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A Qualitative Descriptive Study of Perceived Sexual Effects of Club Drug Use in Gay and Bisexual Men

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Abstract

Club drug use is often associated with unsafe sexual practices and use remains prevalent among gay and bisexual men. Although epidemiological studies commonly report the risk of engaging in unsafe sex due to the effects of particular club drugs, there remain gaps in the literature regarding the specific sexual effects of such substances and the context for their use in this population. We examined secondary data derived from interviews with 198 club drug using gay and bisexual males in New York City and qualitatively describe subjective sexual effects of five drugs: ecstasy, GHB, ketamine, powder cocaine and methamphetamine. Differences and commonalities across the five drugs were examined. Results suggest that each drug tends to provide: 1) unique sexual effects, 2) its own form of disinhibition, and 3) atypical sexual choices, often described as "lower sexual standards." Differences across drugs emerged with regard to social, sensual and sexual enhancement, sexual interest, and impotence. Although some common perceived sexual effects exist across drugs, the wide variation in these effects suggests different levels of risk and may further suggest varying motivations for using each substance. This study seeks to educate public health officials regarding the sexual effects of club drug use in this population.

Keywords

club drugs; gay and bisexual men; HIV; sexual risk taking; methamphetamine

Introduction

The use of drugs such as powder cocaine, ecstasy (MDMA), *gamma*-hydroxybutyrate (GHB), ketamine, and methamphetamine has become prevalent in the "nightlife" scene over the past fifteen years (Finlayson et al., 2011; Halkitis, Palamar, & Mukherjee, 2007; Mackesy-Amiti, Fendrich, & Johnson, 2008; Mattison, Ross, Wolfson, & Franklin, 2001). These substances are part of a set of substances known as "club drugs" because use often takes place at parties or nightclubs (Ross, Mattison, & Franklin, 2003). In addition to high prevalence of use in nightclub settings, club drugs are also often used in the context of sex

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parties, sex clubs, and bathhouses (Halkitis & Palamar, 2006; Palamar, Mukherjee, & Halkitis, 2008). Motivation for using club drugs tends to be recreational: to "be wild and uninhibited," to "look and feel good," and "to have sex" (Mattison et al., 2001). Extensive research has linked these drugs to sexual risk taking, particularly in gay and bisexual men (Colfax et al., 2005; Mattison et al., 2001; Palamar & Halkitis, 2006; Rusch, Lampinen, Schilder, & Hogg, 2004).

Despite the plethora of studies documenting the use, prevalence, and public health implications of club drug use in men who have sex with men, little is documented about the unique sexual effects of each drug. This paper seeks to begin to fill this void by 1) providing a brief summary of the general and sexual effects of each club drug and 2) characterizing the subjective sexual effects of each drug using a qualitative descriptive method of inquiry with tones of thematic analysis (Sandelowski, 2000).

Powder Cocaine

Powder cocaine—commonly referred to as coke, C, or blow—is a stimulant used to produce elation, euphoria, energy, relaxation, talkativeness, and enhanced sociability (Grinspoon & Bakalar, 1985; Palamar et al., 2008). However, use can also bring about anxiety, paranoia, and loss of appetite. As the high wears off, users often experience lethargy, irritability, and a desire for more cocaine (Grinspoon & Bakalar, 1985). Powder cocaine (herein referred to as "cocaine") is most commonly administered nasally by "inhaling" or "sniffing."

Many new or infrequent users report aphrodisiacal effects (Peugh, & Belenko, 2001). For example, Buffum (1982) reported that some men in his study experienced spontaneous erections, prolonged sexual arousal and orgasms, and multiple orgasms after using cocaine. However, sexual stimulation reportedly decreases with greater cocaine use, and most frequent or heavy users tend to report no effect or a negative impact on sexual arousal and function (Gold, 1997). Studies also suggest that long-term cocaine use diminishes sexual desire, impairs ability to achieve and maintain an erection, and impairs ability to ejaculate or reach orgasm (Gold, 1997; Peugh & Belenko, 2001). Such conflicting findings on sexual effects of cocaine may be a result of differences in dose, route of administration, drug purity or other substances taken concomitantly, and long-term effects on the neurotransmitters of the brain (Buffum, Moser, & Smith, 1988).

Ecstasy

Ecstasy (MDMA), also known as E or X, is a substance with hallucinogenic and psychostimulant properties (Cole & Sumnall, 2003). It is usually ingested in pill form, and subjective effects associated with use include feelings of compassion, confidence, empathy, relaxation, and friendliness (Cole & Sumnall, 2003; Solowij, Hall, & Lee, 1992). Users can also experience acute adverse effects such as anxiety, restlessness, fear, confusion, and paranoia. Specific subjective sexual effects commonly include sexual arousal, sensual euphoria, and an overall feeling of "warmth" and openness, making users feel closer to others (Henry, 1992; Peugh & Belenko, 2001). Thus, ecstasy is commonly referred to as the "love drug" or "hug drug."

