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The Potential Role of Circuit Parties in the Spread of HIV among Men Who Have Sex with Men in Asia: A Call for Targeted Prevention

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Abstract

We postulated that the growing popularity of circuit parties may play a role in the escalating HIV prevalence among men who have sex with men (MSM) in Asia. The present study is the first to characterize the sociodemographic and HIV-related behavioral factors of circuit party attendees living in Asia. We analyzed a subset of data from the Asia Internet MSM Sex Survey conducted from January 1 to February 28, 2010. Inclusion criteria included: being biologically male, aged 18 years or above, self-reported sex with another man, and reported international travel in the past 6 months ($N = 6,094$). From our multivariable logistic regression model, participants' resident country with low HIV prevalence (among MSM) (AOR: 1.59, 95% CI: 1.27–2.00) and country of destination with high HIV prevalence were independently associated with higher odds of circuit party attendance (AOR: 1.32, 95% CI: 1.14–1.53) during international travel. Statistical interaction indicated circuit party attendees were likely to have traveled from low HIV prevalence (among MSM) countries to high HIV prevalence countries (AOR: 1.40, 95% CI: 1.20–1.64). Other independent correlates included unprotected anal sex with a male casual sex partner and recreational drug use during travel. HIV and STI prevention focusing on circuit party attendees may have a pivotal role on the spread of the HIV epidemics among MSM in Asia.

Keywords

HIV; Men who have sex with men; Circuit party; Mobility; Asia

INTRODUCTION

The emergence and resurgence of HIV infections in Asia disproportionately affect men who have sex with men (MSM) (Beyrer et al., 2012; van Griensven, de Lind van Wijngaarden, Baral, & Grulich, 2009; van Griensven & van Wijngaarden, 2010). HIV prevalence among MSM has reached new highs of 30% in Thailand and 29.3% in Myanmar (van Griensven & van Wijngaarden, 2010). Throughout the past decade, mainland China, Hong Kong, Taiwan, Singapore, and South Korea have all reported rapid increases of HIV infections among MSM (van Griensven et al., 2009). Countries with particularly low HIV prevalence, such as the Philippines and Japan, are also expected to experience the emergence of concentrated epidemics among MSM (Farr & Wilson, 2010; Gilmour, Li, & Shibuya, 2012). Poor treatment coverage and a lack of governmental investment in prevention are major challenges faced by these Asian countries to control the HIV pandemic (Beyrer et al., 2012; van Griensven et al., 2009; van Griensven & van Wijngaarden, 2010). Therefore, to intervene on the spread of HIV and other sexually transmitted infections (STIs) across these Asian countries, targeted prevention efforts focused on high risk MSM populations are urgently needed (Beyrer et al., 2012).

International travel has been documented to facilitate the spread of HIV and other STIs across the globe (Benotsch et al., 2010; Benotsch, Mikytuck, Ragsdale, & Pinkerton, 2006; Richens, 2006; Taylor et al., 2011; Truong et al., 2008; Vivancos, Abubakar, & Hunter, 2010). Two of the first three cases of AIDS found in Thailand were among MSM travelers from overseas (Phanuphak, Locharenkul, Panmuong, & Wlode, 1985). Truong et al. identified a high prevalence of HIV-1 drug resistant strains among MSM in San Francisco who frequently traveled internationally; this finding may indicate a spread of HIV-1 drug resistance from high treatment coverage country to low treatment coverage country (Truong et al., 2008). These findings suggest that international travel may facilitate the cross-border transmissions of HIV among at risk sub-populations.

Men who travel internationally to attend circuit parties may be exposed to additional risk of cross-country HIV transmission than the risk from international travel alone. The increasing popularity of circuit parties in Asia may play a significant role in the epidemiology of HIV and STIs among MSM residing and traveling to host countries. Circuit party attendees constitute a subset of MSM who travel internationally or domestically for recreational purposes. Circuit parties are weekend long events where gay men gather for a series of social activities and dance parties. Currently, there are more than 54 identifiable weekend circuit parties held annually in metropolitan areas worldwide; 23 of such events are held in Asian countries, such as Thailand, the Philippines, Vietnam, Hong Kong, and Japan (Travel Gay Asia, 2013). In April 2012, over 10,000 MSM attended the “SongKran G” circuit party in Thailand and some circuit parties in the U.S. had well over 20,000 attendees (Chadeyron, 2013; Ghaziani & Cook, 2005; Travel Gay Asia, 2013).

