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Internet Use, Recreational Travel, and HIV Risk Behaviors in Men Who Have Sex With Men

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Abstract

Previous studies have documented higher rates of HIV risk behavior in gay and bisexual men traveling for leisure. Most of these studies collected data in high-risk tourist areas known for promoting alcohol and other substance use. The present study sampled a broader range of men by collecting data at a Gay Pride celebration, and asking participants about vacation experiences over the past 12 months. We also collected information about men's use of the Internet to find sexual partners before they traveled. Overall, two-thirds of participants reported recreational travel in the previous year. Of these men, 17% reported having sex with a new partner during their most recent vacation. Forty-three percent of the respondents were sexually active during their vacation. Sexually-active participants reported a mean of 2.01 unprotected anal sex acts during their brief vacation stay ($M = 6.2$ days). Close to half of the sexually-active men reported having sex with a partner of unknown HIV status. Alcohol and drug use were associated with unprotected sex. Men who used the Internet to set up dates prior to travel reported significantly more sexual partners and were significantly more likely to report having sex with a new partner. Many gay and bisexual men on vacation report behaviors that may place their health at risk, including substance use and unprotected sexual activity. Interventions designed to reduce risk behaviors in this population are needed.

Keywords

HIV; Men who have sex with Men; Tourism; Travel; Internet

Introduction

Travel and vacationing may serve several purposes. For some vacationing represents a chance to “get away,” “recharge,” or simply to have fun. As such, vacationers may seek out experiences that they find new or exciting. Some of these experiences also carry significant negative health consequences [1,2]. For instance, individuals who are traveling are more likely to engage in high-risk sexual practices and health-jeopardizing substance use [3–6]. The institution of spring break for young adults in the United States is one example. The situational disinhibition (i.e., feeling like a different person) that is an inherent part of this novel environment has been associated with higher rates of recreational substance abuse, excessive alcohol consumption and casual sex in American young adults (3–4). One study found that of individuals who engaged in sexual activity at spring break, 73% did so with a new partner [5]. Additionally, intentions to use condoms in this situation explained only 10% of the variance in their actual condom use behaviors, a substantially lower portion of the variance (34%) compared to those engaging in sexual activity with a long-standing partner. In other words, there was a disconnect between intentions to protect themselves and actually doing so with new partners.

This relation is not unique to the US college population, as others have found high risk for alcohol and marijuana use and casual sexual behaviors in British university students traveling abroad for summer break [6]. Similar results have been found for substance use and sexual risk among young travelers on extended backpacking trips and at international night-life resorts [7–9], with as many as 26% of men and 14% of women reporting more than one sexual partner even during brief overseas vacations [10]. Travel to international resorts has also been associated with relapse into use of cocaine and ecstasy after 12 months of abstinence as well as being recruited into using drugs for the first time [11]. Hughes and colleagues [12] found that in a sample of British backpackers in Australia, roughly 69% of those traveling without a long-term partner had sex during their time in the country. Of those individuals, nearly a quarter reported having unprotected sex with a new partner. They also found that frequent visits to bars and nightclubs were associated with increased odds of unprotected sex, and frequent alcohol consumption and illicit drug use were associated with greater odds of having multiple sexual partners while in Australia. Overall, the tendency to engage in casual sex while vacationing is associated with younger age, male gender, having a large number of sexual partners at home, misuse of alcohol and drugs, being single and traveling alone [13].

Travel and Sexual Behavior in Men Who Have Sex With Men

As with the studies described above, the majority of research in this area has focused on heterosexual young adults. It is important to expand the populations examined with regard to the phenomenon of travel and sexual risk, as even different nationalities traveling to the same resort may evidence differences in risk behavior [11]. As such, certain populations may be at greater risk than others. For instance, men who have sex with men (MSM) may have greater discretionary income available for traveling compared to other groups that are at high-risk for contracting HIV (e.g., injection drug users). Although the demographics of HIV transmission have changed over the last several decades, a majority of new HIV infections continue to occur in MSM [14]. Between 2004 and 2007, there was a 26% increase in estimated annual HIV/AIDS diagnoses among MSM [14]. Given this rise, understanding the sexual risk habits of vacationing MSM is important in preventing the spread of HIV as well as other sexually transmitted infections (STIs). Research concerned with travel and sexual risk among MSM has only recently begun to take form in the literature. Clift and Forrest found that 48% of British MSM reported sex with a new partner while on vacation [15]. Approximately half of those who indicated having new sexual partners reported sex with three or more new partners. Factors associated with unprotected

