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

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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

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Authors Weiss, Potter, and Jacobs designed the study and wrote the protocol. Authors Potter, McHugh, and Rosen managed the literature searches and summaries of previous work. Authors Potter and Griffin undertook the statistical analysis. Authors Potter, Griffin, Haller, Gardin, Fischer, and Weiss collected data and assisted with interpretation. Author Potter wrote the first draft of the manuscript. All authors contributed to and have approved the final manuscript.

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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.

Keywords

opioid analgesics; prescription drug abuse; relapse; opioid dependence; 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., 2008; Carroll, Nich, Ball, McCance, & Rounsaville, 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 colleagues (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 cooccurring 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 5-fold in the United States (Substance Abuse and Mental Health Services Administration, 2012). 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 (Rosenblum et al, 2003; Potter, Prather, & Weiss, 2008), 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 and colleagues (2010, 2011) 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 four 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 six 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, current employment status, and marital status. Substance use histories were characterized using the alcohol and drug scales of the Addiction Severity Index-Lite (ASI-Lite; McLellan et al., 1985). Composite scores were calculated according to the methods described by McGahan, Griffith, Parante, & McLellan (1982) and Carroll et al. (1994).

Chronic pain was defined dichotomously as the presence of pain beyond the usual aches and pains, excluding withdrawal pain, which had been present for at least 3 months. Participants self-reported whether or not they experienced pain and the duration of that pain; these responses were used to determine chronic pain group status. This definition was adopted in accordance with standards outlined by the International Association for the Study of Pain (1999). All participants completed self-report pain assessments at baseline to identify the presence of chronic pain and pain-related issues.

The *Brief Pain Inventory-Short Form* (BPI-SF; Keller et al., 2004) was used to assess physical pain severity, location, and pain-related functional interference. Scores for pain severity and pain interference (ranging from 0–10) are reported here. The BPI-SF is appropriate for evaluating heterogeneous groups of patients with chronic pain, and has been used in other samples with opioid use disorders (e.g., Dhingra et al., 2013).

Pain and opioid use history was obtained using a study-specific self-report instrument that included questions related to prescription opioid use. For the purposes of this report, prescription opioid *abuse* refers to either use of prescription opioids obtained illicitly or misuse of prescribed opioids (i.e., using more than prescribed or not as prescribed). Prescription opioid *use* refers to any use of these drugs, including medical and nonmedical use. Information about prescription opioid use and abuse included 1) duration of prescription opioid use, 2) types of prescription opioid used, 3) route of administration, and 4) pain treatment history, including current and past prescriptions for opioids. Participants were also asked about the region and duration of their pain, although specific diagnoses (e.g., fibromyalgia; rheumatoid arthritis) were not assessed. As part of the history, participants identified the most important reason for initiating prescription opioid use from the following

options: *to relieve pain; to get high/for euphoria; to improve sleep; to relieve depressed, sad feelings; to relieve nervousness, anxiety; to deal with bad memories; or, some other reason.* Individuals who endorsed pain relief as their primary reason for initiating prescription opioid use were then asked to report the current reason for continuing to use prescription opioids from the same set of options, with the addition of the item, *to avoid withdrawal.*

To further characterize the study population, the *Composite International Diagnostic Interview* (CIDI) assessed for the presence of major depressive disorder, posttraumatic stress disorder, and substance dependence. The CIDI is a comprehensive, standardized instrument for the assessment of mental disorders as defined by the International Classification of Diseases, 10th Revision (*ICD-10*; World Health Organization, 1992) and *DSM-IV*.

Finally, the *Reasons for Use Questionnaire (RFU)*, a 16-item, self-administered questionnaire that identifies antecedents for substance use, consistent with Marlatt's reasons for use taxonomy (Heather, Stallard, & Tebbutt, 1991; Zywiak et al., 1996), was used to identify the importance of various reasons for prescription opioid use. Using an 11-point numeric rating scale from 0 (not at all important) to 10 (very important), participants rated the importance of each potential reason for prescription opioid use during the preceding 6 months. According to Marlatt & Donovan (2005), the importance of various reasons for use should be considered individually (at the item level) and in aggregate (total scores). In this analysis, we grouped items according to Zywiak et al. (1996), described earlier.

2.5 Data Analysis

Data were analyzed using SPSS Version 18. All statistics utilized two-sided tests of significance with $\alpha=0.05$. Bivariate analyses used chi-square and independent-samples t-tests as appropriate to compare those with and without chronic pain. Groups were compared with respect to both RFU individual items and subscales.

