HIV RISK BEHAVIORS AMONG MAHUWAHINE (NATIVE HAWAIIAN TRANSGENDER WOMEN)

Lyndall Ellingson and Carol Odo

This study explored HIV risk behaviors among Hawaiian and Polynesian-identified transgender women living in Hawai'i. The term transgender encompasses the experience of individuals who violate rigid binomial Western gender roles (Bockting, Robinson, & Rosser, 1998; Lombardi, Wilchins, Priesing, & Malouf, 2001; Yep & Pietri, 1999, pp. 199-200). Although traditional Polynesian cultures tolerate more gender role variations than Western culture, postcolonial acculturation has resulted in notable stigma for transgender individuals in Hawai‘i today (Kame‘eleihiwa, 1999; Kanuha, 2000). Mahu is a cross-Polynesian term originally describing transgender women or female-acting males (Link, 2004; Nanda, 2000; Odo & Hawelu, 2001; Souza, 1976). Mahuwahine is a newly coined term of empowerment among Hawai‘i’s transgender community signifying male-to-female (MTF) transgender identity in varying, personally chosen, forms and coincides with the Hawaiian cultural renaissance (Odo & Hawelu, 2001). Although most of the participants in this study identified as mahu or Mahuwahine there was a significant range in self-identifying terminology. Because of this range and intended audience this article will use the term transgender women in referring to individuals described in the findings.

A review of the literature found only two studies specifically examining HIV infection risk among Pacific Islander transgender women in the United States (Odo & Hawelu, 2001; Operario & Nemoto, 2005). In their case management-based study of 129 Polynesian clients enrolled in a Honolulu HIV prevention and education program, Odo and Hawelu (2001) found a higher incidence of HIV infection in the client sample than in the general Native Hawaiian population (3.0% vs. 0.01%) and increased HIV risk indicators: 31% clients reported having used drugs (excluding marijuana) vs. 2.5% Native Hawaiians in general; nearly all (99%) reported incomes below poverty level as compared to 14% of Native Hawaiians, and 12% had experienced homelessness in the past year vs. 0.5% of Native Hawaiians. Operario and Nemoto (2005) interviewed 110 Asian Pacific Islander (API) transgender women as...
part of a larger study of sexual risk behaviors and substance use among transgender women of color. Of this sample, only 4% identified as Hawaiian and 86% were born outside the United States. Participants were recruited using venue-based sampling strategies to maximize API MTF enrollment. Of the 110 API transgender women included in the sample, 13% reported being HIV-positive, 20% reported having had unprotected receptive anal intercourse (URAI) in the past 30 days, and 46% reported having had sex under the influence of substances with a male partner.

In view of the limited data on HIV risk among Pacific Islander transgender women we also reviewed the literature on ethnic minority and transgender HIV risk. Increased risk of HIV infection among transgender persons is well documented. Various factors contribute to this heightened risk: social and physical isolation and discrimination; feelings of shame, vulnerability, and hopelessness; employment discrimination and subsequent participation in sex work or exchange sex work; seeking multiple sexual partners to gain gender affirmation; violence; and injection drug use (Bockting et al., 1998; Boles & Elifson, 1994, Clements-Nolle, Marx, Guzman, & Katz, 2001; Crosby & Pitts, 2007; Elifson, Boles, Posey, Sweat, Darrow, & Elsea, 1993; Kenagy, 2002; Lombardi, 2001; Melendez & Pinto, 2007; Nemoto, Luke, Mamo, & Ching, 1999; Nemoto, Operario, Keatley, Han, & Soma, 2004; Nemoto, Operario, Keatley, & Villagas, 2004; Nemoto, Sausa, Operario, Keatley, 2006; Operario & Nemoto, 2005; Yep & Pietri, 1999).

The elevated risk for HIV infection among ethnic minorities in the United States is also well documented, and although estimated rates of AIDS per 100,000 for APIs (9.0) is the lowest among all ethnic groups (Centers for Disease Control and Prevention [CDC], 2005), it should be noted that the API category is notoriously flawed when it comes to HIV/AIDS. The experiences of Asian Americans are very different from Pacific Islanders whose cultural history is more similar to Native Americans (i.e., indigenous victims of colonial conquest) than to those with a primarily immigrant heritage (Marger, 2000). To combine these groups hides significant data relative to ethnic/cultural experience and underrepresents heightened HIV/AIDS rates among Pacific Islanders, including Native Hawaiians and part-Hawaiians (Busch, Easa, Grandinetti, Mon, & Harrigan, 2003; Hawai`i State Department of Health [HSDH], 2003).

