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Prescription Drug Misuse among Young Adults: Looking Across Youth Cultures

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Abstract

Aims—Youth cultures play a key role in the social organisation of drug trends among young people; the current prescription drug misuse trend is no different. The authors evaluated whether patterns of prescription drug misuse differed across several youth cultures.

Methods—Using field survey methods and time-space sampling during 2011, the authors assessed the patterns and prevalence of prescription drug misuse among young adults who are socially active in various urban youth cultures (n = 1781).

Findings—The prevalence of lifetime prescription drug misuse is highest within indie rock scenes (52.5%), electronic dance music scenes (52.1%), lesbian parties (53.8%) and alt scenes (50.9%). Prescription drug misuse was lowest among young adults in hip-hop scenes (25.0%). These findings were upheld in logistic regression analyses that accounted for demographic differences across youth cultures: indie rock scenes (adjusted odds ratio = 2.11), electronic dance music scenes (adjusted odds ratio = 2.20), lesbian parties (adjusted odds ratio = 2.30) and alt scenes (adjusted odds ratio = 2.65) all reported statistically significant (P< 0.05) higher odds of misuse than college bar scenes. Recent prescription drug misuse mirrored patterns for lifetime misuse. *Conclusions:* The differing prevalence of prescription drug misuse across distinct youth cultures suggests that the trend has not diffused equally among young people. The differing prevalence across youth cultures indicates that the most efficacious strategies for youth intervention may be targeted approaches that account for the subculturally rooted differences in attitudes and social norms.

Keywords

| prescription | drug misuse; | young adul | ts; youth cul | lture; sub | cultures | |
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INTRODUCTION

Prescription drug misuse has emerged as a significant problem over the past decade, particularly for youth, who remain a focal point for prevention and intervention efforts on

drug use more broadly. The prevalence of prescription drug misuse – considered to be the use of prescription drugs from a non-medical source, use of more than a prescribed dose or use for a non-medical or recreational purpose – among young adults (ages 18-29) in the U.S. has risen considerably in recent years [1]. Young adults misuse prescription drugs at levels higher than any other age group [2]. Among young adults, lifetime prevalence of prescription drug misuse exceeds that for most illicit drugs; only marijuana continues to be more widely used than prescription drugs [3]. This trend may be expanding to young people in other regions of the world and youth cultures may play a role in how this trend diffuses.

Many studies of young people and prescription drug misuse have focused on college populations [4]. Yet, many young adults, particularly those beyond the age of 22, are not in college. Accordingly, examining other contexts in which young adults participate may provide fuller understandings of these drug trends. In particular, nightlife scenes that cater to young adults may function as key contexts shaping prescription drug misuse. Youth cultures have been previously associated with other drug trends [5-7]. Yet, given that youth cultures are themselves numerous and diverse, these wide-ranging contexts may differentially shape patterns of prescription drug misuse among those participants, and therefore understanding this trend across numerous youth cultures may prove important for prevention efforts among young adults.

Drug Use in Youth Cultures

Drug use among young people does not occur in a vacuum. Peer networks, musical tastes, generational shifts, and broader social trends influence how and why young people use drugs. Youth cultures, as taste clusters of values, styles, norms and sensibilities, remain one of the key influences of drug use among teenagers and young adults [8]. Such youth cultures provide particular frames of reference for the young people who participate in them, and such ways of thinking influence what is valued and esteemed within a subculture, thus shaping how young people behave [9].

Given the significance of youth cultures in the lives of young people around the world, it is important to account for how these subcultures differentially shape emerging drug trends. While broader epidemiological studies are important, they often treat young adults as a homogenous group, which does not permit accounting for the variation across clusters of young people who share activities, mindsets, tastes and styles on the basis of subcultural affiliation. Each youth culture has a particular set of social norms, and youth cultures often operate in different ways in reference to broader 'parent' or 'mainstream' social norms [9]. These differing norms in youth cultures create distinct codes of behaviour and informal rules governing the use of drugs by subcultural participants. As such, youth cultures set different patterns for drug use. This influence is especially likely while drug trends are incubating within these subcultures before diffusing more widely [10].

The use of drugs has been tied to participation in youth cultures more generally [11]. The association of certain drugs with particular youth cultures has been well established in the literature. Ecstasy remains strongly associated with rave culture, even after its wide diffusion among young adults more generally [7,12]. Blunts – slang for marijuana rolled in cigar leaves – have been linked with participation in hip-hop culture, primarily among young men of colour [5]. Even the ways in which young people think about the risks associated with drug use may be influenced by subcultural participation [13], enabling risk reduction practices for drug use to become entrenched within that youth culture [14].

