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HIV-Related Risk Behaviors among Kathoey (Male-to-Female Transgender) Sex Workers in Bangkok, Thailand

Tooru Nemoto, Ph.D., Mariko Iwamoto, M.A., Usaneya Perngparn, M.A., Chitlada Areesantichai, M.A., Emiko Kamitani, M.S., and Maria Sakata, M.A.

Abstract

Based on combined methods, this study investigated substance use and HIV risk behaviors among katoey sex workers (KSWs) in Bangkok, Thailand. The study found that only half of the KSW participants reported having been tested for HIV, and that except for one participant, all others had not seen health care providers in the past 12 months. About one third of the participants reported having engaged in unprotected anal sex with customers in the past 6 months. Almost all participants reported alcohol use, as well as having had sex with customers under the influence of alcohol. The prevalence of marijuana and ecstasy use in the past 12 months was high (32% and 36%, respectively); as was for ketamine (20%) and non-injecting methamphetamine (yaba) use (10%). A multiple regression analysis showed that the participants who were post-operative status, had used illicit drugs, or had been abused by their father and brothers were less likely to use condoms for anal sex with customers. Three quarters of the participants sent money to their families and 35% of the participants expressed their willingness to engage in unsafe sex when customers offer extra money. The qualitative interviews revealed that many identified as girl or katoey in early age and had been exposed to transphobia and violence from father and brothers. Some reported support for gender transition from their mothers. More than half of the participants currently had difficulties in living as katoey, such as challenges in job market and relationship with family members. Family obligation for sending money and the Buddhist concept of karma were discussed in relation to risk behaviors among KSWs. The study provided implications for facilitating HIV testing and developing future HIV prevention intervention programs for KSWs in Thailand.

Keywords

Transgender; Kathoey; Sex Workers; Thailand; HIV Risk Behaviors

Transgender women were biologically categorized as male at birth, but later identify themselves as female, transgender, transsexual, or terms other than male or female, and their gender identity does not conform with the traditional gender dichotomy of male and female. Recent meta-analysis studies indicated that the prevalence of HIV/STIs and HIV-related risk behaviors is high among transgender women in the U.S. and elsewhere (Herbst, et al., 2008; Operario, Soma, & Underhill, 2008). High HIV sero-prevalence rates are attributed to transgender women's involvement in sex work, substance use, mental health problems, exposure to transphobia (defined as the individual and institutional discrimination against transgender people), and a lack of access to and availability of health care which is sensitive

Contact Information: Tooru Nemoto, Ph.D., Public Health Institute, 180 Grand Avenue, Oakland, California 94612, Tel: (510) 302-3373; tnemoto@phi.org.

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and specific to transgender people (Clements-Nolle, Guzman, & Harris, 2008; Nemoto, Operario, Keatley, Han, & Soma, 2004; Nemoto, Operario, Keatley, Nguyen, & Sugano, 2005; Nemoto, Sausa, Operario, & Keatley, 2006; Ramirez-Valles, Garcia, Campbell, Diaz, & Heckathorn, 2008; Sugano, Nemoto, & Operario, 2006). High HIV/STI sero-prevalence rates and risk behaviors were also reported among transgender women in Asian countries, such as kathoey in Thailand (Guadamuz, et al., 2009; van Griensven, et al., 2006), hijra in Pakistan (Khan, Rehan, Qayyum, & Khan, 2008) and India (Mathai, Subramanian, Adhikary, Ramakrishnan, & Gupte, 2008; Setia, et al., 2006), and waria in Indonesia (Pisani, 2004).

Based on an ethnographic study, Totoman (2003) observed that kathoey have been historically accepted or tolerated in Thailand because of karmic ideas in Buddhism which consider that “everyone at some stage has been a kathoey” (p. 70) (Totoman, 2003). Kathoey have not been prosecuted by law or targeted by hate crime on the basis of their appearance and living style which do not conform to the traditional male-female gender roles. Kathoey tend to receive some support from family members and have a niche in society (Totoman, 2003). Currently, many kathoey work in entertainment or show businesses and/or exchange sex for money in large cities and tourist areas, such as Bangkok, Chiang Mai, Phuket, and Pattaya.

