

# Sexual Risk Behavior and Venues for Meeting Sex Partners: An Intercept Survey of Gay and Bisexual Men in LA and NYC

Christian Grov · Jeffrey T. Parsons · David S. Bimbi

Published online: 8 January 2007  
© Springer Science+Business Media, LLC 2007

**Abstract** Understanding the link between venues for meeting sex partners and sexual risk behavior is critical to developing and placing effective sexual health education and HIV prevention services. Non-monogamous gay and bisexual men ( $n = 886$ ) were surveyed in New York and Los Angeles about the venues that they met recent sex partners: bathhouses, private sex parties, gay bars/clubs, the gym, via public cruising, and the Internet. Bars/clubs, bathhouses, and the Internet were the most endorsed venues for meeting partners. Men having met a majority of their partners (i.e., “preference”) via these three venues were compared/contrasted. Those having preference for bars/clubs were dissimilar from men with preference for bathhouses or the Internet on multiple levels (e.g. age, number of sex partners, temptation for unsafe sex). However, these men were proportionally similar in whether they had engaged in a recent episode of

unprotected anal intercourse (UAI). Logistic regressions predicting UAI suggested venues might not play a role in differentiating men who had *preference* for bars/clubs, bathhouses or the Internet. Additional regression analyses utilizing all six venues to predict UAI suggested other person-factors such as identity as a barebacker and temptation for unsafe sex better explain UAI. This research suggests HIV prevention and educational campaigns targeted within venues need also address socio-psychological person-factors in addition to environmental/venue contexts.

**Keywords** Gay · Bisexual · MSM · Sex venue location · Risk · Internet · Bathhouse · Cruising · Club · Bar · Gym · HIV

## Introduction

Gay and bisexual men have historically utilized many environments, or venues, to meet potential sex partners including: public venues such as parks, adult bookstores, beaches, alleys, restrooms, sex parties, and gyms (Binson et al., 2001; Humphreys, 1975; Leap, 1999; Parsons & Halkitis, 2002; Reece & Dodge, 2003); commercial sex environments (CSEs) such as bathhouses (Elwood & Williams, 1998, 1999; Parsons & Halkitis, 2002; Tewksbury, 2002); and the Internet (Bolding, Davis, Hart, Sherr, & Elford, 2005; Chiasson et al., 2006; Grov, 2004; Ross, 2005; Tewksbury, 2003). The environmental context where gay and bisexual men meet sex partners has been related to sexual behaviors and communications (Baker, 2002; Bullock, 2004; Elwood & Greene, 2006; Leap, 1999; Silverstein & Picano, 2003), including condom use (Benotsh,

C. Grov · J. T. Parsons · D. S. Bimbi  
Center for HIV/AIDS Educational Studies  
and Training (CHEST), New York,  
NY, USA

C. Grov  
Department of Sociology, Graduate Center of the City  
University of New York (CUNY),  
New York, NY, USA

J. T. Parsons (✉)  
Department of Psychology, Hunter College  
of the City University of New York,  
695 Park Avenue, New York,  
NY 10021, USA  
e-mail: jeffrey.parsons@hunter.cuny.edu

J. T. Parsons · D. S. Bimbi  
Department of Psychology, Graduate Center of the City  
University of New York (CUNY), New York, NY, USA

Kalichman, & Cage, 2002; Binson et al., 2001; Elwood, Green, & Carter, 2003; Klausner, Wolf, Fisher-Ponce, Zolt, & Katz, 2000; Parsons, 2005; Parsons & Vicioso, 2005; Parsons et al., 2004; Taylor et al., 2004).

Recent studies have found the rates of sexual risk behaviors, such as unprotected anal intercourse, among gay and bisexual men have risen (CDC, 2003a, b; Chen et al., 2002a, b; Ekstrand, Stall, Paul, Osmond, & Coates, 1999; Kalichman, Rompa, Luke, & Austin, 2002; Stolte, Dukers, de Wit, Fennema, & Countinho, 2001; Van de Ven, Prestage, Crawford, Gulich, & Kippax, 2000), increasing potential for the spread of sexually transmitted infections (STIs), including HIV (CDC, 2002, 2003a, b, 2005a; Koblin et al., 2000). These data are alarming as gay and bisexual men are a social group with already disproportionate rates of HIV and AIDS. Based on data collected in 2004, the Centers for Disease Control reported that MSM accounted for 70% of all estimated HIV infections among male adults and adolescents in the US (CDC, 2005b). That same year, MSM accounted for 63% of all male adults and adolescents who received an AIDS diagnosis, and 46% of all people who received a diagnosis of AIDS (CDC, 2005b). These data exemplify the need to better identify and provide effective health education and prevention to men who may be most at risk for HIV transmission. A thorough understanding of where men who report sexual risk meet their partners, in conjunction with providing sexual health education and prevention services within these spaces, is one potential method for effectively reaching populations at risk (Blank, Gallagher, Washburn, & Rogers, 2005; Binson et al., 2001, Binson, Woods, Pollack, & Sheon, 2005; Bolding, Davis, Sherr, Hart, & Elford, 2004; Frankis & Flowers, 2006; Taylor et al., 2004; Woods, Binson, Mayne, Gore, & Rebchook, 2000; Woods, Binson, Mayne, Gore, & Rebchook, 2001).

### Assessing Venue and Sexual Risk

Researchers have studied the sexual risk behaviors among MSM in a variety of contexts. Sampling methods have included both surveying men at locations where they met sex partners (i.e., interviewing men at bars, bathhouses, on the Internet) (Benotsch et al., 2006; Bolding et al., 2004, 2005; Crosby & Metty, 2004; Reece & Dodge, 2003; Tikkanen & Ross, 2003; Woods et al., 2001) or by self-report data, in which men were asked to recall where they met sex partners (Binson et al., 2001, 2005; Elwood & Greene, 2006; Parsons & Halkitis, 2002; Rietmeijer & Lloyd, 2005; Taylor et al., 2004). Some studies have compared sexual risk *between* venues (Binson et al., 2001, 2005;

Bolding et al., 2005; Parsons & Halkitis, 2002; Rietmeijer & Lloyd, 2005; Woods et al., 2001) while others reported risks *within* a particular venue (Benotsch et al., 2006; Crosby & Metty, 2004; Elwood & Williams, 1998; Frankis & Flowers, 2006; Taylor et al., 2004; Tewksbury, 2002; Van Bended et al., 2002).

Researchers assessing sexual behavior *within* particular environments have often reported variant levels of risky sexual behavior. For example, researchers have found MSM sampled within bathhouses reported high levels of sexual risk (Elwood et al., 2003; Elwood & Williams, 1998). Meanwhile researchers analyzing public sex environments found some risky behavior within those environments (Frankis & Flowers, 2005, 2006; Reece & Dodge, 2003). Although these studies are informative, it is difficult to empirically contrast findings as sampling procedures and measures are rarely comparable.

