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Circuit party attendance, club drug use, and unsafe sex in gay men

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Abstract

Purpose: We examined the population demographics and club drugs used in gay circuit parties and estimated the reported unsafe sexual behavior associated with each drug, the reasons for attending circuit parties, and the unsafe sex associated with different reasons. **Methods:** A brief questionnaire was provided to a nonrandom sample of party attendees covering demographics, drugs used, sexual activity, and reasons for attending gay circuit parties at three major North American parties in 1998–1999. A total of 1169 usable questionnaires were obtained. Odds ratios for unsafe sex for the drugs surveyed [alcohol, marijuana, methylenedioxymethamphetamine (Ecstasy), ketamine (Special K), crystal methamphetamine (crystal meth), cocaine, volatile nitrites (poppers), and γ-hydroxybutyrate (GHB)] were calculated, as was significance of unsafe sex for the 10 major reasons for attending parties. **Results:** 12-month party drug use was high: >50% reported using alcohol, Ecstasy, and

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Special K. Frequent (rather than occasional) use of Ecstasy, Special K, and poppers had an association with unsafe sex at parties. Poppers also showed a statistically significant association with unsafe sex in 12 months (not necessarily at parties) while crystal meth and GHB showed a trend. Attending circuit parties "to look and feel good," "to have sex," and "to be uninhibited and wild" were associated with higher levels of unsafe sex in 12 months. **Implications:** In this sample, circuit party attendees are well educated and financially secure. Party drug use is high. It appears that use of poppers, Ecstasy, Special K, crystal meth, and GHB are associated with various measures of unsafe sex. More comprehensive research on club drug use in gay men is required. © 2001 Elsevier Science Inc. All rights reserved.

1. Introduction

In most large metropolitan areas, there are several gay clubs (some of which may function primarily on weekends) characterized by dancing, light shows, and live or recorded music played by disk jockeys. In addition, across the US and Canada, circuit parties, events that are usually annual in any location, may attract from 15,000 to 25,000 men and be characterized by spectacular laser shows, music designed to enhance the effect of the shows, and the drugs commonly taken to enhance the whole experience (Lewis & Ross, 1995). It has been estimated (Electric Dreams Foundation, personal communication) that there are 75 such events per year in the US and Canada. Several years ago, an estimated 150,000 to 200,000 gay men in the US paid for tickets to attend these parties, and ticket sales continue to rise. Since the inception of the parties, a regular "circuit" of the most famous ones has developed. Despite differences in regularity, location, and size, clubs and circuit parties are common venues for the use of "club drugs." The most common of these are methylenedioxymethamphetamine (Ecstasy), ketamine (Special K), methamphetamine (crystal meth), and most recently γ-hydroxybutyrate (GHB) (Li et al., 1998), along with more common drugs of abuse such as cocaine, marijuana, and alcohol. In April 2000, the President of the Gay and Lesbian Medical Association called for urgent research on the "devastating results in our emergency rooms" of club drugs, specifically GHB, and noted their "severe increase" (Frontiers Newsmagazine, 2000).

Ostrow (2000) argues that drugs may facilitate HIV-unsafe sexual behaviors by decreasing both anxiety and self-observation, which may otherwise inhibit pleasurable sexual experiences. They may also provide a "scripted" release from internal, social, and peer group norms, thus resulting in more automatic behaviors that are more rewarding because awareness of their consequences is diminished. Using a case-control approach to HIV seroconversion, nitrite and cocaine use were the significant independent risk factors for infection once receptive anal exposures and condom use were controlled for (Ostrow, DiFranceisco, Chmiel, Wagstaff, & Welsch, 1995). Ostrow and McKirnan (1997) argue that taken together, these observations suggest that the association between drug use and unprotected anal sex could account for a significant proportion of new HIV seroconversions taking place in this population of drug-using homosexual men. They also note that the patterns of sexual risk

and drug use in this population are clearly *episodic* rather than *consistent*. Such episodes include circuit parties.

