Addictive Behaviors 38 (2013) 1776–1781

Contents lists available at SciVerse ScienceDirect

Addictive Behaviors

Prescription opioid use among addictions treatment patients: Nonmedical use for pain relief vs. other forms of nonmedical use

Amy S.B. Bohnert [a,b,*], Anna Eisenberg [a,b], Lauren Whiteside [c,d], Amanda Price [b], Sean Esteban McCabe [e,f], Mark A. Ilgen [a,b]

[a] VA National Serious Mental Illness Treatment Resource and Evaluation Center and VA Health Services Research and Development, North Campus Research Complex, 2800 Plymouth Road, Building 14, Ann Arbor, MI, 48109, USA
[b] Department of Psychiatry, University of Michigan Medical School, North Campus Research Complex, 2800 Plymouth Road, Building 14, Ann Arbor, MI, 48109, USA
[c] Department of Emergency Medicine, University of Washington, 325 9th Ave, Box 359702, Seattle, WA, 98104, USA
[d] Department of Emergency Medicine, University of Michigan Medical School, University Hospital Floor B1, 1500 E Medical Center Dr SPC 5301, Ann Arbor, MI, 48109, USA
[e] Institute for Research on Women and Gender, University of Michigan, 1136 Lane Hall, 204 S. State Street, Ann Arbor, MI, 48109, USA
[f] Substance Abuse Research Center, University of Michigan, Victor Vaughan Building, 1111 East Catherine Street, 4th Floor, Ann Arbor, MI, 48109, USA

HIGHLIGHTS

- We examine nonmedical prescription opioid use among addictions treatment patients.
- We examine reasons for use: other than pain relief and only for self-treatment.
- Those with nonmedical use for other reasons had increased substance use severity.
- Those with nonmedical use for other reasons had poorer mental health functioning.

ARTICLE INFO

Keywords:
Prescription opioids
Nonmedical use
Pain
Addictions treatment

ABSTRACT

Background: Differences between those who engage in nonmedical prescription opioid use for reasons other than pain relief and those who engage in nonmedical use for reasons related to pain only are not well understood.
Methods: Adults in a residential treatment program participated in a cross-sectional self-report survey. Participants reported whether they used opioids for reasons other than pain relief (e.g., help sleep, improve mood, or relieve stress). Within those with past-month nonmedical opioid use ($n = 238$), logistic regression tested differences between those who reported use for reasons other than pain relief and those who did not.
Results: Nonmedical use of opioids for reasons other than pain relief was more common (66%) than nonmedical use for pain relief only (34%), and those who used for reasons other than pain relief were more likely to report heavy use (43% vs. 11%). Nonmedical use for reasons other than pain relief was associated with having a prior overdose (odds ratio [OR] = 2.54, 95% CI: 1.36–4.74) and use of heroin (OR = 4.08, 95% CI: 1.89–8.79), barbiturates (OR = 6.44, 95% CI: 1.47, 28.11), and other sedatives (OR = 5.80, 95% CI: 2.61, 12.87). Individuals who reported nonmedical use for reasons other than pain relief had greater depressive symptoms (13.1 vs. 10.5) and greater pain medication expectancies across all three domains (pleasure/social enhancement, pain reduction, negative experience reduction).
Conclusions: Among patients in addictions treatment, individuals who report nonmedical use of prescription opioids for reasons other than pain relief represent an important clinical sub-group with greater substance use severity and poorer mental health functioning.

Published by Elsevier Ltd.

1. Introduction

Medical and nonmedical use (i.e., using more than prescribed by a medical provider, without a prescription, or for purposes other than pain care) of opioid pain medications has increased substantially in the U.S. in the past decade, particularly among adults (Fortuna, Robbins, Caiola, Joynt, & Halterman, 2010; Paulozzi, Budnitz, & Xi, 2006; Substance Abuse and Mental Health Services Administration Office of Applied Studies, 2009; Zacny et al., 2003). Consequently, prescription opioids are now among the most common drugs used nonmedically among Americans (Substance Abuse & Mental Health Services Administration, 2010). Given the negative consequences that have been associated with this rise in nonmedical prescription opioid use,

* Corresponding author at: University of Michigan North Campus Research Complex, 2800 Plymouth Rd., Bldg. 14, Rm. D031, Ann Arbor, MI, 48109, USA. Tel.: +1 734 845 3638; fax: +1 734 222 7514.
E-mail address: amybohne@med.umich.edu (A.S.B. Bohnert).

0306-4603/$ – see front matter. Published by Elsevier Ltd.
http://dx.doi.org/10.1016/j.addbeh.2012.11.005

most notably the rise in unintentional overdose deaths due to prescription opioids (Okie, 2010; Paulozzi & Ryan, 2006), reducing nonmedical use has become a crucial public health issue.

In an effort to understand this growing public health problem, it is important to examine why individuals report that they engage in nonmedical use of opioids. A small body of literature has examined self-reported reasons for nonmedical prescription opioid use, most of which has utilized samples of late high school and college-age youth (McCabe, Boyd, Cranford, & Teter, 2009; McCabe, Boyd, & Teter, 2009; McCabe, Cranford, Boyd, & Teter, 2007). In these studies, those using prescription opioids only for pain relief were less likely than those reporting other motives to report behaviors consistent with a diagnosable substance use disorder. (McCabe, Boyd, Cranford, & Teter, 2009; McCabe et al., 2007) In another study among adolescents in grades 7 through 12, when nonmedical opioid users were stratified into two groups, those self-treating pain and those using for non-pain-related motives, those using due to non-pain-related motives reported more drug-related problems (Boyd, McCabe, Cranford, & Young, 2006).

