HHS Public Access

Author manuscript

Int J Drug Policy. Author manuscript; available in PMC 2016 August 01.

Published in final edited form as:

Int J Drug Policy. 2015 August ; 26(8): 764–771. doi:10.1016/j.drugpo.2015.03.010.

Motivations for prescription drug misuse among young men who have sex with men (YMSM) in Philadelphia

Aleksandar Kecojevic[1], **Heather L. Corliss**[1], and **Stephen E. Lankenau**[2]

[1]SDSU Graduate School of Public Health, Division of Health Promotion and Behavioral Science, 9245 Sky Park Court, Suite 100, San Diego, CA 92123

[2]Drexel University School of Public Health, Department of Community Health and Prevention, 3215 Market Street, Nesbitt Building, 4th floor, Philadelphia, PA 19104

Abstract

Background—Prescription drug misuse (i.e. opioids, tranquilizers and stimulants) has become the fastest growing area of substance abuse among young adults. Limited studies focus on prescription drug misuse among young men who have sex with men (YMSM, aged 18–29 years). Furthermore, little is known about YMSM's motivations for misuse. The purpose of this study was to explore personal motivations for prescription drug misuse among YMSM, including the possible connection between misuse and sexual behaviors.

Methods—As part of a larger mixed methods study of 191 YMSM recruited in Philadelphia during 2012–2013, we conducted semi-structured qualitative interviews with 25 of these participants to gather additional contextual information about their prescription drug misuse. We conducted thematic analysis of qualitative data.

Results—While our results corroborated previous literature on motives for misuse of prescription drugs, our data yielded some distinct motivations specific among YMSM. These motives included social/recreational motives, facilitating sex with other men (including motives such as use of opioids for less painful anal receptive sex), and psychological motives such as depression, stress management, coping with everyday hardships (opioids and tranquilizers) or feeling more energized (stimulants). Prescription drugs were commonly misused within the broader contexts of participants' polysubstance use, adding to the significance of this problem.

Corresponding Author. Aleksandar Kecojevic, DrPH, MPH, San Diego State University Graduate School of Public Health, Division of Health Promotion and Behavioral Science, 9245 Sky Park Court, Suite 100, San Diego, CA 92123, akecojevic@mail.sdsu.edu, phone: 619-594-0477.

Contributors

AK developed the manuscript and conducted analyses. AK and SEL developed implementation protocols and study design. AK conducted participant recruitment with help of research assistant. SEL and HLC assisted with interpreting findings and manuscript writing. All authors approved the final version of manuscript.

Conflict of interest

No conflict declared.

Conclusions—Our findings offer insights into YMSM's motivations for prescription drug misuse, and point to the importance of recognizing and addressing them. While substance use is likely related to various psychosocial issues impacting YMSM, it also may lead to significant health consequences. Results support the need to include prescription drugs and polysubstance use in harm reduction messages and treatment approaches aimed at substance using YMSM.

Keywords

prescription drug misuse; polysubstance use; motives; YMSM

1. Introduction

Prescription drug misuse, defined as taking a prescription drug (i.e. opioids, tranquilizers, stimulants) when not prescribed, or only for the experience or feeling it causes (Substance Abuse and Mental Health Services Administration, SAMSHA, 2010), is an important public health concern. It is the fastest growing area of substance use among adolescents and young adults (Berenson & Rahman, 2011); young adults aged 18–25 years report the highest prevalence of misuse in the past year (14.3%) (SAMHSA, 2010). A few studies have explored prescription drug misuse among sexual minority youth (Corliss et al, 2010), and among young men who have sex with men (YMSM, aged 18–29 years) (Kecojevic et al, 2014) and found risk for prescription drug misuse to be high in sexual minority populations.

To develop appropriate public health prevention and intervention strategies, researchers need to understand which subpopulations are at high risk for prescription drug misuse (Zacny et al., 2003), and their motivations for misuse (DiClemente, 1999; Ferster et al., 1997). The role of motives for prescription drug misuse among young adults, which has been investigated in prior quantitative and qualitative studies, varies depending on the type of prescription drug. For example, the most commonly cited reasons for misuse of opioids include self-medicating to relive pain, to get high, to relax, to experiment, or to monitor the intake of other substances (McCabe et al., 2007; McCabe, West, & Boyd, 2013; Zachny & Lichtor, 2008; Silva, Kecojevic, & Lankenau, 2013). Tranquilizers or benzodiazapines are often misused for their therapeutic indication, i.e. anxiety (Fatseas et al., 2009; Rigg & Ibanez, 2010), but also for recreational, "party", and thrill-seeking behaviors (O'Brien, 2005; Stone & Merlo, 2011; Fatseas et al., 2009). A number of different motives were cited for prescription stimulant misuse such as enhancing academic achievement (Stein, 2012; Arria et al., 2013; Rabiner, Anastopoulos, & Costello, 2009), weight loss (Jeffers, Benotsch, & Koester, 2013), reducing fatigue (White, Becker-Blease, & Grace-Bishop, 2006), or experimentation (McCabe & Cranford, 2012).

The majority of prior research on motivations for prescription drug misuse has been conducted among adolescents, young women, college students, or high-risk populations (i.e. injection drug users). Literature on motivations for prescription drug misuse among MSM and sexual minorities is scant. In one such quantitative study of 350 MSM (ages 18–78) attending gay pride festival (Benotsch et al., 2011), participants described multiple motivations including pain relief, sleep aid, or more experimental motivations such as "getting high" or trying something new. In addition, another study examined motives for use

of erectile dysfunction drugs (EDD) among MSM and reported that the most common reasons were to “add to the fun”, “maintain an erection while using a condom”, and “to have sex for hours” (Pantalone, Bimbi, & Parsons, 2007).

The lack of literature investigating motivations for prescription drug misuse among MSM is surprising given that a number of prior studies have examined motivations for use of popular club drugs, i.e. ecstasy, methamphetamine, cocaine, ketamine, gamma-hydroxybutyrate (GHB), in this population. These studies have identified specific functions and motives related to socializing (Green, 2003; McDowell, 2000), boosting energy, assisting with sleep (Palamar & Halkitis, 2006), and self-medicating of negative affect associated with HIV status (Semple et al., 2002). Several studies also reported motives related to enhancing sexual experiences (Semple, Patterson, & Grant, 2002; Halkitis, Fischgrund, & Parsons, 2005; Palamar & Halkitis, 2006). Although some common perceived sexual effects exist across club drugs, motivations and unique sexual effects for each club drug varied among MSM (Palamar et al., 2014). Club drugs are often used in the context of nightclubs and bars (Halkitis & Parsons, 2002), with younger men more likely than older men to use them for social reasons (Halkitis, Fischgrund, & Parsons, 2005). A qualitative study on motivations for club drug use in a sample of seroconverted and seronegative gay and bisexual men in New York City (Jerome, Halkitis & Scionolfi, 2009) revealed seven recurring subthemes that fall within three larger domains: physical, emotional/mental, and social. Another qualitative study of 16 Latino drug-using gay men in San Francisco found that participants used drugs to cope with sexual identity, to feel like part of the mainstream gay community, and to reduce sexual inhibitions (Bauermeister, 2007). Additionally, prescription drug misuse often occurs within a larger context of polysubstance use, defined as the consumption of more than one drug over a defined period, simultaneously or at different times for either therapeutic or recreational purposes (Connor et al., 2014). Because YMSM may misuse prescription drugs as substitutes for club drugs (Iniciardi et al., 2007) or in combination with alcohol and other drugs (Lankenau et al., 2012; Kelly et al, 2014), some of the same motivations may be shared, including motivations related to sexual behaviors of YMSM.