Among the state of Hawai`i AIDS data, in which API ethnicities can be disaggregated, Hawaiians account for the second-largest number of total AIDS cases after Caucasians (HSDH, 2005; 5-year AIDS case prevalence data; July 1, 2000-June 30, 2005). Although Hawaiians and part-Hawaiians comprise 8.6% of the state’s population they account for 11% of cumulative reported AIDS cases as of June 30, 2005. AIDS infection rates among Hawaiians increased from 10.7% to 13.0% from 1995 to 2005 (HSDH, 2005). Most AIDS cases among Hawaiians are reported within the men who have sex with men (MSM) risk category (HSDH, 2005), which includes transgenders. Given the paucity of information on this ethnic/sexual minority and the aforementioned risk factors, we sought to examine HIV risk behaviors among Native Hawaiian and other Polynesian-identified transgender women in Hawai`i.

METHODS

SAMPLE AND PROCEDURE

This study was co-sponsored by Kulia Na Mamo (KNM), a Honolulu, Hawaii transgender health education center and supported by a grant from the HSDH. Par-
ticipants were current residents of the Hawaiian Islands of O‘ahu, Maui, Kaua‘i and Hawai‘i and were recruited for the survey using convenience sampling methods. Participants were recruited through KNM program activities, events, contact lists, and chain referral of casual transgender social groups and cohabitating transgender households. Other O‘ahu agencies involved in recruitment were an HIV/AIDS service organization, a needle exchange program, and a gay, lesbian/bisexual/transgender community center. Surveys were distributed and collected by KNM research assistants and the principal investigator (PI) from June 1 to August 30, 2005, via various KNM events (pride events, drag shows, hula competitions, informal recreation), focus group participants (in a related qualitative study) and chain referral. The chain referral recruitment involved four chains, each producing two to eight participants. Three of the four chains were facilitated by transgender women who publicized the study and handed out referral cards directing participants to any of the various venues for data collection (Penrod, Preston, Cane, & Starks, 2003). Gatekeepers did not receive compensation for referrals.

Neighbor island (Maui, Kaua‘i, Hawai‘i) surveys were distributed, collected and mailed to the PI by personal contacts of KNM staff on those islands. Eligibility criteria included being (a) at least 15 years of age; (b) self-identified MTF transgender, transsexual, mahu, or Mahuwahine; and (c) self-identified sex at birth as male. Participants received $5 for returning an (assumed) completed survey. Although the survey was anonymous, confidentiality protocols (approved by the HSDH) were followed because of the potentially stigmatizing questions. The survey used an attached cover sheet to inform potential participants of the personal nature of the questions, use of data, and a passive agreement of consent (if the cover page was removed and the survey submitted, consent was assumed). Inclusion of participants younger than 18 years old was approved based on age 13 or older for medical consent for HIV and reproductive health services.

MEASURES

SOCIODEMOGRAPHICS.

The survey was initially piloted among KNM staff and a convenience sample of KNM participants. Questions were adjusted for transgender and ethnic cultural literacy. General demographic (ethnicities, age, birthplace, biological sex), gender identity, sexual attraction, sex reaffirming procedure status were collected using a modified version of Bockting’s needs assessment questionnaire (Bockting, 1998). Gender identity was measured using two questions: “To what extent do you feel like a woman?” and “To what extent do you feel like a man?” using a 6-point Likert scale (0 = “not at all” and 6 = “very strongly”). Sexual attraction to men and women was measured with the same scale. Relationship status items were expanded in an effort to accurately capture this variable among a population that cannot typically get legally married to partners, and/or who may be in a domestic relationship and also have sexual partners via sex work. Thus, relationship status was measured using a six-item response set ranging from “single (not in a relationship) with no sexual partners” to “coupled (in an exclusive sexual/domestic relationship) and other sexual partners.”
SEXUAL BEHAVIORS.