Although frequent ecstasy use is associated with unsafe sex at parties (Mattison et al., 2001), use has also been found to impair sexual performance through erectile dysfunction, inhibited sex drive, and delayed or impeded orgasm (Parrott, Milani, Parmar, & Turner, 2001; Zemishlany, Aizenberg, & Weizman, 2001).

Ketamine

Ketamine, commonly referred to as Special K or K, is a dissociative anesthetic with hallucinogenic properties. Subjective effects of use include sensations of weightlessness, floating, changed perception of body consistency or distortion of body parts, and an absence of a sense of time (Hansen, Jensen, Chandresh, & Hilden, 1988). Ketamine use also reportedly leads to feelings of numbness or a feeling that the user or world is not real. Ketamine can be ingested or injected, but is most often administered intranasally in powder form.

It has been suggested that high doses of ketamine are not compatible with sex; however, lower doses may increase the desire to engage in sex (Jansen, 2001). Use of high doses of ketamine can impair judgment and impede overall functioning, leaving the user vulnerable to sex-related crimes or unprotected sex (Mooney, 2008; Shbair, Eljabour, & Lhermitte, 2010). Although the effects are not known to be highly sexual, ketamine has been shown to increase the odds for unprotected anal sex at a higher level than other club drugs (Rusch et al., 2004).

GHB

gamma-hydroxybutyrate (GHB), also known as G and liquid ecstasy, is a central nervous system depressant, which affects the body in much the same way as alcohol (Gessa et al., 2000). GHB is usually ingested orally, in liquid form, and users report that it induces a state of relaxation, tranquility and euphoria (McDowell, 2000). Nightclub attendees often report taking GHB in order to enhance social activity and well-being (Freese, Miotto, & Reback, 2002). However, it has a steep dose-response curve so small increases in GHB dosage result in greatly increased effects (Galloway et al., 1997). Use has been associated with adverse reactions such as drowsiness, nausea, myoclonic seizures, unconsciousness and coma of short duration (Freese et al., 2002). Sexual predators sometimes take advantage of such side effects, which are potentiated by alcohol, using it for “date rape” purposes (Schwartz, Milteer, & LeBeau, 2001).

Although infamous for being a “date rape” drug, GHB is commonly self-administered recreationally for its libido-enhancing effects (Nicholson & Balster, 2001). Other positive subjective sexual effects include increased feelings of sexual intimacy, hypersensitive sensation to touch, and increased euphoria associated with sexual orgasm. However, GHB use can also have negative sexual effects including difficulty remaining physiologically stimulated and achieving orgasm (Sumnall, Woolfall, Edwards, Cole, & Beynon, 2008).

Methamphetamine

Methamphetamine, also known as crystal meth, Tina, glass or crank, is a stimulant that produces a prolonged high that results in an extended period of euphoria, energy, and

feelings of power (Degenhardt & Topp, 2003; Halkitis, 2009). Use is also associated with increases in subjective effects including confidence, alertness, and talkativeness; however, reported adverse effects include fatigue, hallucinations and paranoia (Halkitis, 2009; Shoptaw, 2006). Routes of administration include snorting, smoking, or injecting. Methamphetamine is particularly known for its sexual effects; specifically, it has been found to increase libido, desire and arousal, delay orgasm, and increase the number of orgasms experienced (Green & Halkitis, 2006; Peugh & Belenko, 2001). However, users also commonly report decreased sexual function; specifically, inability to reach full erection, delayed ejaculation, and inability to reach orgasm (Buffum, 1982; Frosch, Shoptaw, Huber, Rawson, & Ling, 1996; Peugh & Belenko, 2001).

Despite negative subjective sexual effects, methamphetamine has an astonishing effect on sexual risk taking behavior (Halkitis, 2009). Methamphetamine users report an increased desire for sex and a greater aggressiveness during sexual activity (Frosch et al., 1996; Parsons, Kelly, Weiser, 2007). Likewise, use is associated with a loss of sexual inhibition and subsequent risk taking behavior including numerous sexual partners and unprotected intercourse (Green & Halkitis, 2006).

Current Investigation

Few studies have examined the specific subjective effects of each drug and how such effects may relate to risky sexual behavior. Likewise, few investigations consider whether drug use occurred directly preceding or in conjunction with sex, and few studies are descriptive or qualitative in nature and thus lack the ability to obtain rich information regarding specific situations and associated effects. This descriptive qualitative study examines and compares the subjective sexual effects of five club drugs among 198 gay and bisexual men.

Method

Secondary data were drawn from a longitudinal, mixed methods study, funded by the National Institute on Drug Abuse. The study examined club drug use and sexual behaviors associated with use. Participants were assessed via quantitative and qualitative measures during four waves of data collection over the course of 12 months. A random sample of qualitative interviews derived from 198 participants was transcribed the year they were collected, but the cassette tapes of both transcribed and non-transcribed cassette tapes have consequently been destroyed, leaving us unable to examine the full sample.