A few studies conducted in the U.S. have examined MSM at circuit parties and found high prevalence of unprotected anal sex and recreational drug use, particularly among HIV positive circuit party attendees (Colfax et al., 2001; Fisher, Ramchand, Bana, & Iguchi, 2012; Ramchand, Fisher, Griffin, Becker, & Iguchi, 2012). These multiple risk factors place

MSM attendees at elevated risk for HIV and STI infections. However, knowledge about circuit party attendees in Asia is relatively non-existent. The present study explored the role of circuit parties in the epidemiology of HIV and STIs among MSM in Asia. We hypothesized that MSM who reported international travel and attended circuit parties (relative to those who traveled internationally but did not attend circuit parties) would be more likely to reside in a country with low HIV prevalence (among MSM) while their country of destination would tend to be of high HIV prevalence. To address whether these men could be exposed to greater HIV-related risk factors, we compared the sociodemographic and HIV-related behavioral factors between MSM who reported circuit party attendance during international travel and those who traveled for reasons that excluded circuit parties.

METHOD

Study Design and Participants

The current study analyzed data from an online cross-sectional survey conducted among MSM in Asia (Asian Internet MSM Sex Survey or AIMSS). The parent study was organized by the Asia Pacific Coalition of Male Sexual Health (APCOM), a regional umbrella community-based organization, and Fridae.asia, a popular gay-oriented website in Asia. The research team advertised the survey through displaying banners on Fridae.asia's homepage, pop-up windows, and chat rooms. Surveys were also collected through partnerships with over 40 community partners from 12 countries in Asia, including China, Hong Kong, Indonesia, Japan, Malaysia, the Philippines, Singapore, Taiwan and Thailand. Community partners emailed their listserv members by providing a link to the survey. Survey responses were collected from January 1 to February 28, 2010.

Participants had to be at least 18 years old and reported having had sex with other men to complete the online informed consent form before proceeding to the questionnaire. Survey participation was voluntary and anonymous and researchers did not collect any forms of personal identifying information or IP addresses nor did they offer incentives. Participants could choose to complete the survey in either English or 9 other Asian languages. A total of 24,742 participants initiated the survey and the completion rate was 56.15% ($N = 13,883$).

Measures

The study questionnaire was adapted from the Australian Gay Community Periodic Survey (Lee et al., 2011). The questionnaire included sociodemographic questions: age, employment status, educational level, marital status (married to opposite sex partner, married to same sex partner, single, divorced/widowed), relationship status, sexual orientation (gay, bisexual and heterosexual), and country of residence.

To assess international travel related behaviors, participants responded to a question with a dichotomous response (Yes/No): "In the past 6 months, have you traveled outside of your country of residence?" If their response was "Yes," they were then asked to choose their country of destination, followed by responding to a series of dichotomous (Yes/No) questions: "Did you engage in any of the following activities during any of the above

trips?”--“Unprotected anal sex with someone you met during the trip,” “attend a dance/circuit party,” “consume a recreational drug (Ecstasy, Ice, Viagra, cocaine, GHB, Ketamine, etc).” According to the UNAIDS guideline, we categorized a country as having a low HIV prevalence among MSM population when its HIV prevalence (among MSM) was less than or equal to 5.0% and high when its HIV prevalence was more than 5.0% (Table 1) (Joint United Nations Programme on HIV/AIDS & United Nations, 2012; van Griensven et al., 2009; van Griensven & van Wijngaarden, 2010). HIV prevalence among MSM populations of each country was based on meta-analyses and published data (Beyrer et al., 2012; Joint United Nations Programme on HIV/AIDS & United Nations, 2012; van Griensven et al., 2009; van Griensven & van Wijngaarden, 2010).

