

Regular article

Motivations associated with methamphetamine use among HIV+ men who have sex with men

Shirley J. Semple, Ph.D.^a, Thomas L. Patterson, Ph.D.^{a,b,*}, Igor Grant, M.D.^{a,b}

^aDepartment of Psychiatry, University of California, San Diego, La Jolla, CA

^bDepartment of Veterans Affairs Medical Center, San Diego, La Jolla, CA

Received 26 April 2001; received in revised form 22 December 2001; accepted 8 February 2002

Abstract

Previous research has documented an association between methamphetamine (meth) use and high-risk sex among HIV– men who have sex with men (MSM); however, little is known about the sexual risk behaviors of HIV+ meth-using MSM. The purpose of this study was to explore personal motivators of meth use among HIV+ MSM, and to elaborate upon the interaction between meth use and risky sex. Thematic analysis of qualitative data from 25 HIV+ MSM revealed meth use was associated with high rates of anal sex, low rates of condom use, multiple sex partners, sexual marathons, and anonymous sex. Personal motivations associated with meth use included: sexual enhancement; and self-medication of negative affect associated with HIV+ serostatus. A variety of treatment approaches are used to describe how client insights into motivations can be used by clinicians to promote change in drug use and sexual risk behavior. © 2002 Elsevier Science Inc. All rights reserved.

Keywords: Methamphetamine; HIV+; Sex; Gay/bisexual; Males

1. Introduction

Approximately 45% of newly diagnosed AIDS cases in the US are among men who have sex with men (MSM) (Centers for Disease Control, 2000). The spread of HIV/AIDS within the MSM community has been impacted by the use of illicit drugs, particularly methamphetamine (meth) (Reback & Ditman, 1997). Throughout the 1990s, meth use increased dramatically in MSM communities along the West Coast (Reback & Ditman, 1997). In recent years, the popularity of this drug has spread to the midwest and border states such as Arizona and New Mexico. Meth is the most widely used drug in San Diego's MSM community where the preferred mode of use is snorting (Morgan & Beck, 1997).

The relationship between meth use and unprotected sex has been well documented among HIV– “at risk” gay and bisexual men (Frosch, Shoptaw, Huber, Rawson, & Ling, 1996; Paul, Stall & Davis, 1993; Reback & Ditman, 1997;

Stall, McKusick, Wiley, Coates, & Ostrow, 1986; Stall & Wiley, 1988; Stone et al., 1999; Woody et al., 1999). Although some new HIV infections among meth-using MSM are attributable to risk behaviors associated with injection use of this drug (e.g., sharing needles), the greater risk for viral transmission comes from unprotected sexual contact with an HIV+ meth user who snorts or smokes this drug. HIV+ MSM who use meth are at risk for transmitting the virus to their HIV– or unknown serostatus sexual partners because use of this drug is associated with a number of risk factors, including behavioral disinhibition, enhanced sexual desire, low rates of condom use, high rates of sexually transmitted diseases, increased desire for high risk activities such as anal sex and fisting, prolonged sexual activity, multiple partners, and casual/anonymous sex partners (Gorman, 1998; Hando & Hall, 1994; Klee, 1992; Molitor, Truax, Ruiz, & Sun, 1998; Morgan, 1994; Paul et al., 1993; Reback & Ditman, 1997).

This article reports findings from in-depth, qualitative interviews conducted with 25 HIV+ meth-using MSM whose sexual risk practices had placed others at risk for HIV infection. The present analyses sought to explore a range of personal motivators associated with meth use among HIV+ MSM. It also aimed to clarify and elaborate

* Corresponding author. Department of Psychiatry (0680), University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0680, USA. Tel.: +1-858-534-3354; fax: +1-858-534-7723.

E-mail address: tpatterson@ucsd.edu (T.L. Patterson).

upon the interaction between meth use and risky sexual practices in the target population. Knowledge regarding motivations for meth use, and the link between meth use and sexual risk behavior has important treatment implications that are of value to clinicians and practitioners whose clients include HIV+ meth-using MSM.

2. Materials and methods

2.1. Sample selection

To be eligible for the qualitative study, participants had to be HIV+ men (at least 18 years old) who were self-identified “MSM” and reported having unprotected anal or oral sex with at least one HIV– or unknown serostatus male partner during the previous two months. Participants also had to report having snorted or smoked meth at least twice in the past two months.