Participants

The sample consisted of 198 club drug using men residing in New York City. The age of participants in this study ranged from 18 through 59 (M = 30.25, SD = 8.23). With regard to race/ethnicity, 50% (*n* = 99) identified as White, 18.2% (*n* = 36) as Black, 20.2% (*n* = 40) as Hispanic/Latino, 3.5% (*n* = 7) as Asian American, and 8.1% (*n* = 16) identified as other race. In terms of educational attainment, 18.7% (*n* = 37) earned a high school diploma or less, 34.8% (*n* = 69) had some college education, 37.3% (*n* = 74) had earned a bachelor's degree, and 9.1% (*n* = 18) had earned a graduate degree. The majority of the sample identified as gay (86.9%, *n* = 172), and 13.1% (*n* = 26) identified as bisexual.

Procedure

Recruitment was conducted from February 2001 through October 2002. Participants were recruited though passive (e.g., tear-off flyers) and active techniques (e.g., recruited in-person) outside of bars, clubs, restaurants and trendy stores. Potential participants were screened for eligibility via telephone interviews. Eligibility requirements included being 18 years of age or older, identifying as gay or bisexual, and reporting at least six instances of club drug use in the year prior to assessment. Potential participants also had to report at least one instance of club drug use before or during sex within the prior three months. For the purposes of our study, club drugs were defined as powder cocaine, ecstasy (MDMA), ketamine, GHB, and methamphetamine. Those who met eligibility requirements were scheduled for a baseline interview, when the initial assessment, informed consent, and confirmation of HIV status also occurred. A total of 450 club drug using gay and bisexual men completed baseline assessment.

Quantitative assessments were administered via an *Audio Computer Assisted Self-Interview (ACASI)*, using a computer and voice recording so that the participants heard and saw each question and response list. After completing the quantitative portion of the assessment, trained staff members conducted semi-structured qualitative interviews covering a variety of topics related to club drug use and sexual behavior. The Institutional Review Board of New York University approved the protocol for this study.

Quantitative Measures

HIV status—All participants were asked to both self-report and confirm their HIV status. Specifically, those who reported an HIV-negative or unknown serostatus were tested for HIV antibodies using the OraSure® system. Participants who reported an HIV-positive status were asked to provide proof of status such as a doctor's letter, documented viral load results, or prescription bottle for HIV antiretrovirals indicating the individual's name.

Drug use—Frequency of recent drug use (number of days used within the previous four months) was assessed for each of the following club drugs: cocaine, ecstasy, ketamine, GHB, and methamphetamine. Since "frequent use" is defined as using 50 or more days per year (Epstein & Gfroerer, 1994), participants who used at least 16 days within the four months prior to baseline were defined as frequent users of that drug.

Qualitative Analysis

Semi-structured interviews assessed a variety of topics related to club drug use and sexual behavior. Questions relevant to this analysis assessed whether club drugs were used in sexual circumstances and whether they used for sexual reasons. Questions also assessed whether club drugs made a difference in participants' sexual behaviors, affected the kinds of partners they had, or affected their feelings and sensations during sex. Each participant reported using different combinations of drugs, and not all drugs were consistently discussed with regard to sexual activity because interviews were only semi-structured and questions focused mainly on their most frequently used drug. The qualitative data for this analysis were derived from 198 participants and were analyzed using a multilevel process (Miles & Huberman, 1994). Upon review, transcripts were first coded for whether each participant

indicated use of a drug for sexual reasons (e.g., to increase libido or sex drive) or whether the drug was discussed with regard to feelings or sensations related to sex. Coding included whether participants mentioned if drug effects were related to sensual or sexual behaviors, whether the drug was used for sexual reasons or in sexual contexts, and whether the drug affected the kinds of partners they had. When a participant mentioned use of a drug for any of these sexual reasons, they were coded as affirming sexual effects of use. If the participant mentioned that the drug was not related to any of the sexual circumstances aforementioned he was coded as reporting no sexual effects with regard to use of that drug. Those who stated that they were unaware of any of the above sexual effects were coded as reporting no sexual effects. If the participant did not discuss use of a drug with regard to sex he was not coded for that drug; therefore, coding only represents those who discussed use of the specific drug with regard to sex. The richest data often came from those who discussed their most frequently used drug, but valuable information was able to be obtained by examining discussions about other drugs, which were not always discussed at length. Although participants did not consistently discuss effects of each drug, we believe data saturation achieved through those who did discuss their experiences.

Two authors independently identified recurring themes (across drugs) discussed by the participants. Quotations that fit with such themes were catalogued with the corresponding theme in order to form a more comprehensive picture. After a complete consensus was reached regarding the occurrences and classification of such themes, data were further catalogued and examined separately for each drug. Themes were then compared across drugs in order to determine how the subjective sexual effects of such drugs differ.

Results

At baseline, 64.1% (n = 127) were confirmed HIV-negative and 35.9% (n = 71) were confirmed HIV-positive. As is seen in Table 1, the majority of the sample had used cocaine, ecstasy, ketamine, or methamphetamine within the four months prior to baseline. Fewer participants reported recent use of GHB (31.8%, n = 63). Likewise, cocaine was used most frequently and GHB was used the least often. The majority of participants reported increased sexual effects in response to use of ecstasy, GHB, and methamphetamine. Two-thirds reported increased sexual effects in response to cocaine use and only about a third reported increased sexual effects in response to ketamine use.