A recent study investigating HIV risk behaviors among men who have sex with men (MSM) in Thailand included a total of 474 kathoey who were recruited in Bangkok, Chiang Mai, and Phuket. The study reported high HIV sero-prevalence rates among kathoey participants (11.5% in Bangkok, 17.6% in Chiang Mai, and 11.9% in Phuket), particularly among kathoey who had engaged in sex work in the past 3 months (17%) (Wimonsate, et al., 2006). Despite the high HIV/STI sero-prevalence rates and HIV risk behaviors among kathoey sex workers (KSWs) in Thailand, very few studies have investigated sociocultural and environmental factors that influence HIV risk behaviors among KSWs, such as sex-work venues and environments, economic pressure for engaging in sex work, and knowledge about and norms toward practicing safe sex. This study aimed to describe and understand HIV risk behaviors in relation to sociocultural and environmental factors among KSWs, particularly focusing on work venue differences. Future outreach and intervention programs must be specific to KSWs’ work environment, as well as their culture and gender. Because of the work environment at bars/clubs where KSWs have to provide services to customers/patrons, including drinking alcohol with them, we hypothesized that KSWs at bars/clubs were more likely to engage in riskier sexual behaviors with customers than KSWs who work on the street.

Methods

Recruitment

Under the supervision of Thai and U.S. researchers, trained Thai interviewers conducted mapping to identify areas, streets corners, bars, clubs, and karaoke clubs/bars in Bangkok where kathoey had engaged in soliciting and negotiating with customers for commercial sex activities. Based on the mapping data, sampling venues for the recruitment of study participants were categorized into: 1) Bars/clubs, and 2) Street. Trained Thai interviewers conducted outreach to potential study participants in the targeted areas and venues and built rapport with KSWs and managers/owners of bars/clubs. Potential study participants at the targeted venues were then approached directly by the interviewers or through referrals of KSWs who participated in the study, and carefully screened for eligibility in the study based on the following criteria: 18 years or older, self-identified kathoey, being able to communicate in Thai, and currently engaging in sex work in Bangkok. After screening, informed consent was obtained verbally from study participants. Anonymous individual

interviews were conducted using a structured questionnaire in a van or private place where participants' privacy was ensured. An interview took about one hour, on average. Participants were paid cash after completing the interview and provided with information about HIV/STI testing and health promotion pamphlets. We aimed at recruiting an equal number of participants from two types of venues: bars/clubs and streets. However, because of the difficulty in identifying and recruiting KSWs on the street, a disproportionately higher number of KSWs were recruited from bars/clubs ($n=80$) than street ($n=32$). A total of 112 KSWs were interviewed from February 23, 2006 through June 8, 2006.

Measures

The survey questions about HIV-related sexual and drug use behaviors and demographics were modified for KSWs from those used for our previous studies among Asian female sex workers (FSWs) who worked at massage parlors in San Francisco (Nemoto et al., 2003) and Vietnamese FSWs in Ho Chi Minh City, Vietnam (Nemoto et al., 2008). The questionnaire consisted of anchored questions and Likert-type measurements, asking about drug use and HIV-related sexual behaviors with customers and non-paying primary partners, access to HIV/STI testing and health care services, history of STIs, and demographic information. The psychosocial measurements included: 1) AIDS knowledge, 2) Subjective norms toward practicing safe sex ($\alpha=.69$), 3) Perceived economic pressure ($\alpha=.54$), and 4) Self-esteem (Rosenberg, 1965) ($\alpha=.75$). The measure of AIDS knowledge consisted of true and false questions while all other measurements used a 5-point Likert scale (1=strongly disagree to 5=strongly agree). The measurements of AIDS knowledge, norms toward practicing safe sex, and economic pressure were taken from our previous studies (Nemoto et al., 2003; Nemoto et al., 2006 November). The survey questionnaire and informed consent form were translated into Thai and carefully examined for their validity and cultural comparability by Thai researchers of this study.