Percentage gender of partners in past 3 years used actual percentage (ratio). HIV risk and related questions were modified from Bockting’s (1998) questionnaire and asked lifetime and past 2 month occurrence (dichotomous yes/no response options) of URAI, having been paid for sex, having been drunk or high during sex. A series of contingency questions asked if respondents had ever been tested for HIV, if they knew their HIV sero-status and, if so, what it was, and if they had engaged in unsafe sex since their last HIV test.

SUBSTANCE USE.

Illicit substance use was measured similarly to HIV sexual risk behaviors, garnering information about methamphetamine, ice, crack, cocaine and heroin use across lifetime and past 2 months. Responses were aggregated into an “illicit drug use” variable.

STATISTICAL ANALYSIS

Bivariate associations between sex work and HIV risk behaviors (ever and past 2 months: URAI, illicit drug use, sex while drunk or high, all coded yes = 1, no = 0) were conducted using Pearson chi-square tests. Guided by Keppel (1991), statistically significant bivariate associations were entered into multivariate logistic regressions for the three risk behaviors noted above. Adjusted odds ratios and 95% confidence intervals were used to determine predictors of each risk behavior variable. SPSS 13.0 was used for statistical analyses.

RESULTS

SOCIODEMOGRAPHICS

One hundred thirty-four surveys were collected and 128 were eligible based on inclusion criteria and completion. Completed surveys were acquired from Maui (13), Kaua‘i (8), Hawai‘i (4) and O‘ahu (103). Roughly 30% of the surveys were collected via various KNM events, 50% from focus group participants, and 20% via chain referral.

Eighty-nine percent of the 128 (eligible) survey respondents identified ethnically as at least part Hawaiian or other Polynesian. These 114 surveys comprise this study. The mean age among survey participants was 27.7 years (SD: 8.27; range: 18-51 years). Ninety-seven percent were born in Hawaii or the continental United States, the remaining 3% were born in American Samoa or Samoa. All respondents reported they were biological males at birth. The mean response on the item assessing female gender identity was 5.42 (SD = 1.05; range = 2-6). The mean response on the item assessing male gender identity was 1.46 (SD = 1.6; range = 0-6). Sexual attraction was measured using similar scales. The mean response to “sexually attracted toward women” was .55 (SD = 1.2; range = 0-6) and to “sexually attracted toward men” was 5.77 (SD = .813; range = 0-6).

Eighty percent of the respondents reported that their sexual partners in the past 3 years were exclusively male, 7.9% reported exclusively female partners, 5.3% re-
ported that they had no sexual partners in the past 3 years, and remainder reported varying proportions of both male and female partners with 2.6% reporting 50% male and 50% female. Seventy-three percent reported having had hormone therapy in the past 6 months, whereas 10% indicated they had undergone some types of sex reaffirming procedures (breast implants, hip/butt silicone injections, electrolysis, hair line and Adam’s apple alterations) but not lower genital surgery. Fewer than 3% (2 individuals) had undergone vaginoplasty.

Current (past 2 months) relationship status frequencies were: 32.1% reporting as single (“not in a relationship”) with no sexual partners, 24.1% reporting they were single with one sexual partner, 29.5% reported that they were single and had multiple sexual partners, 11.5% reported being in a mutually exclusive sexual relationship, and 2.7% reported being coupled (in an exclusive sexual/domestic relationship) and having other sexual partners as well. Thus, roughly a third reported having no sexual partners, one third having one sexual partner and a third reported multiple sexual partners in the past 2 months.

SEXUAL RISK BEHAVIORS

Over half the respondents reported lifetime URAI (59.8%) and 28.6% had experienced this in the past 2 months (Table 1). The majority of respondents had at one time been paid for sex (71.7%) and 44.2% had been paid for sex in that past 2 months. Almost three quarters of participants reported having had sex while drunk or high ever in their life (71.7%) and nearly half had done so in the past 2 months (46.4%).

SUBSTANCE USE

Half of those surveyed had used methamphetamine, ice, crack, cocaine, or heroin (“illicit drug use”) in their lifetime (50.4%). Twenty percent of the respondents had used these same substances in the preceding 2 months (20.4%). Of those who reported lifetime illicit drug use, 94.7% answered “no” to having ever shared needles for illicit drug use. Of the 73% who had received hormone therapy, 7% reported having received hormone injections from an uncertified medical provider.