Current Study

Given the normative variation across subcultures and the association of certain drugs with particular youth cultures, it is reasonable to expect differences in patterns of drug use across youth cultures. Few studies have examined patterns of drug use across youth cultures. The aim of this study is to assess whether there are differences in prescription drug misuse between youth cultures, and if so the form of these differences. Such an examination not only provides further evidence for elements of distinction between youth cultures, but may also suggest important points for health promotion efforts.

We examine patterns of prescription drug use across six youth cultural scenes, using the college bar scene as a reference point. Using field survey methods, we examine the prevalence of lifetime and recent prescription drug misuse across distinct youth cultural scenes. We also examine the odds of prescription drug misuse within these scenes after controlling for demographic factors. Collectively, these analyses allow us to assess the differences in prescription drug misuse across youth cultures.

METHODS

Our broader project was designed to examine contextual factors related to prescription drug misuse among young adults. The field survey utilised in this phase of the study was intended to assess the patterns and prevalence of prescription drug misuse among young adults active in various youth cultures. The examination of socially active young adults allows us to focus our sampling methods on venues frequented by these populations. This study received institutional review board approval from the affiliated institutions.

Sampling

To generate our sample, we utilised time-space sampling in a range of venues in New York that house youth cultural scenes. Time-space sampling was designed to capture hard-to-reach populations [15-17], but is also useful for sampling venue-based populations [18]. As young adults active in scenes spend considerable time in venues catering to members of these youth cultures, we used venues as our basic unit of sampling to systematically generate a sample of subcuturally-involved young adults. We captured a range of variability among these young adults through randomising (i) the venues attended; and (ii) the days/times attending the venues.

We randomised 'time' and 'space' using an enumerated sampling frame of venues and times of operation developed through a year-long ethnography of urban youth cultures during the prior 12 months, which allowed us to ascertain socially viable venues for a range of youth cultures for each day of the week. We generated lists of viable venues for each day of the week across several key youth subcultures – e.g. electronic dance music, gay clubs, hip hop, lesbian parties, indie rock and alt scenes. These venues primarily included bars, clubs, lounges, concert halls, and other performance venues. All venues listed were assigned a number. Then, using a random digit generator, a random number was drawn, which corresponded to a particular venue on a particular day. This process yielded our schedule of venues for each month. While covering all days of the week, the sampling frame skewed towards the weekend days, given that young people are most likely to be out on weekends and thus venues were more likely to be deemed socially viable on weekend days.

Once at the venue, staff surveyed as many individuals as possible, aiming to achieve saturation at the venue. Each shift lasted approximately three hours. Surveyors approached potential subjects, identified themselves, described the anonymous brief survey, and requested verbal consent for participation. If the patron refused, staff noted the refusal and estimated the individual's age, gender and ethnicity, which allowed us to assess differential

refusal rates. For those who consented, the beginning of the surveys were administered by staff (consent, age and residency) and then individuals self-reported sensitive information (race, sexual orientation, prescription drug misuse) directly onto survey software on an iPod Touch[®]. Field staff members were trained not to administer surveys to individuals visibly impaired by intoxication and thus unable to properly consent. No compensation was provided to subjects.

Measures

Scene characteristics—Six youth cultures plus college bar scenes were assessed. The youth cultures were selected to ensure a cross-section of major youth cultural scenes. Electronic dance music (EDM) scenes emerged from rave culture, although now are heavily based in nightclubs, and revolve around a dance culture driven by electronically produced music [12]. While gay club culture relies on many of these musical genres, a male sexual culture renders it distinct from the EDM scene [19]. Hip-hop scenes included venues with commercial rap performances and open mic nights for MCs, as well as dance clubs that play R&B music in addition to rap. Indie rock scenes included rock clubs ranging from venues that promoted shows via alternative papers to underground 'DIY' venues promoted by word of mouth and social networks. The lesbian party scene focused on weekly and monthly parties that attracted a broad cross-section of young lesbian, bisexual and queer women. Alt scenes are comprised of gatherings of alternative youth culture revolving around art and performance, often manifesting in 'warehouse parties'.

Individual level Variables—Respondents were asked to state their age, recorded as a continuous variable. They were asked whether they identified as Latino, and then self-reported the racial group they identified themselves with: White, Black, Asian, Multiracial or Other. They self-reported gender as female, male or transgender. They self-identified their sexual orientation – straight, gay/lesbian, bisexual, queer, or other – subsequently recoded as heterosexual or gay/lesbian/bisexual/queer.