At the end of the structured questionnaire, participants were asked to respond to five open-ended questions regarding: 1) Gender identity; 2) Family's attitudes toward their gender identity and transition to kathoey; 3) Support from family members; 4) Providing financial support to family members; 5) Perceptions and ideas about being kathoey in Thailand. Participants' answers to these open-ended questions were brief, in general and written by the interviewers in Thai, and later translated into Japanese by a Thai/Japanese bilingual translator. The study protocol was approved by the Committee on Human Research, University of California San Francisco and the Ethical Committee for Research Involving Human Subjects and/or Use of Animal in Research, Health Science Group of Faculties, College and Institute, Chulalongkorn University, Thailand.

Data Analysis

To test the hypothesis, we examined statistical differences in HIV risk behaviors, psychosocial measures, and background variables between participants recruited from bars/clubs and street based on Analysis of Variance (ANOVA) and Chi-square test. A multiple regression analysis was conducted to examine the frequency of condom use for anal sex with customers in the past 6 months in relation to the background and psychosocial measures. The Japanese transcripts to the open-ended questions were reviewed and common themes were extracted independently by two English/Japanese bilingual researchers to develop a code book. Using the code book, two researchers independently assigned codes to the transcripts of each open-ended question. Through discussions between two researchers on the coded responses, 100% inter-rater agreement was attained on all coded responses.

Results

Demographic Characteristics and Work Environment

Study participants were young ($M=25$ years old, $SD=5.1$, *Range*: 18–39 years old) and mostly single, and more than one-third had not completed high school (see Table 1). There were no significant differences between the study participants working at bars/clubs and on the street in terms of age, marital status, and levels of education. Almost all bar/club KSWs identified as Thai, while 10% of the street KSWs identified as mixed ethnicity with Thai and others ($p<.05$). Overall, bar/club KSWs earned more than street KSWs, but 21.9% of street KSWs reported earned more than 40,001 Baht (\$1,207) per month compared 8.8% of bar/club KSWs ($p<.05$). The bar/club KSW participants reported significantly longer work hours per day ($p<.01$), but fewer customers per week than street KSWs ($p<.01$), while both bar/club and street KSWs work 6 days a week. Three quarters of both bar/club and street KSWs reported sending money to their families in home provinces.

Nearly 90% of KSW participants reported having received HIV prevention information in the past 12 months; however, only 53% of the participants reported having been tested for HIV. No one reported being diagnosed as HIV positive. It was striking that only one bar/club KSW reported having seen a health care provider in the past 12 months. The participants who had received HIV prevention information and/or free condoms or lubes in the past 12 months (56%) were more likely to report having been tested for HIV than those who had not (25%) ($n=112$, $\chi^2=4.13$, $df=1$, $p<.05$). A significantly higher proportion of the bar/club KSW participants reported hormone use than street KSWs ($p<.05$). More than half of the participants reported currently injecting hormones. Three-quarters of the participants had had any gender reassignment surgeries while 16% ($n=13$) had male-to-female vaginoplasty. A significantly higher proportion of the bar/club KSW participants reported having ever injected silicone than street KSWs.

Psychosocial Measures

There were no significant group differences on the psychosocial measures (see Table 1). Overall, study participants' levels of AIDS knowledge were moderate; more than 6 out of 10 questionnaire items were correctly answered. Study participants had relatively positive norms toward practicing safe sex and showed high levels of self-esteem, and moderate levels of economic pressure. The participants with higher AIDS knowledge reported lower levels of economic pressure ($r=-.26$, $p<.01$) and higher levels of norms toward practicing safe sex ($r=.17$, $p=.07$). The participants who had higher levels of self-esteem reported higher levels of norms toward practicing safe sex ($r=.20$, $p<.05$).

Sexual Behaviors

Study participants were asked the frequencies of condom use for oral and anal sex with primary partners (e.g., husband or partners in committed relationships) and male customers in the past 6 months (see Table 2). All participants ($n=62$) and more than 86% of the participants ($n=7$) reported having engaged in unprotected oral and anal sex with primary partners in the past 6 months, respectively. Similarly, 87% and 27% of the participants ($n=112$) reported having engaged in unprotected oral and anal sex with customers, respectively. About three-quarter of the participants reported that they did not know the HIV status of their primary partners. More bar/club KSW participants reported their willingness to have unprotected sex with customers for extra money than street KSWs ($p<.05$). The post-operative KSW participants who completed vaginoplasty less frequently used a condom for anal sex with customers in the past 6 months ($M=2.9$) than the pre-operative participants ($M=3.7$), $t(102)=3.12$, $p<.001$.