In addition, participants were asked about their non-travel related sexual behaviors in the last 6 months, including: number of male sex partners, sex with a male commercial sex worker, paid for having sex with men, frequency of HIV status disclosure, assumed HIV status when having sex with a casual sex partner, last HIV test, self-perceived risk of HIV infection, and primary place to find sex with men. Other measures included self-reported HIV infection and STIs (genital wart, genital herpes, syphilis, chlamydia and gonorrhea) within the last 6 months. Detailed descriptions of these measures have been published elsewhere (Lim, Guadamuz, Wei, Chan, & Koe, 2012).

Statistical Analysis

The present study investigated HIV-related risk factors of MSM who traveled internationally and attended circuit parties relative to those who traveled internationally without attending these events. Therefore, our analyses were restricted to a subset of participants who reported to have traveled outside of their country of residence in the past 6 months with a final sample size of 6,094 MSM. We used their attendance at a circuit party during their travel in the past 6 months as the outcome variable. We tested the bivariate associations of circuit party attendance using Pearson's chi-square tests. We then included factors that were significantly associated ($p < .05$) with circuit party attendance into the multivariable model. In constructing the multivariable model, a manual backward elimination multivariable logistic regression was used to determine factors that were independently associated with circuit party attendance among our participants. Factors with p -value $< .05$ and did not qualitatively change the covariate coefficients of other variables in the existing model (when removed) were eliminated from the model. Factors that had high co-linearity with other known confounders were eliminated accordingly (marital status vs. sexual identities). To examine whether MSM from low HIV prevalence countries attended circuit parties in high HIV prevalence or low HIV prevalence countries, we examined the effect modification between their home country's HIV prevalence and their country of destination. We performed a series of bivariate logistic regression analyses between the two covariates (HIV prevalence in home country and HIV prevalence in host country) as well as by each covariate and the outcome variable. If statistical significance ($p < .05$) was achieved in all three logistic regression analyses, an interaction term was then included in the multivariable logistic model. All analyses were conducted in SAS version 9.3. The University of California, San Francisco Committee on Human Research approved the analyses.

RESULTS

Demographic Characteristics

Most of our participants resided in countries of low HIV prevalence among MSM (87%). Participants' travel destinations were almost equally divided between high (54%) and low (46%) prevalence countries (Table 1). The five most frequently reported destinations among all participants were: Thailand (41%), Singapore (40%), Hong Kong (40%), Malaysia (39%), and Taiwan (21%). Participants whose ages were between 30 to 39 years formed the largest group (41%), followed by those older than 40 (32%) and those 18 to 29 of age (27%). A majority of our participants were employed full-time (77%), university or tertiary school educated (61%), and single (84%). Most reported having only casual sexual partners (41%) and identified as gay (83%). A large proportion of participants reported that they had never disclosed their HIV status to sexual partners (64%) (Table 2). Very few participants reported testing for HIV within the last 6 months (8%) while a large proportion of them perceived their HIV risk as being low (73%). The self-reported prevalence of HIV and genital warts were 4% and 3%, respectively (Table 3). In addition, genital herpes, syphilis, chlamydia, and gonorrhea prevalence were all found to be 2% among the participants.

Correlates of Circuit Party Attendance

Table 1 shows the bivariate comparisons of sociodemographic characteristics between those who attended a circuit party during their international travel in the past 6 months ($N = 1314$, 22%) and those who did not attend a circuit party but traveled internationally in the past 6 months ($N = 4780$, 78%). Participants residing in low HIV prevalence countries compared to high prevalence countries (22% vs. 19%, $\chi^2 = 4.62$, $p < .05$) and those having a travel destination with high HIV prevalence among MSM compared to low HIV prevalence destinations (54% vs. 46%, $\chi^2 = 17.34$, $p < .01$) were more likely to be circuit party attendees. Other bivariate sociodemographic correlates of circuit party attendance included: age (30–39), being single or married to same sex partner, having casual sex partners only or both casual and regular sex partners, and having self-identified as gay.