In this analysis, we examined motives specific for prescription drug misuse in a sample of YMSM who are current substance users. We focus specifically on YMSM because of their greater risk of drug use compared to their heterosexual peers (Cochran et al., 2004; Ostrow & Stall, 2008) and compared to older MSM (Greenwood et al., 2001, Thiede et al., 2003). We also focus on YMSM because of their elevated risk for HIV and the role of substance use in contributing to this risk. Prior research suggests that substance use in MSM plays an important role in high-risk sexual behaviors including unprotected anal intercourse (UAI) and having multiple sex partners (Colfax et al., 2004; Koblin et al., 2003; Mansergh et al., 2006). More recently, prescription drug misuse has also been linked to risky sexual behavior among MSM (Kelly & Parsons, 2013), YMSM (Kecojevic et al., 2014) and other young adult populations (Johnston et al. 2013). Understanding YMSM’s motivations for misusing prescription drugs is an important first step for developing public health campaigns geared toward this population, particularly as motivations for misuse that were derived from other populations may not extrapolate to YMSM. Thus, we aimed to identify, describe, and analyze the motives for and meanings of prescription drug misuse among a sample of

substance using YMSM in Philadelphia. In particular, we sought to determine motivations for prescription drug misuse that are most important to YMSM.

2. Methods

This analysis used both quantitative survey data (e.g. frequencies and percentages) to describe broader patterns found within the sample, and qualitative data (i.e., narrative accounts) to provide contextualized details as reported by individual participants. This mixed methods approach (Creswell 2007) has been used previously to describe risk behaviors and patterns of substance use among smaller samples of young adults (Lankenau et al., 2012; Silva et al., 2013) and MSM (Semple et al., 2002), and has been highlighted by the National Institutes of Health (NIH) to be an important and growing methodology for addressing complex public health problems (Creswell et al., 2011).

2.1. Participants and Procedures

Participants for this qualitative analysis (n=25) represent a subset of participants of the larger quantitative survey (n=191) (Kecojevic et al., 2014). Briefly, between November of 2012 to July of 2013, YMSM (ages 18–29 years) who had misused prescription drugs in the past 6 months were recruited in Philadelphia to complete a larger structured, quantitative interview. Prescription drug misuse was assessed as, “In the last 6 months, have you, even once, used any of the following (opioids, tranquilizers, stimulants) when they were not prescribed for you or that you took only for the experience or feeling it caused?” (SAMHSA, 2010). We inquired about misuse of opioids, such as Vicodin and OxyContin, tranquilizers, such as Xanax and Klonapin, and stimulants, such as Adderall and Ritalin. Recruitment involved active and passive distribution of fliers and study cards at nightclubs, coffee houses, LGBT youth organizations, social service agencies, craigslist.com, college campuses, and street and park locations commonly frequented by the population. Those calling the study office to express an interest in participation were screened by telephone and informed that the purpose of the study was to better understand behaviors of YMSM such as drug use and sexual behaviors. Upon completion of the quantitative survey component of the study, selected YMSM were invited to participate in an in-depth interview. To maintain an approximate balance in the sample composition across different variables, 25 interview participants were purposively selected based on their age, race/ethnicity, HIV status, and their responses on prescription drug misuse questions (i.e. quantity, access, alternative methods of use, etc.). Interviews were conducted by the first author in private offices at the Drexel University School of Public Health.

In-depth, semi-structured interviews (Johnson, 2002) were conducted using an interview guide with open-ended questions, follow-up questions, and probes (Rubin & Rubin, 2005). The semi-structured instrument consisted of four interview modules: substance use (i.e. history, motives and reasons for drug use, attitudes, context and settings surrounding drug use, alternative modes of administration, different combinations, and outcomes of drug experience effects), sexual risk behaviors, experiences of discrimination and traumatic life experiences, and social context of YMSM lives (social settings, norms, and support). The main questions and probes used to assess motives for prescription drug misuse in this

analysis included the following: “Which prescription drug do you use most frequently? What do you like about that drug? What are some of reasons you used these drugs? Have you used any prescription drugs before having sex?” In addition, interview participants were asked to provide a detailed account of episodes when they had used prescription drugs within the last 6 months, including the context of and reasons for use. Interviews lasted from 60 to 90 minutes and were audio-recorded. Each participant received $25 cash compensation. The Drexel University’s Institutional Review Board approved the study protocol and instruments.

2.2. Data Analysis

Data from quantitative surveys on these 25 participants were used to provide more comprehensive portraits of participants, to support their qualitative results, and are integrated with the interview findings below. Descriptive analyses were conducted using the SPSS 20.0 statistical software.

All interviews were transcribed verbatim by a hired research assistant and imported in Atlas.ti, a qualitative data analysis computer software program. Given the exploratory nature of this study, data analysis employed an inductive coding process. Analysis was guided by an awareness of the literature, which served as a point of origin for initial coding. After initial review of transcripts during which we identified narratives that revolved around motivations for prescription drug misuse, we used a system of free coding to develop categories of concepts and consistent themes emerging from the data. We developed sets of primary codes of interest such as “opioid - motivations”, or “opioid - context”. From these preliminary findings, we used axial-coding to identify, confirm, and focus emerging inferences from the data (Corbin & Strauss 2008). Using previously identified coding procedures, we reconstructed codes (filling in), expanded on code definitions (extending), collapsed or combined codes (bridging), and added new codes to the list (surfacing). Selective coding and memoing were also pursued to further define and interrogate categories. Emergent themes were labeled during axial-coding, such as “to have a good time”, “to facilitate sexual experience”, or “to get away from problems”. This process continued until all relevant themes were identified. In addition to overall data coding, a profile of each participant was developed that summarized his demographic characteristics. In the results that follow, pseudonyms are used to identify participants.