Some researchers have compared sexual risk between venues. In a sample of 456 HIV positive MSM, Parsons and Halkitis (2002) compared risk behaviors between men having met sex partners via commercial sex environments (CSEs) (e.g., bathhouses and sex clubs) to public sex environments (PSEs) (e.g., cruising parks). Men having gone to CSEs were more likely to report unprotected anal sex than those at PSEs. Binson et al. (2001) reported on 2,881 MSM who went to CSEs or PSEs. In their analysis, men reporting partners only from PSEs were the least likely to report any risky sexual behavior. Meanwhile, men reporting partners from CSEs were more likely to report unprotected sex with non-primary partners. Both Binson et al. (2001) and Parsons and Halkitis (2002) found that, compared to HIV negative men, HIV positive men were more likely to have visited both CSEs and PSEs. Although these analyses have their strengths, they do not address the important fact that many men may meet partners in more than one venue (including those venues beyond CSEs and PSEs).

The Internet is a venue having recently emerged for MSM to meet sex partners (Chiasson et al., 2005; Grov, 2006; Ross, 2005). Liao, Millett, and Marks (2006) meta-analysis of MSM's use of the Internet found that as much as 40% of MSM have met sex partners online (95% confidence interval [CI] = 35.2%–45.2%). Research of MSM who use the Internet to search for sex partners has found men online were younger (Benotsch, et al., 2002; Kim, Kent, McFarland, & Klausner, 2001; Tikkanen & Ross, 2003; Weatherburn, Hickson, & Reid, 2003), more likely to have had a previous STI (Elford, Bolding, & Sherr, 2001; McFarlane, Bull, & Rietmeijer, 2000), not identified as gay, and report sex with women (Tikkanen & Ross, 2003; Weatherburn et al., 2003). Likewise, some

researchers have found men who seek partners online more likely to be Caucasian (Benotsch et al., 2002; Bull & McFarlane, 2000; Bull, Lloyd, Rietmeijer, & McFarlane, 2004; Hirshfield, Remien, Humberstone, Walavalkar, & Chiasson, 2004; Taylor et al., 2004; Weatherburn et al., 2003) while others found no differences in race or ethnicity (Elford et al., 2001; Kim et al., 2001).

Sexual risk behaviors among men who seek partners online have been investigated; however, with contradictory results. Some researchers have found men who seek partners online reported a greater number of partners (Benotsch et al., 2002; McFarlane et al., 2000; Taylor et al., 2004), were more likely to have had casual sex partners (Kim et al., 2001; Tikkanen & Ross, 2003; Taylor et al., 2004), and reported more unprotected sex (Benotsch et al., 2002; Elford et al., *in press*). Others have found men using the Internet were more likely to report condom use with their most recent partner (McFarlane et al., 2000) and some researchers found no differences in the rates of condom use (Bolding et al., 2005; Chiasson et al., 2005; Kim et al., 2001; Metty, Crosby, DiClemente, & Holtgrave, 2003). Nevertheless, there is a growing body of literature suggesting a link between the Internet and barebacking (intentional unprotected anal intercourse) among MSM (Groves, 2006; Halkitis & Parsons, 2003; Shernoff, 2005; Tewksbury, 2003).

Many studies of venues where men met sex partners typically focused exclusively on one or two venues, or broad classifications of venues (i.e., commercial sex environments). These data are limited in that they cannot be empirically contrasted to other venues. Further, with the novelty of the Internet as a resource to meet sex partners, much current research has transitioned to exclusively focus on the Internet as a “venue of risk.” Although informative, findings attributing sexual risk to the Internet have not been systematically contrasted to other venues for meeting sex partners. Further, our knowledge of the link between sexual risk behaviors and other venues such as gay bars/club or the gym has not been widely addressed.

This analysis sought to expand current research having investigated the relationship between sexual risk behavior and venues for meeting sex partners among men who have sex with men. It explored sexual risk and socio-demographic characteristics reported by men who met partners via the following venues: bathhouses, private sex parties, gay bars/clubs, the gym, via public cruising, and the Internet. As men may meet partners in a variety of venues, this broader approach sought to identify links to sexual risk both between and within venues.

## Methods

### Participants and Procedure

A cross-sectional street-intercept survey method (Miller, Wilder, Stillman, & Becker, 1997) was adapted to survey 1,258 gay and bisexual men at a series of gay, lesbian and bisexual (GLB) community events in New York City and Los Angeles in the fall of 2003 and the spring of 2004 through the Sex and Love v2.0 Project, which was approved by the Institutional Review Board of the authors. This approach to collecting data has been used in numerous studies (Carey, Braaten, Jaworski, Durant, & Forsyth, 1999; Chen et al., 2002a, b; Kalichman & Simbaya, 2004a, b; Rotheram-Borus et al., 2001), including those focused on GLB persons (Benotsch et al., 2002; Kalichman, et al., 2001) and has been shown to provide data that are comparable to those obtained from other more methodologically rigorous approaches (Halkitis & Parsons, 2002). Because this study was interested in sexual behavior with non-primary partners, only the data from single or non-monogamous partnered men ( $n = 886$ ) were included for analysis.

At each two-day long community event, the research team hosted a booth, and a member of the research team actively approached each person who passed the booth. Potential participants were provided with information about the project and offered the opportunity to participate. The response rate was high, with 82.9% of those approached having consented. The survey required 15–20 min to complete, and to promote confidentiality, participants were given the survey on a clipboard so that they could step away from others to complete the questionnaire. Upon completion, participants deposited their own survey into a secure box at the booth. Those who consented and completed the survey were provided with a voucher for free admission to a movie as an incentive. Data were entered into an SPSS database and verified by project staff for accuracy.

### Measures

The survey assessed a broad range of sexual behaviors, history of STIs, substance use, physical health, and a series of scales related to psychological health and well-being. Participants were asked “Of the men you had sex with in the last 3 months, how many did you meet . . .” with the following list of venues: bathhouses, private sex parties, gay bars/clubs, the gym, public cruising, and the Internet. Response choices were

ordinal: 0 = none, 1 = few, 2 = about half, and 3 = most or all.

Demographic characteristics such as age in years, HIV serostatus, sexual identity, income in discrete categories and race/ethnicity were also assessed. Race and ethnicity response categories included African American, Asian/Pacific Islander, European/White, Hispanic/Latino, Middle Eastern/Arab, Native American, Mixed and Other/Specify. Due to the small sample size of Middle Eastern/Arab ( $n = 5$ ), Mixed ( $n = 23$ ) and Native American individuals ( $n = 12$ ), these categories were collapsed and added to the “other” group.

### *Sexual Behavior and Health*

Participants estimated their total number of sex partners in the last three months. The range for this varied greatly (range 1–300,  $M = 6.92$ ,  $SD = 17.2$ ); however, 96% of men reported 30 or fewer partners in the last 90 days. In an effort to restore some normality to the distribution of this variable, those 4% of men who reported more than 30 partners were recoded to 31 ( $M_{\text{recoded}} = 5.67$ ,  $SD_{\text{recoded}} = 8.2$ ). In addition, men also indicated if they had unprotected anal sex (whether receptive or insertive) with partners who were HIV serodiscordant or of unknown/undisclosed serostatus (1 = yes, 0 = no). Further, men also indicated if they identified as a barebacker, or a person who intentionally sought out sex without condoms (1 = yes, 0 = no).