HIV TESTING AND SERO-STATUS

Seventy-five percent reported having had an HIV test. Of those who reported having had an HIV test, 23.3% stated they had “had unsafe sex since their last HIV test” and 73.3% reported they had not unsafe sex. Only one respondent reported

<p>| TABLE 1. Selected HIV Risk Factors (Ever in Life and Past Two Months) Among Mahuwahine (Native Hawaiian Transgender Women), O’ahu (N = 114) |
|---------------------------------------------------------------|-----------------|-----------------|
| Ever in Life | Past Two Months |</p>
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<tr>
<th>%</th>
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<tbody>
<tr>
<td>URAI</td>
<td>59.8</td>
<td>67</td>
<td>28.6</td>
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<tr>
<td>Commercial sex work</td>
<td>71.7</td>
<td>81</td>
<td>44.2</td>
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<tr>
<td>Used illicit drugs</td>
<td>55.0</td>
<td>63</td>
<td>21.0</td>
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<tr>
<td>Had sex while drunk or high</td>
<td>71.7</td>
<td>81</td>
<td>46.4</td>
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Note: URAI = unprotected receptive anal intercourse
being infected with HIV; 10 (8.8%) said they were “not sure” and three respondents (2.6%) refused to answer. Among the participants answering “yes” to having had an HIV test and “no” to having engaged in “unsafe sex since their last HIV test,” 14.5% had URAI in the past 2 months. The survey did not ask the date of last HIV test, so it is possible that some respondents had their “last” HIV as recently as the day they answered the survey.

CORRELATES OF SEXUAL HIV RISK BEHAVIORS

To investigate the possibility of relationships between HIV risk factors, chi-square tests of independence were calculated between ever having had URAI, having been drunk or high proximal to sex, having used an illegal drug and having been paid for sex and between these variables in the past 2 months (Table 2). Ever having had sex while drunk or high and having ever used an illicit drug was more likely among those who had ever been paid for sex (\(x^2 = 30.608, p = .000\) and \(x^2 = 14.6, p = .000\), respectively), whereas ever having had URAI was not found dependent upon sex work. Likewise, those who reported having been paid for sex in the past two months were more likely to report having been drunk or high during sex and illicit drug use during the same period (\(x^2 = 26.4, p = .000\) and \(x^2 = 7.5, p = .000\), respectively).

Table 3 shows the results of multivariate analyses for URAI, having been drunk or high proximal to sex, having used an illegal drug, and having been paid for sex. Having ever been paid for sex was significantly associated with having ever been drunk or high proximal to sex (odds ration [OR] = 9.2, 95% confidence interval [CI] = 3.37, 25.14) and ever using illicit drugs (OR = 3.77, 95% CI = 1.3, 10.76). Having been paid for sex in the past 2 months was significantly associated with having been drunk or high proximal to sex in the past 2 months (OR = 7.26, 95% CI = 3.06, 17.31). Having had URAI in the past two months was significantly associated with having been drunk or high proximal to sex (OR = 2.98, 95% CI = 1.24, 7.20) and with having used illicit drugs in the past 2 months (OR = 2.99, 95% CI = 1.10, 8.13).
This research provides particular insight into the HIV risk factors of Polynesian-identified transgender women. Over half the respondents had URAI within the past 2 months and nearly a third reported URAI during this same period, representing a significant heightened HIV sexual risk for the transgender women in this study. This potential HIV risk for transgender women in general is corroborated in the current literature, but the opportunity to compare results with other studies investigating Polynesian MTF HIV risk is limited. In Operario and Nemoto’s (2005) study, 20% of the API MTF participants reported having had URAI in the past 30 days. In their study of HIV risk behaviors among 392 MTF transgender persons (of whom 13% were API), Clements-Nolle et al. (2001) found that 80% had engaged in anal, oral, or vaginal risk behaviors in the past 6 months. Similarly, Kenagy (2002) reported 71.4% of 48 MTF participants of a needs assessment survey (70% of whom were African American) had engaged in at least one high-risk sexual activity (unprotected anal, oral, vaginal insertive and oral sex) within the three months prior to the survey. Nemoto, Operario, Keatley, Han, et al.’s (2004) study of HIV risk factors among 332 transgender women of color (34% African American, 33% Latina, 33% API) went further in identifying the type of partner with whom participants had engaged in unprotected anal intercourse. In their study 47% had done so with a primary partner, 26% with a casual partner, and 12% with a commercial partner.