Analysis yielded results suggesting various themes with regard to each drug and its subjective sexual effects. Although some themes and points varied between drugs, three main themes emerged across all drugs: 1) the sexual sensation associated with use, 2) disinhibiting effects that lead to sex or occur during sex, and 3) atypical sexual interactions resulting from use. Each quote contains the participant's race, age, HIV status, and whether he is a frequent or non-frequent user of that drug.

Ecstasy

The majority (84.8%) of those who used ecstasy mentioned some form of related sexual enhancement. More specifically, ecstasy was commonly described as being a sensual drug that increased sensation to touch.

> When someone touches you or rubs against you, [compared to] the feeling you get when you're not on E, it's just not the same…[it is] five times the effect. So it just enhances the feeling that you get. (White, 24, HIV-negative, non-frequent user)

> With ecstasy my body sensations are just all in full effect. Getting touched, just anything kind of stimulates it. (White, 23, HIV-negative, non-frequent user)

Along with the enhanced bodily sensation associated with ecstasy use, participants commonly reported an increased feeling of affection or sensuality. This was sometimes reported as a sexual feeling, although physical encounters were often limited to touching, massaging, or kissing.

> I would just be like more touchy, feely and sensual; not sexual. I just want to touch. I did have sex the first time, but it was more about the touch and the feeling and kissing and that kind of stuff. (White, 24, HIV-negative, non-frequent user)

> I feel like I am making love. I hold the person even more; the kisses are more conducive; the warmth is there. It doesn't have to be penetration necessarily or any type of copulation. (Hispanic, 42, HIV-negative, non-frequent user)

The feeling of sensuality derived from use was sometimes reported to lead to sex in the course of the interaction. However, regardless of the type of sexual interaction, the high often temporarily led participants to feel as if they were "in love" with their partners.

> I guess they sort of call it the "love drug" for a reason…for the length of time you're high you sort of fall in love with every one you're having sex with. (White, 45, HIV-positive, non-frequent user)

> It's more romantic or whatever…I know it makes me more delusional or something with people…I'll be tripped out on X, I think I'll love these people. Black, 31, HIV-positive, non-frequent user)

Aside from reports that ecstasy is more sensual than sexual, many participants added that ecstasy is not a very "sexual" drug because the high tends to leave them impotent.

> I can't get an erection when I'm on ecstasy. It's just nothing happening down there. And it still feels great to be touched, but since such a major part of the sensation factory is just not working down there, it's (sex) never been the purpose of why I've done ecstasy. (White, 22, HIV-negative, non-frequent user)

> When you are on E, there's just a lot of people that can't get it up. If somebody put Viagra and ecstasy in one pill they would make a fortune. (White, 40, HIV-negative, non-frequent user)

However, although users commonly reported impotence as a result of ecstasy use, some participants did in fact report enjoying sex while high on it. This may be due, in part, to when the actual sex occurred. During the high, "trip," or "roll," participants were often unable to gain an erection; however, as the high wore off they tended to gain back the ability to perform.

> I can't perform when I'm getting at my peak. After my peak is when I get extremely horny and aroused and that's when I can perform. (Hispanic, 21, HIV-negative, frequent user)

> As I was coming down I got real sexually aroused…it was when I was coming down off it that it made me want to have sex. (other race, 29, HIV-positive, frequent user)

In addition, the context and type of ecstasy pill ingested also reportedly influenced the mood of the user and the type of sexual encounter. Since the majority of ecstasy pills contain adulterants and varying levels of MDMA, some pills appear to provide different sexual effects.

> Sometimes I take a pill and I really don't feel like having sex. It takes the sexual pleasure away and I just want to party, have fun, and dance. And sometimes it makes me very horny; it makes me want to have sex; it really depends on the pill and my mood. (White, 20, HIV-negative, non-frequent user)

> It depends on the E. Like if you're taking something speedy, generally you don't want to be a bottom. If you're taking something really dopey, generally you just want to lay there. If I have speedy E I'm like, "I'm not going to lay down so you better get on your stomach." (White, 19, HIV-negative, frequent user)

Ecstasy, like most other club drugs, tended to leave users socially and sexually disinhibited. Since participants reported feeling more outgoing and sensual while high on ecstasy, they often sought affection from other individuals, often strangers, in the nightclub.

> I get a lot more flirty when I'm on it and I'm just like, "Okay, I need to hook up now." I love making out when I'm on it. I'm just like, "Okay, I have to find someone." (White, 20, frequent user, HIV-negative, frequent user)

> It just makes you more free-going and wild…I mean its fun to do 'cause I think it makes you a little more wild…I end up having sex with partners who normally I wouldn't have sex with. (Hispanic, 22, HIV-negative, non-frequent user)

A common theme associated with such disinhibition was atypical sexual interactions. For example, many participants described the lowering their "sexual standards" because they were high. Specifically, they tended to report that they engaged in sexual interactions with individuals they would not normally be attracted to if sober.