Participants also completed the temptation of unsafe sex scale (Parsons, Halkitis, Bimbi, & Borkowski, 2000; Parsons, Halkitis, Wolitski, Gomez, & Seropositive Urban Men’s Study Team, 2003). The temptation scale assesses temptations for unsafe sexual behavior. It is a 10-item four-point Likert-type scale. It assesses different situations to which an individual may be tempted to engage in sex without a condom (i.e., think risk is low, really want affection, under the influence of alcohol or drugs) (Cronbach’s  $\alpha = .89$ ).

### *Analytic Plan*

This analysis occurred in two phases. In the first phase of analysis, the three most endorsed venues for meeting sex partners were identified (i.e., gay bars/clubs, the Internet, and bathhouses). Next, men who reported meeting a majority of their recent sex partners (i.e., had preference) uniquely via these venues were systematically identified. For example, men who reported meeting half or more of their partners via the Internet and a “few” partners from bathhouses or a “few” partners via the gym were

coded as having preference for the Internet. In contrast, men who reported meeting half or more partners via bathhouses and “few” partners via other venue combinations were coded as having preference for bathhouses, etcetera. Men who reported an equal share of partners (i.e., half or more partners) via both bathhouses and the Internet (or Internet–bars/clubs, or bathhouses–bars/clubs) were not included in this first phase of analysis. Men who reported meeting any combinations of “none” or “some” partners ( $n = 208$ ) from the remainder venues were also included in first phase of analysis and served as a reference group of individuals with no clear venue preference.

Those men identified as having preference for bars/clubs ( $n = 107$ ), the Internet ( $n = 153$ ), bathhouses ( $n = 71$ ), or “no preference” ( $n = 208$ ) were next compared and contrasted using ANOVA,  $\chi^2$ , and difference of proportion statistical tests (Daniel, 1996). Finally, to better explore the confounding impact of additional variables into this analysis (e.g., number of recent sex partners, temptation for unprotected sex, barebacker identity, HIV serostatus), a five-step logistic regression was conducted to predict a recent episode of UAI with HIV serodiscordant (or unknown/undisclosed) partners (1 = yes). All analyses in Phase I were conducted among this sub-sample of 539 men.

The second phase of this analysis sought to address relationships between having met a recent sex partner (1 = yes) via *any* one of the six venues (bar/club, bathhouse, Internet, public cruising, private sex party, and the gym); while controlling for other variables (e.g., HIV serostatus, barebacker identity, temptation for unsafe sex, number of venues a person may have utilized to meet sex partners). These analyses were also conducted using a 5-step logistic regression, whereby UAI with HIV serodiscordant (or unknown/undisclosed) partners was the dependent variable (1 = yes). Both phases of analyses were conducted with SPSS version 12.0.

## **Results**

The sample was diverse with more than one third being a person of color. A large majority (93.5%) of the sample identified as gay, while a smaller portion (6.5%) identified as bisexual. Ages ranged between 18 and 84 ( $Mean = 38.5$ ;  $SD = 11.1$ ). Approximately 12.5% ( $n = 111$ ) of the men were HIV positive and 13.2% ( $n = 117$ ) identified as barebackers, or men who intentionally sought sex without condoms. Finally, 39.9% of men reported having engaged in at least one recent episode of unprotected sex. See Table 1 for full demographics.

**Table 1** Participant characteristics ( $N = 886$ )

	<i>n</i>	%
Race and ethnicity		
African American	89	10.1
Asian/Pacific Islander	63	7.1
Hispanic/Latino	117	13.3
White	569	64.5
Other/Mixed	44	5.0
Sexual identity		
Gay	823	93.5
Bisexual	57	6.5
Education		
High school or less	68	7.7
Some college	206	23.3
Bachelors	321	36.4
Some graduate school	82	9.3
Graduate degree	206	23.3
Relationship status		
Single, not dating	333	37.6
Single, casually dating	358	40.4
Partner, non-monogamous	195	22.0
Income		
\$10,000 or less	62	7.1
\$10,001 to \$30K	138	15.8
\$30,001 to \$50K	261	29.9
\$50,001 to \$70K	169	19.4
\$70,001 to \$100K	133	15.3
Over \$100K	109	12.5
HIV serostatus		
Negative	753	85.0
Positive	111	12.5
Refused/Uknown	22	2.5
Barebacker/identified	117	13.2

Bars/clubs (54.8%), the Internet (53.5%) and bathhouses (40.3%) were the most frequently endorsed venues for having met at least one sex partner recently. They were also the most commonly reported venues for having met about half or greater sex partners (see Table 2). Public cruising, the gym, and private sex parties followed. Note that the percentage totals for where men reported meeting half or more of their recent sex partner exceeded 100%. Men were asked to estimate “approximately half” such that they could have indicated meeting about half of their partners in more than one venue. Nevertheless, the data indicated that the Internet, bathhouses, and via bars/gyms were the most commonly endorsed venues for having met a majority of partners.

### Phase I

Men who reported meeting a majority of their recent sex partners uniquely via the three most endorsed venues (i.e., had preference) were identified. Table 3 reports differences between men who met a majority of their partners via bathhouses versus the Internet versus

**Table 2** Locations where partners were met

	<i>n</i>	%
Any sex partners (i.e., 1–100%) (<3 months)		
Bar or dance club	364	54.8
Internet	359	53.5
Bathhouse	263	40.3
Public cruising	190	29.8
Gym	180	28.3
Private sex parties	159	24.9
Half or more sex partners (i.e., ≥50%) (<3 months)		
Bar or dance club	180	27.1
Internet	223	34.7
Bathhouse	146	22.4
Public cruising	79	12.4
Gym	66	10.4
Private sex parties	72	11.3

bars/clubs versus those who indicated no clear venue preference. Men who “preferred” the Internet averaged a greater number of recent sex partners ( $m = 8.7$ ,  $SD = 9.5$ ) than men who preferred bars/clubs ( $m = 5.4$ ,  $SD = 7.0$ ) and men who had no clear preference for any venues ( $m = 2.9$ ,  $SD = 5.4$ ). Men who preferred bars/club tended to be younger on average ( $m = 34.7$ ,  $SD = 9.3$ ), while men who preferred bathhouses tended to be older on average ( $m = 44.9$ ,  $SD = 12.3$ ). Further, men who preferred bathhouses ( $m = 17.6$ ,  $SD = 18.4$ ) or the Internet ( $m = 17.0$ ,  $SD = 7.4$ ) averaged higher scores on temptation for unsafe sex, while men with no clear preference ( $m = 14.7$ ,  $SD = 7.2$ ) and those preferred bars/clubs ( $m = 14.6$ ,  $SD = 6.4$ ) averaged the lowest scores.

A significantly larger proportion of men who preferred bathhouses were HIV positive (20.3%) compared to men who preferred the Internet (15.2%), bars/clubs (6.7%), or had no clear preference (8.3%). Men with no clear venue preference were the least likely to report a recent episode of unprotected sex with a HIV serodiscordant or unknown/undisclosed status partner (27.9%). In contrast, men who preferred the Internet (46.0%), bars/clubs (38.0%), or bathhouses (39.2%) were the most likely to have reported UAI.