Table 2 shows the bivariate comparisons of HIV-related behavioral characteristics between MSM travelers who attended a circuit party and those who did not. Notably, circuit party attendees were characterized by having more male sex partners in the past 6 months ($\chi^2 = 105.10$, $p < .01$), having had unprotected anal intercourse with a casual sex partner during the trip (37%, $\chi^2 = 76.76$, $p < .01$), and having used recreational drug(s) during the trip (64%, $\chi^2 = 601.47$, $p < .01$). Although few participants reported having sex with male commercial sex workers and being paid for having sex with men, circuit party attendees were more likely to report their participation in both transactional sex activities compared to non-attendees. Circuit party attendees were also more likely to disclose their sero-status to casual sex partners, assume seropositivity in their casual sex partners, have a higher self-perceived risk of HIV infection and report more recent HIV testing behaviors than non-circuit party attendees. In addition, they were less likely to use the Internet to find sex than non-attendees. However, circuit party attendees were more likely to report being HIV-positive ($\chi^2 = 11.89$, $p < .01$) and having had genital warts ($\chi^2 = 28.71$, $p < .01$), genital

herpes, ($\chi^2 = 12.77, p < .01$), syphilis ($\chi^2 = 8.75, p < .01$), chlamydia ($\chi^2 = 17.6, p < .01$) and gonorrhea ($\chi^2 = 8.06, p < .01$) in the past 6 months (Table 3).

Table 4 shows the factors that were independently associated with circuit party attendance among MSM travelers. Consistent with our bivariate analyses, MSM residing in low HIV prevalence countries were more likely to attend circuit parties (AOR: 1.59, 95% CI: 1.27–2.00) compared to their counterparts in high HIV prevalence countries while circuit party attendees' travel destination tended to be in high HIV prevalence countries (AOR: 1.32, 95% CI: 1.14–1.53). We also found a statistically significant interaction between participants' country of residence and country/continent of destination, which indicated that when participants reported their residence from a country categorized to have a low HIV prevalence among MSM, their circuit party attendance (AOR: 1.40, 95% CI: 1.20–1.64) was associated with the reported country of destination being categorized as having high HIV prevalence. Moreover, compared to non-attendee travelers, circuit party attendees also had a higher likelihood of reporting unprotected sex with a casual male sex partner (AOR: 1.40, 95% CI: 1.11–1.77) and reporting recreational drug use during their travel (AOR: 7.1, 95% CI: 5.73–8.83). Other independent correlates of circuit party attendance include younger age, higher number of male sex partners in the past 6 months, having both regular and casual male sex partners as well as finding sex at bars, dance parties and friendship networks.

DISCUSSION

MSM who travel internationally and those who attend circuit parties have been well characterized by existing literature to have a high prevalence of unprotected sex, high recreational drug use, and high risk of HIV infection (Benotsch et al., 2010; Colfax et al., 2001; Fisher et al., 2012; Ghaziani & Cook, 2005; Richens, 2006; Truong et al., 2008, 2008). However, no studies have examined MSM circuit party attendees who traveled internationally from Asia. For the first time, our study characterized circuit party attendees residing in Asia and found that MSM who reported both circuit party attendance and international travel in the past 6 months reported higher HIV-related behavioral risks than those who traveled internationally but did not attend circuit parties.

Through a statistical interaction between home and destination country HIV prevalence, those who reported circuit party attendance during international travel were more likely to have a traveling pattern from lower to higher HIV prevalence countries in Asia. Other existing evidence also demonstrated that sexual mixing of MSM traveling across international borders might lead to the widespread transmissions of HIV and STIs and their resurgence in low prevalence areas. For example, a recent study identified the emergence and circulation of a HIV-1 variant in Japan, a low prevalence country, disseminated internationally from Chinese MSM lineage (Kondo et al., 2013). In addition, mathematical modeling on MSM sampled from gay oriented venues from Key West, Florida suggested that sexual activity at gay oriented parties contributed 201 new HIV infections among MSM visitors each year (Benotsch et al., 2006). These data provided evidence that, in addition to international travel, MSM who attend circuit parties internationally may indicate an important role in the emergence and resurgence of HIV and STIs among MSM in low prevalence Asian countries.