3. Results

3.1. Sample Demographics and Drug Use Characteristics

Socio-demographic and drug use characteristics of the qualitative sample mirrored those of the larger, quantitative, sample which are reported elsewhere (Kecojevic et al., 2014). In Table 1, we present these characteristics for the 25 MSM who participated in the qualitative interview.

Opioids were the most commonly misused prescription drugs in the past 6 months, followed by tranquilizers and stimulants. Polysubstance use was common, with 92% of participants misusing at least 2 classes, and 48% misusing all three classes of prescription drugs in the

past 6 months. Of eight participants who reported using opioids in the past 6 months before having sex, seven reported not using condoms consistently. Of nine participants who reported using tranquilizers in the past 6 months before sex, four reported inconsistent use of condoms. Seven participants reported using stimulants in the past 6 months before sex, all of which reported inconsistent use of condoms. In Table 1, we also report participants' use of other substances in the past 6 months, including their use before sex.

3.2. Motives for prescription drug misuse

In our analysis, we highlight a number of motives for prescription drug misuse that are frequent and salient for YMSM. We present our findings as distinctive themes and use specific examples of each prescription drug class within each theme. Categories below illustrate the major motives for prescription drugs misuse derived from our data and point to some specific patterns. Within each motivation category, we describe occurrences of polysubstance use, which was widespread in this sample.

3.2.1. Social/Recreational—One pattern that emerged involved prescription drug misuse for social and/or recreational reasons. For example, some participants described taking opioids "for fun", "out of boredom", and as a part of desire to explore and experiment. Such motives often arose in the presence of their friends, as described by this college student, who took Percocet:

> "I was just feeling like taking it, I was just kind of bored. I was with my friends, and we just decided to do that." (1096)

However, more often narratives centered around social activities (i.e. going out, clubbing), and emphasized social interaction. The narratives were often structured around the timing of the night out and centered on participants' experiences at social venues. Motivations included intent to use for social benefits, such as reducing anxiety when around other gay men. These drugs allowed participants to overcome social inhibitions when interacting with other men, allowing them to feel more confident and accepted in gay nightlife venues, and among their peers. The social aspect of tranquilizer misuse became apparent when participant's discussions centered on descriptions of a night out:

> "Last Saturday, I took two blues (**Xanax, 1mg**), when I was at my house, then we went out. It did make it more fun and more exciting. We took a lot of pictures that night. I was in my own little zone, I was in my own little world. I felt powerful. They really get you like that, Xanis. It's all about me, I just felt like I was a boss, I wasn't so shy, I wasn't so timid…I was more bold. Like I almost felt like the incredible hulk a little bit, you know?" (1034)

Some participants described their misuse of prescription drugs as either an attempt to substitute a night of alcohol consumption or as a mean of achieving a level of soberness that will allow them to continue with dancing in a club. For example, one participant suggested that taking opioids was a substitute for drinking alcohol and might have led to reduced alcohol consumption for a night, which made sense economically for him:

> "Instead of going out and drinking, I'll just take a Percocet, and then I don't have to buy drinks, 'cause I take a Percocet, which my insurance paid for, and I've saved myself from a night of drinking." (2042)

Another participant used stimulants to reduce alcohol intoxication. This narrative centered on using prescription drugs to "party" within the contexts of parties and dance clubs, as an aid to staying up and awake well into the night:

> "I'll take Adderall mainly when I go to the clubs. At nighttime when I'm too drunk, I'll take the Adderall to straighten me up a little bit, open my eyes, be more attentive. So, I'm always, feeling like I've got energy, I can go forever without stopping." (1108)

A few participants described use of tranquilizers to reduce the negative effect of coming down from "club/party" drugs, or prescription stimulants. These users take drugs in sequences so as to induce certain responses at specific points over the course of an evening. These motivations for prescription drug misuse were framed in the context of polysubstance use, and were fairly common. For example, one participant used tranquilizers as a sleeping aid after a night of club partying:

> "I usually take Seroquel to go to sleep. A lot of times, I take it because I party, party meaning I do a lot of cocaine and crystal meth, those types of party drugs. When I party, I can't go to sleep, so Seroquel helps me go to sleep. I've never taken them for any other reason, except to go to sleep. I go to sleep really quick on those thing, they work really good." (1145)

Another participant used tranquilizers to help alleviate the come down from Adderall:

> "If I've been up for a few days on the Adderall, usually I can fall asleep 'cause I'm exhausted, but if it's just one day of it, if I can find a Xanax or something, I'll come down on that." (2033)

The above accounts, which describe using tranquilizers to come down from stimulants, contrast with previous descriptions of tranquilizer misuse whereby a participant used Xanax to enhance his confidence in social situations.

3.2.2. Facilitating sexual interactions with other men—A second pattern of prescription drug misuse motivations was use within a sexual context. While a majority of participants suggested that the link between prescription pills and sexual behaviors was often “coincidental”, a number of participants reported using them intentionally, with the purpose of facilitating sexual interactions with other men. For example, it was common for those who engaged in receptive anal intercourse to take opioids or muscle relaxants to manage pain associated with receptive anal intercourse, thus allowing them to be penetrated more easily during anal sex. One participant describes experiencing physical pain when engaging in receptive anal intercourse and the role of opioids in dealing with this pain and managing stress:

> “I like men, so it's kind of hard for me to talk to somebody without them tryin' to put their dick in my ass…and that's a lot of stress, anxiety, and then pain. I might

> take two Percocets, make sure I'm high, because I know this guy is wanna try to fuck me. So it helps me to get over that pain, and stress about him.”(1022)

Similarly, another participant reported that tranquilizers made receptive anal intercourse easier:

> “I do Xanax sometimes before, it's…it's just easier sometimes to receive anal sex.” (1093)

Those who engaged in insertive anal intercourse described taking opioids to increase their sexual excitation and to prolong sexual experience. A number of participants noted that taking opioids allows them to have erection for extended period of time ("oxyboner"), but noted their inability to ejaculate while on opioids. This participant described how he wanted his sexual encounters to last longer by postponing ejaculation:

> "*Sometimes I'll nut [ejaculate] kind of quick. But when I'm on oxy, it's takin' me longer to nut, because it's feelin' good, and I want it to keep feelin' good…I don't want it to hurry up." (1034)*

Contrary to his experience with opioids, the same participant reported that he was unable to keep erection when he took Xanax:

> "My dick really couldn't get hard when I took the Xanax. I mean it was soft a little bit. When you take the Percs, your dick get hard, like brick, but with the Xanis, it was just soft again…it was just like 'Oh, man, I don't think I can take these and be fucking'." (1034)

For some participants, especially those who struggled with their sexuality, or were sex workers, tranquilizers helped to facilitate sex with other men. This 21-year-old self-identified heterosexual man reports:

> "The majority of the sex that I had with males was for money, to support my (drug) habit. I would take the Xanax because I wouldn't really think; it wouldn't really bother me as much when I had sexual relations with them as if I was sober." (1104).