intercourse included an expectation of sexual behavior while on vacation, HIV-positive status, and not taking condoms during traveling. More recently, Whittier and colleagues compared the sexual behaviors of MSM while vacationing in a popular beach resort on the American east coast to their sexual activity collected for the last 60 days in their home residences. Men on vacation reported 11 times more non-main sexual partners with whom they had engaged in unprotected anal intercourse at the resort, versus at their homes [16]. Additionally, significantly more participants reported engaging in sex in combination with alcohol and other recreational drugs (e.g., ecstasy) while on vacation than at home. Through mathematical modeling analyses of the risk taking behaviors of sexually-active, at-risk (HIV-negative or unknown serostatus) MSM vacationing in Key West, it was determined that more than 1 out of every 200 would be expected to acquire HIV over the course of a 1-week stay [17].

Moreover, there may be greater risk to MSM traveling to destinations where the local population engages in more high-risk sexual behavior or has a higher incidence rate of HIV. For instance, the local MSM population in South Florida, which is represented by a highly transient MSM population, may be more likely to attend sex clubs and bath houses, while at the same time visitors to this area may engage in more acts of unprotected anal sex while vacationing [18]. Consistent with previous work that has examined its impact more broadly [19], alcohol and recreational drug use is associated with high-risk sexual activities. In one study, MSM traveling to Key West and Rehoboth Beach, Delaware, were significantly more likely to report unprotected anal sex during their stay if they had also used poppers, ecstasy or ketamine [20]. Thirteen percent also identified having had anal sex after consuming alcohol to the point of intoxication. In another study of MSM traveling for Mardi Gras celebrations in New Orleans, 48% of sexually active participants reported having anal sex after having too much to drink and 19% reported having anal sex after using drugs [21]. Associations with unprotected anal intercourse have also been demonstrated for traveling MSM who use methamphetamine, both alone and in combination with sex [16]. There is also evidence that when MSM travel to attend circuit parties (versus attending them locally), they are more likely to have unprotected anal sex with serodiscordant partners, an association that is mediated by variation in drug use [22]. Darrow and colleagues found that unprotected sex at circuit parties was strongly associated with the use of club drugs (e.g., poppers) both among local residents and travelers [18].

A potential disadvantage of recruiting participants in party-oriented gay tourist destinations is that these sites may be more likely to attract men who are especially prone to engaging in HIV risk behavior, whether at home or away. MSM travelers to other vacation destinations (e.g., the Grand Canyon) may engage in relatively little HIV risk behavior.

Kaufman and colleagues recently examined the differences between the sexual risk behaviors of MSM who vacation at gay resorts versus those who vacation elsewhere [23]. Because recruitment occurred at a place of central gathering (gay community festival), the data included information about multiple travel destinations for MSM. They found that those who visited gay resorts reported a higher average number of male sex partners over the prior six months, were more likely to report ever having an STI, and were more likely to have attended a circuit party compared to those who had vacationed elsewhere. This highlights other findings that MSM vacationers may travel with different motivations for or expectations of having sex which can impact risk behavior [15,21]. Some travel destinations make it a point to advertise an uninhibited atmosphere where sexual promiscuity is condoned or even encouraged (e.g., “What happens in Vegas, stays in Vegas.”) The negative consequences of engaging in risk behaviors as a part of traveling may be most salient for destinations with a large number of male transactional sex workers such as the Caribbean or Dominican Republic [24,25]. For these reasons, certain destinations may represent a greater

concern with regard to the risk behavior of vacationing MSM. To date, few studies exist that ask MSM participants to indicate their sexual risk and substance abuse behaviors after they have returned from traveling. Previous work has instead studied MSM while on vacation, and typically this has occurred at destinations regarded as gay resorts or hot spots (e.g., Key West, New Orleans). The approach taken by Kaufman and colleagues [23] and that taken in the current article broadens the focus of these behaviors by not exclusively centering on MSM who vacation at gay resorts or party destinations. The current study also seeks to build on previous work by using a recruitment method that is “off-site” with regard to the vacation destinations of MSM.

The Internet, Sex, and Travel

Just as prospective travelers use the Internet to search out activities and accommodations [26,27], some MSM travelers in our qualitative work reported that they went online in advance of travel to try to find potential sex partners before they arrive [28]. Typically these men would go to gay-oriented chat rooms geographically centered on their destination city (e.g., Gay.com New Orleans room), chat with local men, receive information about places to go and things to do, and set up dates. Considerable evidence suggests that MSM who use the Internet to find sexual partners engage in more HIV risk behavior than those who do not [29–32]. To the best of our knowledge, associations between Internet use, travel, and sexual risk behavior have not been previously investigated in quantitative studies with MSM.