A study of circuit party attendees from the San Francisco Bay area in the U.S. found that HIV seropositivity and recreational drug use (crystal methamphetamines, sildenafil, and amyl nitrates) were associated with unprotected anal sex with sero-discordant or unknown HIV serostatus partners (Colfax et al., 2001). Another recent study also demonstrated similar sexual behavioral risks among HIV-positive circuit party attendees (Fisher et al., 2012). However, from our data collected in Asia, HIV positivity did not remain a significant correlate of circuit party attendance in the multivariable model. This result could be due to a combination of underreporting on HIV seropositivity and a high proportion of participants whose HIV serostatus was unknown (N = 1972, 32%). However, we found that circuit party attendees were significantly more likely to have engaged in unprotected anal sex with casual male partners and used recreational drugs during their travel than non-attendee MSM travelers.

Community interventions (e.g., dissipating substance use norms or promoting consistent condom use) focused on circuit party attendees in these high HIV prevalence countries may be a effective measure to prevent cross-country HIV transmission related to travels involving circuit parties. Such a hypothesis heralds future investigation. On the other hand, self-identifying as gay, disclosure of HIV status, assumed sero-positivity, and more recent HIV testing were univariately associated with circuit party attendance. These findings suggest that circuit party attendees may be more aware of their risks than their non-attendee comparison group and hence engaged in some protective behaviors. Studies on acceptability of HIV testing and prevention services at these target venues are warranted. Together, our findings suggested that prevention efforts should not only be limited to HIV-positive attendees, as suggested by previous studies, but should also include those who have never tested for HIV and those who engaged in high risk behaviors (Colfax et al., 2001; Fisher et al., 2012; Ramchand et al., 2012). Such prevention efforts can include providing rapid HIV testing at event venues, where brief sexual and substance use risk reduction education is incorporated into pre-test counseling.

The study had several limitations. The use of convenience sampling to recruit MSM from the Internet limited the generalizability of our results to MSM Internet dating site users and MSM community members. Also, MSM without access to the Internet may be systematically excluded from our sample. Despite these limitations, the demographics of our participants approximated those in similar studies (Colfax et al., 2001; Fisher et al., 2012). As aforementioned, self-report of HIV/STIs instead of biomarkers were used, which might have led to underreporting. Moreover, the online survey did not have a system to safeguard the uniqueness of each entry, but the lack of incentives should have discouraged individuals from undertaking duplicate participations. Also, participants' reported sexual behaviors and drug use may or may not have been venue specific. We did not know whether these men met their sex partners through the circuit party venues. Therefore, we were unable to conclude whether circuit parties facilitated venue-level high risk behaviors among MSM or, instead, the association lied between men who reported circuit party attendance and additional risk behaviors relative to international travel. Future studies should investigate these event-level associations. Participants who had multiple travels in the past 6 months may or may not have attended circuit parties during all of their visits, which might have also biased the true association between reported circuit party attendance and high risk behavioral factors.

Finally, circuit party attendance was only assessed among those who traveled internationally. Future studies should examine the issue of multiple travels within a given time frame and compare behavioral risks among in-country circuit party attendees and those who travel internationally for circuit parties.

In conclusion, HIV infection continues to spread across MSM populations globally and is rapidly escalating among MSM in Asian metropolitan areas. Our findings call for the development of multi-country prevention efforts geared toward circuit party attendees in Asia. Prevention programs should incorporate harm reduction education such as sero-sorting and disclosure, encourage the use of condoms and post-exposure prophylaxis, drug and alcohol education, HIV and STI testing preceding and proceeding circuit party events in combination with timely linkage to care (Cohen et al., 2011; Ghaziani & Cook, 2005; van Griensven & van Wijngaarden, 2010). Future studies should also examine the potential use of HIV pre-exposure chemoprophylaxis (PrEP) for this highly at-risk and volatile MSM population.