In addition to focusing on younger populations, most of the prior research on motives for nonmedical opioid use has studied individuals who are relatively high functioning, such as college students. It is also important to understand distinctions in type of nonmedical use in adults with more established patterns of substance use to understand how type of use may perpetuate and maintain substance use. This work could be particularly important in addictions treatment settings, which frequently treat individuals with recent nonmedical use of opioids (Price, Ilgen, & Bohnert, 2011). The only study of motives for nonmedical prescription drug use among middle-aged and older adults to our knowledge included a sample of 18- to 65-year-old methadone maintenance patients, residential drug treatment clients, and active street drug users (Rigg & Ibanez, 2010). In this study, use for reasons other than pain relief was common (Rigg & Ibanez, 2010).

Understanding the reasons for substance use, including use of prescription opioids, is important for the development of drug use behavior change interventions (Pomazal & Brown, 1977). The present study sought to compare those who engage in nonmedical prescription opioid use for reasons other than pain relief and those who engage in nonmedical use for reasons related to pain only in a sample of adults in residential addictions treatment. This study focused on the distinction between nonmedical use of prescription opioids for self-treatment of pain vs. other motivations specifically because prior research in adolescents and young adults has highlighted the importance of this distinction (Boyd et al., 2006; McCabe, Boyd, & Teter, 2009; McCabe et al., 2007). Additionally, pain is common among individuals in addictions treatment (Trafton, Oliva, Horst, Minkel, & Humphreys, 2004), and persistent pain is associated with poorer addictions treatment outcomes (Caldeiro et al., 2008). Nonmedical use that is solely for the purpose of pain relief likely indicates poorly managed pain, for which interventions focused on improving pain management may be an appropriate adjunct to traditional substance use-focused interventions. We also sought to extend prior studies by examining a broader array of correlates, including demographic, drug use-related, pain-related, and psychological factors.

2. Methods

2.1. Sample and design

This study used cross-sectional data (Price et al., 2011) collected at a large residential addictions treatment center in Waterford, Michigan, which provides services to patients in the surrounding areas of Michigan, including the urban areas of Flint and Detroit. Data were collected from January to November of 2009. Participants were recruited via presentations made by research staff to all patients during didactic groups at the treatment site. Patients requiring treatment for withdrawal at admission were treated in a separate detoxification unit prior to treatment on the unit where recruitment took place. Interested participants were informed of the study protocol and given the opportunity to provide written informed consent; those who consented were given a self-administered pen-and-paper questionnaire. Participants were compensated for their time with a $10 gift card. Exclusion criteria included being under the age of 18, being unable to speak or understand English, being unable to provide voluntary written consent, and having current acute psychotic symptoms.

In total, 351 individuals completed surveys, 24% of whom were female. The mean age was 35.6 (standard deviation [SD] = 10.8). The distribution of the primary substance for which treatment was sought in this sample was as follows: 30.2% alcohol, 19.4% heroin, 16.0% cocaine, 9.7% marijuana, 4.0% other opiates, and 20.8% other or missing. The average number of years of regular alcohol use to intoxication for participants with lifetime alcohol use was 10.8 (SD = 9.4). The average years of regular use for heroin, cocaine, and marijuana was 6.2 (SD = 5.9), 8.1 (SD = 7.4), and 11.3 (SD = 8.4) among users of each substance, respectively.

Primary analyses were restricted to individuals who reported past-month nonmedical use of prescription opioids, based on items from the Current Opioid Misuse Measure (COMM) (Butler et al., 2007), as described by Price et al. (2011) and below. This was the case for 238 of the 351 (68%) respondents. All study procedures were approved by the University of Michigan Medical School Institutional Review Board.

2.2. Measures

2.2.1. Opioid pain medication use

The COMM is a 17-item measure that was developed to detect nonmedical use of opioids among individuals prescribed opioids for pain (Butler et al., 2007). Based on prior research in the present sample, six items from the COMM were used to define nonmedical prescription opioid use (Price et al., 2011), which have an $\alpha = 0.93$. These six items were: 1) "How often have you taken your medications differently from how they are prescribed?"; 2) "How often have you needed to take pain medications belonging to someone else?"; 3) "How often have you had to go to someone other than your prescribing physician to get sufficient pain relief from your medications?"; 4) "How often have you had to take more of your medication than prescribed?"; 5) "How often have you borrowed pain medication from someone else?"; and 6) "How often have you used your pain medication for symptoms other than pain (e.g., to help you sleep, improve your mood, or relieve stress)?" All items assessed past-month use and used a five-point scale ranging from "never" to "very often." Individuals were further classified as nonmedical users who used for reasons other than pain if they reported any use in response to the question "How often have you used your pain medications for symptoms other than pain (e.g., to help you sleep, improve your mood, or relieve stress?)" Thus, individuals classified as using for reasons other than pain relief may or may not have also been using opioids for pain relief. Individuals who responded "never" to this question but endorsed at least one of the other five core COMM questions used to assess nonmedical use were classified as using nonmedically only for pain relief. The six core items selected from the COMM were also used to identify heavy nonmedical prescription opioid use; heavy nonmedical prescription opioid use was defined as a response of "very often" on any of the six items.

The Pain Medications Expectancy Questionnaire (PMEQ) (Ilgen, Roeder, et al., 2011) was used to assess the degree to which participants expect that they would use pain medications in specific situations. The PMEQ has three domains: pleasure/social enhancement, pain reduction, and negative experience reduction. For each domain, a mean score was created by averaging the responses of the corresponding items.