Ninety-two percent of the sample self-identified as “gay/homosexual” and reported having only male partners during the previous two months. Eight percent of the sample self-identified as “bisexual” and reported having sex with a female partner during this same time period. Participants ranged in age from 27 to 57, with a mean age of 38.1 years ($SD = 6.5$). Fifty-six percent were Caucasian, 24% Latino, 16% African American, and 4% Native American. Approximately 66% of the sample had some postsecondary education, and 28% were currently employed. Approximately half of the sample had an annual income of \$10,000 or less. Sixteen percent of the sample lived with a spouse or steady partner, 32% lived with other adults, 36% lived alone, and 16% were homeless at the time of the interview (29% had been homeless during the past two months). Eighty percent were never married; the remainder were either divorced/separated (16%), or married (4%). Participants had known of their HIV seropositivity for an average of 8.2 years ($SD = 5.6$ years, range = 4–240 months). Sexual contact was identified as the most likely mode of HIV infection. The mean number of CD4+ cells was 434 ($SD = 379$, range = 11–1357). Approximately 50% of the sample were on triple drug therapy and antiretrovirals. Seventy-two percent of the sample knew their current viral load. Viral loads ranged from less than 50 to 2 million ($M = 157,632$; $SD = 473,010$). Forty-eight percent of the sample reported having one or more STDs (other than HIV) in the past two months. The most common STD reported was genital/anal warts. Twenty-eight percent of the sample reported having a diagnosis of hepatitis B, and 4% reported coinfection with hepatitis C. In terms of psychiatric status, 67% of the sample had received a psychiatric diagnosis during their lifetime. Among those who had received a psychiatric diagnosis, the most common diagnoses were (in rank order): depression (81.2%), bipolar disorder (12.5%), and anxiety (6.3%). Time since most recent psychiatric diagnosis ranged from 2 weeks to 40 years ($M = 5.6$ years; $SD = 10.5$ years).

Approximately 42% of the sample were currently taking psychiatric medications. The most frequently used psychiatric medications were Paxil, Wellbutrin, Zoloft, Clomipramine, Zyprexa, and Trazodone. Sixty-eight percent of participants also reported having been under the care of a psychologist at some time in their lives. Reasons for seeking care from a psychologist included depression, anxiety, bipolar disorder, attention deficit disorder, relationship issues, emotional problems, and sleep disorders. On average, participants had been under the care of a psychologist for 2.7 years ($SD = 2.5$ years).

2.2. Recruitment

All participants were recruited through community outreach efforts. Recruiters visited specific locations and posted flyers in geographic areas throughout San Diego County that were known to have high concentrations of meth users and MSM (e.g., food bank, bus depots, public bathrooms, dance clubs, bars, coffee houses, video arcades, adult bookstores, and health clubs). Advertisements in the print media were also used to target meth users, particularly ethnic minority MSM. Our recruiters performed aggressive street outreach (e.g., in parks, beach locations, gay bars and dance clubs), actively networked with the Association of Community Health Outreach Workers (ACHOW), and sought referrals from substance users. Additional informal recruitment locations included homeless centers, shelters, soup kitchens, single occupancy residences, and motels. In terms of formal recruitment sources, outreach workers targeted a variety of health and social service agencies that have frequent contact with drug users (e.g., primary care physicians). In addition, staff and administrators of direct service organizations (e.g., case managers) were asked to provide recruitment materials to clients who were deemed eligible for the study. Seven participants were recruited through the poster campaign, 13 were referrals from community-based service providers, and 5 were recruited through face-to-face meetings with outreach workers in targeted social environments such as gay bars, dance clubs, and after-hours clubs.

2.3. Procedure

Participants who were determined eligible for the study were asked to participate in a 2–3 hour, semi-structured interview that addressed a variety of topics, including drug user identity, sexual identity, HIV identity, sexual risk behaviors, drug use behaviors, the interaction of sexual behavior and drug use behaviors, attitudes, beliefs, motivations, social network influences, and community norms. In addition, our Ph.D. candidate level interviewers were trained to explore unexpected topics that were raised by participants and deemed relevant to understanding the lives of the target population. Informed consent was obtained from each study participant before beginning the interview. Participants were