A multivariate model then examined differences in reasons for use between those with and without chronic pain. A logistic regression was used with the presence of chronic pain as the dependent variable and reasons for use as the independent variable. Age was included as a covariate based on significant bivariate associations found between chronic pain and age. The RFU total score without the pain item was also entered as a covariate. Non-withdrawal pain was entered separately from other reasons because it was a focal reason of interest, and because of the substantial between-group difference observed in the bivariate analysis.

3. RESULTS

3.1 Baseline Characteristics

The sample of 653 patients (see Table 2) was 91.3% non-Hispanic white and 60.0% male. Median education was some college ($M=13.0$ years, $SD=2.2$ years); 72.9% were currently employed full- or part-time, and 49.9% had never been married.

The mean age of onset of opioid problems was 28.5 years ($SD=9.9$); mean duration of abuse of prescription opioids was 5.2 years ($SD=4.7$). Most patients had never used heroin (77.0%). This study represented the first opioid dependence treatment episode for most

patients (67.8%). Mean ASI drug composite scores showed high severity ($X=0.34$, $SD=0.07$), with relatively low ASI alcohol composite scores ($X=0.06$, $SD=0.11$).

Overall, 42.0% of participants met criteria for current chronic pain. Among those with chronic pain, 56.9% described their pain as intermittent, rather than constant. Of those with chronic pain, 92.7% had experienced pain for more than one year, with 54.7% reporting at least 4 years of pain. Pain was predominantly located in the spine (48.2%) and lower extremities (31.9%). Scores for pain severity ($X=4.4$; $SD=2.2$) and functional interference ($X=4.2$; $SD=2.7$) were moderate, as defined by previously established cut-off scores on the BPI (Jensen, Smith, Ehde, & Robinson, 2001). Unsurprisingly, the chronic pain group reported significantly more severe pain and more pain-related interference than the group without chronic pain, which reported only minimal pain (see Table 2).

Sociodemographic and substance use characteristics were similar for those with and without chronic pain, with a few exceptions (see Table 2). Patients with chronic pain were older than those without, reported a later age of onset of problems with prescription opioid abuse, and were more likely to have first obtained opioids via a legitimate prescription (all p values <0.001). The chronic pain group was more likely to meet criteria for a current diagnosis of major depressive disorder and less likely to meet criteria for another substance dependence diagnosis.

3.2 Reasons for Prescription Opioid Use

Participants both with and without chronic pain reported that pain relief was their primary *initial* reason for use, but those with chronic pain were significantly more likely than those without chronic pain to report this (83.2% vs. 48.8%, $p<0.001$). The second most common reason for initial use in both groups was to get high was (13.1% of chronic pain, 39.1% of non-chronic pain participants, $p<0.001$), with a small group of participants ($<5\%$ of either group) reporting other reasons, such as anxiety or depression relief, sleep improvement, or avoiding bad memories.

Among those with chronic pain who reported pain relief as the primary initial reason for prescription opioid use, 56.5% reported that avoiding withdrawal was their primary *current* reason for use. The second most common current reason for use was pain relief (22.6%), followed by getting high (13.9%).

3.3 Reasons for Use Questionnaire

The importance of reasons for current prescription opioid use was examined using the RFU Questionnaire (Table 3). Regardless of chronic pain status, avoiding withdrawal (i.e., ill or in pain from wanting prescription opioids) was the most important reason for prescription opioid use. Participants with chronic pain rated relief from physical pain (other than withdrawal) as almost twice as important as those without chronic pain. Physical pain was the only reason that received a higher mean importance rating among patients with chronic pain than among those without chronic pain, and was their second most important current reason for use on average. Participants without chronic pain rated 7 of the 16 reasons for use significantly higher than did patients with chronic pain.

The three RFU subscales identified by Zywiak (1996) were examined (Table 3); no between-group difference was observed for category 1 (coping). In contrast, patients with chronic pain rated categories 2 (social) and 3 (cues/craving/withdrawal) as significantly less important than patients without chronic pain. The total RFU score was greater for those without chronic pain.