A small number of participants reported engagement in sexual activity as a motivation for stimulant misuse. For example one participant, when asked whether sex was a motive for misuse of Adderall, describes it:

> “Not really, maybe Adderall, just because I thought it might help, make me want to. It makes me hypersexual, it'll make me think about sex more often. Maybe partake in activities I shouldn't. Promiscuity in general, public sex, or…I'll seek it out, I'll go on Grindr or Craigslist, or more inclined to look at pornography, when on Adderall.” (2033)

This participant noted that Adderall influenced him to make decisions he should not be making. While some of the effects of stimulants when taken in a sexual context were described as achieving “longevity”, or “aggressiveness”, most participants described the relationship between prescription stimulants and hooking up with men as more coincidental rather than intentional:

> "If I'm at a party, sometimes, that'll happen. But I don't use Adderall to hook up with anyone. If I'm at a party, I'm drunk or I'm messed up on Addys, and then I end up hooking with someone, but I don't go through the night planning to hook up with anyone." (1179)

While not a primary focus of this analysis, some participants also reported taking EDD to enhance and extend their sexual experiences. For instance, one participant who engaged in sex work reported that EDD helped with stamina, while another who used crystal methamphetamine reported use of EDD to counter the effect of it, i.e. “meth dick”:

> “I take like, uh, Viagra, and the other one, Cialis. And that helps me keep it up, when I'm on Tina.” (1045)

When participants were asked whether they felt that prescription drug misuse contributed to high-risk sexual behaviors (i.e. UAI), only a few thought of prescription pills as something that might put them at risk. In many of these occasions, prescription drug misuse was accompanied by other substance use, in particular alcohol and marijuana. This participant described one such recent occasion when he engaged in UAI:

> "I smoked weed, took like three Percocets, and I was drinking. It absolutely impaired my judgment. Absolutely, because I had no care in the world. I was very careless in what I did, and my actions, so like, you know that could have been a life sentence for me."(1108)

3.2.3. Psychological motives, i.e. stress management, coping with negative affect, energizing—Another commonly cited motive for misuse of prescription drugs, in particular opioids and tranquilizers, focused on psychological motives. Responses within this category consistently focused on self-medicating for problems, such as depression, trauma, grief, loneliness, relationships, and stress related to personal life. Participants often emphasized the stressful environment and the need to cope, escape, or to avoid and regulate unpleasant emotions. Opioids and tranquilizers often represented an opportunity to escape the reality of everyday hardships, and to relieve stress related to their work or personal life. The need to escape from life stresses was made explicit by this participant when asked why he used opioids:

> "For fun, to get high, but also to escape. You know, when things get too heavy sometimes, it's just easier to pop a pill than it is to, figure it out, especially when you are under duress. The last six months has really been difficult for me, because I lost my job, I got into my first relationship, I subsequently moved several states away from my family. All those things together, just created a circumstance for me where it was easier, in some instances, to escape through taking a pain medication." (1119)

About one-third of participants were homeless. For these participants, prescription drugs offered an escape route to cope with their daily struggles. One homeless participant described taking Xanax as the only way he was able to cope with adversity:

> “*That's the only way that I'm able to come out. Do you think I would be able to come out here, in this cold, in this rain? No, no! With being homeless and trying to*

go to my grandma's house, and all the hell that's going on there, there's no way I could do it without a Xanax to calm my anxiety. There's just no way." (1022)

Another participant endorsed feeling of depression and stress related to financial issues as motivation for taking Klonapin. This was a way to escape his daily reality:

"I was depressed. I've been having a lot of money issues lately; it kind of affects everything in my life. That's probably why. It's sort of like a temporary relaxed feeling, even for a few hours or a day, or a night. It allows me to go to sleep and not think about problems that I have."(1053)

In several narratives participants elaborated on significant adverse events that happened either a long time ago, or more recently in their lives. For example, almost half of sample (48%) reported histories of childhood sexual abuse. One participant connected his current misuse of opioids to the memories of sexual abuse in childhood.

"The reason why I take a lot of pills now is because of the pain, I want to forget that pain. If that pain keeps in my head, I try to take as many pills as I can to forget the pain. One time I popped six Percs and I passed out." (1008)

Another participant gives a more recent example of adversity in his life and how he used tranquilizers to attempt to cope:

"I was going through a lot of stress. My brother attempted suicide a month before and my whole family was a complete mess from it. That and also having monetary stress, and I got into a little bit of trouble with the law. It's the only time I've taken a medication, to not have fun, but to bring myself up, actually." (1179)

Nearly one quarter of participants reported being HIV positive. One participant, who discovered the previous week that he seroconverted, described how he used Klonapin, in addition to alcohol, to cope with mental health ramification of being diagnosed with HIV:

It was a rough day. Friday and Saturday both were kind of anxious. I had found out that I…had a health issue, and infected somebody else with it, one of my good friends. Seeing the reaction on them, I kind of saw my own reaction, and I guess that's when it fully hit me, in a way. I was hiding the pain of that, and I drank, took Klonapins from my friend who I was with, who was prescribed to them. The whole two days were kind of like self-loathing. Not like it was my fault, but we both were just dumb, and careless in a way…it was just very sad." (1122)

Contrary to above motives for opioids and tranquilizers, motives that pertained to stimulants emphasized a need to feel more energized. Polysubstance use emerged in narratives explaining motivations for stimulant misuse, as explained by this participant who used Adderall in conjunction with crystal methamphetamine when he felt irritable or tired:

"I kind of like to ride like a stimulant wave, it's very typical for me to after doing crystal all weekend to just do Adderall, to get through the day. Because, again, you're not kind of cranky, you're still up and you're still awake, and you're not tired, and you're able to do super-human things by just keeping going" (1043)

4. Discussion

This qualitative analysis provided in-depth accounts of motivations for prescription drug misuse among a sample of 25 YMSM, a population that is at elevated risk for drug use (Marshal et al., 2008). Thematic analysis of our qualitative data revealed that motivations for prescription drug misuse were organized around three general themes: social/recreational, sexual and psychological. This study also highlights the common occurrence of polysubstance use among YMSM, which may have broad implications for negative health outcomes. Polysubstance use is associated with elevated risk of developing comorbid psychiatric and other health conditions, including risk for nonfatal and fatal overdoses (Connor et al., 2014).