To assess lifetime use, participants were asked whether they had ever misused a prescription drug; response No=0, Yes=1. Misuse was defined in the survey as "using prescription drugs obtained from a non-medical source, using more than the prescribed dose, or using prescription drugs for a non-medical or recreational purpose". Those who responded "Yes", were asked how often in the past six months they had misused each of 3 different prescription drug classes; painkillers, sedatives and stimulants. The question for each class contained examples of such drugs. These answers were continuous, but were recoded dichotomously for these analyses (No=0, Yes=1). To assess recent misuse of prescription drugs, they were asked if they had misused any prescription drugs within the past 3 months; No=0, Yes=1.

Data Analysis

Prevalence estimates were computed using SPSS. Stratified chi-square analyses were conducted to examine differences in the prevalence of prescription drug misuse between youth cultures defined by the sites attended. Given that young people may differentially select into youth culture participation, we accounted for differences in the types of people participating in these scenes. To control for demographic differences between the youth cultures of interest, multivariate logistic regression analyses were conducted to evaluate the association of each youth culture with prescription drug misuse while controlling for the potentially confounding effects of demographic variables in the model.

RESULTS

Sample Characteristics

During 2011, 3528 individuals were approached. Of these, 2656 (75.5%) consented to take the survey and were at least 18 years of age. Response rates did not differ by gender or sexual identity. Black individuals were slightly less likely to consent to the survey. Among those who consented, we excluded some respondents. Those 30 years old and older (n=559) were excluded as 30 was deemed to be a cut off for the category of young adults. We excluded those who do not reside in the New York metropolitan area (n=187), so as to avoid the inclusion of tourists with those regularly involved in these youth cultures. We exclude those who self-reported 'other' gender or sexual identity given their low sample size (collectively n=67), and those with missing data (n=56), for a final analytic sample of 1781 subjects.

The average age of the young adults included in our analytic sample was 24 years (SD = 2.7). The proportion of males to females in the sample was approximately equivalent and almost one-third of the sample identified as gay, lesbian, bisexual or queer. Whites accounted for the majority (62.4%) of the sample, followed by those who reported their race as 'Mixed' or 'Other' (13.5%). Those who identified as 'Black', 'Latino' or 'Asian' comprised 6.9%, 9.8% and 7.4% of the sample, respectively.

Prescription Drug Misuse

As anticipated, there are differences in the prevalence of prescription drug misuse across different nightlife scenes. The prevalence of lifetime prescription drug misuse appears to be highest among those involved in electronic dance music (EDM; 52.1%), indie rock (52.5%), lesbian parties (53.8%) and alt scenes (50.9%). These patterns hold for the recent misuse of specific prescription drug classes. For pain killer misuse, young adults in EDM scenes (23.9%), indie rock scenes (19.9%), lesbian parties (20.4%) and alt scenes (19.1%) reported the highest prevalence. For sedative misuse, attendees of EDM scenes (19.6%), indie rock scenes (17.3%) and lesbian parties (18.6%) reported the highest prevalence. For stimulant use, EDM scenes (20.6%), indie rock scenes (20.2%), lesbian parties (21.3%) and alt scenes (20.8%) all revealed recent prevalence over 20%. Similarly, with regard to general prescription drug misuse within the past 3 months, EDM scenes (28.8%), indie rock scenes (24.4%), lesbian parties (24.9%) and alt scenes (22.0%) reported the highest prevalence. Notably, young people involved in hip-hop scenes consistently reported the lowest prevalence of prescription drug misuse.

We considered young adults in college bar scenes – some of which also cater to a 'post-college' crowd – to be an appropriate reference category given that such young adults are often perceived to be 'mainstream' for their age group. In comparison to young people involved in college bar scenes, the odds of lifetime prescription drug misuse were higher for young adults involved in EDM scenes (adjusted odds ratio [AOR] = 2.20), indie rock scenes (AOR = 2.11), lesbian parties (AOR = 2.30) and alt scenes (AOR = 2.65). With respect to the misuse of any prescription drugs within the past 3 months, we see similar results. Compared to young adults involved in college bar scenes, young adults involved in EDM scenes (AOR = 2.51), indie rock scenes (AOR = 2.00) and lesbian parties (AOR = 2.03) reported significantly higher odds of recent prescription drug misuse. With respect to individual drug classes, although some scenes approached significance in the odds of misuse of sedatives and stimulants within the past 6 months, we find no statistically significant differences across youth scenes for these drugs. With respect to pain killer misuse within the past 6 months, we find that young adults involved in EDM scenes (AOR = 2.71), indie rock

scenes (AOR = 2.04) and alt scenes (AOR = 2.24) report higher odds of misuse than individuals in other scenes.

