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Influences of motivational contexts on prescription drug misuse and related drug problems

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ABSTRACT

Prescription drug misuse has emerged as a significant problem among young adults. While the effects of motivational contexts have been demonstrated for illicit drugs, the role of motivational contexts in prescription drug misuse remains understudied. Using data from 400 young adults recruited via time–space sampling, we examined the role of motivational contexts in the frequency of misuse of three prescription drug types as well as drug-related problems and symptoms of dependency. Both negative and positive motivations to use drugs are associated with increases in prescription drug misuse frequency. Only negative motivations are associated directly with drug problems and drug dependence, as well as indirectly via prescription pain killer misuse. Addressing positive and negative motivational contexts of prescription drug misuse may not only provide a means to reduce misuse and implement harm reduction measures, but may also inform the content of treatment plans for young adults with prescription drug misuse problems.

1. Introduction

Prescription drug misuse has emerged as a significant problem during the 21st century; this trend has been particularly prevalent among young adults (Kelly et al., 2013; McCabe, Teter, & Boyd, 2006). In 2012, over 4.7 million American young adults reported the misuse of prescription drugs during the past year (Substance Abuse and Mental Health Services Administration [SAMHSA], 2013). Furthermore, the lifetime prevalence of prescription drug misuse among young adults is greater than that for most illegal drugs; only marijuana continues to be more widely used than prescription drugs among young people (SAMHSA, 2013). Further, while the overall prescription drug trend has plateaued in the United States, misuse remains a significant problem among American young adults, and recently it has become a more significant global drug trend (United Nations Office on Drugs and Crime, 2011).

Prescription drug misuse has not only emerged as a significant drug trend, but has created substantial problems for the health care sector and drug treatment facilities. Studies suggest that a range of negative health effects are associated with prescription drug misuse, including cognitive impairment, mental health problems, overdose, and organ damage (Caplan, Epstein, Quinn, Stevens, & Stern, 2007; Teter, Falone, Cranford, Boyd, & McCabe, 2010). Prescription drug misuse burdens the health care system as well. Between 2004 and 2008, the number of emergency room visits involving the misuse of prescription drugs increased 81%; for prescription pain killers specifically, the increase was 111%, or more than double the number of visits (SAMHSA, 2011). The misuse of prescription drugs accounted for a large proportion of all drug-related emergency room visits (SAMHSA, 2011). Increased rates of prescription drug misuse have also contributed heavily to the treatment burden in the United States in recent years. Prescription drug misuse is among the most common problems for young people enrolled in drug treatment (Gonzales, Brecht, Mooney, & Rawson, 2011). There are also major economic impacts; prescription opioid abuse alone costs the United States tens of billions of dollars (Birnbaum et al., 2011). Thus, the problems associated with prescription drug misuse are significant, making research into the motivations associated with misuse imperative to guide prevention and intervention programs.

1.1. The role of motivational contexts in drug use

There are a variety of motivations underlying substance use. Young people, in particular, have been shown to express a wide range of motivations for substance use, including relaxation, intoxication, staying alert while socializing, and alleviating negative affect (Boys, Marsden, & Strang, 2001), and these wide ranging motivations among young people extend to prescription drug misuse (Boyd, McCabe, Cranford, & Young, 2006; McCabe, Boyd, & Teter, 2009). Such motivational contexts have

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proven to be important influences of patterns of drug use in a variety of ways (Hartwell, Back, McRae-Clark, Shaftman, & Brady, 2012; Starks, Golub, Kelly, & Parsons, 2010). For example, the desire to use drugs to deal with conflicts with others is associated with greater frequency of drug use (Halkitis, Parsons, & Wilton, 2003). The growth of an individual's drug use trajectory over time is associated with the motivation of using drugs to have pleasant times with others (Palamar, Mukherjee, & Halkitis, 2008). Additionally, unpleasant emotions have been identified as a motivational context related to polydrug use among young adults (Kelly & Parsons, 2008). Scholars have also shown that motivations are important in the reduction or cessation of substance use. For example, feeling motivated to use drugs due to social pressures has been associated with heroin relapse (El Sheikh & Bashir, 2004). Collectively, numerous studies demonstrate the role of a range of motivational contexts in patterns of substance use, particularly that certain motivations are tied to increasing frequency of substance use. Yet, the role of motivational contexts in abuse and dependence related to prescription drug misuse remains understudied.

Motivational contexts also have implications for both identifying the potential for problem use as well as the consideration of drug treatment options (Turner, Annis, & Sklar, 1997). If particular motivations can be tied to problem patterns of drug use, researchers and practitioners can identify high risk situations for drug users, and intervention or harm reduction efforts can focus on these motivational contexts as part of the approach. Similarly, if these motivations can be linked with symptoms of drug dependence, they will facilitate tailored interventions as well as the identification of treatment modalities that best serve clients with certain motivational profiles. Furthermore, motivational contexts are particularly important when it comes to relapse of substance abuse (Marlatt & Friedman, 1981), and thus will enable the identification of key relapse prevention measures among individuals with past substance abuse problems.