paid \$50 for their time. All interviews were audio-recorded and transcribed verbatim. Text from the transcribed interviews was subjected to thematic analysis using principles delineated by Miles and Huberman (1984). Each transcript was coded independently by the two researchers (i.e., Semple & Patterson). A two-level approach to data analysis was utilized. To begin, the researchers read through a hard copy printout of each transcript and identified narratives that revolved around the general theme of motivations for meth use. To ensure the coders shared the same meaning of what constituted a motivation, the researchers initially coded the same data from five transcripts and discussed their experiences to ensure that each understood the code and was able to identify segments of the text that best fit the definition of a motivation for meth use (i.e., check-coding). Upon achieving consensus, the researchers continued to perform “first-level” coding to identify general themes of motivation for meth use. Segments of data that met the general definition of a motivation for meth use were then excerpted and sorted independently by each coder into subcategories of motivations or subthemes. The latter was accomplished by cutting up segments of the transcripts and sorting the material into piles that pointed to commonalities in motivations. Using this method, the coders independently identified two distinct motivational themes, each with multiple subcategories. Interrater reliability was approximately 90%. Where disagreements were noted, the researchers discussed their difficulties, clarified their differences, and agreed to a final classification.

3. Results

3.1. Patterns of meth use

Our qualitative interviews revealed a general pattern of meth use. The majority of participants described themselves as moderate users; very few described themselves as “addicted” to meth. Most participants reported using meth during the week and on the weekends. Meth was used, on average, 10 days during the past month. Participants snorted or smoked an average of 4.3 g of meth during the previous 30 days. Participants had been using meth for an average of 13 years. The average age of first meth use was 24 years ($SD = 9.3$ years). The majority of participants were introduced to the drug by a friend (76%) or a sexual partner (16%). The top five reasons for starting to use meth were (in rank order): to experiment (40%); to party (32%); to get more energy (28%); peer pressure (24%); and to get high (24%). Reasons for using meth changed over time such that the top five reasons for current use of meth were: to enhance sexual pleasure (88%); to get high (84%); to party (76%); to relieve boredom (72%); and to cope with mood (68%). Meth was used most often with a friend (87%) or sexual partner (84%). Almost 50% had used meth with their dealer, and 61% reported using meth by themselves during the

previous 2 months. Approximately 70% of the sample indicated they were most likely to snort or smoke meth at their own home or a friend’s house. Approximately 40% of the sample reported having engaged in a “meth binge” during the previous two months. A meth binge was defined as the experience of continuously consuming large quantities of meth for a period of time – “until you run out or just can’t physically do it anymore.” Meth binges ranged in duration from 2 to 33 days ($M = 6.9$; $SD = 8.9$ days). Binge users reported using an average of 12.6 g of meth in the past 30 days.

3.2. Use of other substances

Participants were also asked about their use of alcohol and other illicit drugs. Eighty-four percent of the sample reported consumption of alcohol during the past two months; 48% reported using alcohol “once in awhile”; 20% reported consuming alcohol “fairly often”; and 16% reported drinking “very often.” The most frequently consumed illicit drugs were marijuana (88% used during the past 2 months), and poppers (76% used in past 2 months). Less frequently used drugs included powder cocaine, crack cocaine, and ecstasy (44%, 36%, and 32%, respectively, used in the past 2 months).

3.3. Sexual behavior

Ninety-seven percent of the sample indicated they used meth before or during sex. The link between meth use and sexual risk behavior was readily apparent. Eighty-four percent of the sample reported engaging in sexual risk behavior (e.g., unprotected anal sex, anonymous sex) when high on meth. Participants reported that when high on meth they were more likely to have anal sex without a condom (55.2%), more likely to seek out risky sexual partners (57.9%), more likely to be the insertive partner (62.1%), and more likely to have sex with people who would otherwise not be their sex partner (57.9%). The number of unprotected anal sex acts with HIV– or unknown serostatus partners over a 2-month period ranged from 0–91 (Mean = 10.0; $SD = 20.1$). The number of unprotected oral sex acts with HIV– or unknown serostatus partners ranged from 1–328 (Mean = 30.9; $SD = 61.0$). On average, participants reported 8 HIV– or unknown serostatus partners during the previous 2 months. Other sexual activities that were associated with being high on meth included fisting (i.e., anal penetration with hand), water sports (activities involving urine; e.g., drinking urine), rimming (i.e., oral-anal contact), and group sex. Approximately 80% of the sample also reported engaging in marathon sex while high on meth. Marathon sex was defined as “prolonged sexual activity where there was genital contact for hours and hours.” During marathon sex, participants reported engaging in receptive anal sex without a condom (93%), insertive anal sex without a condom (72%), receptive oral sex without a condom (90%), and insertive oral

sex without a condom (97%). The most common locations for finding sex partners were bars (60%), bathhouses (52%), and adult bookstores (40%). Sexual encounters occurred most frequently in the participant's home, the home of sexual partners, and in bathhouses.