DISCUSSION

Main Findings

Youth cultures, as subcultural bodies, create distinct social worlds for the young people who participate in them. In this respect, youth cultures play a key role in the social organisation of drug use among young people. Given that subcultures function with different social norms, we would expect to find different patterns of prescription drug misuse between youth cultural scenes. Overall, we find a range of variability in prescription drug misuse among young adults across different youth cultures. This variability may reflect the differing 'tastes' within these youth cultures that are structured by a subcultural ethos and particular social norms circulating within subcultural networks [20]. This finding highlights the need for more research on differences in drug use between youth cultural scenes.

Generally speaking, the prevalence of prescription drug misuse is highest within the indie rock scene, electronic dance music scene, lesbian parties, and alt scenes. In some cases, the misuse of prescription drugs may fit into a broader drug culture within these scenes. For example, rave and EDM cultures have been linked with the use of ecstasy and other drugs [12]. Rock scenes have long been linked with drug use as well, dating back to the emerging rock culture of the 1960s [21]. We may be seeing prescription drug misuse integrated within these broader drug use patterns within these subcultures. In the case of women participating in the lesbian party scene, which does not have the same visible connection to drugs, the misuse of prescription drugs may provide an alternative to illicit drug markets. It is notable that women at lesbian parties are misusing prescription drugs at elevated rates but men at gay clubs are not. This difference may be due to the accessibility of drugs such as ecstasy and cocaine in the gay club scene [22-23], which may be less available at women's parties.

Young adults who participate in hip-hop subcultures consistently reported the lowest levels of prescription drug misuse. The prevalence of misuse in this scene was even lower than for college bar scenes. While the use of blunts and malt liquor use have been associated with hip-hop [24-25], 'harder' drugs have not had the same associations with this youth culture in the wake of the crack epidemic. Perceptions of prescription drug misuse within this scene may be similar to the norms for hard drugs. Thus, there may be internal deterrents to the misuse of prescription drugs within this scene. Further study of the inhibiting factors within this subculture is merited as they may have broader applicability to the prevention of prescription drug misuse among young people.

Limitations

One limitation is that the sampling of young adults at specific sites of subcultural participation only indicates some participation, not their level of embeddedness. Thus, we cannot make inferences about frequency of participation in youth cultures and drug use. Future studies should examine the influence of subcultural embeddedness in drug practices, as we may reasonably expect that the depth of embeddedness will affect the influence of that subculture's norms. In addition, as we sampled from nightlife venues with time-space sampling, we may have oversampled people who are more intensely involved in these subcultures and thus who appear more often at nightlife venues. Our field survey was brief by design, thus limiting the amount of information collected from individuals, including that of broader drug use patterns. Thus, it remains unclear whether and how patterns of prescription drug misuse are shaped by the presence of other drugs in these scenes. In addition, although subjects self-reported their behaviours on a secure device, the public

setting may have introduced a social desirability bias in the reporting of some behaviours. Considering the direction of social desirability biases, however, we might expect that such biases rates may yield underestimates.

Conclusions

The misuse of prescription drugs is an active drug trend among young adults. Different prevalence of prescription drug misuse occurs across distinct youth cultures, suggesting that the trend has not diffused equally among young people. These differing rates also suggest that targeted approaches that account for the subculturally rooted differences in attitudes, social norms, and motivations for use among young people may be most efficacious. Specifically, by working within the parameters of a subculture itself, it may be easier to deliver harm reduction practices that make sense within the scene itself [14]. Intraventions of this type have proven effective means of enabling a community to generate meaningful approaches to health promotion [26]. We may also have opportunities to learn about factors that inhibit prescription drug misuse among young people by further studying youth cultures with low prevalence rates. Ethnographic approaches to the study of prescription drug misuse across youth cultures may be particularly valuable to gain such insights.

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Table 1

Descriptive statistics of demographics

| | n | Mean (SD) |
|------------------------|------|------------|
| Average age | 1781 | 24.0 (2.7) |
| | n | % |
| Gender | | |
| Male | 864 | 48.5% |
| Female | 917 | 51.5% |
| Sexuality | | |
| Gay/Lesbian/bisexual | 587 | 33.0% |
| Heterosexual | 1194 | 67.0% |
| Race/ethnicity | | |
| White | 1111 | 62.4% |
| Black | 123 | 6.9% |
| Latino | 175 | 9.8% |
| Asian/Pacific Islander | 131 | 7.4% |
| Mixed/other | 241 | 13.5% |
| Scene | | |
| College bar scene | 135 | 7.6% |
| EDM scene | 326 | 18.3% |
| Gay scene | 253 | 14.2% |
| Hip-hop scene | 180 | 10.1% |
| Indie rock scene | 381 | 21.4% |
| Lesbian parties | 333 | 18.7% |
| Alt scene | 173 | 9.7% |

EDM, electronic dance music.