1.2. Current study

Given the significance of prescription drug misuse and the treatment and care burden it has generated, we aim to understand how motivational contexts influence patterns of prescription drug misuse and related problems. Specifically, we examine the influence of motivational contexts on the frequency of prescription drug misuse, drug related problems, and symptoms of dependence among young adults active in nightlife scenes. We will consider that greater scores on motivational contexts will directly influence greater frequency of misuse of all prescription drug types as well as prescription drug related problems and symptoms of dependency. We also posit that greater scores on these motivational contexts indirectly influence prescription drug related problems and symptoms of dependency via the frequency of prescription drug misuse. The identification of these pathways allows us to determine the motivational contexts that most influence prescription drug misuse and its associated problems. Such an assessment may facilitate prevention, treatment, and harm reduction efforts.

2. Methods

2.1. Sampling and procedures

To generate the sample for this study, we primarily utilized time–space sampling in a wide range of venues that house nightlife scenes in New York City (NYC). Time–space sampling was originally developed to capture hard-to-reach populations (MacKellar, Valleroy, Karon, Lemp, & Janssen, 1996; Muhib et al., 2001; Stueve, O'Donnell, Duran, San Doval, & Blome, 2001), but is also constructive for generating samples of venue-based populations (Parsons, Grov, & Kelly, 2008). As young adults active in nightlife scenes can be considered a venue-based population, we used venues as our basic unit of sampling in order to systematically generate a sample of socially active young adults. We captured a range of variability among these young adults through randomizing (1) the venues attended and (2) the days and times we sampled individuals from them.

We randomized "time" and "space" using a sampling frame of venues and times of operation. To construct the sampling frame, ethnographic fieldwork conducted over the previous 12 months enabled the assessment of "socially viable" venues for each day of the week. A venue was deemed socially viable if a threshold of young adult patron traffic existed at the venue on that given day of the week. We generated lists of socially viable venues for each day of the week across several key youth cultures—e.g. electronic dance music (EDM), gay clubs, lesbian parties, and indie rock scenes. The venues included bars, clubs, lounges, warehouses, loft spaces, and performance venues. Recruitment occurred year round with teams of recruiters. For all days of the week, all viable venues were listed and assigned a number. Using a random digit generator, a random number was drawn corresponding to a particular venue on a particular day. Ultimately, this process yielded our schedule of venues for each month.

Once at the venue, project staff attempted to screen as many individuals as possible, aiming to survey all young adults at the venue. Staff approached a patron, identified themselves, described the screening survey, and requested verbal consent for participation in the anonymous brief survey conducted on an iPod Touch® that was designed using iFormBuilder™ software. For those who provided consent to participate, the beginning of the brief surveys were administered by trained staff (age and NYC residency) and respondents self-reported all other information (race, sexual orientation, gender, and substance use) directly onto the iPod Touch®. Individuals received no compensation for completing the screening survey. Field staff members were trained not to administer surveys to individuals who were visibly impaired by intoxication to ensure the capacity to consent. Response rates to the screening survey (75.0%) were high given the difficult conditions of surveying young adults in nightclub settings and the lack of compensation for participating in the screening survey.

Upon completion of the survey, the software determined whether the individual was eligible for the study (9.4% of all those screened in venues were eligible). If participants were eligible, they were given a brief description of the study and asked to provide contact information if they were interested in participating. Later in the timeline of study enrollment, staff also provided eligible participants the opportunity to verify their age and identity at the point of recruitment so that the study survey could be completed online. A majority of those deemed eligible (77.4%) provided contact information for further study participation.

Near the end of the project, venue recruitment was supplemented by scene-targeted recruitment via online groups associated with nightlife scenes of interest. The research team first developed a list of groups that were relevant to each of the scenes of interest for the project. Group members who were between the ages of 18 and 29 and resided in the NYC metropolitan area saw an advertisement for the study; if they clicked on the advertisement, they were directed to a Qualtrics® survey that screened for study eligibility and, if eligible, collected their contact information. Less than 5% of the sample was recruited via this supplemental method.

Regardless of recruitment method (venue-based or online), research staff contacted participants by phone and e-mail to provide more information about the study, confirm eligibility, and schedule the initial assessment (or send them a link to the online survey if they showed proof of age in the field). Eligibility criteria were as follows: (1) aged 18–29; (2) report the misuse of prescription drugs at least three times in the past 6 months; and (3) report the misuse of prescription drugs at least once in the past 3 months. The subjects could report any of three classes—many reported the misuse of multiple classes. A threshold of 3 recent occasions of misuse excluded