Substance Use Behaviors

All participants except one bar/club KSW reported drinking alcohol in the past 12 months (see Table 2). More than one-third of the participants reported having used ecstasy, as well as marijuana (32%). One-fifth of the participants reported having used ketamine in the past 12 months, while 10% reported non-injection methamphetamine (yaba) use. No significant group differences were found in the prevalence of any types of substance use. No participants reported having ever injected drugs.

Due to a high prevalence of alcohol use among the participants, almost all participants had had sex with their primary partners and customers under the influence of alcohol within the past six months. About half of the participants reported having had sex with customers under the influence of drugs in the past six months while about a quarter of the participants had engaged in this behavior with their primary partners. No significant group differences were found in having had sex with either primary or commercial sex partners under the influence of alcohol or drugs.

Content Analyses on Open-Ended Questions

Based on coding the transcripts from the open-ended questions, we found that 92% of the participants identified themselves as a girl or woman (see Table 3). More than one-third of the participants felt that they were not a boy and/or identified as a girl or kathoey when they were 5 to 12 years old. The remaining two-thirds reported that they identified themselves as a girl or kethoey in their early age, but did not specify age. About two-thirds of the participants reported having had difficulties in growing up in childhood. One participant reported: *"When I was a child, my family didn't accept me as a kathoey. I was often scolded and left alone at home when a whole family went out."* Close to half of the participants reported having been abused by a father and/or brother. They revealed their experiences of abuse: *"My father was extremely upset when I first told him about my gender identity. He used to scold, hit, and kick me all the time. Now, he doesn't say anything, but I know he is still upset with me"; "My father and brother were very upset with me. We fought a lot, and I ended up feeling intimidated and scared. I was taken to a hospital by my mother and received treatment (for physical injuries)."*

Contrary to their father's rejection and abuse, one-third of the participants reported that their mothers supported their transition to kathoey: *"Since my father passed away and my mother wanted to have a daughter, my family has been accepting me as a kathoey"; "My mother paid 6,000 baht for my breast surgery."* A significantly higher proportion of the bar/club KSW participants reported their mother's support for gender transition than the street KSWs ($p < .05$). Overall, only 30% of the participants reported that their kathoey identity was accepted by their family. Bar/club KSWs were more likely to report being accepted by family ($p < .01$). The majority of the participants whose families did not accept them as kathoey expressed their desire for being accepted by their families in the future. About one-third of the participants reported that they were first rejected by their family members, but later they were accepted: *"At first, my father didn't understand when I revealed my gender identity because he was worried about what our neighbors were going to say about it. But, once I got a job and was able to send money to my parents, they stopped talking against me"; "My parents were against my gender identity, but they gave up since there was nothing they could do about it. Now, they feel they have a daughter."* Cultural norms or mores emerged surrounding transition to kathoey; that is, about half of the participants reported that their family members maintained silence about the issues of gender transition. One participant reported: *"After I sent money to my family members at hometown, they do not talk about my gender issues."*

More than half of the participants reported current difficulties in living as kathoey, and only 30% expressed that kathoey were accepted in Thai society. Discrimination in their daily lives and strong desire to be accepted in the society were commonly expressed: *"I think kathoey are not well accepted in Thailand. People tend to think kathoey have mental problems. But, I really want them to know that it is not true"; "Especially, men often harass me. I don't know why I have to be hated, even though I don't bother anyone."*

Discrimination in job market was also expressed among participants. About half reported that job opportunities were limited for kathoey: *"Since kathoey are not fully accepted in Thailand, I would not be able to get a job if they found out I am kathoey. That's the reason I start thinking it is pointless to go to school"; "In terms of career opportunities, things are still difficult for kathoey. Only fashion related jobs or jobs in show business are available for us. I want to get an office job or government job, or I want to work at bank, but I know it is impossible."*

Multiple Linear Regression Analysis

A multiple linear regression analysis was conducted on the frequencies of condom use for anal sex with customers in the past six months, simultaneously entering demographic and sociocultural variables (see Table 4). Two bi-variate variables with $p < .10$ from the content analyses (having been abused by father/brother; difficult living in childhood) were entered in the equation. The KSW participants who were post-operative, had used any illicit drug in the past 12 months, or had been abused by father/brother were significantly less likely to have used condoms for anal sex with customers in the past six months.