> I lower my standards and say "Ah, you'll do; you are good enough." It heightens my sensations and makes my feelings—it clouds over them and lets me go along with whatever. (Hispanic, 39, HIV-negative, non-frequent user)

> I think my standards get lowered a lot when I'm on ecstasy. When I'm at the club and I'm hooking up with some guy, like five minutes later when we're making out, I'm like, "Who the hell is this?" If I become coherent, then I'll stop. But there are times when I'm just so fucked up where I'm just like, "Okay, whatever." Like it's easier for someone to get me in bed then it would be if I wasn't on ecstasy. (Hispanic, 19, HIV-negative, frequent user)

GHB

Although only a third of participants reported use of GHB, we were able to examine themes. Users commonly reported the feeling derived from GHB as being sexual (88.1%). Unlike the sensual feeling that often results from ecstasy use, the GHB high was often described as a more purely sexual feeling that is more intense.

> The first time I did GHB it was great because you could feel this warm energy emanating up your body and you just feel sort of tingling and very sexual. Asian, 28, HIV-negative, non-frequent user)

> It [GHB] is more aggressive. You're floating; just the touch is real intense. If two people are attracted to one another and GHB is involved then it gets very sexually intense. (Asian, 36, HIV-negative, frequent user)

While GHB tends to provide users with a sexual feeling, the drug also reportedly makes individuals sexually disinhibited. Participants often reported that GHB made them feel like a sexual predator, a savage, or an animal. So unlike the emotion and affection commonly associated with ecstasy use, GHB use was described as being more animalistic.

> [It makes me a] sexual predator. That drug is just so sexual it's sickening. As soon as I take that drug my mind is there (on sex). (White, 24, HIV-negative, non-frequent user)

> I really felt like a savage. It's like I was devouring him, he was devouring me, almost violent in a way. There was like no interior monologue…just totally connected, feeling like an animal. (White, 39, HIV-positive, non-frequent user)

> I just become an animal…[I] definitely go crazy on it, just sexually. I get extremely aggressive, any masculinity is kind of heightened…I get rough sometimes and controlling. (White, 23, HIV-negative, non-frequent user)

Similar to ecstasy, while GHB lowered sexual inhibitions, participants commonly reported sexually connecting with individuals they would not normally be attracted to while sober. One participant referred to this phenomenon as "G goggles"—a reference to the term "beer goggles," which is sometimes referred to as when an individual is drunk and becomes intimate with an individual below his or her sexual standards.

> I feel like I'm still in control of my faculties, but like suddenly every guy looks like the most amazing specimen. (White, 32, HIV-negative, non-frequent users)

> GHB probably did affect the sort of person I would have sex with…everybody looked better when I was on GHB. People I didn't find attractive when I was sober looked really hot and sexy. (White, 37, HIV-positive, non-frequent user)

Ketamine

While only about half of participants reported recent use of ketamine, strong themes emerged. Unlike the sensations that result from the use of ecstasy or GHB, ketamine, a dissociative anesthetic, tends to lead to a feeling of numbness and passiveness, socially and sexually. Due to this effect, only 37.6% of users associated use with sex. However, this

feeling was sometimes reported to be associated with the user taking the anal-receptive role during sex.

> I become anti-social—I'll be introverted. You can't have a sexual relationship. When I'm there (high on ketamine) I don't care. It numbs me. (White, 24, HIV-negative, frequent user)

> If I am a little high on K I just prefer to sort of take the more passive role—just sort of get all kind of spacey and mental about it. (White, 40, HIV-negative, non-frequent user)

> K is good for sex because it's a numbing feeling and it…lets your ass stretch and lets you relax you know, take more. (White, 25, HIV-positive, non-frequent user)

> He (his boyfriend) can't get fucked without it. He's totally Catholic-guilty, and I have to drug him to have sex with him, which he loves. He'll say, "I'm gonna go do a bump of K and you can fuck me, okay?" (White, 39, HIV-positive, frequent user)

Although some participants reported that ketamine use led them into a more passive role during sex, the majority mentioned that the drug, unlike other club drugs, inhibited sex. This was often attributed to the "bizarre" mindset and hallucinogenic effects resulting from use of the drug.

> I can't really have sex on K. It whacks me out too much to have sex. It (sex) doesn't even occur to me. (White, 32, HIV-negative, non-frequent user)

> If I'm just on K most times I don't even feel like being sexy or being bothered…I am not looking to hook up with anybody because I am just so zonked and I am in like K mindset and sex is pretty much the last thing I am thinking about. I do not get horny when I am on K. (Black, 20, HIV-negative, frequent user)

> I would never have sex on K. I don't know if you could 'cause…I'd probably have these really bizarre, ridiculous thoughts. (White, 40, HIV-negative, non-frequent user)

While no participants commented on the dose or type of ketamine used prior to potential sexual encounters, like other drugs, these factors likely played a role. For example, since ketamine is a dissociative anesthetic, smaller doses or weaker concoctions may not inhibit sex as much as larger doses or stronger formulations. Similarly, intentional sex, or socialization, is unlikely to occur when one falls into a "k-hole"—an extreme dissociative state. Although ketamine is not a very sexual drug, the passivity associated with use can in fact lead to sexual disinhibition. However, according to study participants, such disinhibition often took place in the form of letting one's guard down. So unlike the more social and assertive disinhibition associated with use of other club drugs, ketamine tended to leave participants more vulnerable to others making sexual advances. Participants also reported engaging in sexual interactions with individuals they normally would not connect with.