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Table 1

Bivariate sociodemographic correlates of circuit party attendance among MSM participants in Asia who traveled in the past 6 months (N = 6094)

	All		Attended circuit party		Not attended circuit party		χ^2
	N	(%)	N	(%)	N	(%)	
	6094	--	1314	(22)	4780	(78)	
Resident country by HIV prevalence ^{a,b}							
0.1–5.0 /low	5233	(87)	1153	(89)	4080	(86)	4.62*
>5.0% /high	783	(13)	146	(11)	637	(14)	
Destination country by HIV prevalence ^{a,b}							
0.1–5.0 /low	2554	(46)	514	(41)	2040	(47)	17.34**
>5.0% /high	3006	(54)	746	(59)	2260	(53)	
Age							
18–29	1666	(27)	368	(28)	1298	(27)	28.87**
30–39	2507	(41)	608	(46)	1899	(40)	
40+	1921	(32)	338	(26)	1583	(33)	
Employment							
Full time	4664	(77)	1016	(77)	3648	(76)	1.17
Student	765	(13)	163	(12)	602	(13)	
Unemployed	202	(3)	44	(3)	158	(3)	
Retired/Other	463	(8)	91	(7)	372	(8)	
Education							
None-Secondary School	503	(8)	105	(8)	398	(8)	1.59
University/Tertiary degree	3744	(61)	827	(63)	2917	(61)	
Post-graduate/Professional school	1847	(30)	382	(29)	1465	(31)	
Marital status							
Single	5124	(84)	1121	(85)	4003	(84)	14.98**
Married to opposite sex partner	255	(4)	31	(2)	224	(5)	
Married to same sex partner	583	(10)	136	(10)	447	(9)	
Divorced/Widowed	132	(2)	26	(2)	106	(2)	
Relationship status ^b							

	All		Attended circuit party		Not attended circuit party		χ^2
	N	(%)	N	(%)	N	(%)	
Casual only	2184	(41)	506	(42)	1678	(45)	35.77*
Regular only	1089	(20)	205	(17)	371	(10)	
Both casual and regular	1691	(31)	423	(36)	1268	(34)	
None	428	(8)	57	(5)	371	(10)	
Sexual orientation							
Gay	5079	(83)	1126	(86)	3953	(83)	6.66*
Heterosexual/Bisexual	1015	(17)	188	(14)	827	(17)	

^a Countries that have HIV prevalence among MSM population between 0.1 to 5.0 (low) include the Philippines, Bangladesh, Sri Lanka, East Timor, Mongolia, Japan, Singapore, Nepal, Malaysia, Taiwan, China, Hong Kong, and South Korea. Countries/continent with HIV prevalence among MSM population 5.1 or higher include Vietnam, Laos, Mauritius, Indonesia, Cambodia, Pakistan, India, Thailand, Myanmar, Europe, USA, and Australia.

^b Did not utilize full sample size of 6094 due to missing data.

* $p < .05$;

*** $p < .01$.

Table 2

Bivariate sexual behavioral correlates of circuit party attendance among MSM participants in Asia who traveled in the past 6 months (N = 6094)

	All		Attended circuit party		Not attended circuit party		χ^2
	N	(%)	N	(%)	N	(%)	
No. of male sex partners, past 6 months							
0	702	(12)	123	(9)	579	(12)	105.10**
1	1419	(23)	226	(17)	1193	(25)	
2–5	2362	(39)	480	(37)	1882	(39)	
6+	1611	(26)	485	(37)	1126	(24)	
Sex with male commercial sex workers, past 6 months							
Yes	1105	(20)	280	(24)	825	(20)	8.54**
No	4287	(80)	911	(76)	3376	(80)	
Paid for having sex with men, past 6 months							
Yes	340	(6)	191	(14)	239	(5)	14.12**
No	5754	(94)	1213	(86)	4541	(95)	
Frequency of disclosing HIV status to others							
Always	846	(16)	166	(14)	680	(16)	21.18**
Sometimes	1070	(20)	291	(24)	779	(19)	
Never	3478	(64)	734	(62)	2744	(65)	
Assumed HIV status with a casual sex partner							
HIV+	1283	(21)	314	(24)	969	(20)	8.36*
HIV–	1221	(20)	248	(19)	973	(20)	
Do not know	3590	(59)	752	(57)	2838	(59)	
Last HIV test							
Less than 6 months	478	(8)	125	(10)	353	(7)	31.45**
6 months to 2 year	3111	(51)	735	(56)	2376	(50)	
More than 2 year	752	(12)	140	(11)	612	(13)	
Never	1753	(29)	314	(24)	1439	(30)	
Self-perceived risk of HIV infection							
High	400	(7)	122	(9)	278	(6)	25.14**