Significant participation in sex work among the Polynesian transgender women in this study is also corroborated in the literature, although again, finding comparable studies on Polynesian MTF is limited. In a comparative study between transgender women and nontransgender heterosexual women and gay or bisexual male participants, Nemoto et al. (1999) found that 80% of transgender women had exchanged sex for money or drugs (their sample was predominantly African American and Latino (65%), with only 3% Pacific Islander). Clements-Nolle et al. reported 80% of their MTF transgender study participants had exchange sex for money in their lifetimes (2001). In an evaluation of a community-based transgender HIV harm re-

### Table 3. Multivariate Correlations Between Sex Work and Unprotected Receptive Anal Intercourse (URAI), Being Drunk or High Proximal To Sex, Illicit Drug Use (“Ever In Life” And “Past 2 Months”) – Among Mahuwahine (Native Hawaiian Transgender Women), O'ahu (N = 114)

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Note. OR = odds ratio; CI = confidence interval.

**DISCUSSION**

This research provides particular insight into the HIV risk factors of Polynesian-identified transgender women. Over half the respondents had URAI within the past 2 months and nearly a third reported URAI during this same period, representing a significant heightened HIV sexual risk for the transgender women in this study. This potential HIV risk for transgender women in general is corroborated in the current literature, but the opportunity to compare results with other studies investigating Polynesian MTF HIV risk is limited. In Operario and Nemoto’s (2005) study, 20% of the API MTF participants reported having had URAI in the past 30 days. In their study of HIV risk behaviors among 392 MTF transgender persons (of whom 13% were API), Clements-Nolle et al. (2001) found that 80% had engaged in anal, oral, or vaginal risk behaviors in the past 6 months. Similarly, Kenagy (2002) reported 71.4% of 48 MTF participants of a needs assessment survey (70% of whom were African American) had engaged in at least one high-risk sexual activity (unprotected anal, oral, vaginal insertive and oral sex) within the three months prior to the survey. Nemoto, Operario, Keatley, Han, et al.’s (2004) study of HIV risk factors among 332 transgender women of color (34% African American, 33% Latina, 33% API) went further in identifying the type of partner with whom participants had engaged in unprotected anal intercourse. In their study 47% had done so with a primary partner, 26% with a casual partner, and 12% with a commercial partner.

Significant participation in sex work among the Polynesian transgender women in this study is also corroborated in the literature, although again, finding comparable studies on Polynesian MTF is limited. In a comparative study between transgender women and nontransgender heterosexual women and gay or bisexual male participants, Nemoto et al. (1999) found that 80% of transgender women had exchanged sex for money or drugs (their sample was predominantly African American and Latino (65%), with only 3% Pacific Islander). Clements-Nolle et al. reported 80% of their MTF transgender study participants had exchange sex for money in their lifetimes (2001). In an evaluation of a community-based transgender HIV harm re-
duction program Reback and Lombardi (1999) reported that among the 209 transgender women interviewed (of whom 40% were Latino, 28% White, and 6% API), 44% reported being involved in sex work and 36% reported doing so in the past 30 days. Reasons for transgender women’s participation in sex work are well documented in the literature: being economically marginalized when official documents do not match gender role presentation and societal transphobia, costs of surgical sexual reassignment and body modification (e.g., hormones, electrolysis), and seeking affirmation of femininity (Bockting et al., 1998; Clements, Wilkinson, Kitano, & Marx, 1999; Ellingson, 2004; Kammerer, Mason, & Connors, 1999; Nemoto et al., 1999; Nemoto, Operario, Keatley, Han, et al., 2004; Nemoto, Operario, Keatley, & Villegas, 2004; Reback & Lombardi, 1999; Yep & Pietri, 1999).