Social/recreational motives were often reported by individuals wishing to achieve altered states of consciousness and experiment with particular drugs. For example, a number of participants endorsed “to get high” and “to have fun” as motives for opioid misuse, which often emerged in the presence of friends. Opioids were often used to supplement or replace the effects of other drugs, e.g., alcohol. Complementing findings from previous research on tranquilizer misuse in the club scene (Kurtz et al., 2011), YMSM in this study who attend nightlife venues misused tranquilizers regularly. Tranquilizer misuse was seen as enhancing sociability and facilitating interactions within the gay scene, which may be relevant for YMSM with negative self-images or in response to social anxiety (Kalichman et al., 1994). Tranquilizer misuse also occurred in the context of coming down from club drugs and countering the effects of stimulants used while engaged in a club scene, which is not surprising given the high polysubstance use within the club scene (Inciardi et al. 2007; Kurtz et al., 2011). A number of YMSM misused prescription pills in such settings for purposes of “partying”. In these narratives, use of stimulants was about fun and sociability and often described as a positive experience. These participants described stimulant misuse in association with, or as substitution for illicit drugs, such as cocaine and methamphetamine. Similar to combining illicit drugs and alcohol (Jerome, Halkitis, & Scionolfi, 2009), a number of participants in our study reported simultaneous use of prescription pills and alcohol, which is problematic since the use of psychoactive medication in combination with alcohol can lead to both acute and long-term risks (Wilsnack et al., 2004).

Previous research has found that some prescription drugs, such as erectile dysfunction drugs, have become a stable fixture of the sexual culture of gay men (Paul et al., 2005; Purcell et al., 2005). We contribute to this body of literature by reporting that YMSM misuse other prescription drugs for sexual enhancement as well according to patterns that were both planned and spontaneous. Approximately one third of participants reported using prescription pills before sex. In some occasions there is explicit forethought to use prescription drugs (mainly opioids and tranquilizers) for the purposes of engaging sexually with other men and maximizing sexual pleasure. In this process, some found that prescription opioids negatively affect their desire to have sex, which is similar to previous study of opioid users (Johnson et al., 2013). Furthermore, some participants used opioids to ease the pain associated with receptive anal sex. In addition, those who have a strong negative affect may be using these drugs strategically to dampen stress or anxiety related to sexual contact with other men. Our findings indicate that this may be particularly true for

those YMSM who are struggling with their sexuality. In other occasions there is unplanned or coincidental use of drugs with sex. In these cases, prescription drug misuse was connected to other issues, including sociability, and was viewed as acceptable within this context (Fazio et al., 2012). Prescription drug misuse was often combined with use of alcohol and illicit drugs, making the relationship of prescription drug misuse and HIV-risk behaviors, such as UAI, less clear. Due to the high prevalence of UAI in this population, it is possible that this relationship was correlational rather than causal.

Not surprisingly, opioid and tranquilizer misuse was also discussed in the context of depression, anxiety and overall mental stress. Often, motivations for opioid and tranquilizer misuse evoked a strong need for emotional escape. Similar to club drugs (McKirnan et al., 2001; Jerome, Halkitis, & Siconolfi, 2009) these drugs may help to raise self-esteem, confidence, or feeling of attractiveness, thereby helping YMSM to deal with HIV status, stigma, or discrimination. For some participants, these pills offered an escape from major stressors in their lives, including traumatic experiences that happened in a distant or more recent past. Similar to sexual minority women with experiences of childhood abuse who are at heightened risk of lifetime alcohol abuse (Hughes et al., 2007), YMSM with abuse and discrimination histories may cope with negative affect of stressful life experiences by self-medicating with opioids and tranquilizers. Opioids and tranquilizers, in particular, may have an additional appeal due to their perceived safety, known dose dependent response, and psychopharmacological properties (Cicero & Inciardi, 2005; Quintero, 2009, Zulig & Divin, 2012). Given these findings, offering support and services to YMSM with histories of traumatic experiences may be particularly warranted.

While not a specific focus of this analysis, we found that self-medicating for pain was a frequently described motive for opioid misuse (McCabe et al., 2006). Participants also discussed misusing stimulants to improve concentration and attention in academic environments (Prudhomme-White et al., 2006). These motives for misuse of opioids and stimulants, which have been well-described in prior studies of young people (Quintero et al., 2006; Quintero, 2009; Boyd et al., 2006), make our sample similar to non-YMSM populations in some ways.

While not a representative sample, these findings suggest that substance use prevention programs aimed at YMSM should also include content on prescription drug misuse. From a treatment perspective, the findings presented in this study indicate a need for clinicians to consider underlying motives for prescription drug misuse among YMSM, which may vary by both individual motivations and types of prescription drugs. Understanding YMSM's intrinsic motivations for prescription drug misuse is likely to improve treatment options and ultimately health outcomes for these young men. Clinicians working with YMSM who are misusing prescription drugs should routinely inquire about their motives, which may also reveal exposure to significant adverse events.

From a public health and policy perspective, our findings indicate that prescription drugs are misused in the context of polysubstance use, adding to the significance of prescription drug misuse among YMSM. This is particularly troublesome, as polysubstance use has been linked to adverse health outcomes such as drug overdose (Coffin et al., 2003; Silva et al.,

2013), drug dependence (Lee et al., 2003), deficits in cognitive functioning (Connor et al., 2014), and high-risk sexual behaviors (McCarty-Caplan, Jantz, & Swartz, 2014). Therefore, harm-reduction messages for YMSM should be tailored to include prescription drug misuse so as to inform them of problems associated with polysubstance use. Findings from our study indicate that prescription drug misuse among YMSM emerges from a complex interplay of physical, emotional, and social conditions. While misuse of prescription drugs is significant from a public health perspective, this suggests that prevention and policy programs should also target broader problems such as childhood abuse, mental health, poor self-esteem, discrimination, homelessness, inadequate social support, and unemployment.

The current study is subject to several important methodological limitations. All data are based on self-report and may be subject to recall bias since the events reported often occurred several months prior to being interviewed, i.e. details of particular experience related to substance use. There is also a possibility that participants felt compelled to offer socially desirable responses. However, all interviews were conducted in private offices, and after conducting quantitative survey, at which point participants had developed some rapport with the interviewer. Since enrollment criteria were designed to capture YMSM who are current misusers of prescription drugs, our findings cannot be generalized to larger populations of high-risk youth, or YMSM in general. Furthermore, since we targeted a small, non-random sample of YMSM future studies will needed to confirm the external validity of these findings. Lastly, data collection was completed prior to analysis, which limited the ability to explore emergent themes as they arose during real time (Patton, 1990).