The multivariate model examining the association between reasons for use and chronic pain status was significant ($\chi^2(5) = 136.79, p < 0.001$). After adjusting for age, the importance of non-withdrawal related physical pain relief as a reason for use was significantly associated with the presence of chronic pain, and other reasons for use were associated with the absence of chronic pain. Tests of interaction terms for physical pain, withdrawal, and other reasons for use by age and sex were not significant. Secondary analyses also examined reasons for use based on pain severity and interference, with no significant divergence from the final model presented.

4. DISCUSSION

This report examined reasons for prescription opioid use in individuals with and without co-occurring chronic pain who were seeking treatment for prescription opioid dependence. Results indicated that the most common reason for initiating opioid use among participants with and without chronic pain was pain relief; over 80% of those with chronic pain and 49% of those without chronic pain reported that pain relief was their primary reason for initiating opioid use. Participants without chronic pain were significantly more likely than those with chronic pain to report that their reason for initiating use was to get high (39% vs. 13%). Other reasons for initiating use (e.g., to improve sleep or relieve anxiety) were relatively uncommon in both groups. However, among those with chronic pain who initially used opioids for pain relief, avoiding withdrawal was the most common reason for their current use of prescription opioids. Indeed, avoiding withdrawal was rated as the most important reason for current prescription opioid use, regardless of chronic pain status.

Although those with and without chronic pain were similar in sociodemographic and clinical characteristics, several differences emerged in their reports of the importance of various reasons for opioid use. Participants with chronic pain rated pain relief (not associated with withdrawal) as significantly more important than the non-pain group. Many other reasons for use—including boredom, social/interpersonal reasons, craving, and wanting to get high—were rated as more important by those without chronic pain. These reasons for use included interpersonal and intrapersonal issues addressed commonly in substance use disorder treatment (Marlatt & Donovan, 2005; National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2004; National Institute on Drug Abuse [NIDA], 2000). The finding that pain relief was a more important reason for use among those with chronic pain is consistent with previous findings that the presence of co-occurring psychiatric disorders (e.g., posttraumatic stress disorder, social anxiety disorder) is associated with coping with negative affect coping as a reason for use (Cooper, Hildebrandt, & Gerlach, 2014; Waldrop et al., 2007).

The finding that the avoidance of withdrawal was the most important reason for current use is consistent with the key role that physical dependence plays in maintaining opioid

dependence. Obtaining non-withdrawal-related pain relief was the second most important reason for prescription opioid use reported by participants with chronic pain; this was not the case for individuals without chronic pain, who identified a variety of reasons as important for current use.

These findings highlight the potentially important role of physical pain, other than pain from withdrawal, in maintaining prescription opioid use in patients with chronic pain who are dependent upon these drugs. The importance of pain as an ongoing reason for use is particularly notable, given the fact that the patients in this study characterized their pain to be, on average, only moderately severe. It is also possible that patients with chronic pain focus on their physical pain at the expense of the importance of other reasons for use. Thus, it may be important to facilitate patients' better understanding of their myriad reasons for substance use in addition to physical pain.

In light of the importance attributed to physical pain as a reason for prescription opioid use, pain issues should be considered when conceptualizing reasons for use in these patients. For example, behavioral treatments may benefit from an enhanced focus on physical pain as a trigger for opioid use. Similarly, incorporating pain-focused content and referral for pain evaluation as part of standard treatments for opioid dependence may benefit patients with co-occurring chronic pain. This is consistent with clinical guidelines that recommend augmenting opioid agonist treatment with supportive counseling and other combined behavioral and pharmacological approaches with demonstrated efficacy (Woody, 2003).

There are several limitations to the current study. It should be noted that the data reported reflect patients' retrospective attributions for use. As mentioned above, although relieving pain may be endorsed as more important than getting high, this does not necessarily mean that this is an accurate perception. The reasons for use in this analysis were based on Marlatt's taxonomy, leaving open the possibility that other important motivations for use were not identified. The results describe a cohort of patients seeking treatment for prescription opioid dependence, with little or no heroin use; generalizations beyond this particular population should be made with caution. Finally, our analyses included a heterogeneous group of patients with chronic pain enrolled in a clinical trial; this heterogeneity reflects the diversity of pain complaints found in patients seeking treatment for opioid dependence. Reasons for prescription opioid use may vary among subgroups of patients with chronic pain. For example, patients with chronic low back pain may display a different use profile from those with pain originating from a different region (e.g., headaches). Moreover, patients seeking treatment for chronic pain who have a co-occurring opioid use disorder may have different clinical needs from those of patients with pain who are receiving treatment for their opioid use disorder. Future research will benefit from considering possible heterogeneity within prescription opioid dependent patients.