Method

Participants, Setting and Procedures

To examine risk behaviors among MSM, 378 people attending a gay pride festival in Denver, CO were recruited to complete self-administered surveys. Participants were asked to complete a 9-page survey concerning HIV and AIDS as they walked through the festival grounds where retail vendors and community organizations occupied display booths, one of which was rented for the purposes of this study. Participants were told that the survey was about sexual relationships, contained personal questions about their sexual history and substance use, was anonymous, and required approximately 15 min to complete. Research assistants attempted to recruit all men walking through the vending area. Over 70% of men approached agreed to complete the survey. Participants' names were not collected with the survey at any time. Participants were offered \$2 for completing the survey, and an additional \$2 donation was made to a local charity on their behalf. All research procedures were approved by the Institutional Review Board of the University of Colorado Denver. Recruitment methods such as these have been used extensively in prior research [33–35] and have yielded samples that are roughly representative of methods that use more sophisticated sampling procedures [36].

This festival was chosen as the site for the survey because over 200,000 people attend this annual event [37]. Previous research has shown that men who attend gay pride festivals report significant rates of high-risk sexual behaviors [38]. Almost 60% of all AIDS cases in Colorado have been reported in Denver County and more than 70% of Colorado's HIV infections have occurred among MSM [39].

Measures

The anonymous survey included measures of demographic information, recent travel and vacation experiences, the use of the Internet in advance of travel, attitudes about sex on vacation, and sexual practices while on vacation.

Demographics—Participants were asked their age, years of education, income, race/ethnicity, home zip code, whether they self-identified as gay, bisexual, or heterosexual, whether they had been tested for HIV antibodies, and if so the results of their most recent HIV test.

Recent Travel and Vacation Experiences—Participants were asked how many trips in the previous year they had taken for vacation purposes (i.e., not trips for work or to visit family), when their most recent vacation occurred, and how many days it lasted.

Internet Use—Participants were asked if they had gone online before their most recent vacation to contact men in their destination city. Men who had gone online were asked to indicate how many times they had done so.

Attitudes Concerning Sex on Vacation—Three items used in previous research [21] measured personal motivations or expectations for sex on vacation (e.g., “A big part of having a fun vacation is finding new guys to have sex with.”). Response choices ranged from 1 (strongly disagree) to 4 (strongly agree). Internal consistency for this measure was acceptable ($\alpha = 0.79$).

Sexual Practices—Sexual behavior was measured by asking participants to report the number of times they had engaged in unprotected anal intercourse as the insertive and receptive partner during their most recent vacation. We were particularly interested in unprotected anal intercourse because of the high risk that this behavior poses for HIV transmission. Participants also reported the number of male and female sex partners they had during their most recent vacation, whether they had a new sexual partner during their most recent vacation, and whether they had discussed their partner's and their own HIV status prior to sex. Separate questions asked if participants had engaged in sex during their most recent vacation after having “too much” to drink or after using drugs. Open response formats were used for the sexual behavior measures to reduce response bias and to minimize measurement error. Measures similar to these have been found to be reliable in self-reported sexual behavior assessments [40] and to yield aggregate indices of HIV risk that are comparable to those obtained by finer-grained partner-by-partner sexual behavior assessments [41].

Data Quality Assurances and Statistical Analyses

All surveys were examined for inconsistencies and invalid responses. Missing data were omitted from analyses, resulting in slightly different *ns* for various statistical tests. Because distributions of sexual behavior were highly skewed, nonparametric analyses were used as recommended by Hays [42]. Two-tailed significance levels were used for all tests.

Participants

Eighty-three percent of participants self-identified as gay, 9% bisexual, and 8% heterosexual. Because we specifically wanted to focus on men who have sex with men, participants who self-identified as heterosexual and reported no sexual contact with a man in the 3 months prior to the study were eliminated from further analyses. In order to increase accuracy of recall, men whose most recent vacation was more than 12 months prior to the study were not included in the analyses of behaviors and attitudes during vacation travel. Among the 342 MSM participants, 230 (67%) reported having traveled 100 miles or more for vacation purposes in the previous year. The mean age for these 230 men was 35.4 years ($SD = 11.5$), and the average years of education was 14.7 ($SD = 2.1$). The majority of the sample was White (78%), with the remainder being Latino (8%), African American (5%), Asian American (4%), Native American (1%), or other/mixed ethnic heritage (4%). The

majority of participants (90%) indicated that they live in Colorado. Eighteen percent of participants reported annual incomes below \$16,000, 23% had incomes between \$16,000 and \$30,000, 25% had annual incomes between \$31,000 and \$45,000, and 33% had incomes above \$45,000. The majority (93%) reported having been tested for HIV antibodies; of those, 80% tested HIV negative, 17% tested HIV positive, and 3% did not know their test results.