Discussion

It was surprising to find that only half of the KSW participants reported having been tested for HIV, and that except one participant, all others had not seen health care providers in the past 12 months. In terms of sexual risk, about one third of the participants reported having engaged in unprotected anal sex with customers in the past six months. The post-operative status, illicit drug use, and having been abused by father or brother were independently and significantly correlated with the infrequent condom use for anal sex with customers. The study also revealed high prevalence of alcohol and illicit drug use (e.g., marijuana, ecstasy, ketamine, and non-injecting methamphetamines/yaba). Almost all participants reported alcohol use, as well as having had sex with customers under the influence of alcohol. The study provided first-hand data for understanding substance use and HIV risk behaviors and lives among KSWs in Bangkok for developing future HIV prevention intervention programs.

Notably, KSW participants revealed their transphobia experience, such as difficulty in growing up as kathoey, and having been abused by father and brother, and ignored or disregarded by their family members, while they kept wishing for their families' acceptance of their gender identity. In addition, KSW participants expressed current difficulties in living as kathoey, finding jobs, and gaining acceptance from society. Our study targeted and recruited high risk groups of kathoey in Bangkok in terms of substance use and HIV/STIs; therefore, sampling biases must be considered. In addition, under-reporting sexual and substance use behaviors and incidents of abuse by family members must be considered when we interpret study results because Thai social and cultural norms might have constrained the participants to reveal private experience, behaviors, attitudes, and thoughts to interviewers or outsiders. None the less, previously reported favorable attitudes toward kathoey in Thai society and general ideas about societal and cultural acceptance of kathoey may need to be reexamined when we develop culturally sensitive HIV prevention programs for KSWs.

Studies conducted mainly in the U.S. reported the lack of access to and low utilization of gender sensitive health services for transgender women (Nemoto, et al., 2006; Sanchez, Sanchez, & Danoff, 2009). The epidemiological study clearly indicated high HIV prevalence rates among KAWs in Thailand (Guadamuz, et al., 2009; van Griensven, et al., 2006; Wimonstae, et al., 2006). Studies among transgender women in the U.S. reported that exposure to transphobia (Sugano, et al., 2006), using substances (Ramirez-Valles, et al., 2008) and engaging in sex work (Operario & Nemoto, 2005; Operario, et al., 2008) were correlated with their HIV sero-prevalence or risky sexual behaviors (e.g., unprotected anal sex). Our current study revealed that the KSW participants who were post-operative transgender, had used illicit drugs, or had been abused by father/brother were significantly less likely to have used condoms for anal sex with customers. The study also showed that one quarter of the participants reported having engaged in unprotected anal sex with customers in the past six months, as well as other risk behaviors, such as having sex with customers under the influence of alcohol and drugs. In addition, more than one third of the participants reported their willingness to engage in unprotected sex with customers if customers offer extra money. Despite the fact that only about half of the participants had been tested for HIV and no one reported HIV positive status, these study results clearly indicate that KSWs were engaging in HIV risk behaviors and support the reported high HIV prevalence rates among kathoey in Thailand (Wimonstae, et al., 2006).

When we compare our study results with those conducted in the U.S., we must consider a major difference between KSWs in Thailand and transgender female sex workers in the U.S.; that is, three quarters of the KSW participants in our study sent money to their family who lived in their home provinces in Thailand. Participants described that after sending money to their family, family members stopped talking against their gender identity or transition or avoided talking about gender issues. Sending money to family is not specific to KSWs because our another study found that overall, 87% of female sex workers in Bangkok sent money to their family (Nemoto et al under review). Sending money to support family members who live in economically challenged rural areas or to fulfill family obligation may be considered as merit increase to be a good Buddhist and in turn, rewarded in the next life based on the Buddhist concept of karma (Muecke, 1992). It should be also noted that in Buddhist Thai culture, being or becoming a kathoey is considered predetermined from birth and being a sex worker is a consequence of misdeeds in the previous life (Totoman, 2003). Therefore, sin as sex workers, not as being kathoey must be compensated for the sake of their next lives through conscientiously following the Buddhist doctrines which include sacrificing themselves to family.