A factor adding to their risk of adverse effects is that drugs are rarely used singly. McNall and Remafedi (1999) conducted an analysis of data derived from nine annual cross-sectional surveys on 877 young (≤ 21) homosexual and bisexual men in Minneapolis–St. Paul. Clustering study subjects into groups by drug use revealed three distinct clusters of drug users: those who primarily used alcohol; those who used mostly alcohol and marijuana; and those who used cocaine, alcohol, marijuana, and a variety of other substances. These data are consistent with those of Chesney, Barrett, and Stall (1998) on homosexual male HIV seroconverters in San Francisco. They followed a sample of 337 baseline HIV-negative men for 6 years, controlling for needle use, and reported that men who have sex with men (MSM) who seroconverted were consistently likely to report use of marijuana, volatile nitrites ("poppers"), amphetamines, and cocaine than were matched MSM who did not seroconvert. Chesney et al. suggest that the mechanisms leading to seroconversion may include (1) stimulants and inhalants increasing arousal and delaying ejaculation, (2) the disinhibitory effects of substance use, and (3) substance abuse and high-risk sexual behavior occurring within long-standing social networks, so that sexual mixing in such networks results in increased seroconversion if unprotected anal intercourse is a norm and there is a high background prevalence of HIV (Chesney et al., 1998).

Apart from the largely qualitative work of Lewis and Ross (1995) on drug use and HIV risk behavior in circuit parties, there are no research data on the prevalence of use of club drugs, the demographics of men who attend circuit parties, or the association of club drugs with unsafe sex. We present a preliminary report on these questions.

2. Methods

The first author collected data at three major circuit parties in North America in 1998–1999 in diverse geographical areas of the country. The estimated attendance of the three parties, all of which were held over holiday weekends, were 25,000, 15,000 and 10,000, respectively. All data collection was undertaken with the active support of the party producers and based on a two-page, 16-item questionnaire derived from 24 preliminary interviews with party patrons and previous research. It took on average 3 min to complete and was distributed by patron volunteers approaching patrons with the questionnaire on a clipboard at several occasions over the 3-day circuit party events. These occasions were included at Party 1: in the line to the coat-check (the party was in the north during winter) on the first night, in a booth in the exhibition hall between 11 pm and 2 am on the second night, and at the "morning after" party. At Party 2, patrons were approached during the beach party (this party was in the south) in daytime, at the hotel party ticket pick-up line, and from a table at the entrance to the late night party. At Party 3, patrons were approached in the line at the party hotel for ticket pick-up, and at poolside (this party was in the west) during the 3 days of the event. It was estimated that the refusal rate was between 1% and 5%; 15 uncompleted, discarded questionnaires were from the 11 pm–2 am data collection at Party 1, where some patrons were apparently

chemically incapacitated. There was no incentive provided and if respondents were approached more than once, they indicated previous completion of the instrument. A total of 1169 usable questionnaires were obtained, which were entered into SPSSx (SPSS Inc, Chicago, IL) and S-PLUS (Statistical Sciences Inc, Seattle, WA) for statistical analysis. The anonymous questionnaire sought information on demographics, reasons for party attendance, number of circuit parties attended, number of sexual partners, and drug use and unsafe sex both during and outside of circuit parties.

3. Analyses

The data were subject to calculation of simple frequencies and percentages. A binary measure of unsafe sex was computed from the questions asking for number of instances of unprotected anal insertive and receptive sex in the past 12 months. Levels of unsafe sex in the past 12 months were also cross-tabulated with drugs individually, and Pearson χ^2 Tests were used to evaluate the relationship between the two variables. A multivariate logistic regression was also performed, predicting unsafe sex from binary measures (yes/no) of reported use of eight club drugs: alcohol, Ecstasy, Special K, cocaine, crystal meth, GHB, marijuana, and poppers. Odds ratios were computed for each of the predictor drugs. We also obtained another measure for unprotected anal sex. This new measure targeted behavior at parties (rather than in the past 12 months overall) and was in conjunction with the use of specific drugs. Party patrons were dichotomized based on this measure, and we used Pearson χ^2 Tests to evaluate the relationship between patrons who did and did not have unsafe sex and their levels of reported drug use at the parties (occasional vs. frequent). Since patrons were not asked about unsafe sexual behavior at the party if they did not use a particular drug, for this analysis, a comparison with nonusers was not possible. Similar analyses (Pearson χ^2 Test) were performed to evaluate the relationship between unsafe sex in the past 12 months and reasons reported for attending the circuit party. Bonferroni correction for multiple testing was applied in all χ^2 analyses.