3.4. Motivations associated with meth use

We identified a range of motivators associated with meth use in our sample of HIV+ MSM. These motivations can be organized around two general themes: (1) Sexual enhancement; and (2) Self-medication of negative affect associated with HIV+ serostatus.

3.4.1. Sexual enhancement

3.4.1.1. Meth makes sex more pleasurable. All 25 participants reported that a primary motivation for meth use was the fact the drug made sex more pleasurable. One participant described sex as the “highlight of the meth trip.” Participants described every aspect of the sexual experience from kissing and touching to orgasm as being extremely more intense and pleasurable than sex without being high on meth. One participant described the increased sensation on meth in the following way.

Meth makes sex feel like puberty. Every touch is enhanced. On meth, orgasms are over the top. It's increased sensation on meth. Even a kiss is amazing. Everything tingles.

Meth was also described as enhancing sexual performance. Participants reported meth made sex last longer and it was possible to orgasm repeatedly.

Meth enhances sexual performance, repeat performances. On meth, I'm more heightened sexually... You don't reach your end. It slows the race to ejaculation.

In some cases, participants reported meth use made it easier to have anal sex. For some, receptive anal sex without meth was painful. For others, meth simply made the person more relaxed so that anal sex was more pleasurable. Meth also helped to relax some participants so that they could enjoy other types of sex such as sado-masochism (SM) or group sex.

Without meth, anal sex is painful. Before meth, I had to use poppers. Meth relaxes me for anal sex. It makes anal sex and SM a lot more pleasurable. If there is any pain, I really don't feel it.

3.4.1.2. Meth facilitates sexual experimentation. There was a general consensus among participants that meth use enhanced the sexual experience. One form of sexual enhancement involved sexual experimentation. Twenty-two participants reported meth facilitated sexual experimentation, mostly through the loss of inhibitions. It was common for participants to report that meth provided

them with the freedom to try sexual activities they would not engage in if they were sober. Sexual activities that were associated with meth use included the use of toys, fisting, SM, master/slave, leather, bondage, water sports, rimming, eating feces, orgies, fetishes, cross-dressing, and group sex.

Participants also described their sexual experiences on meth as going beyond experimentation to pushing the limits on sexual activities by engaging in sexual marathons for hours or days or having a succession of partners sometimes numbering up to 100 in a single evening. The quality of sexual activity on meth was described as more aggressive, hard, rough, animalistic, wild, and manly.

Sex on meth is completely physical. It's about pushing my limits. It's about seeing how far I can take it. The nastier the sex, the better. Nastier being multiple partners, a lot of exchange of body fluids. I like to have multiple partners, one right after the other for hours and hours, and sexual marathons up to 20 hours of rough sex.

3.4.1.3. Meth makes it easier to approach sexual partners and to have sex without love or emotional connection. It was common for participants to report that meth use facilitated social interactions that would lead to sexual encounters. Seven participants described themselves as shy and uncertain about how to approach sexual partners when sober. Meth allowed these individuals to put themselves “out there,” to be more sexually assertive, to feel less inhibited and act “bolder” in the context of seeking a sex partner. Twelve participants also described being emotionally disconnected from their partner when high on meth. Meth made it “OK” to have sex without love or any emotional connection. One person described his sexual encounters as being “all about action” and involving very little emotion. Another described himself as being so self-absorbed when on meth that he really doesn't care about his partners. For many, sex on meth involved a tacit understanding that neither partner owed the other anything – that the encounter was strictly about sex and would not lead to anything more. In some cases, participants were bothered by the fact they were capable of feeling and acting this way toward another person. There were expressions of guilt and remorse in sober moments. In other cases, there was no remorse. The latter subscribed to the philosophy that love and sex are two different things that do not necessarily go together. These individuals reported they were not at all concerned about having hurt their partners' feelings.

I don't feel any real connection to my partner when I'm having sex on meth. I kind of detach myself from the whole situation knowing that this is just sex, and it's not going to lead to anything more. And I'm less concerned about hurting someone's feelings when on meth. You think differently on meth. Like when they don't ask to use a condom, I think if this is what you want, then you take your chance buddy. Later, I think that's not me. Who was that person?