Although it seemed a smaller portion of men who preferred bars/clubs identified as barebackers (7.9%) (compared to the proportion of men who preferred the Internet that identified as barebackers [15.8%]), neither  $\chi^2$  nor difference of proportion tests could detect a significant difference (95% CI = 0.0–0.16). Further, although  $\chi^2$  did not detect a significant difference in the proportions of men of color, a difference of proportion test indicated a greater proportion of men of color among men who preferred bars/clubs (40.6%)

**Table 3** Across venue comparisons

	A No Clear Preference <i>n</i> = 208	B “Preferred” Bars/ Clubs <i>n</i> = 107	C “Preferred” Bathhouses <i>n</i> = 153	D “Preferred” Online <i>n</i> = 71	<i>F</i>	<i>df</i>	<i>p</i>	Post hoc
Number of partners last 90 days	2.9	5.4	8.2	8.7	16.6	3,469	<.001	A < CD, B < D
Age	38.1	34.7	44.9	37.5	13.0	3,535	<.001	B < A, ABD < C
Temptation for unsafe sex scale	14.7	14.6	17.6	7.0	5.2	3,528	<.01	A < CD, B < C
Mean number of venues met partners at	1.2	2.0	2.2	2.1	22.7	3,353	<.001	A < BCD
Percentage HIV positive	8.3	6.7	20.3	15.2	$\chi^2$ 11.7	<i>df</i> 3	<i>p</i> <.01	N/A
Percentage reported any UA w/HIV serodiscordant/ unknown*	27.9	38.0	39.2	46.0	9.6	3	<.01	N/A
Percentage identified as barebackers	12.6	7.9	15.2	15.8	3.6	3	0.31	N/A
Percentage w/income <\$30K	27.7	25.5	17.1	20.5	4.5	3	0.22	N/A
Percentage persons of color (non-white)	32.7	40.6	23.9	31.4	5.6	3	0.13	N/A

\* UA = Unprotected Anal

compared to the proportion of men of color who preferred bathhouses (23.9%). There were no significant income differences.

Using the same sub-sample of 539 men, (*n* = 208 who indicated no clear venue preference and *n* = 311 who specifically reported having a preference for bars/clubs, bathhouses, or the Internet) a five-step logistic regression was conducted to predict a recent episode of unprotected sex with a partner of HIV serodiscordant or unknown/undisclosed status (see Table 4). Controlling for the effects of other variables (such as HIV serostatus, barebacker identity, income, race, number of recent sex partners, temptation for unsafe sex) having met partners predominantly via bathhouses, the Internet, or bars/clubs offered little to explain a recent episode of sexual risk behavior with a partner of HIV serodiscordant or unknown/undisclosed status. In step four of the logistic regression, it seemed both HIV serostatus and number of recent sex partners predicted sexual risk; however, the strength of HIV serostatus to predict sexual risk behavior was better explained by barebacker identity and temptation for unsafe sex (see step 5). Restated, controlling for where men reported having met a majority of their sex partners, number of recent sex partners, barebacker identity, and temptation for unsafe sex were the best “predictors” of recent sexual risk behavior.

## Phase II

As many men reported partners via a variety of venues, and some men reported at least a few partners via all the venues analyzed in this study, the following analyses were conducted with the data from all non-monogamous men (*n* = 866). Table 5 reports on a series of five logistic regressions predicting a recent episode of sexual risk behavior. In the first step, demographic characteristics were entered into the model. The second step introduced the six potential venues where men may or may not have met a recent sex partner (1 = yes). Step three controlled for the potential confounding effects of those men who may have met partners in multiple venues. Finally, steps four and five introduced socio-psychological and demographic variables related to sexuality and sexual behavior.

Step one of this regression provided little in way of explaining sexual risk behavior. Controlling for the effects of other variables, age, income, sexual orientation, and being Caucasian (versus not) provided little in terms of predicting a recent episode of unprotected sex. The second step of adding different types of venues in which men may have met a recent sex partner did provide some predictive ability in way of explaining sexual risk behavior. Having met a partner via a bar/club, private sex party, or the Internet seemed

**Table 4** Selected venues, logistic regression predicting a recent episode of UAI, *B* (exp. *B*)

	Step 1	Step 2	Step 3	Step 4	Step 5
Model $\chi^2$	2.5	6.04	8.14	24.29***	66.35 ***
<i>df</i>	4	7	8	10	12
Nagelkerke $R^2$	0.01	0.03	0.04	0.12	0.31
Constant	-1.04	-1.46*	-1.52 *	-1.67 *	-3.19***
Age	0.01 (1.01)	0.01 (1.01)	0.02 (0.10)	0.01 (1.01)	0.01 (1.01)
Income < \$30K (1 = yes)	0.46 (1.59)	0.49 (1.63)	0.45 (1.57)	0.39 (1.48)	0.51 (1.66)
Bisexual (1 = yes)	-0.44 (0.65)	-0.46 (0.63)	-0.53 (0.59)	-0.59 (0.55)	-0.64 (0.53)
Caucasian (1 = yes)	0.05 (1.05)	0.00 (1.00)	-0.04 (0.96)	0.10 (1.10)	0.26 (1.30)
Bar/Club is primary venue for partners (1 = yes) <sup>a</sup>		0.24 (1.27)	-0.10 (0.91)	0.16 (1.18)	0.03 (1.30)
Bathroom is primary venue for partners (1 = yes)		0.37 (1.45)	-0.01 (0.99)	-0.12 (0.89)	-0.43 (0.65)
Online is primary venue for partners (1 = yes)		0.67 (1.94)	0.30 (1.35)	0.31 (1.36)	0.09 (1.10)
Total number of venues met partners at (Range 1–6)			0.18 (1.19)	0.03 (1.03)	0.04 (1.04)
Number of sex partners (<90 days)				0.04 (1.04)*	0.04 (1.04)*
HIV positive (1 = yes)				1.26 (3.51)**	0.37 (1.45)
Barebacker (1 = yes)					1.89 (6.61)***
Temptation for unsafe sex scale					0.07 (1.08)***

<sup>a</sup> Reference group is men with no clear venue “preference”