4. Results

The demographic summary of party patrons is presented in Table 1. It shows that, on average, one is dealing with a relatively wealthy and well-educated cohort at circuit parties.

Table 1
Demographic summary of circuit party patrons

Mean age (S.D.)	33.5 years (6.5)
% with Bachelor's degree or higher	68
% Caucasian	76
% with annual income of US$50,000 or more	50
% with boyfriend or partner	49
Median length of relationship (where exists)	2 years

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Table 2
Drugs used and unsaf

Substance
Alcohol
Sometimes
Often
Ecstasy
Sometimes
Often
Special K
Sometimes
Often
Cocaine
Sometimes
Often
Crystal meth
Sometimes
Often
GHB/GLB
Sometimes
Often
Marijuana
Sometimes
Often
Poppers
Sometimes
Often

Looking at HIV serostatus, 80% of those interviewed were HIV-negative, 13% HIV-positive, 4% had been tested but did not know, and 3% had never been tested.

Over half of the party patrons reported use of alcohol (79%), Ecstasy (72%), and Special K (60%) at parties in the past 12 months. Over a third reported using cocaine (39%), crystal meth (36%), poppers (39%), and marijuana (45%) in the same time period. Over a quarter had used GHB (28%). Reasons reported for circuit party attendance were (strongly agree) (1) to celebrate, have fun (97%); (2) to dance, enjoy music (97%); (3) to be with friends (95%); (4) to escape from usual day-to-day routines (84%); (5) to look and feel good (86%); (6) to have an intense gay experience (73%); (7) to be wild and uninhibited (68%); (8) to party, use drugs (58%); (9) to have sex (43%); and (10) to forget about HIV/AIDS (14%).

The relationship between each of the party drugs and unsafe sexual behavior at the party while under the influence of these drugs was evaluated by a set of χ^2 tests. After the Bonferroni correction was applied, only *P*-values lower than .0125 were considered significant. Our data show that *at the party*, unsafe sexual behavior was significantly associated with frequent (as opposed to occasional) use of Ecstasy ($\chi^2 = 6.37$, $df = 1$, *P*-value = .01), Special K ($\chi^2 = 6.66$, $df = 1$, *P*-value = .01), and poppers ($\chi^2 = 7.30$, $df = 1$,

Table 2
Drugs used and unsafe sex while using

	Unsafe sex			
Substance	No	Yes	χ^2	*P*-value
Alcohol			5.75	0.02
Sometimes	290	44		
Often	239	62		
Ecstasy			6.37	0.01
Sometimes	250	26		
Often	245	50		
Special K			6.66	0.01
Sometimes	199	16		
Often	192	36		
Cocaine			0.10	0.75
Sometimes	194	23		
Often	53	8		
Crystal meth			4.67	0.03
Sometimes	146	24		
Often	73	25		
GHB/GLB			0.31	0.58
Sometimes	107	20		
Often	56	14		
Marijuana			2.64	0.11
Sometimes	185	17		
Often	76	14		
Poppers			7.30	0.01
Sometimes	159	30		
Often	52	24		

Table 3
Logistic regression summary: unsafe sex predicted by club drug use

	Coefficient	*P*-value	Odds ratio	95% CI
Alcohol	0.122	0.307	1.13	(0.70, 1.81)
Ecstasy	−0.380	0.075	0.68	(0.41, 1.15)
Special K	−0.270	0.157	0.76	(0.45, 1.29)
Cocaine	0.241	0.145	1.27	(0.82, 1.99)
Crystal Meth	0.333	0.085	1.40	(0.87, 2.24)
GHB/GLB	0.368	0.064	1.45	(0.90, 2.32)
Marijuana	0.097	0.317	1.10	(0.74, 1.64)
Poppers	0.540	0.004	1.72	(1.16, 2.55)

P-value = .01). There was no significant association between unsafe sexual behavior and frequent use of any of the other party drugs (Table 2).