In conclusion, YMSM in our study reported multiple motives for prescription drug misuse, including facilitating sexual interactions with other MSM, which adds to the multidimensional nature of prescription drug misuse etiology (Rigg & Ibanez, 2011). Also, prescription drug misuse was related to other substance use (e.g., illicit drugs, alcohol) and other health risk behaviors, including sexual risk behaviors. Our findings point to the importance of recognizing and addressing motives for prescription drug misuse since the multiple motives identified are likely related to a range of psychosocial problems impacting YMSM. Overall, these qualitative findings on motives indicate a multifaceted relationship between prescription drug misuse, other drug use, and health behaviors in lives of YMSM. Policy interventions should acknowledge that prescription drugs are misused by YMSM to mitigate psychological problems and to facilitate social or sexual contacts. Health professionals should take into account these motivations when helping YMSM to reduce harms associated with prescription drug misuse. Future research in this population should further examine the intersection of prescription and illicit substance use and their meanings. Through a greater understanding of these relationships, health disparities associated with prescription drug misuse may be reduced among YMSM.

Acknowledgments

The authors gratefully acknowledge Jonathan Newman for transcribing interviews. We would also like to acknowledge the young men who participated in this study, and all of LGBT organizations in Philadelphia, which allowed recruitment at their premises.

Role of funding sources

This research was supported by funding from the National Institute of Drug Use (NIDA, Grant No. R36DA034543; PI: Kecojevic). The NIDA had no role in the study design, collection, analysis or interpretation of the data, writing the manuscript, or in the decision to submit the paper for publication.

References

Arria AM, Wilcox HC, Caldeira KM, Vincent KB, Garnier-Dykstra LM, O'Grady KE. Dispelling the myth of "smart drugs": cannabis and alcohol use problems predict nonmedical use of prescription stimulants for studying. Addict Behav. 2013; 38(3):1643–1650. [PubMed: 23254212]

Bardhi F, Sifaneck SJ, Johnson BD, Dunlap E. Pills, thrills, and bellyaches: Case studies of prescription pill use and misuse among marijuana/blunt smoking middle class young women. Contemporary Drug Problems. 2007; 34:53–101. [PubMed: 19081798]

Bauermeister JA. It is all about “connecting”: Reasons for drug use among Latino gay men living in the San Francisco Bay Area. Journal of Ethnicity in Substance Use. 2007; 6(1):109–129.

Benotsch EG, Martin AM, Koester S, Cejka A, Luckman D. Nonmedical use of prescription drugs and HIV risk behavior in gay and bisexual men. Sex Transm Dis. 2011; 38(2):105–110. [PubMed: 20838365]

Berenson AB, Rahman M. Prevalence and correlates of prescription drug misuse among young, low-income women receiving public healthcare. J Addict Dis. 2011; 30(3):203–215. [PubMed: 21745043]

Boyd CJ, McCabe SE, Cranford JA, Young A. Adolescents' motivations to abuse prescription medications. Pediatrics. 2006; 118(6):2472–2480. [PubMed: 17142533]

Cicero TJ, Inciardi JA. Potential for abuse of buprenorphine in office-based treatment of opioid dependence. N Engl J Med. 2005; 27;353(17):1863–1865.

Cochran SD, Ackerman D, Mays VM, Ross MW. Prevalence of non-medical drug use and dependence among homosexually active men and women in the U.S. Population. Addiction. 2004; 99(8):989–998. [PubMed: 15265096]

Coffin PO, Galea S, Ahren J, Leaon AC, Vlahov D, Tardiff K. Opiates, cocaine and alcohol combinations in accidental drug overdose deaths in New York City, 1990–1998. Addiction. 2003; 98:739–747. [PubMed: 12780362]

Colfax G, Vittinghoff E, Husnik MJ, McKirnan D, Buchbinder S, Koblin B, Celum C, Chesney M, Huang Y, Mayer K, Bozeman S, Judson FN, Bryant KJ, Coates TJ. EXPLORE Study Team. Substance use and sexual risk: a participant- and episode-level analysis among a cohort of men who have sex with men. Am J Epidemiol. 2004; 159(10):1002–1012. [PubMed: 15128613]

Connor JP, Gullo MJ, White A, Kelly AB. Polysubstance use: diagnostic challenges, patterns of use and health. Curr Opin Psychiatry. 2014; 27(4):269–275. [PubMed: 24852056]

Corbin, J.; Strauss, AL. Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory. Los Angeles, CA: Sage Publications, Inc.; 2007.

Corliss HL, Rosario M, Wypij D, Wylie SA, Frazier AL, Austin SB. Sexual orientation and drug use in a longitudinal cohort study of U.S. adolescents. Addict Behav. 2010; 35(5):517–521. [PubMed: 20061091]

Creswell, JW.; Klassen, AC.; Plano Clark, VL.; Smith, KC. for the Office of Behavioral and Social Sciences Research. Best practices for mixed methods research in the health sciences. National Institutes of Health; 2011. http://obssr.od.nih.gov/mixed_methods_research [Date retrieved December 2014]

DiClemente CC. Motivation for change: Implications for substance abuse. Psychological Science. 1999; 10:209–213.

Fatséas M, Lavie E, Denis C, Auriacombe M. Self-perceived motivation for benzodiazepine use and behavior related to benzodiazepine use among opiate-dependent patients. J Subst Abuse Treat. 2009; 37(4):407–411. [PubMed: 19339146]

Fazio A, Hunt G, Moloney M. “It is one of the better drugs to use”: Perceptions of cocaine use among gay and bisexual Asian American men. Qual Health Res. 2011; 21(5):625–641. [PubMed: 20952603]

Ferster, CB.; Skinner, BF.; Cheney, CD.; Morse, WH.; Dews, PB. Schedules of reinforcement. Acton, MA: Copley Publishing Group; 1997. BF Skinner Reprint Series.

Green AI. “Chem friendly”: The institutional basis of club-drug use in a sample of urban gay men. Deviant Behaviors. 2003; 24(5):427–447.

Greenwood GL, White EW, Page-Shafer K, Bein E, Osmond DH, Paul J, Stall RD. Correlates of heavy substance use among young gay and bisexual men: the San Francisco Young Men's Health Study. Drug Alcohol Depend. 2001; 61:105–112. [PubMed: 11137274]

Halkitis PN, Fischgrund BN, Parsons JT. Explanations for methamphetamine use among gay and bisexual men in New York City. Subst Use Misuse. 2005; 40(9–10):1331–1345. [PubMed: 16048820]

Halkitis PN, Parsons JT. Recreational drug use and HIV-risk sexual behavior amon men frequenting gay social venues. J of Gay and Lesbian Social Services. 2002; 14:19–38.