3.4.2. Self-medication of negative affect associated with HIV+ serostatus

3.4.2.1. Meth helps participants to cope with an HIV+ diagnosis. Seven participants described the importance of meth in terms of helping them cope with the trauma of receiving an HIV+ diagnosis. In a few cases, participants used meth for the first time after being diagnosed; a more common scenario was for the participant to increase his meth use in response to a diagnosis. Meth use motivated participants in at least two ways. For some, it allowed them to “go on living” or “to get going again” after experiencing the paralyzing effects of diagnosis. This was particularly true for those who were diagnosed in the years preceding the advent of triple combination therapies. An HIV+ diagnosis left participants feeling uncertain about their future, and afraid to develop relationships or get close to others. Participants also described feeling “ugly” and “tainted” as a result of their HIV diagnosis. Meth use helped participants to view their situation in a more positive light.

When I found out that I was HIV+, I didn't know what was going to happen. I didn't know what to expect with HIV. I didn't know where I was going. But after I started using [meth] – I started making some positive choices in my life. And actually I think I did some pretty good things. It helped me. I don't know how I would ever have got started again.

3.4.2.2. Meth use provides a temporary escape from being HIV+. Five participants reported feeling bombarded with messages about HIV. One participant described how he is unable to walk down the street without seeing a poster or a sign that reminds him of his HIV+ serostatus. Meth use was viewed as a temporary escape from being HIV+. Participants described how meth freed one's mind of intrusive thoughts about HIV and life as an HIV+ person. One person described his escape from HIV into the world of a meth user in the following way.

Everywhere you go, you're reminded of HIV. Can I have one day when I'm not reminded that I'm HIV+? Meth gives me that.

3.4.2.3. Meth makes the HIV+ person feel better physically. Three participants reported their meth use was motivated by HIV-related health problems. Participants described meth use as a quick remedy for feeling sick and tired. Meth was described as providing instant energy for day-to-day functioning.

I was not feeling well. I was feeling sick and isolated. Crystal [meth] made it all better.

3.4.2.4. Meth is used as a method for coping with the specter of death. Five participants mentioned the link between meth use and concerns about “death and dying.” For

those with a fatalistic perspective, meth use tended to increase dramatically following HIV diagnosis. Those who believed they were going to die from HIV/AIDS described their decision to “go out with a bang.” The rationale was to die having fun and meth was viewed as a means to an end. One participant described how meth gave him control over how he was going to die; he wanted the drugs to kill him before the HIV took his life.

When I found out that I was HIV+, I doubled my meth use. You go off and party blindly. Every day could be your last. Although it affects your health, you don't care because you're on your way out anyway.

3.4.2.5. Meth use helps the individual to manage negative self-perceptions and social rejection associated with being HIV+. It was clear from our interviews that HIV seropositivity was strongly associated with negative self-perceptions. Participants often used negative words such as “ugly, tainted, unwanted, and unlovable” to describe how they felt about themselves. Using meth relieved the emotional pain that accompanied these negative self-perceptions. Ten participants described their ongoing meth use as important in terms of dealing with the emotional pain associated with HIV-related social rejection. Most rejection was experienced in a sexual context. Using meth, allowed participants to “not care” if rejected by a sexual partner. Others described the experience as still painful but “less devastating” when high on meth.

I feel ugly about being HIV+. Meth anesthetizes, it's a way to deal with emotional pain. It probably desensitized me a bit so that it (rejection) isn't so hurtful.

In addition to negative self-perceptions related to HIV seropositivity, five participants also reported enduring negative emotions and self-perceptions that were not related to their HIV serostatus. These participants reported having experienced major life adversity in the form of physical, emotional, and sexual abuse during childhood. Meth was described as having the power to make negative perceptions go away and give rise to feelings of attractiveness, desirability, intelligence, and self-worth.

I was seriously abused by my mother during my childhood. And I have these old tapes that say I'm not good enough, nobody wants me. Those old tapes don't play when I'm on meth.

4. Discussion

The purpose of this study was to explore a range of personal motivators associated with meth use among HIV+ MSM. It also aimed to elaborate upon the interaction between meth use and risky sexual practices in this population. Previous research conducted with HIV- “at risk” populations of meth-using MSM has documented high rates

of sexual risk behavior (e.g., Frosch et al., 1996; Reback & Ditman, 1997; Stall et al., 1986; Stall & Wiley, 1988; Woody et al., 1999). Similar findings emerged from this qualitative study of HIV+ meth-using MSM. The men in our study reported engaging in a variety of high-risk sexual activities with HIV– or unknown serostatus partners in the context of using meth. Meth use was associated with high rates of anal sex, low rates of condom use, multiple sex partners, anonymous sex partners, marathon sex, fisting, rimming, and group sex. These data provide additional support for the previously observed relationship between meth use and high-risk sexual behavior. It also suggests the importance of developing counseling programs or behavioral interventions that seek to reduce drug and sexual risk behaviors in this target population of HIV+ individuals.