Results

Demographics and Vacation Parameters

Among the 230 men who reported a vacation in the previous year, 34% reported one vacation during the previous 12 months, 34% reported two vacations during this period, and 33% reported 3 or more vacation periods in the previous year. The overall number of vacations was significantly correlated with income ($\rho = 0.14, P < .05$) and education ($\rho = 0.24, P < .001$). Participants' most recent vacation lasted an average of 6.2 days (SD = 5.23).

Sexual Behavior During Vacation Travel

Slightly more than half (57%) of the men surveyed reported not having sex during their most recent vacation. During their most recent out-of-town vacation (of an average 6.2 days) 30% of participants had sex with one partner, 6% had sex with two partners, and 7% had sex with three or more partners. Twenty-four percent of participants reported engaging in unprotected anal sex during their most recent vacation. The sexually-active participants reported a mean of 2.01 unprotected anal sex acts (SD = 4.14, range = 0 to 25). Among those who were sexually active, 43% did not discuss their HIV status with all of their sexual partners and 46% did not ask about all of their partners' HIV status.

Overall, 17% of participants reported having sex with a new partner during their most recent vacation. Men who had sex with a new partner did not differ from those who had not in race, age, years of formal education, income, or HIV status. Men who had sex with a new partner were significantly less likely to discuss their HIV status with all of their vacation sex partners (41%) than men who had not had sex with a new partner (67%), $\chi^2 (1, N = 97) = 6.56, P < .01$. Similarly, men who had sex with a new partner were significantly less likely to find out the HIV status of all of their vacation sex partners (38%) than men who had not had sex with a new partner (63%), $\chi^2 (1, N = 101) = 5.79, P < .01$.

Substance Use and Sexual Behavior During Vacation Travel

Eleven percent of the sample reported having sex after having “too much” to drink. Four percent of the sample reported having sex after using drugs other than alcohol. Substance use was correlated with sexual risk behavior. Among sexually-active men, using alcohol to the point of intoxication was associated with the total number of vacation sex partners ($\rho = 0.41, P < .001$) and with unprotected anal sex acts ($\rho = 0.35, P < .001$). Using drugs before sex was associated with the number of vacation sex partners ($\rho = 0.23, P < .01$) but was not associated with unprotected sex. Among sexually-active men, 65% who drank alcohol to intoxication had unprotected anal intercourse during their most recent vacation, whereas 42% of individuals who did not drink to intoxication had unprotected sex, a significant difference ($\chi^2 [1, N = 97] = 3.86, P < .05$).

Motivations for Sexual Activity During Vacation Travel

The percent of men who endorsed various motivations for sex during travel are shown in Table 1. Overall, scores on the combined motivations for sex during travel scale were associated with higher rates of risk behaviors, including greater numbers of sexual partners

($\rho = 0.18, P < .01$), having sex after using drugs ($\rho = 0.15, P < .05$) and having sex after consuming alcohol to the point of intoxication ($\rho = 0.23, P < .01$). Men who reported having sex with a new partner during their most recent vacation had significantly higher scores on the motivations for sexual activity during travel scale ($M = 6.35, SD = 1.97$) than men who did not have sex with a new partner ($M = 5.00, SD = 1.92$), $t(228) = 4.02, P < .001$.

Use of the Internet in Advance of Travel

Overall, 11.9% of men reported going online in advance of travel to try to meet someone. Participants who went online in an attempt to meet someone before traveling did so an average of 3.4 times ($SD = 13.5$). Men who went online to find potential partners before traveling had higher motivations for sex during their vacation ($M = 6.77, SD = 2.08$) than did men who had not gone online ($M = 5.02, SD = 1.88$), $t(216) = 4.40, P < .001$. Men who used the Internet prior to travel were also more likely to report a new sexual partner (38.5%) than men who did not (15.6%; $\chi^2[1, N = 218] = 6.74, P < .01$). Similarly, among men who were sexually active during their most recent vacation, those who had gone online before traveling reported more total sexual partners ($M = 2.25, SD = 1.29$) than those who had not ($M = 1.52, SD = 1.35$), Mann–Whitney $Z = 2.90, P < .01$. However, men who had gone online in advance of travel did not differ from those who had not in the total number of unprotected anal intercourse acts or in their likelihood of discussing their and their partners' HIV status prior to engaging in sexual activity.