None of the KSW participants explicitly referred to sending money to family as based on the Buddhist principles or their intention for attaining better lives or living without suffering in their future lives. It may be due to our short open-ended questions without probing, as well as the manifestation of cultural norms or mores which are often practiced by people in society, but people cannot often articulate the meaning of their practices. About one-third of the participants reported their mothers' support for gender transition, as well as the trajectory of rejection to acceptance of kathoey identity; that is, compared with many Western and Muslim countries in which transgender people are prosecuted and exposed to hate crimes and harassment, some KSW participants provided positive account of their lives while transitioning. However, the majority reported having been abused by family members and not been accepted by their families. It is devastating that KSWs send money to their family for the sake of family obligation, but cannot get the acceptance of their gender transition from their families. Study participants described their harsh lives exemplified by having sex with four to five customers a week and working 6 days a week. In addition, more street KSWs reported jobs other than sex work compared with bar/club KSWs. Compared with the average monthly income among female sex workers in Bangkok (Nemoto,

Iwamoto, Perngarn, Areesantichai, & Sakata, 2010), KSWs reported much lower income. Therefore, it must be very difficult for KSWs to save money for their family from a limited income. More than one-third of the participants reported their willingness to engage in unprotected sex with customer for extra money. The economic hardship, family obligation, and karmic idea for wishing better lives in their next incarnation could have contributed to their unsafe sexual behaviors and intention to engage in unprotected sex for extra money.

Study findings should not be extrapolated to KSWs in Bangkok due to the small number of participants who were recruited based on purposive sampling methods. Future HIV prevention intervention studies must investigate the reasons why KSWs engage in unprotected sex to earn extra money. Is it justified because of their perception of fulfilling the family obligation and performing good deeds by sending money to their families? It should be also noted that the KSWs who were abused by father and brother had less frequently used condoms for anal sex with customers. Future studies must investigate the exposure to transphobia, particularly physical and sexual abuse in relation to substance use and HIV risk behaviors among KSWs. We found that post-operative (vaginoplasty) KSW participants reported less frequent condom use for anal sex with customers compared with pre-operative KSWs. Future studies must target both pre- and post-operative KSWs and find out differences in risk behaviors (e.g., anal and vaginal sex) and sociocultural factors between two groups. Illicit drug use was found as a significant predictor of unprotected anal sex with customers among KSW participants. Future HIV prevention intervention studies among KSWs must target their HIV risk behaviors in relation to alcohol and drug use and the social and environmental contexts of substance use (e.g., yaba use for maintaining sex work; ecstasy use with foreign customers during sex). Although most of the participants had received some HIV prevention materials, only 53% had been tested for HIV. We need to develop effective programs to facilitate HIV testing among KSWs, such as rapid testing and counseling at mobile vans.

Most of all, kathoey friendly and sensitive health care systems including free HIV/STI testing and treatment programs must be implemented in Bangkok and elsewhere in Thailand. Despite Western researchers' idealization about kathoey in Thai society, kathoey or gender variant people are not treated equally and often deprived of their human rights. HIV prevention efforts for kathoey cannot be successful without improving their health, housing and living conditions, and social and economic status, as well as their human rights. Cultural or religious ideas in Thailand; accepting kathoey as they are and not blaming them as a sin or ostracizing them from society, can be further strengthened to reduce KSWs' substance use and HIV risk behaviors and improve their health and well-being.

