Journal of Substance Abuse Treatment 47 (2014) 140–145

Contents lists available at ScienceDirect

Journal of Substance Abuse Treatment

Reasons for opioid use among patients with dependence on prescription opioids: The role of chronic pain

Roger D. Weiss, M.D. [a,b,*], Jennifer Sharpe Potter, Ph.D., M.P.H. [a,b,c], Margaret L. Griffin, Ph.D. [a,b], R. Kathryn McHugh, Ph.D. [a,b], Deborah Haller, Ph.D. [d], Petra Jacobs, M.D. [e], John Gardin II, Ph.D. [f], Dan Fischer, M.S. [g], Kristen D. Rosen, M.P.H. [c]

[a] McLean Hospital, 115 Mill St, Belmont, MA 02478, United States
[b] Harvard Medical School, 25 Shattuck St, Boston, MA, 02115, United States
[c] University of Texas Health Science Center San Antonio, 7526 Louis Pasteur MC7733, San Antonio, TX, 78229, United States
[d] Behavioral Science Research Unit, Mt. Sinai at St. Luke's, 1111 Amsterdam Ave., New York, NY, 10025, United States
[e] Universidad San Francisco de Quinto, Escuela De Medicina, Quito, Ecuador
[f] Adapt, Inc., 548 SE Jackson St., Roseburg, OR 97470, United States
[g] University of New Mexico Center on Alcoholism, Substance Abuse, and Addictions (CASAA), 2650 Yale SE MSC11-6280 Albuquerque, NM 87106, United States

ARTICLE INFO

Article history:
Received 7 September 2012
Revised in revised form 7 February 2014
Accepted 24 March 2014

Keywords:
Opioid analgesics
Prescription drug abuse
Relapse
Opioid dependence
Chronic pain

ABSTRACT

The number of individuals seeking treatment for prescription opioid dependence has increased dramatically, fostering a need for research on this population. The aim of this study was to examine reasons for prescription opioid use among 653 participants with and without chronic pain, enrolled in the Prescription Opioid Addiction Treatment Study, a randomized controlled trial of treatment for prescription opioid dependence. Participants identified initial and current reasons for opioid use. Participants with chronic pain were more likely to report pain as their primary initial reason for use; avoiding withdrawal was rated as the most important reason for current use in both groups. Participants with chronic pain rated using opioids to cope with physical pain as more important, and using opioids in response to social interactions and craving as less important, than those without chronic pain. Results highlight the importance of physical pain as a reason for opioid use among patients with chronic pain.

1. Introduction

Identifying specific reasons for substance use is an important component of cognitive–behavioral approaches to understanding and treating substance use disorders (Anton et al., 2006; Carroll, Nich, Ball, McCance, & Rounsavile, 1998; Marlatt & Donovan, 2005). For example, the identification of precipitating factors for use informs the development of strategies to manage these factors without using substances (Marlatt & Donovan, 2005).

Marlatt and Gordon (1985) developed a taxonomy of reasons for substance use to facilitate understanding of precipitating factors for use and relapse following treatment. This taxonomy categorized reasons for use broadly as (1) intrapersonal–environmental (e.g., cue-induced craving, coping with negative emotional and physical states), and (2) interpersonal determinants (e.g., interpersonal conflict, social enhancement). This taxonomy has been informative for understanding reasons for use among alcohol (Turner, Annis, & Sklar, 1997) and opioid (mostly heroin) users (Heather, Stallard, & Tebbutt, 1991). Further research on this taxonomy found that high-risk situations are more accurately grouped in three categories (Zywiak, Connors, Maisto, & Westerberg, 1996): (1) negative emotions, interpersonal conflict, and negative physiological states (coping); (2) direct and indirect social pressure and positive interpersonal emotions (social); and, (3) cues, urges, desire to get high, and withdrawal symptoms (cues/urges/withdrawal).

Studies have identified differences in reasons for substance use based on a number of individual characteristics, such as gender (Lau-Barraco, Skewes, & Stasiewicz, 2009), primary substance used (Waldrop, Back, Verduin, & Brady, 2007), and presence or absence of co-occurring illnesses (Waldrop et al., 2007). For example, individuals with co-occurring posttraumatic stress disorder and substance dependence report that they are more likely to use substances to manage negative emotional and physical states relative to those without posttraumatic stress disorder (Waldrop et al., 2007). Such differences may have important implications for targeting treatments to particular subgroups.

The number of patients seeking treatment for problems with prescription opioids has increased dramatically: from 2001 until 2011, treatment admission rates for dependence on these drugs increased

* Corresponding author at: Division of Alcohol and Drug Abuse, McLean Hospital, Proctor House 3 MS 222, 115 Mill Street, Belmont, MA 02478. Tel.: +1 617 855 2242; fax: +1 617 855 2699.
E-mail address: rweiss@mclean.harvard.edu (R.D. Weiss).

http://dx.doi.org/10.1016/j.jsat.2014.03.004
0740-5472/

5-fold in the United States (Substance Abuse and Mental Health Services Administration, 2013). As a result, research is needed to better understand the clinical characteristics of this patient population and to determine their specific treatment needs.