Hughes TL, Johnson TP, Wilsnack SC, Szalacha LA. Childhood risk factors for alcohol abuse and psychological distress among adult lesbians. Child Abuse Negl. 2007; 31(7):769–789. [PubMed: 17628667]

Inciardi JA, Surratt HL, Kurtz SP, Cicero TJ. Mechanisms of prescription drug diversion among drug-involved club- and street-based populations. Pain Med. 2007; 8(2):171–183. [PubMed: 17305688]

Jeffers A, Benotsch EG, Koester S. Misuse of prescription stimulants for weight loss, psychosocial variables, and eating disordered behaviors. Appetite. 2013; 65:8–13. [PubMed: 23376413]

Jerome RC, Halkitis PN, Siconolfi DE. Club drug use, sexual behavior, and HIV seroconversion: a qualitative study of motivations. Subst Use Misuse. 2009; 44(3):431–447. [PubMed: 19212930]

Johnson, JM. In-depth interviewing. In: Gubrium, JF.; Holstein, JA., editors. Handbook of interview research: context and method. Thousand Oaks, CA: Sage; 2002. p. 103-119.

Johnson KM, Fibbi M, Langer D, Silva K, Lankenau SE. Prescription drug misuse and risk behaviors among young injection drug users. J Psychoactive Drugs. 2013; 45(2):112–121. [PubMed: 23908999]

Kalichman SC, Johnson JR, Adair V, Rompa D, Multhauf K, Kelly JA. Sexual sensation seeking: Sale development and predicting AIDS-risk behavior among homosexually active men. Journal of Personality Assesment. 1994; 62(3):385–397.

Kecojevic A, Silva K, Sell R, Lankenau SE. Prescription Drug Misuse and Sexual Risk Behaviors in a Sample of Young Men Who Have Sex With Men (YMSM) in Philadelphia. AIDS Behav. 2014

Kelly BC, Parsons JT. Prescription Drug Misuse and Sexual Risk Taking Among HIV-Negative MSM. AIDS Behav. 2013; 17(3):926–930. [PubMed: 21769494]

Kelly BC, Welles BA, Pawson M, LeClair A, Parsons JT. Combinations of prescription drug misuse and illicit drugs among young adults. Addict Behav. 2014; 39:941–944. [PubMed: 24462348]

Koblin BA, Chesney MA, Husnik MJ, Bozeman S, Celum CL, Buchbinder S, Mayer K, McKirnan D, Judson FN, Huang Y, Coates TJ. High-risk behaviors among men who have sex with men in 6 US cities: baseline data from the EXPLORE Study. Am J Public Health. 2003; 93(6):926–932. [PubMed: 12773357]

Kurtz SP, Surratt HL, Levi-Minzi MA, Mooss A. Benzodiazepine dependence among multidrug users in the club scene. Drug Alcohol Depend. 2011; 1;119(1–2):99–105.

Lankenau SE, Schrager SM, Silva K, Kecojevic A, Bloom JJ, Wong CF, Iverson E. Misuse of prescription and illicit drugs among high-risk young adults in Los Angeles and New York. J Public Health Res. 2012; 14;1(1):22–30.

Lankenau SE, Teti M, Silva K, Bloom JJ, Harocopos A, Treese M. Initiation into prescription opioid misuse amongst young injection drug users. Int J Drug Policy. 2012; 23(1):37–44. [PubMed: 21689917]

Lee SJ, Galanter M, Dermatis H, McDowell D. Circuit parties and patterns of drug use in subset of gay men. J. Addict Dis. 2003; 22:47–60. [PubMed: 14723477]

Mansergh G, Shouse RL, Marks G, Guzman R, Rader M, Buchbinder S, Colfax GN. Methamphetamine and sildenafil (Viagra) use are linked to unprotected receptive and insertive anal sex, respectively, in a sample of men who have sex with men. Sex Transm Infect. 2006; 82(2):131–134. [PubMed: 16581738]

Marshall MP, Friedman MS, Stall R, King KM, Miles J, Gold MA, Bukstein OG, Morse JQ. Sexual orientation and adolescent substance use: a meta-analysis and methodological review. Addiction. 2008; 103(4):546–556. [PubMed: 18339100]

McCabe SE, Cranford JA, Boyd CJ, Teter CJ. Motives, diversion, routes of administration associated with nonmedical use of prescription opioids. Addictive Behaviors. 2007; 32:562–575. [PubMed: 16843611]

McCabe SE, Cranford JA. Motivational subtypes of nonmedical use of prescription medications: results from a national study. J Adolesc Health. 2012; 51(5):445–452. [PubMed: 23084165]

McCabe SE, Teter CJ, Boyd CJ. Medical use, illicit use, and diversion of abusable prescription drugs. J of Am College Health. 2006; 54(5):269–278.

McCabe SE, West BT, Wechsler H. Alcohol-use disorders and nonmedical use of prescription drugs among U.S. college students. J Stud Alcohol Drugs. 2007; 68(4):543–547. [PubMed: 17568959]

McCabe SE, West BT, Boyd CJ. Motives for medical misuse of prescription opioids among adolescents. J Pain. 2013; 14(10):1208–1216. [PubMed: 23954519]

McCarty-Caplan D, Jantz I, Swartz J. MSM and drug use: A latent class analysis of drug use and related sexual risk behaviors. AIDS Behav. 2014; 18(7):1339–1351. [PubMed: 24065437]

McDowell, D. MDMA, Ketamine, GHB and the “club drug” scene. In: Galanter, M.; Kleber, HD., editors. Textbook of substance abuse and treatment. 2nd ed.. Washington, DC: American Psychiatric Press; 1999. p. 295-305.

McKirnan DJ, Vanable PA, Ostrow DG, Hope B. Expectancies of sexual escape and sexual risk among drug and alcohol-involved gay and bisexual men. J of Substance Abuse. 2001; 13(1–2): 137–154.

O'Brien CP. Benzodiazepine use, abuse, and dependence. J Clin Psychiatry. 2005; 66(Suppl 2):28–33. [PubMed: 15762817]

Ostrow, DG.; Stall, R. Alcohol, tobacco, and drug use among gay and bisexual men, in Unequal opportunity: health disparities affecting gay and bisexual men in the United States. Wolitski, RJ.; Stall, R.; Valdiserri, RO., editors. New York: Oxford University Press; 2008. p. 121-158.

Palamar JJ, Halkitis PN. A qualitative analysis of GHB use among gay men: Reasons for use despite potential adverse outcomes. Int J Drug Policy. 2006; 17(1):23–28. [PubMed: 23543728]

Palamar JJ, Kiang MV, Storholm ED, Halkitis PN. A Qualitative Descriptive Study of Perceived Sexual Effects of Club Drug Use in Gay and Bisexual Men. Psychol Sex. 2014; 1;5(2):143–160. [PubMed: 24883174]

Pantalone DW, Bimbi DS, Parsons JT. Motivations for the recreational use of erectile enhancing medications in urban gay and bisexual men. Sex Transm Infect. 2008; 84:458–462. [PubMed: 19028947]

Patton, MQ. Qualitative evaluation and research methods. 2nd ed.. Newbury Park, CA: Sage; 1990.