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

**Table 5** All venues, logistic regression predicting a recent episode of UAI, *B* (exp. *B*)

	Step 1	Step 2	Step 3	Step 4	Step 5
Model $\chi^2$	2.3	31.1***	31.2***	42.0***	98.4***
<i>df</i>	4	10	11	13	15
Nagelkerke $R^2$	0.01	0.11	0.11	0.14	0.31
Constant	0.04	-0.97 <sup>+</sup>	-1.01 <sup>+</sup>	-0.99 <sup>+</sup>	-2.26***
Age	-0.01 (0.99)	0.00 (1.00)	0.00 (1.00)	-0.01 (0.99)	-0.01 (0.99)
Income < \$30K (1 = yes)	-0.01 (0.99)	0.01 (1.01)	0.01 (1.01)	-0.08 (0.92)	-0.23 (0.79)
Bisexual (1 = yes)	-0.40 (0.67)	-0.51 (0.60)	-0.51 (0.60)	-0.44 (0.64)	-0.74 (0.48)
Caucasian (1 = yes)	-0.22 (0.80)	-0.23 (0.79)	-0.24 (0.79)	-0.19 (0.83)	-0.04 (0.96)
Sex partners from Bars/Clubs		0.25 (1.28)*	0.23 (1.26) <sup>+</sup>	0.23 (1.26) <sup>+</sup>	0.28 (1.33) <sup>+</sup>
Sex partners from Bathhouses		0.10 (1.11)	0.08 (1.08)	0.04 (1.04)	0.03 (1.03)
Sex partners from private sex parties		0.46 (1.59)**	0.44 (0.16)*	0.34 (1.41) <sup>+</sup>	0.37 (1.45) <sup>+</sup>
Sex partners from public cruising		-0.11 (0.90)	-0.14 (0.87)	-0.14 (0.87)	-0.08 (0.92)
Sex partners from the gym		0.18 (1.20)	0.15 (1.17)	0.04 (1.04)	0.05 (1.05)
Sex partners from the Internet		0.29 (1.34)**	0.27 (1.31)*	0.23 (1.26) <sup>+</sup>	0.24 (1.27) <sup>+</sup>
Total number of venues met partners at (Range 1–6)			0.05 (1.05)	0.04 (1.04)	0.02 (1.02)
Number of sex partners (<90 days)				0.02 (1.02)	0.02 (1.02)
HIV positive (1 = yes)				0.92 (2.50)**	0.05 (1.05)
Barebacker (1 = yes)					1.63 (5.09)***
Temptation for unsafe sex scale					0.08 (1.08)***

<sup>+</sup>  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

to “predict” a recent episode of unprotected sex with a HIV serodiscordant or HIV unknown/undisclosed partner; however, these strength of these effects were somewhat mitigated once controlling for the number of venues where participants met partners (see step 3).

As with the first series of regressions listed in Table 4, steps four and five indicated there was a strong relationship between barebacker identity and temptation for unprotected sex in predicting risky sexual behavior. Further, these factors diminished the strength of the relationship between HIV serostatus and reported sexual risk behavior. Refocusing to

venues for meeting sex partners, these findings suggested that by controlling for other variables (including HIV serostatus, barebacker identity, number of venues with which a person could have met a partner, demographic characteristics, etc.), there was still a marginally-significant ( $p < .10$ ) association between three specific venues for meeting sex partners and sexual risk behavior: bars/clubs, private sex parties, and the Internet. Finally, net for the effects of other variables, having met partners via the gym, bars/clubs, or public cruising provided little in way of explaining a recent episode of sexual risk behavior.

## Discussion

The social environment in which MSM meet sex partners has been implicated not only for impacting the decision to use a condom (Benotsh et al., 2002; Binson et al., 2001; Elwood & Greene, 2006; Elwood et al., 2003; Klausner et al., 2000; Parsons, 2005; Parsons & Vicioso, 2005; Parsons et al., 2004; Taylor et al., 2004), but it also has been an effective outlet for reaching at-risk men (Binson et al., 2001, 2005; Bolding et al., 2004; Taylor et al., 2004; Woods et al., 2000, 2001). Researchers have informed how MSM frequenting *within* different environments reported variant levels of sexual risk behaviors, however our knowledge of how this may have varied across multiple venues is limited. Further, there are seemingly contradictory findings within academic literature in relation to sexual risk among men who meet partners specifically from the Internet.

Within this analysis, three particular venues were the most frequently endorsed for meeting sex partners: gay bars/club, the Internet, and bathhouses. Specifically comparing and contrasting men who met a majority of their partners (i.e., had preference) via these venue types to each other found those whom had preference for bars/club were most “dissimilar” from the men having preference for the Internet or bathhouses. Meanwhile, men having preference for bathhouses or the Internet were more similar on both socio-demographic and socio-sexual variables. Regardless of which of these *three* venues men had “preference” for, they were fairly similar in the proportion that reported UAI.

Men with no clear venue preference tended to differ most from men who “preferred” any of these three venues and they were also the least likely to have reported UAI. This could be the result of lack of opportunity to engage in UAI as these men reported fewer partners and utilized fewer venues (as assessed in this analysis). Multinomial logistic regression found no relationship between having a preference for either of these venues (bathhouses, the Internet, or bars/clubs) and sexual risk behavior. In fact, and as would be expected, identity as a barebacker and temptation for unsafe sex were the best indicators of actual risky sexual behavior.

Many researchers have agreed that sexual health education and HIV prevention initiatives within venues such as bathhouses and bars/clubs are not only feasible, but also effective (Binson et al., 2001, 2005; Blank et al., 2005; Lister et al., 2005; Parsons, 2005; Taylor et al., 2004; Woods et al., 2001). Meanwhile, there is a growing body of research suggesting the same of the Internet (Bolding et al., 2004; Chiasson et al.,

2006; Liau et al., 2006). The findings from this analysis suggest it may be necessary to enhance specialized HIV prevention and educational efforts within bars/clubs and on the Internet in an effort to more effectively reach those few men whom engage in sexual risk behavior; and in particular barebackers. For barebackers, emerging medical technologies, such as Pre-exposure Prophylaxis (PrEP), might be a necessary harm reduction strategy worthy of exploring (Cohen, 2006; Costello, 2005; Kellerman et al., 2005; Youle & Wainberg, 2003).

In Phase II, the analysis was expanded to include men who may have met partners via a variety of venues (and not necessarily those who had a particular preference). Findings suggested men who met a partner via the Internet, bars/clubs, or a private sex party *might* be at greater risk for UAI. This was the case even when controlling for a variety of factors including the number of venues a person may have met a partner, their HIV serostatus, whether they were a barebacker, the number of recent sex partners they had, and their level of reported temptation for unprotected sex. Nevertheless, caution is needed before these findings can be extrapolated, as the relationships between venues and sexual risk behavior in Phase II were only *marginally* significant ( $p < .10$ ), introducing the opportunity for a Type I error.

Private sex parties are often organized in private spaces such as homes, hotel rooms, or venues that have been otherwise rented by a private promoter and are closed to the public (see Clatts, Goldsamt, & Yi, 2005). This presents an inherent greater challenge for community groups and health educators seeking to provide outreach within these settings. Further, because many private sex parties are themed (e.g., sado-masochism, urophilia [water sports], barebacking), traditional outreach strategies might not be as effective.

Sex party promoters are essentially gatekeepers to the men who attend their events. As a suggestion, those seeking to provide outreach to private sex parties might consider partnerships with these promoters/hosts in efforts to develop rapport, as promoters could serve as HIV prevention or harm reduction peer educators/leaders. In lieu of a condom-only approach, harm reduction strategies could be incorporated for those private sex parties that eschew condoms or promote/provide substance use (Shernoff, 2005).