Thematic analysis of qualitative data revealed that motivations for using meth can be organized around two general themes: sexual enhancement and self-medication of negative affect associated with HIV+ serostatus. The relationship between meth use and sexual enhancement was the most frequently occurring theme that emerged from our qualitative interviews. Some researchers have theorized a direct relationship between drug use and sexual behavior. Certain drugs, such as stimulants, may have a direct effect on the central nervous system wherein sexual arousal is increased, anxiety is reduced, and perceptions of sensation are enhanced (Crowe & George, 1989; Levenson, Sher, Grossman, Newman, & Newlin, 1980; Steele & Josephs, 1990). This theory is consistent with our participants' descriptions of their sexual experiences while high on meth. Some researchers suggest there is also a powerful learned association between drug use and sexual experience (McKirnan & Peterson, 1992). Support for this theory of "learned associations" emerged from our qualitative interviews. So strong is the association that many of our participants reported they could not have sex unless they were high on meth. The fear of no longer being sexual was identified as a major barrier to giving up meth. From a treatment perspective, this presents a challenge for the therapist whose goal is to help the client to change his drug use behavior. One clinical approach to this issue involves the use of motivational interviewing techniques to help the client develop insights into the link between his meth use and his sexual experience. Over time, the therapist can help the client to apply these insights in terms of developing a plan and setting goals for behavior change (Miller & Rollnick, 1991).

Our data also provide valuable insights into the far-reaching and enduring negative impact that an HIV+ diagnosis can have upon the individual. It was apparent from our interviews that participants experienced enduring emotional pain associated with being HIV+. Sources of emotional pain included social rejection, negative self-perceptions, fear of dying, and the constant and intrusive social reminders of one's HIV+ serostatus. Identification of a "self-medication of negative affect" motivational theme suggests meth use may be functional in that it allows the HIV+ individual to "cognitively

escape" from the constant awareness and emotional pain associated with being HIV+. From a drug treatment perspective, McKirnan, Ostrow, and Hope (1996) suggest it is important to get high-risk individuals to recognize the relationship between cognitive escapism and their use of substances. By inducing awareness of the relationship between drug use and the individual's motivation to escape the emotional pain associated with being HIV+, the clinician may be able to help the client identify moods, emotions, expectancies, and coping styles that contribute to an ongoing pattern of drug use. Once the client has achieved awareness of the link between his use of meth and a need to escape cognitively from his HIV status or identity, the therapist can address alternative strategies for maintaining self-awareness and avoiding escape behavior. Meth use may be reduced through focusing the individual on the relationship between HIV status and meth use, and providing strategies for self-monitoring and controlling these underlying motivations of drug use (McKirnan et al., 1996).

In general, HIV+ meth-using MSM may benefit from a variety of treatment approaches that address underlying motivations for meth use, and the link between meth use and sexual risk behavior. The three major behavioral approaches that are currently used in the treatment of substance abuse are cognitive behavioral therapy (CBT), motivational enhancement therapy (MET), and self-help groups (Fuller & Hiller-Sturmhofel, 1999). Client insights into motivations for meth use can be readily incorporated into each treatment approach. For example, cognitive behavioral therapy views human behavior as primarily learned (Fuller & Hiller-Sturmhofel, 1999). Thus, therapists who use the CBT approach, address the link between motivations for meth use and high risk situations, and have their clients practice behavioral and cognitive skills to cope with or avoid high risk behavior, such as drug use and unprotected sex. MET is a psychological-behavioral approach to treatment wherein the therapist explores client insights into motivations associated with problem behavior, and applies those insights to setting goals for behavior change and developing a plan of action (Miller, Zweben, DiClemente, & Rychtarik, 1994). Addressing motivations for meth use within a self-help group would be most beneficial to clients who are able to enhance their coping skills to avoid high risk situations by drawing upon the shared experiences and support of fellow members.

We also offer global recommendations that could be incorporated into each of these treatment approaches. Our data suggest an important issue in the treatment of HIV+ MSM is the need to recognize the role of gay sexuality and HIV+ identity in the recovery process. Therapists must acknowledge and address the powerful links between gay sexuality, HIV+ identity, and meth use. Accordingly, we recommend the development of specialized treatment programs, which address these special issues that are relevant to understanding the underlying motivations for meth use among HIV+ MSM.