Paul JP, Pollack L, Osmond D, Catania JA. Viagra (sildenafil) use in a population-based sample of U.S. men who have sex with men. Sex Transm Dis. 2005; 32(9):531–533. [PubMed: 16118600]

Prudhomme-White B, Becker-Blease KA, Grace-Bishop K. Stimulant medication use, misuse, and abuse in an undergraduate and graduate student sample. J of Am College Health. 2006; 54(5):261–268.

Purcell D, Moss S, Remien R, Woods WJ, Parsons JT. Illicit substance use, sexual risk, and HIV-positive gay and bisexual men: Differences by serostatus of casual partners. AIDS. 2005; 19:S37–S47. [PubMed: 15838193]

Quintero G. Rx for a party: a qualitative analysis of recreational pharmaceutical use in a collegiate setting. J Am Coll Health. 2009; 58(1):64–70. [PubMed: 19592355]

Quintero G, Peterson J, Young B. An exploratory study of socio-cultural factors contributing to prescription drug misuse among college students. Journal of Drug Issues. 2006; 36:903–932.

Rabiner DL, Anastopoulos AD, Costello EJ, Hoyle RH, McCabe SE, Swartzwelder HS. Motives and perceived consequences of nonmedical ADHD medication use by college students: are students treating themselves for attention problems? J Atten Disord. 2009; 13(3):259–270. [PubMed: 18664714]

Rigg KK, Ibañez GE. Motivations for non-medical prescription drug use: a mixed methods analysis. J Subst Abuse Treat. 2010; 39(3):236–247. [PubMed: 20667680]

Rubin, HJ.; Rubin, I. Qualitative Interviewing: The Art of Hearing Data. Thousand Oaks, CA: Sage Publications, Inc; 2005.

Semple SJ, Patterson TL, Grant I. Motivations associated with methamphetamine use among HIV+ men who have sex with men. J Subst Abuse Treat. 2002; 22(3):149–156. [PubMed: 12039618]

Silva K, Kecojevic A, Lankenau SE. Perceived Drug Use Functions and Risk Reduction Practices Among High-Risk Nonmedical Users of Prescription Drugs. Journal of Drug Issues. 2013; 43(4): 483–496. [PubMed: 25477621]

Silva K, Schrager SM, Kecojevic A, Lankenau SE. Factors associated with history of non-fatal overdose among young nonmedical users of prescription drugs. Drug Alcohol Depend. 2013; 128(1–2):104–110. [PubMed: 22974490]

Substance Abuse and Mental Health Services Administration. (SAMHSA). Results from the 2009 National Survey on Drug Use and Health: Volume I. Summary of National Findings. Rockville, MD: Office of Applied Studies, NSDUH Series H-38A, HHS Publication No. SMA 10-4586 Findings; Available at: http://oas.samhsa.gov/NSDUH/2k9NSDUH/2k9ResultsP.pdf

Stein MT. Stimulants to enhance academic achievement. J Dev Behav Pediatr. 2012; 33(7):589. [PubMed: 22947885]

Stone AM, Merlo LJ. Attitudes of college students toward mental illness stigma and the misuse of psychiatric medications. J Clin Psychiatry. 2011; 72(2):134–139. [PubMed: 21208582]

Thiede H, Valleroy LA, MacKellar DA, Celentano DD, Ford WL, Hagan H, Koblin BA, LaLota M, McFarland W, Shehan DA, Torian LV. Young Men's Survey Study Group. Regional patterns and correlates of substance use among young men who have sex with men in 7 US urban areas. Am J Public Health. 2003; 93(11):1915–1921. [PubMed: 14600066]

Wilsnack S, Kristjanson A, Graham K. Presentation at Society for Study of Social Problems, San Francisco. Alcohol use and prescription drug use in women: Findings from a U.S. national survey. 2004

White BP, Becker-Blease KA, Grace-Bishop K. Stimulant medication use, misuse, and abuse in an undergraduate and graduate student sample. J Am Coll Health. 2006; 54(5):261–268. [PubMed: 16539218]

Zacny J, Bigelow G, Compton P, Foley K, Iguchi M, Sannerud C. College on problems of Drug dependence taskforce on prescription opioid non-medical use and abuse: position statement. Drug Alcohol Depend. 2003; 69:215–232. [PubMed: 12633908]

Zacny JP, Lichtor SA. Nonmedical use of prescription opioids: motive and ubiquity issues. J Pain. 2008; 9(6):473–486. [PubMed: 18342577]

Zullig KJ, Divin AL. The association between non-medical prescription drug use, depressive symptoms, and suicidality among college students. Addict Behav. 2012; 37(8):890–899. [PubMed: 22541802]

Highlights

- YMSM motivations for misuse of prescription drugs are multidimensional.
- They include social/recreational motives, easing sex with other men, and psychological motives.
- Misuse was combined with alcohol and illicit drug use, revealing complex patterns of polysubstance use.
- Prevention messages aimed at YMSM should include prescription drug misuse.

Table 1

Socio-demographics and drug behaviors in the past 6 months of YMSM who participated in in-depth, semi-structured interviews

Variable	N (%)
Demographics	
Age, median (IQR)	23 (21, 26)
Race	
White	10 (40)
Non-White	15 (60)
Sexual identity	
Gay/Homosexual	17 (68)
Bisexual/Heterosexual/Other	8 (32)
Currently in school	6 (24)
Currently employed	11 (44)
Unstable housing	8 (32)
Engaged in sex work	5 (20)
HIV +	6 (24)
Lifetime diagnosis of sexually transmitted infection (STI)	12 (48)
Prescription Drug Misuse in the past 6 months	
Opioids[a]	22 (88)
Used opioids before sex	8 (32)
Tranquilizers[b]	21 (84)
Used tranquilizers before sex	9 (36)
Stimulants[c]	17 (68)
Used stimulants before sex	7 (28)
Other substances use in the past 6 months	
Alcohol use (to the point of intoxication)	21 (84)
Used alcohol before sex	21 (84)
Marijuana	24 (96)
Used marijuana before sex	20 (80)
Ecstasy	10 (40)
Used ecstasy before sex	8 (32)
Cocaine	12 (48)
Used cocaine before sex	6 (24)
Crystal methamphetamine	7 (28)
Used crystal methamphetamine before sex	6 (24)
Heroin	4 (16)
Used heroin before sex	4 (16)

[a] - Includes Vicodin, OxyContin, Codeine, Morphine and similar drugs.

[b] - Includes Xanax, Valium, Klonopin, and similar drugs.

[c] - Includes Ritalin, Adderall, Desoxyn, and similar drugs.