The univariate analyses conducted in the first part of Phase I indicated 46% of men who preferred the Internet had engaged in recent unprotected sex. Many researchers have investigated and found men who meet partners online report greater instances of sexual risk behaviors. Adjusting for the effects of other variables,



by using multi-step multivariate analyses, confounded the interpretation of these preliminary univariate analyses. This suggests the simple correlation found between venues for meeting sex partners and subsequent sexual risk might be better explained by other factors outside the context of the venues themselves.

These findings raise important implications related to the development and refinement of HIV prevention and health education policy/strategies. For example, a minimalist approach to HIV education and prevention (such as educational posters/advertisements and a bowl of free condoms) in venues where MSM encounter sex partners may not be enough to address the variety of socio-psychological person-characteristics that comprise the complex decision making process impacting UAI. As such, it is necessary for both researchers and health officials/community groups to fully evaluate the social, environmental, and psychological components of sexual behavior. These analyses indicate temptation for unsafe sex and identity as a barebacker might be two good starting points.

### Limitations and Future Directions

Researchers having investigated venues for meeting sex partners and sexual risk behavior among MSM have often narrowed their focus to only one or two types of venues. Although this analysis found a select set of venues (i.e., bars/clubs, bathhouses, Internet) were more often endorsed for having met recent sex partners, it is particularly important to highlight that many men reported having met partners in multiple venues. As such it is essential to understand that the venues analyzed within this analysis are neither mutually exclusive nor exhaustive. Although parts of this analysis “controlled” for the number/variety of venues with which men met partners, some of the sexual risk reported was “shared” among other venues, including those venues not assessed (i.e., partners met through friends, social groups, school, work, gay resorts) (Benotsch et al., 2006). This analysis does not provide a definitive indication of specifically where sexual risk may occur, but rather an indication where men who reported risky sex met their partners. As such, this type of analysis informs about where men who report sexual risk might be easier to locate and hence provide comprehensive sexual health education and HIV prevention services.

The survey method used in this analysis was able to capture a broad variety of individuals including more than one hundred HIV positive men. Nevertheless, some statistical power is diminished when conducting

analyses among smaller sub-samples; hence some caution is urged before these results can be widely extrapolated. For example, targeted sampling of HIV positive men might be necessary to both secure more statistical power and to better understand the relationship between sexual behavior and venue.

As with most survey research, these data are limited to the individuals who attended the large-scale GLB events and participated in the study (i.e., a self selection bias). Although efforts were made to ensure confidentiality, data were gathered in public places. The reporting of sensitive information could result in socially desirable responses. Data were collected at large-scale GLB community events in NYC and LA. At these types of large-scale events, GLB individuals are accessible to community groups, service providers, and researchers. The findings from this study can assist these groups and service providers with developing or refining prevention messages and sexual health educational programs that are designed to reach the types of men whom attend these types of large-scale events.

These data do not reflect all gay and bisexual men, or individuals who may *not* attend large-scale GLB events. Other variables such as class, education, cultural influences, norms, alcohol, drugs etc. also play important roles in sexual behavior and this analysis does not wish to discount this myriad of variability. Nevertheless, this analysis contributes further to our knowledge of the relationship between environment and behavior.

**Acknowledgments** The Sex and Love v2.0 Project was supported by the Hunter College Center for HIV/AIDS Educational Studies and Training (CHEST), under the direction of Dr. Parsons. The authors acknowledge the contributions of other members of the CHEST Sex and Love v2.0 Project Team—Gideon Feldstein, Catherine Holder, James Kelleher, and Juline A. Koken. The authors also wish to thank Sarit A. Golub and the anonymous reviewers for their helpful comments.

### References

- Baker, P. (2002). *Fantabulosa: A dictionary of polari & gay slang*. New York: Continuum.
- Benotsch, E. G., Kalichman, S., & Cage, M. (2002). Men who have met sex partners via the Internet: Prevalence, predictors, and implications for HIV prevention. *Archives of Sexual Behavior, 31*, 177–183.
- Benotsch, E., Seeley, S., Mikytuck, J. J., Pinkerton, S. D., Nettles, C. D., & Ragsdale, K. (2006). Substance use, medications for sexual facilitation, and sexual risk behavior among traveling men who have sex with men. *Sexually Transmitted Diseases, 33*(12), 706–711.
- Binson, D., Woods, W. J., Pollack, J., Paul, J., Stall, R., & Catania, J. A. (2001). Differential HIV risk in bathhouses and public cruising areas. *American Journal of Public Health, 91*, 1482–1486.