> You just kind of transcend a little bit and you just let your guard down and maybe you'll start making out with anyone. It's kind of scary. (other race, 24, HIV-negative, non-frequent user)

> It (ketamine) makes me less able to control what is going on. Two people started the sexual thing with me and I didn't know it was going on, and they were people I wouldn't mess around with, but it made me want to mess around with them because I saw them differently. (White, 23, HIV-negative, non-frequent user)

Cocaine

While 80.8% of respondents used cocaine, only 34.8% reported using in the context of sex. Research was needed to help determine whether or not cocaine enhances sexual activity because current evidence is conflicting. Cocaine tends to lead to social disinhibition and is often used for social reasons (e.g., in bars, at parties). The social lubrication effect derived from cocaine use appears to influence sexual contacts, more so than club drugs with more direct sexual effects.

> I'm kind of shy and withdrawn and I'm more social on cocaine so it makes sex a lot easier. (White, 30, HIV-positive, frequent user)

The specific sexual effects of cocaine were rarely discussed other than the fact that it commonly led to impotence or decreased sexual interest.

> It restricts a lot of things (sexually). Eight out ten times I'm usually not that sexual. It just depends on if it's coming up and it never really does. (Black, 22, HIV-negative, frequent user)

> I don't remember a time when I had a desire to have sex when I was on coke. It's never been a situation where I'd want to make out with anybody or whatnot. (Hispanic, 19, HIV-negative, frequent user)

> It's a pain in the ass to get hard when you are on coke. You're just so into the coke; sex becomes very secondary. (other race, 20, HIV-negative, non-frequent user)

Others have resorted to anal receptive intercourse, a more risky sexual behavior than insertive intercourse, as a result of impotence that resulted from cocaine use.

> If I do too much then I will be the bottom…because if I do too much I will be at the point where my dick won't get hard, but I still have that itch and excitement inside me. Then I would be the bottom. (Hispanic, 29, HIV-positive, frequent user)

Some participants, however, clearly were able to obtain an erection and reported enjoying sex while high on cocaine due to heightened sensation related to use of the drug.

> Some people say they can't get aroused on cocaine, but I have no problem at all. It really arouses me. It heightens the sexual stimulation. (Hispanic, 35, HIV-negative, frequent user)

> It keeps me hard for hours. The arousal is amazing and the satisfaction is just oh man and it doesn't matter whether it's all out sex or just something like simple masturbation or touching or kissing, or maybe even safe sex—it just enhances it. I enjoy it. It's such a sexual turn on. (Hispanic, 42, HIV-negative, frequent user)

Similar to ecstasy, the ability to have sex on cocaine appears to be dependent on when (during the high) the sex occurs. It appears that stimulants such as cocaine can allow or

increase the possibility of sexual intercourse, but after continued use throughout the night, participants often cannot engage in sexual activity until they are "coming down" from the drug.

> I think in the beginning it might intensify it (sexual desire) and heighten arousal. When it comes to the actual sex, it is pretty much fizzled. (White, 28, HIV-negative, non-frequent user)

> I feel kind of sexual at the beginning, but then after sniffing a lot I don't feel like having sex. I'm just numb…if I've been sniffing for a while then I don't want to be touched. (Black, 37, HIV-positive, frequent user)

> When I am coming down with coke—that's the best time [for sex], but when I am actually really feeling in full motion with it, I don't like to be touched and no sex then. (Black, 34, HIV-positive, frequent user)

Sexually, cocaine was commonly reported to disinhibit users, and it allowed them to engage in sexual activities they felt they would normally not engage in.

> It just sort of really makes you horny; well coke makes you horny, period. What's bad about it is that you will get pretty desperate and you'll start looking pretty voraciously. (other race, 28, HIV-negative, frequent user)

> Sexually it lets me step out of myself and do things that I wouldn't do if I was level-headed…some of the kinky stuff…water sports, bondage, leather. Obviously if I'm not high I might not get into some of the stuff as if I were. (Asian, 23, HIV-negative, non-frequent user)

Similar to other club drugs, another theme involving disinhibition was that users often reported lowering their sexual standards and seeking partners they would not normally be attracted to when sober.

> Cocaine will make me have sex when I really didn't want to. I feel like I want to have sex and you are here, so why not just let me use you. (Black, 34, HIV-positive, frequent user)

> I've hooked up with people I like probably wouldn't have otherwise if I hadn't been on it. Guys will get boys really high on cocaine in order to get them into bed, which has worked on me before. (White, 21, HIV-negative, frequent user)

Methamphetamine

Methamphetamine was most commonly reported to be associated with a perception of increased sexual effects (88.8%). Unlike ecstasy, methamphetamine was commonly reported to lead to sex without emotion. However, this emotional numbing is reported in a sexual context different than the general emotional numbing related to ketamine use.

