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Coping and emotion regulation profiles as predictors of nonmedical prescription drug and illicit drug use among high-risk young adults

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ABSTRACT

Background: Deficits in the ability to organize, integrate, and modulate emotions, thoughts, and behaviors when dealing with stress have been found to be related to the onset and escalation of substance use among adolescents and young adults. However, limited research has focused on understanding how coping and emotion regulation tendencies might be associated with different patterns of prescription and illicit drug use, particularly among high-risk young adults who may already face additional challenges relative to lower-risk populations.
Methods: Young adults aged 16–25 years who had misused prescription drugs within the past 90 days were interviewed in Los Angeles and New York. The current study utilized latent profile analysis to empirically derive coping and emotion regulation typologies/profiles that are then used to predict different patterns of substance use ($N = 560$).
Results: Four latent classes/groups were identified: (1) suppressors, (2) others-reliant copers, (3) self-reliant copers and (4) active copers. Distinct patterns of prescription and illicit drug misuse were found among different coping/emotion regulation profiles, including differences in age of initiation of opiates, tranquilizers, and illicit drugs, recent injection drug use, substance use-related problems, and past 90-day use of tranquilizers, heroin, and cocaine. Specifically, suppressors and others-reliant copers evidenced more problematic patterns of substance use compared to active copers.
Conclusion: This is among the first studies to show how coping and emotion regulation profiles predict distinct patterns of substance use. Results provide the groundwork for additional investigations that could have significant prevention and clinical implications for substance-using high-risk young adults.

1. Introduction

Nonmedical use or "misuse" of prescription drugs has been linked to a range of negative health outcomes among adolescents and young adults, including drug dependence in adulthood (McCabe et al., 2007), drug overdose (Paulozzi et al., 2012), and psychiatric dysfunctions (Schepis and Hakes, 2011). Since most research on prescription drug misuse patterns tend to focus on typically-developing adolescents and young adults, there may be a reduced understanding of current patterns of prescription drug misuse among high-risk young adults, including homeless persons, injection drug users, or polydrug users (Daniulaityte et al., 2009; Kurtz et al., 2005; Lankenau et al., 2007). These young active drug users are considered "high-risk" because they may be at greater risk for drug overdose and other negative health consequences such as hepatitis, HIV, and long-term drug dependence compared to lower-risk populations (Benotsh et al., 2011; SAMSHA, 2010). Studies that do not include high-risk groups may underestimate more serious or complex patterns of prescription drug misuse and illicit drug use, as research has revealed higher rates of prescription drug and illicit drug misuse among high-risk youth compared to general young adult populations (Lord et al., 2009; McCauley et al., 2010).

Furthermore, research to date among prescription drug misusers has sparsely addressed the impact of psychological factors related to the management of emotions and stress on misuse (Ford, 2008; Ford and Arrastia, 2008; Sung et al., 2005), despite the

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fact that the management of stress and the management of both positive and negative emotions are fundamental features of motivations to misuse drugs (Arnett, 1995; Conrad et al., 1992). It has been postulated that substance misuse is a symptom, not a cause, of psychological and social maladjustment among adolescents and young adults, suggesting that individuals' ability to handle stress and distress would be important determinants/drivers of substance misuse (Shedler and Block, 1990). Hence, greater empirical attention is needed to understand how individuals' coping responses and emotion regulation tendencies in the face of stress and distress might be associated with their initiation and persistence in misusing prescription and illicit drugs. This is also a particular concern among high-risk youth who may contend with more difficult life circumstances than youth from general youth populations (McCauley et al., 2010; Sinha, 2008). A better understanding of individual differences in both coping and emotion regulation could inform programs and facilitate the development of interventions that build on specific strengths and characteristics of high-risk young adults.

Even though both coping and emotion regulation (ER) can be conceptualized as traits (i.e., predispositions/tendencies) or states (Lazarus, 1993), the current study focused on individuals' predisposition to cope and manage their emotions. Coping is defined as behavioral and cognitive responses to manage external and internal demands that exceed a person's resources and encompasses strategies that may or may not be directed at emotions (Lazarus and Folkman, 1984). ER strategies, though related to coping, refer to strategies used to influence, experience, and modulate emotions (e.g., suppression and cognitive reappraisal). ER includes processes that may not be typically considered as coping, such as managing expressions of emotions or enhancing positive emotions (Gross, 1999). Adaptive ER can be characterized by individuals' ability to use effective coping strategies during stressful situations. Effective coping, in turn, can buffer substance use behaviors and emotional distress (Stein and Nyamathi, 1999).