- Binson, D., Woods, W. J., Pollack, L., & Sheon N. (2005). Bringing HIV/STI testing programmes to high-risk men. *International Journal of STD & AIDS*, *9*, 600–604.
- Blank, S., Gallagher, K., Washburn, K., & Rogers, M. (2005). Reaching out to boys at bars: Utilizing community partnerships to employ a wellness strategy for syphilis control among men who have sex with men in New York City. *Sexually Transmitted Diseases*, *32*, s65–s72.
- Bolding, G., Davis, M., Hart, G., Sherr, L., & Elford, J. (2005). Gay men who look for sex on the Internet: Is there more HIV/STI risk with online partners? *AIDS*, *19*, 961–968.
- Bolding G., Davis M., Sherr L, Hart G., & Elford J. (2004). Use of gay Internet sites and views about online health promotion among men who have sex with men. *AIDS Care*, *16*(3), 993–1001.
- Bull, S., Lloyd, L., Rietmeijer, C., & McFarlane, M. (2004). Recruitment and retention of an online sample for an HIV prevention intervention targeting men who have sex with men: The smart sex quest project. *AIDS Care*, *16*, 931–943.
- Bull, S. S., & McFarlane, M. (2000). Soliciting sex on the Internet: What are the risks for sexually transmitted diseases and HIV? *Sexually Transmitted Diseases*, *27*, 545–550.
- Bullock, D. (2004) Lesbian cruising: an Examination of the concept and methods. *Journal of Homosexuality*, *47*, 1–31.
- Carey, M. P., Braaten, L. S., Jaworski, B. C., Durant, L. E., & Forsyth, A. D. (1999). HIV and AIDS relative to other health, social, and relationship concerns among low-income women: A brief report. *Journal of Women's Health and Gender Based Medicine*, *8*, 657–661.
- Centers for Disease Control, Prevention (CDC). (2002). Unrecognized HIV infection, risk behaviors, and perceptions of risk among young black men who have sex with men—Six US cities 1994–1998. *MMWR*, *51*, 733–736.
- Centers for Disease Control and Prevention (CDC) (2003a). HIV/AIDS Surveillance Report: HIV Infection and AIDS in the United States. Accessed online on October 20, 2005 at <http://www.cdc.gov/hiv/stats.htm#exposure>.
- Centers for Disease Control and Prevention (CDC) (2003b). HIV/AIDS Surveillance Report: HIV Infection and AIDS in the United States, Table 18. Accessed Online on October 20, 2005 at <http://www.cdc.gov/hiv/stats/2003SurveillanceReport/table18.htm>.
- Centers for Disease Control and Prevention (CDC) (2005a). HIV/AIDS among men who have sex with men (MSM). Accessed online on October 20, 2005 at <http://www.cdc.gov/hiv/pubs/facts/msm.htm>.
- Centers for Disease Control and Prevention (CDC) (2005b). *HIV/AIDS Surveillance Report, 2004*. Vol. 16. Atlanta: US Department of Health and Human Services, CDC; 1–46. Also available at <http://www.cdc.gov/hiv/topics/surveillance/resources/reports.htm>. Accessed July 19, 2006.
- Chen, S. Y., Gibson, S., Katz, M. H., Klausner, J. D., Dilley, J. W., Schwarcz, S. K., Kellogg, T. A., & McFarland, W. (2002a). Continuing increases in sexual risk behavior and sexually transmitted diseases among men who have sex with men: San Francisco, Calif, 1999–2001. *American Journal of Public Health*, *92*, 1387–1388.
- Chen, J. L., Kodagoda, D., Lawrence, A. M., & Kerndt, P. R. (2002b). Rapid public health interventions in response to an outbreak of syphilis in Los Angeles. *Sexually Transmitted Diseases*, *29*, 285–287.
- Chiasson, M., Hirshfield, S., Humberstone, M., Remien, R., Wolitski, R., & Wong, T. A. (2005). Comparison of online and offline risk in MSM. Paper presented at: 12th Conference on Retroviruses and Opportunistic Infections; February 25, 2005; Boston, MA.
- Chiasson M. A., Parsons J. T., Tesoriero J., Carballo-Diequez, A., Hirshfield, S., & Remien, R. H. (2006) HIV behavioral research online. *Journal of Urban Health*, *83*, 1–13.
- Clatts, M. C., Goldsamt, L. A., & Yi, H. (2005). An emerging HIV risk environment: A preliminary epidemiological profile of an MSM Poz Party in New York City. *Sexually Transmitted Infections*, *81*, 373–376.
- Cohen, J. (2006, January 22, 2006). Protect or disinhibit? *New York Times*, p. 12.
- Costello, D. (2005, December 19, 2005). AIDS pill as party drug? *Los Angeles Times*, p. F1.
- Crosby, R., & Metty, A. (2004). A descriptive analysis of HIV risk behavior among men having sex with men attend a large sex resort. *AIDS*, *37*, 1496–1499.
- Daniel, W. W. (1996). *Biostatistics: A foundation for analysis in the health science*. New York: Wiley.
- Ekstrand, M. L., Stall, R. D., Paul, J. P., Osmond, D. H., Coates, T. J. (1999). Gay men report high rates of unprotected anal sex with partners of unknown or discordant HIV status. *AIDS*, *13*, 1525–1533.
- Elford, J., Bolding, G., Davis, M., Sherr, L., & Hart, G. (in press). Barebacking Among HIV-Positive Gay Men in London. *Sexually Transmitted Diseases*.
- Elford, J., Bolding, G., & Sherr, L. (2001) Seeking sex on the Internet and sexual risk behaviour among gay men using London gyms. *AIDS*, *15*, 1409–1415.
- Elwood, W. N., & Greene, K. (2006). “Risks both known and unknown”: A qualitative method to assess the role of situation in HIV/STD Risk and Prevention. *Journal of Homosexuality*, *50*, 135–154.
- Elwood, W. N., Green, K., & Carter, K. K. (2003). Gentlemen don't speak: Communication norms and condom use in bathhouses. *Journal of Applied Communication Research*, *31*, 277–298.
- Elwood W. N., & Williams, W. L. (1998). Sex, drugs, and situation: attitudes, drug use, and sexual risk behaviors among men who frequent bathhouses. *Journal of Psychology and Human Sexuality*, *10*, 23–44.
- Elwood, W. N., & Williams, M. L. (1999). The politics of silence: Communicative rules and HIV prevention issues in gay male bathhouses. In W. N. Elwood (Ed.), *Power in the blood: A handbook on AIDS, politics, and communication* (pp. 121–132). Mahwah, NJ: Lawrence Erlbaum Associates.
- Frankis, J. S., & Flowers, P. (2005). Men who have sex with men (MSM) in public sex environments (PSEs): A systematic review of quantitative literature. *AIDS Care*, *17*, 273–288.
- Frankis, J. S., & Flowers, P. (2006). Cruising for sex: Sexual risk behaviours and HIV testing of men who cruise, inside and out with public sex environments (PSE). *AIDS Care*, *18*, 54–59.
- Grov, C. (2004). “Make me your death slave:” Men who have sex with men and use the Internet to intentionally spread HIV. *Deviant Behavior*, *25*, 229–349.
- Grov, C. (2006). Barebacking websites: Electronic environments for reducing or inducing HIV risk. *AIDS Care*, *18*, 990–997.
- Halkitis, P. N., & Parsons, J. T. (2002). Recreational Drug Use and HIV-Risk Sexual Behavior among Men Frequenting Gay Social Venues. *Journal of Gay & Lesbian Social Services*, *14*, 19–38.
- Halkitis, P. N., & Parsons, J. T. (2003). Intentional unsafe sex (barebacking) among HIV-positive gay men who seek sexual partners on the Internet. *AIDS Care*, *15*, 367–378.
- Hirshfield, S., Remien, R., Humberstone, M., Walavalkar, I., & Chiasson, M. (2004) Substance use and high-risk sex among men who have sex with men: a national online study in the USA. *AIDS Care*, *16*, 1036–1047.