> I think it numbs your emotions so that you're not really focused on, "Oh, I really care about this person. This person's great, I love him." (White, 32, HIV-positive, non-frequent user)

> It made me sexually veracious. My emotional feelings are in the back seat if not in the trunk, or being dragged behind the car on the road. (White, 59, HIV-positive, frequent user)

Despite the increase in libido, many users reported impotence during or after use of methamphetamine.

> The problem is of course it's hard to stay hard on crystal after about the first hour or two. (White, 45, HIV-positive, non-frequent user)

> Physically, if it's not accompanied by Viagra, it kind of hinders me physically, but mentally it makes me feel like I could go for days. (Hispanic, 20, HIV-negative, non-frequent user)

Like cocaine, the impotence associated with use was sometimes reported to leave participants resorting to anal receptive intercourse.

> When I'm not doing crystal I tend to be a top, but when I'm on crystal I'm more open to being bottom. (White, 33, HIV-negative, non-frequent user)

Therefore, the ability to have sex on methamphetamine, like cocaine, appears to be dependent on when it was taken. The peak of the drug's increased sexual effect tends to be as it is wearing off.

> Crystal is like the sex drug, especially when it's wearing off. It just like makes you really horny, and you can just go again and again and again. (White, 21, HIV-negative, non-frequent user)

> Not when I'm on Tina, but when I'm coming down, like an hour after I've done my last bump of Tina, I could have sex and then go to sleep for an hour and then wake up and have sex again…like six or seven times. So sex is wonderful when I've been coming down from it. (Black, 22, HIV-negative, non-frequent user)

Methamphetamine was most commonly discussed in terms of sexual disinhibition. Not only did participants become more disinhibited after use, but mentally and physically, it often allowed them to engage in sexual encounters for hours or days at a time.

> It makes you extremely horny. Our sexcapades probably extend for a longer period than they would when we are not using it. There doesn't seem to be a whole lot of hesitation about much. If he asks me to do something then certainly I would do it. (White, 48, HIV-negative, non-frequent user)

> Sex always comes with it. It enhances the sex 200%. It definitely prolongs the time of sex. Everything feels a lot better, and when you cum, it's the best. So it's definitely very intense, very strong. (Hispanic, 23, HIV-negative, frequent user)

> It releases my inhibitions and intensifies my sexual appetite. It allows me to be freer and freakier…and it takes away any awkward or uncomfortable feelings that I might have about engaging in certain sexual activities. (White, 40, HIV-positive, non-frequent user)

Similar to other club drugs, the use of methamphetamine also was associated with having sex with individuals that participants would not normally have sex with when not high.

> I think you are more willing to jump at the first person that comes your way and you're not as selective about it when you're high, whereas when you are sober, you're much more selective. (Hispanic, 19, HIV-negative, non-frequent user)

> It lowers one's standards—lowers one's capacities for critical thinking. On crystal I've had sex with people I would never consider having sex with sober. (White, 27, HIV-positive, non-frequent user)

Discussion

This qualitative descriptive analysis investigated the subjective effects of five club drugs among a diverse sample of gay and bisexual club drug using men. Epidemiological survey results tend to report a high association between club drug use and unsafe sex (Colfax et al., 2005; Mattison et al., 2001; Palamar & Halkitis, 2006; Rusch et al., 2004), but few studies have examined the subjective effects of each club drug. This is among the first studies to investigate and compare the subjective sexual effects of five club drugs: ecstasy, ketamine, GHB, cocaine, and methamphetamine.

While effects differed across each drug, results from analysis yielded three main themes. The first theme was subjective sexual sensation related to use of each drug. Ecstasy was most commonly described as a sensual drug, associated with increased physical sensation and a desire to touch or be touched. GHB was described as having a more "tingling" and animalistic sexual feeling, accompanied with less emotion. Similarly, methamphetamine was frequently associated with an increased, emotionless drive to have sex, often for extended periods of time. Participants reported mixed results with regard to sexual effects associated with cocaine; specifically, use inhibited sexual desire or sex for many, but it increased sensitivity and sexual desire in others. Ketamine was most often reported to be associated with a numb, passive or dissociated feeling and was less often used in conjunction with sex. This theme also reflects our quantitative findings in that among recent users, methamphetamine (88.8%) and GHB (88.1%) were reported to have been used in a sexual context by most users. Ecstasy was commonly used in a sexual context (84.8%), although often in a more "sensual" manner. Cocaine was used in a sexual context (66.3%) less often, and ketamine was least likely to be used in a sexual context (37.6%).

The second theme was the disinhibiting or inhibiting effects of each drug. Ecstasy, through the sensual and empathetic feeling and perception of "oneness" with others, tended to disinhibit users. Disinhibition appeared to have allowed users to meet other individuals more freely and often facilitate physical, sensual interactions such as kissing and touching. GHB reportedly disinhibited users in a more animalistic or aggressive sexual nature. Methamphetamine use also appeared to have disinhibited users in an almost animalistic sense, and was commonly associated with extreme sexual acts that participants reportedly would not normally engage in. Cocaine subjective effects were sometimes similar; however, cocaine use reportedly most often facilitated sociability, which can lead to sex, although it was often associated with a decreased desire for sexual intercourse. Ketamine reportedly

most often disinhibited its users who rarely associated use with the desire to have sex. However, although ketamine tended to be cited as a sexual deterrent, it was reported to disinhibit in the sense of letting one's "guard down" with respect to physical encounters. Therefore, unlike the disinhibition associated with use of the other drugs, ketamine appears to leave users more passively disinhibited, possibly in a more vulnerable sense.