1.1. Coping, emotion regulation, and substance misuse

Deficits in individuals' ability to organize, integrate, and modulate emotions, thoughts, and behaviors when dealing with stress (i.e., impairment in coping) have been found to be related to the onset and escalation of substance use among adolescents and young adults (Compas et al., 1992; Wills et al., 2001). For example, strategies that have been found to perpetuate substance use include disengagement coping, such as venting. On the other hand, proactive behavior or task-oriented coping (e.g., use of problem-solving strategies) have been found to deter substance use and initiation among general adolescents and young adults. Wills et al. (2001) found behavioral coping (i.e., doing something to solve a problem) to have a protective effect on drug use initiation and diminished growth in drug use over time among adolescents, while avoidant or anger coping (e.g., using distraction or social diversion) was associated with initiation and escalation of substance use. Similarly, low emotional restraint has been found to be associated with increases in gateway-drug use among a sample of middle-school aged boys (Farrell and Danish, 1993). In contrast, a study of homeless youth revealed avoidant coping to be significantly associated with lower HIV-risk taking behaviors, fewer depressive or anxiety-related symptoms, and less frequent alcohol use (Dashora et al., 2011). In the same study, task-oriented coping and emotion-oriented coping (e.g., self-blame, rumination) were not significantly associated with HIV risk-taking and substance use. Another study of homeless youth indicated that the use of nondisclosure coping (i.e., not telling others how you feel), self-destructive escape coping (i.e., engaging in dangerous activities to reduce tension), and withdrawal coping were related to increased illicit drug use. However, problem-solving coping did not reduce drug use (Nyamathi et al., 2010).

These results showed that individuals' coping and ER responses are important factors that impact drug-use and other risk-taking behaviors among general and high-risk young adults. Results also revealed interesting differences on which types of strategies are considered "adaptive" or "mal-adaptive" for different youth populations. While these studies are informative, no studies to date have considered how coping and ER tendencies constitute meaningful profiles or typologies that account for intra-individual differences in the different types of strategies one might use. This approach can provide a more complex and complete characterization of individuals' underlying coping and ER response to stress and distress because individuals are categorized based on the multitude of coping and ER strategies they prefer/tend to use or not use.

1.2. Current study

In the present study, we employed latent profile analysis (LPA) to develop distinct coping and ER profiles that are then used to predict patterns of prescription and illicit drug misuse among a sample of high-risk young adults. Specifically, we examined how coping and ER typologies are able to differentiate age of initiation of specific prescription and illicit drugs, and magnitude of recent drug use and other high-risk behaviors, such as injection drug use (IDU). LPA enables us to link these typologies/profiles to different patterns of prescription and illicit drug use behaviors while accounting for socio-demographic and significant early life experiences (e.g., having experienced abuse) that could influence the formation of coping and ER tendencies.

2. Methods

2.1. Participants and procedures

Data for this study come from a previously reported study of youth who misuse prescription drugs (Lankenau et al., 2012a), recruited in Los Angeles (LA) and New York (NY) between October 2009 and March 2011. Eligible participants were between 16 and 25 years old and had engaged in misuse of a prescription drug (i.e., opioid, tranquilizer, stimulant, or any combination, at least three times in the last 90 days). "Misuse" was defined as taking prescription drugs "when they were not prescribed for you or that you took only for the experience or feeling it caused" (Hernandez and Nelson, 2010; SAMSHA, 2010). The original sample of 596 was reduced to 560 due to missing values on observed independent variables in the final model.

Sampling was stratified to enroll three groups of high-risk young adults – injection drug users, homeless persons, and polydrug users – with different access to prescription drugs and risks for negative health outcomes, such as overdose, drug dependence, hepatitis, and HIV. Participants were located using a combination of sampling strategies (targeted and chain-referral sampling) in variety of settings, such as parks, streets, and neighborhoods and organizations serving youth (Biernacki and Waldorf, 1981; Watters and Biernacki, 1998). To enhance the diversity of the sample, only one referral or network member per enrolled participant was allowed into the sample as part of the chain-referral sampling process. A brief screening tool was used to determine eligibility, and participants who qualified and were interviewed received a $25 cash incentive. Emancipated minors, i.e., homeless 16 or 17 year olds, received a follow-up set of questions during the consent process to ensure that rights as a research participant were understood. Non-emancipated minors were not enrolled in the study. Referral information, such as resources for counseling, housing, or drug treatment, was offered to all participants following the interview. Additional descriptions of recruitment strategy and sampling methods are reported elsewhere (Lankenau et al., 2012a).

A cross-sectional survey was developed using Entryware Software (Techneos Systems, Inc., Vancouver, Canada) and loaded onto laptop computers. The instrument was administered during face-to-face interviews with enrolled participants by one of two interviewers at each recruitment site. Interviews, which lasted approximately 60 min, were conducted in private offices or natural settings, such as fast food restaurants and parks. Interview data were recorded on both laptop computers and digital recorders. The study protocol was approved by institutional review boards at Drexel University, Children's Hospital Los Angeles, and the National Development and Research Institutes, Inc.