Converse to the above similarities between the literature and this study, and counterintuitive to the heightened risk of HIV infection, the Polynesian transgender women in this study reported a very low HIV infection rate. Although 75% of the study population reported having had an HIV test, only one respondent reported being HIV-positive, 10 respondents indicated they were not sure and three “refused to answer.” (Demographic and behavioral comparisons between those who responded “yes,” “no,” “not sure,” and “refuse to answer” about having HIV found no differences across response groups.) This level of HIV infection is significantly lower than those reported in recent literature. Operario and Nemoto (2005) reported 13% of their MTF participants were HIV-positive; Clements-Noelle et al. (2001) found a 35% HIV prevalence among their San Francisco MTF study participants, and 18% of Kenagy’s (2002) Philadelphia MTF study participants reported being HIV positive.

Possible reasons for this study’s sero-status vs. behavioral risk incongruence include Hawai’i is a low prevalence state, with 10.8 statewide cases per 100,000 (HSDH, 2004), and most transgender hormone injections on O’ahu are administered by a medical doctor (vs. street or peers), which may be fairly unique among urban transgender situations. For example, Nemoto et al. (1999) noted in their qualitative interviews with primarily Black and Latino transgender women enrolled in a San Francisco prevention program that many share needles with peers for hormones. Crosby and Pitts (2007) found similar results in their qualitative study among the Black/African American transgender women who reported acquiring hormones through the Internet, friends, and street vendors--and sharing needles and syringes to administer them. Related, but unpublished, qualitative data from the current study describe well-organized underground arrangements with a medical doctor in Honolulu that provide sterile hormone injections (Ellingson, 2004a). Also, related to HIV risk of needle sharing, the predominate form of methamphetamine in Hawaii is the smokable form known as “ice” possibly reducing HIV risk compared to similar populations on the U.S. mainland (HSDH, 2004). A third reason may be a cultural protective factor among Polynesian-identified transgender women in Hawai’i that reinforces and supports condom use with sex work clients and discourages needle sharing despite the stressors of sex work or transphobia. Kanuha (2000), in a study of gay and bisexual American Asian and Pacific Island men in Hawai’i, suggested that the sexual and gender diversity condoned in traditional Hawaiian culture (evidence included journal entries from Captain Cook’s first voyage describing male companions [aikane] to Hawaiian royalty and social integration of female-acting men [mahu]) allows for more familial tolerance of transgenderism (Kame’eleihiwa, 1999). Wong, Chng, Ross and Mayer (1998) agreed with this possibility but also noted this familial acceptance is combined with the expectation of minimal public
displays that violate Western norms to protect family honor. The participants in this study, as noted in the introduction, live fully as women and therefore may defy this familial expectation.

A fourth possibility explaining this incongruence is that there is some bias in this particular study. This potential is underscored by the existence of other unpublished data from several KNM-based surveys conducted since 2002 in which the reported HIV infection rate ranges from 5% to 11% (Odo & Havelu, 2001; Odo, personal communication, 2006). Even these data, however, are lower than those reported for U.S. mainland, predominantly non-Polynesian, transgender samples. Operario and Nemoto’s (2005) noted in their discussion that an apparent low reported HIV-positive status juxtaposed against elevated risk factors may represent a nascent surge in HIV infection among this population.

Almost half (42%) of this study’s respondents reported having being drunk or high proximal to sexual activity in the past 2 months and almost three quarters (72%) report having done so ever in their life. This compares well with Nemoto, Operario, Keatley, Han, et al.’s (2004) study of transgender persons of color, which reports sex while under the influence of substances was common, ranging from 55% with a primary partner (of those who had a primary partner), 45% with a casual partner (of those who had casual partner(s), to 52% with a commercial partner (of those involved in sex work) (2004a). Similarly, Operario and Nemoto’s 2005 study of API transgender women found that almost half (47%) of their sample reported “sex under the influence.”

Our study’s overall illicit drug use level is likewise supported in the literature. Again, citing the most current and relevant comparison study, Operario and Nemoto (2005) reported that 50% of their sample of API transgender women had used illicit drugs in the past 30 days. Clements-Nolle et al. (2001) reported that 34% of their 392 MTF study participants in San Francisco indicated nonhormonal injection drug use in the past 30 days, and Reback and Lombardi’s (1999) 209 MTF participants in Hollywood, California, reported 44% illicit drug use during the same period. In ethnic and geographical context, a 1998 household telephone survey on substance abuse among adults in Hawai’i found Hawaiians reporting the highest illicit substance use across all ethnicities (methamphetamine, cocaine, heroin, marijuana, hallucinogens) (Gartrell, Wood, & Ovenden, 1998).