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Table 1

Demographic Characteristics by Work Venues

	Bar/Club (n=80)		Street (n=32)		Total (n=112)		χ^2	<i>t</i>
	%	%	%	%	%	%		
Age (years)	25.0	24.9	25.0	25.0	25.0	25.0	ns	
Marital status							ns	
Single	87.5	87.5	87.5	87.5	87.5	87.5		
Married	10.0	9.4	9.4	9.8	9.8	9.8		
Divorced/separated/widowed	2.5	3.1	3.1	2.7	2.7	2.7		
Ethnicity								
Thai	98.8	90.6	90.6	96.4	96.4	96.4	4.38 ^{*a}	
Thai and other race	1.2	9.4	9.4	3.6	3.6	3.6		
Educational attainment							ns	
Less than high school	37.5	40.6	40.6	38.4	38.4	38.4		
High school/vocational school graduate	56.3	50.0	50.0	54.5	54.5	54.5		
College graduate	6.3	9.4	9.4	7.1	7.1	7.1		
Monthly income (baht)							11.51 [*]	
Less than 12,000 (< \$362)	1.2	0	0	0.9	0.9	0.9		
12,001 – 24,000 ($\approx$ \$362 – \$724)	13.8	31.2	31.2	18.8	18.8	18.8		
24,001 – 40,000 ($\approx$ \$724 – \$1,207)	76.2	46.9	46.9	67.9	67.9	67.9		
40,001 – 60,000 ($\approx$ \$1,207 – \$1,811)	8.8	18.8	18.8	11.6	11.6	11.6		
More than 60,001 (> \$1,811)	0	3.1	3.1	0.9	0.9	0.9		
Seen healthcare provider (past 12 months)	1.2	0	0	0.9	0.9	0.9	ns	
Received HIV prevention information (past 12 months)	92.5	81.2	81.2	89.3	89.3	89.3	ns	
Ever been tested for HIV	52.5	53.1	53.1	52.7	52.7	52.7	ns	
Work condition								
Work hours per day (hours)	7.6	5.7	5.7	7.1	7.1	7.1	7.12 ^{***}	
Number of work days per week	6.1	6.0	6.0	6.1	6.1	6.1	ns	
Number of customers per week	3.6	4.9	4.9	4.0	4.0	4.0	-4.55 ^{***}	

	Bar/Club (n=80)		Street (n=32)		Total (n=112)		χ^2	<i>t</i>
	%	%	%	%	%	%		
Send money to family	75.0	75.0	75.0	75.0	75.0	75.0	ns	
Have job other than sex work	6.2	12.5	12.5	8.0	8.0	8.0	ns	
Current Hormone use								
Using hormone	84.4	65.6	65.6	78.9	78.9	78.9	4.79*	
Injecting hormone	55.0	40.6	40.6	50.9	50.9	50.9	ns	
Sexual reassignment procedures								
Ever had any procedures	76.2	71.9	71.9	75.0	75.0	75.0	ns	
Vaginoplasty	11.5	26.1	26.1	15.5	15.5	15.5	ns	
Ever injected silicone	63.8	43.8	43.8	58.0	58.0	58.0	3.75*	
Psychosocial measures								
AIDS knowledge ^b	6.0	5.7	5.7	5.9	5.9	5.9	ns	
Subjective norms toward practicing safe sex ^c	3.6	3.7	3.7	3.6	3.6	3.6	ns	
Self-esteem ^c	4.1	3.9	3.9	4.0	4.0	4.0	ns	
Economic pressure ^c	3.3	3.1	3.1	3.2	3.2	3.2	ns	

Note: ns=not significant.

^a phi(.20).

^b Mean score out of 10 items.

^c 5-point Likert scale (1=strongly disagree to 5 = strongly agree).

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 2**HIV Related Risk Behaviors by Work Venues**