	All		Attended circuit party		Not attended circuit party		χ^2
	N	(%)	N	(%)	N	(%)	
Medium	1217	(20)	283	(22)	934	(20)	
Low	4477	(73)	909	(69)	3568	(75)	
Primary place to find sex							
Internet	3409	(63)	660	(55)	2749	(65)	45.41**
Bars/dance parties/friends	888	(16)	259	(22)	629	(15)	
Sex clubs/gay saunas/cruising spots	1095	(20)	272	(23)	823	(20)	
Unprotected anal sex with a casual sex partner during the trip							
Yes	507	(8)	187	(14)	320	(7)	76.76**
No	5587	(92)	1127	(86)	4460	(93)	
Used recreational drug(s) during the trip							
Yes	510	(8)	328	(25)	182	(4)	601.47**
No	5584	(92)	986	(75)	4598	(96)	

* $p < .05$;

** $p < .01$.

Table 3

Bivariate STI/HIV correlates of circuit party attendance among MSM participants in Asia who traveled in the past 6 months (N = 6094)

	All		Attended circuit party		Not attended circuit party		χ^2
	N	(%)	N	(%)	N	(%)	
Genital wart, last 6 months							
Yes	160	(3)	62	(5)	98	(2)	28.70**
No	5934	(97)	1252	(95)	4682	(98)	
Genital herpes, last 6 months							
Yes	103	(2)	37	(3)	66	(1)	12.77**
No	5991	(98)	1277	(97)	4714	(99)	
Syphilis, last 6 months							
Yes	146	(2)	46	(4)	100	(2)	8.75**
No	5848	(98)	1268	(96)	4680	(98)	
Chlamydia, last 6 months							
Yes	118	(2)	44	(3)	74	(2)	17.60**
No	5976	(98)	1270	(97)	4706	(98)	
Gonorrhea, last 6 months							
Yes	118	(2)	38	(3)	80	(2)	8.06**
No	5976	(98)	1276	(97)	4700	(98)	
HIV status							
HIV-	3888	(64)	871	(66)	3017	(63)	11.89**
HIV+	234	(4)	75	(6)	159	(3)	
Do not know	1972	(32)	368	(28)	1604	(34)	

**
p < .01.

Table 4

Multivariable logistic regression model to predict circuit party attendance as an outcome among MSM who traveled in the past 6 months (N = 6094)

	AOR	95% CI
Resident country by HIV prevalence		
0.1–5.0% /low	1.59**	1.27–2.00
>5.0% /high	Reference	
Destination country by HIV prevalence		
0.1–5.0% /low	Reference	
>5.0% /high	1.32*	1.14–1.53
Resident country by HIV prevalence ^a		
0.1–5.0% /low	1.40*	1.20–1.64
>5.0% /high	Reference	
Age		
18–29	1.86**	1.52–2.27
30–39	1.99**	1.67–2.37
40+	Reference	
Relationship status		
Both regular and casual	1.55*	1.11–2.17
Casual only	1.36	0.98–1.89
Regular only	1.72*	1.21–2.43
None	Reference	
No. of male sex partners, past 6 months		
6+	2.00**	1.55–2.58
2–5	1.43*	1.13–1.80
1	Reference	
Primary place to find sex		
Internet	Reference	
Bars/dance parties/friends	1.91**	1.58–2.30
Sex clubs/gay saunas/cruising spots	1.27	1.05–1.52
Unprotected anal sex with a casual sex partner during the trip		
Yes	1.40**	1.11–1.77
No	Reference	
Used recreational drug(s) during the trip		
Yes	7.12**	5.73–8.83
No	Reference	

^a Interaction term

* $p < .05$;

** $p < .01$.