A limited number of studies have examined reasons for prescription opioid abuse (defined variously as nonmedical use, misuse, and abuse or dependence); much of this research has focused on adolescents and non-treatment seekers. Among adolescents, getting high and relieving pain are commonly reported reasons for non-medical prescription opioid use (McCabe, West, & Boyd, 2013). Adolescents who report using these drugs to get high, or report multiple reasons for use, are more likely to have negative consequences associated with use, including the development of substance use disorders (Boyd, McCabe, Cranford, & Young, 2006; McCabe et al., 2013). The limited literature in adults has found that several reasons for use are common among non-treatment seeking individuals with prescription opioid dependence; these include pain relief, getting high, coping with negative emotional states, and aiding sleep (Back, Lawson, Singleton, & Brady, 2011; Barth et al., 2013). One small study that included a subset of participants in substance use disorder treatment who reported abusing any prescription drug (including opioids) also found a range of motives, with "getting high" rated as the primary reason for use in most participants (Rigg & Ibañez, 2010).

Although studies to date have provided important information on the reasons for use among those with non-medical use of or dependence upon prescription opioids, no studies to our knowledge have specifically examined patients seeking treatment for prescription opioid dependence. Furthermore, because physical pain is quite common in this patient population (Potter, Prather, & Weiss, 2008; Rosenblum et al., 2003), the importance of pain as a reason for use is of particular interest.

Taken together, the above evidence suggests that reasons for use vary among different groups of individuals with substance use disorders. Identifying and understanding group differences in reasons for substance use may be important to the development of treatments that are tailored to the specific needs of individuals by targeting the risk factors that are most relevant for continuing substance use.

The aims of this study were to characterize reasons for prescription opioid use among treatment-seeking individuals with prescription opioid dependence, and to examine whether reasons differed based on the presence or absence of chronic pain. We examined reasons for prescription opioid use in 653 patients enrolled in a multi-site controlled clinical trial examining the efficacy of different durations of buprenorphine-naloxone and different intensities of individual opioid counseling to treat prescription opioid dependence. We hypothesized that individuals with chronic pain would rate coping with physical pain as more important and non-pain related reasons as less important relative to those without chronic pain.

2. Materials & methods

2.1. Study overview

The multi-site Prescription Opioid Addiction Treatment Study (POATS) was conducted within the National Drug Abuse Treatment Clinical Trials Network (CTN). The CTN, a partnership between academic research centers and community-based substance use disorder treatment programs, conducts multi-site clinical trials in community treatment programs. POATS was the first multi-site, large-scale, randomized clinical trial designed to characterize a prescription opioid dependent population and to examine different treatment strategies for this patient population. Participants were recruited from 10 treatment programs throughout the United States.

The primary objective of POATS was to determine whether the addition of individual drug counseling (Mercer & Woody, 1999; Woody, Stockdale, & Hargrove, 1977) to buprenorphine-naloxone (along with standard medical management) improved outcomes for participants dependent on prescription opioids. Of note, the individual drug counseling treatment included a module addressing chronic pain as a potential trigger for opioid use. Participants initially received a 4-week buprenorphine-naloxone taper. Those who relapsed to opioid use during the taper had an opportunity to enter the second phase of the trial, consisting of 12 weeks of buprenorphine-naloxone. In both phases of the trial, participants received standard medical management, and were randomly assigned to receive or not to receive additional individual opioid drug counseling. The POATS trial found no difference in treatment response for participants receiving added counseling during either phase 1 or phase 2 (Weiss et al., 2011). A very small percentage of participants (6.6%) responded successfully to phase 1 (i.e., abstained or nearly abstained from opioids), with almost 50% having successful opioid use outcomes in phase 2. A history of heroin use, however limited, predicted poor treatment outcome; co-occurring chronic pain was not associated with treatment outcomes. Weiss et al. (2011, 2010) provide a full description of the study design and primary outcomes. The current report is a secondary analysis of baseline data from the POATS trial.

The research protocol was approved by the McLean Hospital Institutional Review Board, the institutional review boards at each site, and an independent NIDA-appointed Data Safety and Monitoring Board. Study activities were monitored by an independent Clinical Coordinating Center on behalf of the sponsor, and data were collected and coordinated via a Web-based platform at a central data and statistics center. All study procedures were conducted in accord with the Helsinki Declaration of 1975.

2.2. Participants

Recruitment began in May 2006 and ended in November 2008. Males and females age ≥18 meeting *Diagnostic and Statistical Manual of Mental Disorders, 4th Edition* (*DSM-IV*; American Psychiatric Association, 1994) criteria for opioid dependence, with no history of opioid dependence that could be accounted for by heroin use alone were recruited (Potter et al., 2010). Of the 870 individuals screened, 653 eligible participants (75.3%) seeking treatment for dependence upon prescription opioids were enrolled.

Eligibility criteria included a number of opioid and pain-related considerations (Weiss et al., 2010). Participants were included if they were physically dependent on prescription opioids and used prescription opioids ≥20 days/month. Potential participants were excluded if they reported more than 4 days of heroin use in the 30 days prior to the baseline assessment, any lifetime history of injection heroin use, a traumatic or major pain event in the last 6 months, or if a prescribing clinician believed that the participant's pain was of sufficient severity that ongoing opioid therapy was warranted. The full list of inclusion and exclusion criteria is presented in Table 1.

2.3. Procedures

Potential participants were identified from within the existing patient populations of the participating programs and other sources including advertising, referrals from health care providers, and public service announcements. Potential participants were provided basic information about the study and invited to an in-person visit at the clinic for the informed consent meeting and to complete baseline screening for eligibility and evaluation. The analyses presented in this report utilize the POATS baseline (i.e., pre-randomization) screening data for participants who were later randomized.

2.4. Measures

Sociodemographic variables examined for this analysis were age, sex, race (White versus other racial groups), years of education,