Results from bivariate and multivariate analyses underscore the need for comprehensive prevention education among Polynesian transgender women. The participants in this study who had ever been paid for sex (69%) reported a ninefold increase in ever having been drunk or high proximal to sex and a threefold increase in ever having used illicit drugs. This pattern of substance use and commercial sex work was also found in recent periods, with study participants who said they had been paid for sex in the past 2 months reporting a sevenfold increase in having drunk or high proximal to sex in the past 2 months. This finding is supported by several studies. Operario and Nemoto’s (2005) study of API transgender women found similar significant relationships between participation in sex work and both sex under the influence of substances and use of illicit drugs. Reback and Lombardi’s (1999) study of transgender women in Hollywood, California, shows a significant relationship between sex work and crystal, crack use, cocaine and marijuana use. A qualitative study by the same authors (Nemoto, Operario, Keatley, and Villegas, 2004) also reported the use of drugs as a stress coping strategy among sex workers. Interestingly, URAI was not found to explain any of the variance in commercial sex work. This finding may be explained in the literature by studies that have found consistent
compliance with regular condom use by sex workers with sex work clients (Nemoto, Operario, Keatley, Han, et al., 2004b). This finding is countered, however, by studies that show unique vulnerabilities to condom negotiation among transgender women in sex work. MTF sex workers often defer condom use for same economic and gender affirmation reasons that drive them into sex work initially noted (and cited) earlier in this discussion.

URAI was, however, found to be associated with alcohol and drug use, with study participants who reported having had unprotected anal intercourse in the past 2 months reporting an almost threefold increase in both having been drunk or high proximal to sex and having used illicit drugs in the past 2 months. It is difficult to corroborate this relationship in the quantitative literature. For example, Nemoto, Operario, Keatley, and Villegas (2004) found an association between receptive anal intercourse (but not unprotected) and “drug use during sex” in their study of transgender women in San Francisco. These authors most recent and appropriately comparable study of API transgender women did not test this association (Operario & Nemoto, 2005). Qualitative studies do reveal participant reports of either themselves or knowledge of others using drugs to reduce inhibitions that often result in unsafe sexual behaviors (Bockting et al., 1998; Clements et al., 1999; Crosby & Pitts, 2007).

The primary limitation of this study is the reliance on convenience and chain referral participant recruitment. Although this is an appropriate, and frequently the only, method of accessing hard-to-reach populations, it is inherently biased and not generalizable to all Polynesian transgender women in Hawai`i. As with all sexuality and drug use research, there is the probability of underreporting of socially undesirable behaviors and the overreporting of desirable ones. The assistance of mahuwahine researchers may have both introduced and reduced this problem. Peer researchers are more able to access the subculture but may inhibit expression of ideas or opinions that violate subculture norms.

The implications for this research are clear. First, to our knowledge this is only one of two studies exploring the HIV risk among Polynesian transgender women underscoring the need for further basic and applied research into the familial, cultural, and socioeconomic contexts that may be factors in HIV risk and harm reduction. It is important for public health to increase knowledge about the broader and daily discrimination faced by understudied gender and ethnic minorities and to investigate the confluence of minority gender identity, ethnic minority culture, and other social determinants of HIV risk. Also, given the noted incongruence between HIV risk and HIV-positive status found in this study, an exploration of possible resiliency factors is warranted, including the greater gender expression fluidity in traditional Polynesian cultures and its relationship to gender identity, ethnic, and subcultural norms as antecedents to behavior (Kanuha, 2000; Wong et al., 2003). Furthermore, these elevated risk data underscore the need for evidenced-based culturally competent health education that addresses the social determinants to HIV risk as well as empowering subcultural norms toward prevention. In her report to the HSDH on HIV risk and education needs among Mahuwahine, Ellingson (2004b) concluded that health programs designed to use Polynesian cultural assets and to ameliorate the socioeconomic causes that drive risk behaviors are an expressed need of this community.
REFERENCES


HIV RISK AMONG MAHUWAHINE