The lowering of sexual standards, the third theme, was commonly discussed with regard to the use of each club drug. Use of each drug was associated with physical or sexual connections that reportedly would not have occurred if the participant was not on the drug. Most commonly, participants reported engaging in sexual acts with individuals who would normally be "below their standards" if not high. Such encounters were sought out, although ketamine reportedly sometimes left participants more vulnerable or passive to unwanted counters.

It should be noted that effects of some drugs were reportedly related to impotence or the inhibited ability to have sex, but some participants noted that this was dependent on when (in relation to the encounter) the drug was administered or how much was administered. Ecstasy use, and heavier cocaine or methamphetamine use was reported to be associated with decreased ability to have sex; however, increased sexual effects tended to increase as the drug effects wore off. The GHB high tended to be associated with increased sexual effects and ketamine use tended to be associated with decreased sexual effects, especially when taken in larger doses.

Limitations

The semi-structured interviews pose limitations because users of multiple drugs were not always assessed consistently about the sexual effects of each substance. The sample was also comprised of gay and bisexual males who reside in New York City. Although subjective effects are thought to be consistent in males, gay and bisexual club drug users report high rates of club drug use and use with sex; therefore, heterosexual male users may not experience the same effects due to different contexts. No females were assessed so sexual effects cannot be generalized across gender. Sexual effects were not consistently assessed between all drugs and effects were subjective and not measured in a quantitative fashion. Effects were not tested in a controlled environment; therefore, dose, purity, length of use, mindset, motivation, experience with use, and context were all potential confounders. Intoxicating effects of each drug may have distorted perception of effects as well as recall, and frequent users or 'addicts' might experience or report different effects in comparison to novice or less frequent users. Use of legal drugs (i.e., tobacco, alcohol) was not assessed in this study, and use of illicit drugs (e.g., marijuana) other than the five club drugs was also not assessed. Poly-club-drug use and use of alcohol was common (Halkitis et al., 2007), and could not be controlled in this study; therefore, it is possible that the true sexual effects of each drug were biased due to concomitant use of other substances. Another limitation from this secondary analysis is that the interviews were conducted prior to 2004. While rates of methamphetamine and powder cocaine use remain high in NYC, use of ecstasy, ketamine and GHB have declined (Pantalone, Bimbi, Holder, Golub, & Parsons, 2010). Therefore, even though pharmacological responses should remain the same, social contexts associated

with use might have changed. Interviews were semi-structured so true qualitative analysis could not be conducted. It should be noted that while these data come from a study finished in 2003, we believe the findings to remain relevant due to the sustained prevalence of club drug use in this population, and due to unchanging biological effects of each drug. Finally, missing data is a limitation of this secondary analysis.

Conclusion

Although there was a great variation of sexual effects associated with each of the drugs, all club drugs in this study were associated with a risk of increased sexuality or vulnerability to sexual advances. The current public health paradigm of addressing sexual risks associated with drug use often fails to acknowledge the nuanced and complex differences in the effects and motivations of each drug's use. Public health officials should recognize the wide range of these effects and the varying landscape of context. In conclusion, it is well known that club drug use is associated with risky sexual behavior, but this study was among the first to differentiate and compare the effects in a qualitative manner. Each club drug clearly has different sexual effects, and sexual risks, thus public health officials should consider the contexts of club drug use, the variation of sexual effects, and not just the sexual risk within itself.

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Table 1

Descriptive Results of Number of Days Club Drugs Were Used in Last Four Months (*n* = 198)

Recent Use N (%)	Frequent Use N (%)	Mean (days used)	SD (days used)	Median (days used)	Range (days used)	Used in a Sexual Context N (%)	Used in a Sexual Context (Users Only) N (%)	
Cocaine	160 (80.8%)	50 (25.3%)	13.34	21.51	5	0 – 120	69 (34.8%)	69 (66.3%)
Ecstasy	155 (78.3%)	33 (16.7%)	8.58	12.90	4	0 – 80	95 (48.0%)	95 (84.8%)
Ketamine	111 (56.1%)	23 (11.6%)	6.14	13.73	1	0 – 120	18 (9.1%)	18 (37.6%)
GHB	63 (31.8%)	7 (3.5%)	1.99	6.50	0	0 – 65	37 (18.7%)	37 (88.1%)
Methamphetamine	130 (65.7%)	23 (11.6%)	7.55	16.58	2	0 – 120	87 (43.9%)	87 (88.8%)

Note. Recent use is defined as use within the four months prior to baseline assessment and frequent use is defined as use on 16 or more days in four months prior to assessment. Days used is number of days used in that four month period. A participant could have reported use in a sexual context without reporting recent use.