While these data suggest the importance of addressing motivations for meth use in relation to sexual risk behavior and substance abuse treatment, the limitations of this analysis must be mentioned. Because these data were gathered from a convenience sample and specific inclusion/exclusion criteria were utilized (e.g., intravenous drug users were excluded), the findings should not be considered generalizable. However, our sample did include a broad spectrum of HIV+ meth users, including MSM who were homeless, unemployed, low income, and sex workers. In addition, almost half of our sample was made up of ethnic minority participants. From a clinical perspective, it would also have been useful to distinguish between participants who met DSM-IV criteria for dependence, use, or abuse. The latter is an important factor that may help the clinician to determine the best treatment approach for the client. For example, in alcohol studies, there is evidence to suggest that differences in treatment outcomes may be associated with the severity of addiction or degree of dependence (Project MATCH Research Group, 1997). It would also have been beneficial to have assessed the psychiatric status of study participants. Studies of cocaine and opiate users report that one-third to two-thirds have a lifetime history of a major psychiatric disorder (Hendriks, 1990; Regier et al., 1990). In the present sample, 81% of participants reported having a lifetime diagnosis of depression. There was also evidence to suggest the majority of participants in this study were self-medicating, a negative affect associated with their HIV+ serostatus (primarily depression) through the use of meth. We recommend using an objective measure, such as the Diagnostic Interview Schedule (DIS) (Robins, Helzer, Croughan, Williams, & Spitzer, 1981) or the Addiction Severity Index (ASI) (McLellan et al., 1992) to assess the psychiatric status of meth-using clients.

This qualitative study extends previous research on meth-using MSM (e.g., Reback & Ditman, 1997), by focusing on HIV+ individuals, and providing insights into personal motivations associated with meth use. We view our qualitative approach as useful in terms of identifying motivations that are salient to the target population of HIV+ men. In general, the findings from this study are best applied in terms of the development of behavioral interventions or counseling programs that seek to reduce the drug use behaviors and sexual risk practices of HIV+ meth-using MSM. More specifically, this study suggests counseling programs should address underlying motivations associated with meth use, and the relationship between meth use and unsafe sex.

Acknowledgments

Support for this work was provided, in part, by the National Institute of Drug Abuse (NIDA) R01 DA12116 (Promoting Safer Sex in HIV+ MSM Methamphetamine Users), the National Institute of Mental Health (NIMH)

grants 5 R01 MH56264 (Brief Targeted Behavior Intervention for HIV+ Persons) and 1 R01 MH61146-01A2 (HIV/STD Risk and Maintenance in “At Risk” People), NIMH Center grant 2 P50 MH45294 (HIV Neurobehavioral Research Center), and the Department of Veterans Affairs. The authors wish to acknowledge and thank our interviewers, David Rudenberg, MA., and Jim Zians, MA.