	Bar/Club (<i>n</i> =80)	Street (<i>n</i> =32)	Total (<i>n</i> =112)	χ^2
	%	%	%	
Sexual behaviors in the past six months				
Inconsistent condom use for oral sex with				
Customers	88.6 (<i>n</i> =45)	83.9 (<i>n</i> =17)	87.3 (<i>n</i> =62)	ns
Primary partner	100	100	100	<i>a</i>
Inconsistent condom use for anal sex with				
Customers	25.7 (<i>n</i> =4)	30.0 (<i>n</i> =3)	26.9 (<i>n</i> =7)	ns
Primary partner	75.0	100	85.7	ns
Willing to have unprotected sex with customers for extra money	41.2	18.8	34.8	5.10*
Doesn't know primary partner's HIV status	(<i>n</i> =33) 75.8	(<i>n</i> =8) 62.5	(<i>n</i> =41) 73.2	ns
Substance use behaviors				
Substance use in the past 12 months				
Alcohol	98.8	100.0	99.1	ns
Marijuana	30.0	37.5	32.1	ns
Amphetamines (yaba)	10.0	9.4	9.8	ns
Ketamine	23.8	9.4	19.6	ns
Ecstasy	37.5	31.2	35.7	ns
Having sex under the influence of substances in the past six months				
Alcohol Use				
With customers	96.3 (<i>n</i> =43)	100.0 (<i>n</i> =17)	97.3 (<i>n</i> =60)	ns
With primary partner	100	94.1	98.3	ns
Drug use				
With customers	39.2 (<i>n</i> =43)	53.1 (<i>n</i> =17)	43.2 (<i>n</i> =60)	ns
With primary partner	23.3	23.5	23.3	ns

Note: ns=not significant.

^aNo statistics are computed.

*
p< .05.

Table 3

Themes of Open Ended Question

	Bar/Club (n=80)	Street (n=32)	Total (n=112)	χ^2
	%	%	%	
Identify as a girl or kathoey	93.8	87.1	91.9	ns
Age identify as a girl or kahtoey	(n=18)	(n=4)	(n=22)	ns
Age 5 through 12	38.9	25.0	36.4	
Early age (not specified)	61.1	75.0	63.6	
Experienced difficulties in childhood	62.8	71.9	65.5	ns
Abused by father and/or brother	43.8	43.8	43.8	ns
Supported gender transition by mother	38.8	18.8	33.0	4.13*
Accepted being kathoey by family	36.3	12.5	29.5	6.20**
	(n=59)	(n=19)	(n=78)	
Wishing family's acceptance for being kathoey	60.0	71.9	63.4	ns
Financially supported for gender reassignment surgery by family	12.5	9.4	11.6	ns
First being rejected, but later supported/accepted as kathoey by family	34.2	34.4	34.2	ns
Silence in family about gender identity and transition	43.6	40.6	42.7	ns
Currently experiencing difficulties in living as kathoey	55.1	55.2	55.1	ns
Thought that kathoey is accepted in society	30.1	29.0	29.8	ns
Experiencing limited job opportunities due to kathoey	(n=47)	(n=14)	(n=61)	
	57.4	28.6	50.8	ns

Note: ns=not significant.

*
 $p < .05$.

**
 $p < .01$.

Table 4

Multiple Linear Regression Analysis on Frequency of Condom Use for Anal Sex with Customers in the Past Six Months

Variables	Beta	<i>t</i>
Age	-.02	-.26
Monthly income ^a	.12	1.28
Work place ^b	.11	1.17
Education ^c	.01	.11
Post sexual reassignment surgery ^d	-.32	-3.30***
Abused by father and/or brother ^e	-.27	-2.49*
Had difficulty to live in childhood ^e	.02	.18
Any illicit drug use in the past 12 months ^e	-.34	-3.85***
HIV/AIDS knowledge	.07	.74
Subjective norms toward practicing safe sex	-.11	-1.08
Self-esteem	-.11	-1.09
Perceived economic pressure	-.09	-.93
$R^2 = .34$, $F(12, 89) = 3.84$, $p < .001$		

^a 1 = Less than 12,000 baht (< \$362), 2 = 12,001–24,000 baht (\$362–724), 3 = 24,001–40,000 baht (\$724–1,207), 4 = 40,001–60,000 (\$1,207–1,811), 5 = More than 60,001 baht (\$1,811+).

^b 0=Bar, 1=Street.

^c 1=Less than high school, 2=Completed high school or vocational school, 3=College degree.

^d 0=Pre-operated, 1=Post-operated.

^e 0=No, 1=Yes. Frequency scale: 1=Not at all to 5=Always

* $p < .05$.

** $p < .01$.

*** $p < .001$.