Discussion

In the present study, many participants reported low rates of HIV risk behaviors. However, a significant minority had engaged in behavior that could place them at risk for HIV and other STIs, including unprotected anal sex and substance use in conjunction with sexual activity. More than 1 in 7 men reported having sex with multiple partners during their most recent vacation, which lasted less than a week, on average. Almost half of the sexually-active men reported having anal sex with a partner of unknown HIV status and a similar number did not disclose their own HIV status to all of their sexual partners. Some individuals who travel for leisure report the specific intentions of finding new sex partners. For our participants, motivations to seek sexual activity and sexual activity in conjunction with alcohol and drugs were significantly associated with risk.

Risk behaviors were highest in men who used the Internet prior to travel to “meet” potential partners online before meeting them in person. This finding adds to the literature documenting associations between using the Internet to find sexual partners and HIV risk behavior [29–32,43] and is the first to note associations between Internet use to find sexual partners, travel away from home, and HIV risk behavior. In both settings—whether vacationing away from home or spending time online—men have a greater amount of anonymity and are free to try out new roles. These are essentially “liminal” spaces where men may feel less constrained by the expectations of others and their normal (frequently safer) daily routines [44].

Despite the risk behaviors reported by participants in this study, it is worth noting that these participants reported lower rates of risk behavior and lower motivations to seek sex than has been documented in previous work. For example, in our prior study of men visiting a gay party destination (New Orleans), a substantially higher percentage of participants (60%) endorsed the item “A big part of having a fun vacation is finding new guys to have sex with” than did participants in the present study (19.5%) [21]. Similarly, in our prior work with data collected in New Orleans, Key West, and Rehoboth Beach, disclosure of HIV status to sexual partners was lower than we found in the present study [17,20,21]. These differences

may be accounted for by differences in methodology between those studies—where data were collected in locations known for being party-oriented—and this study, which collected data from men whose vacation destinations likely spanned the gamut from sedate to disinhibited. In this sense, the present work contributes to the work of Kaufman and colleagues [23] in providing a broader view of the vacation risk behaviors of MSM.

Taken together, the findings from prior work and the present study suggest that interventions directed at MSM in destinations with a “party atmosphere” are needed. Such interventions face a number of challenges, including attracting the attention of men who are focused on having fun and meeting new partners while on vacation. Such interventions are more likely to be effective if they are not puritanical in their opposition to sex, but rather are focused on enjoying time away from home (including enjoying sexual activity) while at the same time reducing HIV risk behaviors such as unprotected sex and sex with partners whose HIV status is unknown. Potential interventions might involve recruiting agents of change who come in contact with MSM tourists regularly, such as bartenders or guest-house workers. Given that men who go online in advance of travel are at particularly high risk, interventions might also include an Internet component, including providing information about the risks of sex during travel that can be accessed from Internet sites where men may go to plan their trips. Previous work has shown that the Internet can be an effective tool for HIV primary prevention with MSM [45,46]. Non-governmental organizations (NGOs) are often on the cutting edge in providing innovative interventions [47,48] and many NGOs are already incorporating Internet-based approaches in their prevention work [49].

The present study sampled from men attending a gay pride festival; men who participated may be more likely to be open about their sexual orientation. The present study does not provide information on how men who are less open about their sexual activity with other men experience HIV risk during leisure travel. In addition, the surveys relied on self-reported behavior, potentially leading respondents to over or under-report risk behaviors. An additional limitation of the present study is that we did not ask participants if they had traveled to the leisure destination with a long-term partner. Undoubtedly, some of the men reporting unprotected sex with 1 partner during their most recent vacation were describing activities with a long-term partner, in which case there was no additional risk attributable to vacation travel. However, the fact that 17% reported sex with a new partner, and among sexually-active men, that 46% indicated that they did not know the HIV status of all their sexual partners during vacation, suggests that vacation travel is associated with greater HIV risk for some individuals. Despite these limitations, this study provides additional information about patterns of HIV risk behavior among MSM who are traveling away from home and is among the first to document associations between Internet use, recreational travel, and sexual risk behaviors. The risk-taking behavior of MSM on vacation may play an important role in the dissemination of HIV and other STIs. Men who contract HIV or other STIs while traveling will bring these infections home with them. Since many of the party destinations investigated in this area of research are also high HIV prevalence areas, this pattern may inadvertently spread HIV from areas of high prevalence to areas of lower prevalence. In an era of limited budgets for prevention programs, interventions directed at traveling MSM may prove cost-effective in reducing the spread of HIV.

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Table 1
Motivations for sex during travel

Item %	Agreeing or strongly agreeing
A big part of having a fun vacation is finding new guys to have sex with.	19.5
I am more interested in sex when I am on vacation than when I am at home.	17.9
I have more sex on vacation than when I am at home.	16.5