References

- Centers for Disease Control. (2000, December). HIV/AIDS surveillance report. 12 (2), 14.
- Crowe, L. C., & George, W. H. (1989). Alcohol and human sexuality: review and integration. *Psychological Bulletin*, 105, 374–386.
- Frosch, D., Shoptaw, S., Huber, A., Rawson, R. A., & Ling, W. (1996). Sexual HIV risk among gay and bisexual male methamphetamine abusers. *Journal of Substance Abuse Treatment*, 3, 483–486.
- Fuller, R. K., & Hiller-Sturmhofel, S. (1999). Alcoholism treatment in the United States. *Alcohol Research Health*, 23, 69–77.
- Gorman, M. (1998). A tale of two epidemics: HIV and stimulant use. *FOCUS*, 13, 1–8.
- Hando, J., & Hall, W. (1994). HIV risk-taking behavior among amphetamine users in Sydney, Australia. *Addiction*, 89, 79–85.
- Hendriks, V. M. (1990). Psychiatric disorders in a Dutch addict population: rates and correlates of DSM-III diagnosis. *Journal of Consulting and Clinical Psychology*, 58, 158–165.
- Klee, H. (1992). A new target for behavioral research – amphetamine misuse. *British Journal of Addiction*, 87, 439–446.
- Levenson, R. W., Sher, K. J., Grossman, L. M., Newman, J., & Newlin, D. B. (1980). Alcohol and stress response dampening: pharmacological effects, expectancy, and tension reduction. *Journal of Abnormal Psychology*, 89, 528–538.
- McKirman, D. J., & Peterson, P. L. (1992). Gay and lesbian alcohol use: epidemiological and psychosocial perspectives. In EMT Group (Ed.), *Research symposium on alcohol and other drug prevention among gays and lesbians*. Sacramento, CA: California Department of Alcohol and Drug Programs.
- McKirman, D. J., Ostrow, D. G., & Hope, B. (1996). Sex, drugs and escape: a psychological model of HIV-risk sexual behaviours. *AIDS Care*, 8, 655–669.
- McLellan, A. T., Kushner, H., Metzger, D., Peters, R., Smith, I., Grissom, G., Pettinati, H., & Argeriou, M. (1992). The fifth edition of the Addiction Severity Index. *Journal of Substance Abuse Treatment*, 9, 199–213.
- Miles, M., & Huberman, A. (1984). *Qualitative data analysis: a source book for new methods*. Beverly Hills: Sage Publications.
- Miller, W. R., & Rollnick, S. (1991). *Motivational interviewing: preparing people to change addictive behavior*. New York: The Guilford Press.
- Miller, W. R., Zweben, A., DiClemente, C. C., & Rychtarik, R. G. (1994). *Motivational Enhancement Therapy Manual*. Rockville, MD: National Institute on Alcohol Abuse and Alcoholism Project MATCH Monograph Series.
- Molitor, F., Truax, S., Ruiz, J., & Sun, R. (1998). Association of methamphetamine use during sex with risky sexual behaviors and HIV infection among non-injection drug users. *Western Journal of Medicine*, 168, 93–97.
- Morgan, P. (1994). *Researching hidden communities: a quantitative comparative study of methamphetamine use in three sites*. Epidemiologic Trends in Drug Abuse. Bethesda, MD: U.S. Department of Health and Human Services, National Institute on Drug Abuse.
- Morgan, P., & Beck, J. (1997). The legacy and the paradox: hidden contexts of methamphetamine use in the United States. In H. Klee (Ed.), *Amphetamine misuse: international perspectives on current trends* (pp. 135–179). The Netherlands: Harwood Academic Publishers.

- Paul, J. P., Stall, R., & Davis, F. (1993). Sexual risk for HIV transmission among gay and bisexual men in substance abuse treatment. *AIDS Education and Prevention*, 5, 11–24.
- Project MATCH Research Group. (1997). Project MATCH secondary a priori hypotheses. *Addiction*, 92, 1671–1698.
- Reback, C. J., & Ditman, D. (1997). The social construction of a gay drug: methamphetamine use among gay and bisexual males in Los Angeles. Executive Summary. City of Los Angeles, AIDS Coordinator.
- Regier, D. A., Farmer, M., Rae, D. S., Locke, B. Z., Keith, S. J., Judd, L. L., & Goodwin, F. K. (1990). Comorbidity of mental disorders and other drug abuse: results from the Epidemiological Catchment Area (ECA) Study. *JAMA*, 264, 2511–2518.
- Robins, L. N., Helzer, J. E., Croughan, J., Williams, J. B., & Spitzer, R. (1981). National Institute of Mental Health Diagnostic Interview Schedule. *Archives of General Psychiatry*, 18, 381–389.
- Stall, R., McKusick, L., Wiley, J., Coates, T. J., & Ostrow, D. (1986). Alcohol and drug use during sexual activity and compliance with safe sex guidelines for AIDS: The AIDS Behavioral Research Project. *Health Education Quarterly*, 13, 359–371.
- Stall, R., & Wiley, J. (1988). A comparison of alcohol and drug use patterns of homosexual and heterosexual men: The San Francisco Men's Health Study. *Drug and Alcohol Dependence*, 22, 63–73.
- Steele, C. M., & Josephs, R. A. (1990). Alcohol myopia: its prized and dangerous effects. *American Psychologist*, 45, 921–933.
- Stone, E., Heagerty, P., Vittinghoff, E., Douglas Jr., J. M., Koblin, B. A., Mayer, K. H., Celum, C. L., Gross, M., Woody, G. E., Marmor, M., Seage 3rd, G. R., & Buchbinder, S. P. (1999). Correlates of condom failure in a sexually active cohort of men who have sex with men. *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology*, 20, 495–501.
- Woody, G. E., Donnell, D., Seage, G. R., Metzger, D., Marmor, M., Koblin, B. A., Buchbinder, S., Gross, M., Stone, B., & Judson, F. N. (1999). Non-injection substance use correlates with risky sex among men having sex with men: data from HIVNET. *Drug and Alcohol Dependence*, 53, 197–205.