclusion

This study is a first step in understanding the complex needs of an overlooked youth subpopulation. Although HIV is clearly a major problem among ethnic minority MTF transgender youth, this population faces a variety of envi-

ronmental stressors and challenges to their health, well-being, and overall survival. Studies with a larger, more diverse MTF transgender youth sample will need to be done to better understand the unique underpinnings of sexual and behavioral risk in this population. Given the complex interactions among stigma, sexual identity formation, and sexual risk, more sophisticated qualitative techniques may be useful in acquiring an in-depth look at the needs of MTF transgender youth so that culturally appropriate, broad-based, and theoretically grounded interventions can be developed and implemented.

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References

- [1] Gainor KA. Including transgender issues in lesbian, gay, and bisexual psychology: implications for clinical practice and training. In: Greene B, Croom GL, eds. *Education, Research, and Practice in Lesbian, Gay, Bisexual, and Transgendered Psychology: A Resource Manual*, Vol.5. Thousand Oaks, CA: Sage Publications, 2000:131–60.
- [2] Israel GE, Tarver DE. *Transgender Care Recommended Guidelines, Practical Information, and Personal Accounts*. Philadelphia, PA: Temple University Press, 1997:3–20,99–108,132–140.
- [3] Nemoto T, Operario D, Keatley J, et al. HIV risk behaviors among male-to-female transgender persons of color in San Francisco. *Am J Public Health* 2004;94(7):1193–9.
- [4] 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. *Am J Public Health* 2001;91(6):915–21.
- [5] Elifson KW, Boles J, Posey E, et al. Male transvestite prostitutes and HIV risk. *Am J Public Health* 1993;83(2):260–2.
- [6] Kenagy GP. HIV among transgendered people. *AIDS Care* 2002; 14(1):127–34.
- [7] Gattari P, Spizzichino L, Valensi C, et al. Behavioural patterns and HIV infection among drug using transvestite practising prostitution in Rome. *AIDS Care* 1992;4:83–7.
- [8] Nemoto T, Luke D, Mamo L, et al. HIV risk behavior among male-to-female transgenders in comparison with homosexual or bisexual males and heterosexual females. *AIDS Care* 1999;11(3):297–312.
- [9] Modan B, Goldschmidt R, Rubinstein E, et al. Prevalence of HIV antibodies in transsexual and female prostitutes. *Am J Public Health* 1992;82(4):590–2.
- [10] Simon PA, Reback CJ, Bemis CC. HIV prevalence and incidence among male-to-female transsexuals receiving HIV prevention services in Los Angeles County. *AIDS* 2000;14:2953–5.
- [11] Varella D, Tuason L, Proffitt MR, et al. HIV infection among Brazilian transvestites in a prison population. *AIDS Patient Care STDS* 1996;10:299–302.
- [12] Nemoto T, Operario D, Keatley J, et al. Social context of HIV risk behaviors among male-to-female transgenders of color. *AIDS Care* 2004;16(6):724–35.
- [13] Kellogg TA, Clements-Noelle K, Dilley J, et al. Incidence of human immunodeficiency virus among male-to-female transgender persons in San Francisco. *J Acquir Immune Defic Syndr* 2001;28:381–4.
- [14] Seidman E, Allen L, Aber JL, et al. Development and validation of adolescent perceived microsystem scales: social support, daily hassles, and involvement. *Am J Community Psychol* 1995;23:355–88.
- [15] Shah D, Thornton S, Burgess P. Sexual risk cognitions questionnaire: a reliability and validity study. *AIDS Care* 1997;9(4):471–80.
- [16] Rosenberg M. *Society and the Adolescent Self-Image*. Princeton, NJ: Princeton University Press, 1965.
- [17] Radloff LS. The CES-D Scale: a self-report depression scale for research in the general population. *Appl Psychol Meas* 1977;1(3): 385–401.
- [18] Centers for Disease Control and Prevention HIV/STD Behavioral Surveillance Working Group [cited 2003 Jan]. Available from: http://www.cdc.gov/nchstp/od/core_workgroup/sexbeh500.pdf.
- [19] Lombardi E. Enhancing transgender health care. *Am J Public Health* 2001;91:869–72.
- [20] Kammerer N, Mason T, Connors M. Transgender health and social service needs in the context of HIV risk. *Int J Transgender* 1999;3:1.
- [21] Harper GW, Jernwall N, Zea MC. Giving voice to emerging science and theory for lesbian, gay, and bisexual people of color. *Cultur Divers Ethnic Minor Psychol* 2004;10(3):187–99.
- [22] Clements K, Wilkinson W, Kitano K, Marx R. HIV prevention and health service needs of the transgender community in San Francisco. *Int J Transgender* 1999;3:1–2. Available from: http://www.symposium.com/ijt/hiv_risk/clements.htm.
- [23] Castre J, Brun P, Soler P, et al. Acute and latent pneumonitis after subcutaneous injections of silicone in transsexual men. *Am Rev Respir Dis* 1987;135(1):236–40.
- [24] Ellenbogen R, Rubin L. Injectable fluid silicone therapy: human morbidity and mortality. *JAMA* 1975;234(3):308–9.
- [25] O'Hare P. Injected silicone suspected in third death. *Houston Chronicle*; Aug 21,2003. Available from: <http://www.genderadvocates.org/News/FrameNews.html>.
- [26] Katz MH, Schwarcz SK, Kellogg TA, et al. Impact of highly active antiretroviral treatment on HIV seroincidence among men who have sex with men: San Francisco. *Am J Public Health* 2002;92(3):388–94.
- [27] Vanable PA, Ostrow DG, McKimman DJ, et al. Impact of combination therapies on HIV risk perceptions and sexual risk among HIV-positive and HIV-negative gay and bisexual men. *Health Psychol* 2000;19(2): 134–45.
- [28] Centers for Disease Control and Prevention. HIV incidence among young men who have sex with men—seven U.S. cities, 1994–2000. *MMWR* 2001;50(21):440–4.
- [29] Centers for Disease Control and Prevention. HIV/AIDS Surveill Rep 2002;14:1–40.
- [30] James NL, Bignell CJ, Gillies PA. The reliability of self-reported sexual behavior. *AIDS* 1991;5:333–6.
- [31] Weatherby NL, Needle R, Cesari H, Booth RE. Validity of self-reported drug use among injection drug users and crack cocaine users recruited through street outreach. *Eval Program Plann* 1994;17:347–55.