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Table 2

Prescription drug prevalence by youth cultural scene

| | Total sample, (n=1781) | College bars (a), (n=135) | EDM scene (b), (n=326) | Gay scene (c), (n=253) | Hip-hop scene (d), (n=180) | Indie rock scene (e), (n=381) | Lesbian parties (f), (n=333) | Alt scenes (g), (n=173) |
|--------------------------------------|------------------------------|---------------------------------|---------------------------|---------------------------|-------------------------------|-------------------------------------|---------------------------------|-------------------------|
| | Prevalence | Prevalence | Prevalence | Prevalence | Prevalence | Prevalence | Prevalence | Prevalence |
| Any Rx drug ever | 46.7% | 32.6% ^{befg} | 52.1%acd | 41.5% bdef | 25.0%bcfg | 52.5%acd | 53.8%acd | 50.9% ^{ad} |
| Past 6 months pain killer use | 18.4% | 10.4% ^{befg} | 23.9% acd | 14.2% ^b | 12.8% ^{bef} | 19.9% ^{ad} | 20.4% ^{ad} | 19.1% ^a |
| Past 6 months sedative use | 16.0% | 11.9% ^b | 19.6% ^{ad} | 13.8% | 8.3% befg | 17.3% ^d | 18.6% ^d | 15.6% ^d |
| Past 6 months stimulant use | 18.6% | 13.3% ^f | 20.6% ^d | 18.6% ^d | 8.3% boefg | 20.2% ^d | 21.3% ^{ad} | 20.8% ^d |
| Rx drug use last 3 months | 22.4% | 13.3% bef | 28.8% acd | 19.8% ^b | 12.8% ^{befg} | 24.4% ^{ad} | 24.9% ^{ad} | 22.0% ^d |

All reported differences at P = 0.05, indicated by corresponding letter. EDM, electronic dance music.

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Table 3

Scene predictors of prescription drug misuse among subculturally-involved young adults

| | Lifetime Rx drug use | Past 6 months Pain killers | Past 6 months Sedatives | Past 6 months Stimulants | Any Rx drug use in past 3 months |
|------------------|-----------------------------|-------------------------------|----------------------------|-----------------------------|----------------------------------|
| | AOR (95% CI) | AOR (95% CI) | AOR (95% CI) | AOR (95% CI) | AOR (95% CI) |
| College bars | 1 | 1 | 1 | 1 | 1 |
| EDM scene | 2.203 *** (1.430, 3.393) | 2.714** (1.457, 5.056) | 1.711 (0.935, 3.130) | 1.642 (0.918, 2.937) | 2.511 *** (1.438, 4.387) |
| Gay scene | 1.252 (0.763, 2.053) | 0.978 (0.475, 2.017) | 0.897 (0.443, 1.817) | 1.443 (0.749, 2.781) | 1.281 (0.670, 2.446) |
| Hip-hop scene | 0.858 (0.516, 1.426) | 1.516 (0.736, 3.125) | 0.830 (0.388, 1.776) | 0.711 (0.339, 1.494) | 1.146 (0.582, 2.257) |
| Indie rock scene | 2 114 *** (1.412, 3.256) | 2.043* (1.106, 3.775) | 1.444 (0.799, 2.609) | 1.604 (0.914, 2.815) | 1.998* (1.142, 3.460) |
| Lesbian clubs | 2.302 *** (1.433, 3.697) | 1.840 (0.939, 3.607) | 1.436 (0.745, 2.770) | 1.848 (0.991, 3.448) | 2.031^* (1.102, 3.743) |
| Alt scenes | 2.654** (1.442, 4.887) | 2.242* (1.003, 5.012) | 1.267 (0.556, 2.886) | 1.514 (0.702, 3.266) | 1.717 (0.923, 3.194) |
| | | | | | |

Significance:

Estimates reported are adjusted odds ratios (AOR) (95% confidence intervals [CI]).

Note: All reported analyses are adjusted for socio-demographic factors, including age, gender, sexual identity, and race/ethnicity.

EDM, electronic dance music.

$$P = 0.01$$

 $^{***}_{P}$ 0.001.

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