- Humphreys, L. (1975). *Tearoom Trade: Impersonal sex in public places*. Chicago, IL: Aldine Publisher Company.
- Kalichman, S. C., Benotsch, E., Rompa, D., Gore-Felton, C., Austin, J., & Luke, W., DiFonzo, K., Buckles, J., Kyomugisha, F. & Simpson, D. (2001). Unwanted sexual experiences and sexual risks in gay and bisexual men: Associations among revictimization, substance use and psychiatric symptoms. *Journal of Sex Research, 28*, 1–9.
- Kalichman, S. C., Rompa, D., Luke, W., & Austin, J. (2002). HIV transmission risk behaviors among HIV-positive persons in serodiscordant relationships. *International Journal of STD AIDS, 13*, 677–682.
- Kalichman, S. C., & Simbaya, L. (2004a). Sexual assault history and risks for sexually transmitted infections among women in an African township in Cape Town, South Africa. *AIDS Care, 16*, 681–689.
- Kalichman, S. C., & Simbaya, L. (2004b). Traditional beliefs about the cause of AIDS and AIDS-related stigma in South Africa. *AIDS Care, 16*, 572–580.
- Kellerman, S., Hutchinson, A., Begley, E., Boyett, B., Clark, H., & Sullivan, P. (2005, July). *Knowledge and use of pre-exposure prophylaxis among attendees of minority gay pride events, 2004*. Paper presented at the The 3rd IAS Conference on HIV Pathogenesis and Treatment, Rio de Janeiro, July 24–27 2005.
- Kim, A., Kent, C., McFarland, W., & Klausner, J. (2001) Cruising on the Internet highway. *Journal of Acquired Immune Deficiency Syndrome, 28*, 89–93.
- Klausner, J., Wolf, W., Fisher-Ponce, L., Zolt, I., & Katz, M. (2000). Tracing a syphilis outbreak through cyberspace. *Journal of the American Medical Association, 284*, 447–449.
- Koblin, B. A., Torian, L. V., Gulin, V., Ren, L., MacKellar, D. A., & Valleroy, L. A. (2000) High prevalence of HIV infection among young men who have sex with men in New York City. *AIDS, 14*, 1793–1800.
- Leap W. L. (ed.) (1999) *Public sex: Gay space*. New York: Columbia University Press.
- Liau, A., Millett, G., & Marks, G. (2006). Meta-analytic examination of online sex-seeking and sexual risk behavior among men who have sex with men. *Sexually Transmitted Diseases, 33*, 576–584.
- Lister, N. A., Smith, A., Sepehr, T. N., Garland, S., Hayes, P., & Fairley, C. K. (2005). Comprehensive clinical care on-site in men-only saunas: confidential STI/HIV screening outreach clinic. *International Journal of STD & AIDS, 16*, 794–798.
- McFarlane, M., Bull, S., & Rietmeijer, C. (2000). The Internet as a newly emerging risk environment for sexually transmitted diseases. *Journal of the American Medical Association, 284*, 443–446.
- Mettey, A., Crosby, R., DiClemente, R., & Holtgrave, D. (2003) Associations between internet sex seeking and STI associated risk behaviours among men who have sex with men. *Sex Transmitted Infection, 79*, 466–468.
- Miller, K.W., Wilder, L.B., Stillman, F.A., & Becker, D.M. (1997). The feasibility of a street-intercept survey method in an African-American community. *American Journal of Public Health, 87*, 655–658.
- Parsons, J. T. (2005). HIV-positive gay and bisexual men. In S. C. Kalichman (Eds) *Positive Prevention: Reducing HIV Transmission among People Living with HIV/AIDS* (pp. 99–133). New York: Kluwer.
- Parsons, J. T., & Halkitis, P. N. (2002). Sexual and drug-using practices of HIV-positive men who frequent public and commercial sex environments. *AIDS Care, 14*, 815–826.
- Parsons, J. T., Halkitis, P. N., Bimbi, D. S., & Borkowski, T. (2000). Perceptions of the benefits and costs associated with condom use and unprotected sex among late adolescent college students. *Journal of Adolescence, 23*, 377–391.
- Parsons, J. T., Halkitis, P. N., Wolitski, R. J., Gomez, C. A., the Seropositive Urban Men's Study Team. (2003). Correlates of sexual risk behaviors among HIV-positive men who have sex with men. *AIDS Education and Prevention, 15*, 383–400.
- Parsons, J. T., Vicioso, K., Punzalan, J. C., Halkitis, P. N., Kutnick, A., & Velasquez, M. M. (2004). The Impact of alcohol use on the sexual scripts of HIV+ men who have sex with men. *Journal of Sex Research, 41*(2), 160–172.
- Parsons, J. T., & Vicioso, K. (2005). Brief encounters: The roles of public and commercial sex environments in the sexual lives of HIV-positive gay and bisexual men. In P. Halkitis, C. Gómez, & R. J. Wolitski (Eds.) *HIV Positive Sex: The Psychological and Interpersonal Dynamics of HIV-Seropositive Gay and Bisexual Men's Relationships* (pp. 183–200). Washington, DC: American Psychological Association.
- Reece, M., & Dodge, B. (2003). Exploring the physical, mental and social well-being of gay and bisexual men who cruise for sex on a college campus. *Journal of Homosexuality, 46*, 111–136.
- Rietmeijer, C. A., & Lloyd, L. V. (2005). Net, bath and beyond: Serosorting, unprotected anal intercourse, and gonorrhoea among MSM who preferentially seek sex partners on the Internet, in Bathhouses, or in other environments. Paper presented at the 2005 National HIV Prevention Conference, Atlanta Georgia, June 12–15.
- Ross, M. (2005). Typing, doing, and being: Sexuality and the Internet. *Journal of Sex Research, 42*, 342–352.
- Rotheram-Borus, M. J., Mann, T., Newman, P. A., Grusky, O., Frerichs, R. R., Wight, R. G., & Kuklinski, M. (2001). A street intercept survey to assess HIV-testing attitudes and behaviors. *AIDS Education and Prevention, 13*, 229–238.
- Silverstein, C., & Picano, F. (2003). *The joy of gay sex*. New York: Harpers Resource.
- Sherhoff, M. (2005). *Without Condoms: Unprotected sex, gay men, and barebacking*. New York: Routledge.
- Stolte, I. G., Dukers, N. H., de Wit, J. B., Fennema, J. S., & Countinho, R. A. (2001). Increases in sexually transmitted infections among homosexual men in Amsterdam in relation to HAART. *Sexually Transmitted Diseases, 77*, 184–186.
- Taylor, M., Aynalem, G., Smith, L., Bemis, C., Kenney, K., & Kerndt, P. (2004). Correlates of Internet Use to Meet Sex Partners Among Men Who Have Sex With Men Diagnosed With Early Syphilis in Los Angeles County. *Sexually Transmitted Diseases, 31*, 552–556.
- Tewksbury, R. (2002). Bathhouse intercourse: structural and behavioral aspects of an erotic oasis. *Deviant Behavior, 23*, 75–112.
- Tewksbury, R. (2003). Bareback Sex and the Quest for HIV: Assessing the Relationship in Internet Personal Advertisements of Men Who Have Sex With Men. *Deviant Behavior, 24*, 467–483.
- Tikkanen, R., & Ross, M. (2003). Technological tearoom trade: Characteristics of Swedish men visiting gay Internet chat rooms. *AIDS Education and Prevention, 15*, 122–132.
- Van Beneden, C. A., O'Brien, K., Modesitt, S., Yusem, S., Rose, A., & Fleming, D. (2002). Sexual behaviors in an urban bathhouse 15 years into the HIV epidemic. *Journal of Acquired Immune Deficiency Syndrome, 30*, 522–526.
- Van de Ven, P., Prestage, G., Crawford, J., Gulich, A., & Kippax, S. (2000). Sexual behavior increases is associated with HIV optimism among HIV negative and HIV positive gay men in Sydney over the Four-year period to February 2000. *AIDS, 14*, 2951–2953.

- Weatherburn, P., Hickson, F., & Reid, D. (2003). *Gay men's use of the Internet and other settings where HIV prevention occurs*. London: Sigma Research.
- Woods, W. J., Binson, D. K., Mayne, T. J., Gore, L.R., & Rebchook, G.M. (2000). HIV/sexually transmitted disease education and prevention in US bathhouse and sex club environments. *AIDS*, *14*, 625–626.
- Woods, W. J., Binson, D. K., Mayne, T. J., Gore, L. R., & Rebchook, G. M. (2001). Facilities and HIV prevention in bathhouse and sex club environments. *Journal of Sex Research*, *38*, 68–74.
- Youle, M., & Wainberg, M. A. (2003). Could chemoprophylaxis be used as an HIV prevention strategy while we wait for an effective vaccine? *AIDS*, *17*, 937–938.