When levels of unsafe sex *in the past 12 months* were univariately cross-tabulated with drug use at circuit parties (no use vs. any amount of use), only poppers showed a significant association ($\chi^2 = 8.33$, $df = 1$, *P*-value = .004). Recall that this is now a different measure of unsafe sex, which covers the entire 12 months, including but not limited to behavior at parties. The logistic regression summary in Table 3 presents coefficients and odds ratios (exponentials of the coefficients) for predicting unsafe sex by the use of party drugs. Only poppers show a statistically significant association with unsafe sexual activity in the past 12 months. The *P*-values for GHB and crystal meth show a trend, although the odds ratios are not high and their confidence intervals straddle one, suggesting that the increase in odds is not noteworthy.

We also looked at the relationship between reasons for attending circuit parties and unsafe sex in the past 12 months. Participants were asked to strongly agree, agree, disagree, or strongly disagree with 10 possible reasons for attending. We dichotomized the answers into agree/strongly agree and disagree/strongly disagree groups. After the Bonferroni correction, three reasons showed a significant association with unsafe sex in the past 12 months: to Have Sex ($\chi^2 = 7.82$, $df = 1$, *P*-value = .005), to be Uninhibited and Wild ($\chi^2 = 19.76$, $df = 1$, *P*-value < .0000), and to Look and Feel Good: $\chi^2 = 6.39$, $df = 1$, *P*-value = .012). Since party patrons overwhelmingly agreed that they attended parties "to celebrate," "to be with friends," and "to dance and enjoy music," it was difficult to determine unsafe sex patterns specific to these reasons.

5. Discussion

These data offer a closer look at the relationship between substance use and unsafe sex in a group of circuit party patrons who are well educated and economically comfortable. These patrons are part of a "party circuit," with multiple party attendance and drug use being the norm. It is interesting that the reasons for party attendance appeared to also predict unsafe sexual behavior, with attending "to have sex," to be "uninhibited and wild," and "to look and feel good" all predicting higher levels of unsafe sexual behavior.

However, the reasons for party attendance were overwhelmingly related to nonsexual and nondrug desires of community, enjoyment, and celebration. These data show a remarkably similar picture to the work of Lewis and Ross (1995) on Sydney circuit parties but in addition provide some quantitative assessment of the prevalence of drug use and the risks associated with particular drugs.

It is apparent that reported unsafe sexual behavior in this sample is relatively low, at 15% in the past 12 months including at circuit parties. Drug use prevalence in the past 12 months was high, with over half of the sample using alcohol, Ecstasy, or ketamine at circuit parties. However, between a quarter and a third of participants surveyed used other potentially dangerous drugs (GHB, crystal methamphetamine, and cocaine). Of particular concern was the fact that for multiple drug use (including alcohol), the modal number was four drugs used (not necessarily concurrently) at circuit parties in the past year. The data suggest a dose–response relationship between number of drugs used and unsafe sex, with 10% of those using just one drug reporting unsafe sex in the past 12 months compared with 26% of those who had used seven or eight drugs. It is probably a reasonable conjecture that not only is it likely that users of multiple drugs are less likely to be able to predict or control drug interactions but also that as the number of drugs used simultaneously increases, disinhibition and amnesia may increase. From the data, poppers appear to be most closely associated with unsafe sex in the past year: these data are consistent with previous data on poppers, which are used specifically in association with sex.

These data should be interpreted with several cautions in mind. This was a nonrandom sample of convenience and it was not possible to discern an association between drug use and unsafe sex *at the party*, because data were not available for unsafe sex *at circuit parties* in nondrug users. However, these data *were* available for unsafe sex in the past 12 months and provide a crude index of risk. Our conservative measure of unsafe sex may underestimate risk, but because we were not able to separate out risky behavior in mutually monogamous and HIV-seroconcordant relationships, this may conversely bias toward overestimation. Nonresponse data were excluded from the computation of percentages, possibly biasing the results. We are not able to estimate whether the voluntary nonrandom nature of this survey may have led to any bias toward (or against) drug use in the sample. Nevertheless, there are no published data available on the circuit party phenomenon and its patrons in the US. These data indicate that patrons tend to be well educated and financially secure.

It is apparent that some drugs are associated with elevated risk of unsafe sex in addition to the morbidity and possibly mortality associated with the drugs. Multiple drug use is a particular concern and we believe from these preliminary data that a case can be made for increased research, including a focus on interventions to reduce both drug and sexual risk, in the circuit party subpopulation of gay men.

Acknowledgments

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Abstract

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