In sum, the results support continued examination of the role of physical pain in the onset and maintenance of prescription opioid dependence. Among these patients, it may be important to consider the functional relationship between pain and continued opioid use as well as the role of other, more traditional reasons for opioid use. The evidence presented

supports the importance of considering pain status and ongoing pain complaints as part of the treatment for opioid dependence.

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Table 1**Prescription Opioid Addiction Treatment Study - Eligibility Criteria**

<u>Inclusion criteria</u>
<ul style="list-style-type: none"> • Ability to read, understand, and provide written informed consent • Age 18 • If female and of childbearing potential, agrees to use an acceptable method of birth control throughout study • Ability to meet study requirements (i.e., can attend weekly visits, able to take medications, etc.) • Meets DSM-IV criteria for current opioid dependence • Current physical dependence on opioids (using prescription opioids 20 days/month) and need for medical assistance for opioid withdrawal • Good general health or, if requires ongoing medical/psychiatric treatment (whether currently in such treatment or not), participant is under the care of a physician willing to continue participant's medical management and to cooperate with study site investigators • Non-psychotic and psychiatrically stable in the opinion of the study investigator • Willingness to provide locator information • Prior to induction, participant is in opioid withdrawal (COWS scale > 8), or alternatively, participant's dose of methadone (if receiving it for pain; those receiving methadone treatment for opioid dependence are excluded) is 40 mg
<u>Exclusion criteria</u>
<ul style="list-style-type: none"> • A medical condition that would make participation medically hazardous • A known allergy or sensitivity to buprenorphine or naloxone • An acute severe psychiatric condition or psychosis • Participant has been a suicide risk within the past 30 days • Dependence on alcohol, sedative-hypnotics, or stimulants, and requiring immediate medical attention • Participation in another investigational drug study within the last 30 days • Participation in methadone or buprenorphine maintenance treatment for opioid dependence within 30 days of study enrollment • A current or pending legal status that would make the participant unlikely to remain in the local area for the duration of the study • If female, participant is pregnant, lactating, or unwilling to follow study required measures for pregnancy prevention • Inability to remain in the local area for the duration of the study • Liver function tests > 5 times the upper limit of normal • Surgery scheduled within the next 6 months that would preclude participation during the active treatment phase of the study • Current participation in formal substance abuse treatment

Table 2

Background characteristics by presence of chronic pain

Background characteristics	Chronic Pain (n=274)	No Chronic Pain (n=379)	P
Age, $\bar{X}$, SD	35.4, 10.3	30.8, 9.7	<.001
Female, %	42.3	38.3	.294
White, %	91.2	93.1	.368
Education, $\bar{X}$ years, SD	12.9, 2.3	13.1, 2.1	.384
Employed full time, %	59.1	65.7	.086
Brief Pain Inventory			
Severity, $\bar{X}$, SD	4.4, 2.2	1.7, 2.1	<.001
Interference, $\bar{X}$, SD	4.2, 2.7	1.7, 2.4	<.001
Substance use			
Ever used heroin	20.1	25.1	.134
ASI alcohol composite score, $\bar{X}$, SD	.05, .09	.06, .12	.106
ASI drug composite score, $\bar{X}$, SD	.33, .07	.34, .07	.215
Opioid use			
Duration not for pain relief ^a , $\bar{X}$, SD	4.6, 1.5	4.4, 1.3	.156
Onset of 1st opioid problems, $\bar{X}$ age, SD	30.8, 10.3	26.8, 9.2	<.001
Opioid dependence treatment ever, %	29.9	33.8	.299
Oxycodone most used opioid in past 30 days, %	28.8	39.8	.004
First source of opioids			<.001
Legitimate prescription from a doctor, %	73.4	39.3	
Someone have them to me, %	13.1	30.1	
Bought from a dealer, %	5.5	15.3	
Other, %	8.0	15.3	
Co-occurring Diagnoses (past year)			
Major Depressive Disorder, %	26.3	18.2	.013
Posttraumatic Stress Disorder, %	14.6	10.3	.096
Other Substance Dependence, %	11.7	18.7	.015

^a[Median=4 (=2 to <4 yrs.) for both Chronic Pain+ & for Chronic Pain-]

Table 3

Reasons for use prescription opioids in the past 6 months by presence of chronic pain

Importance in the past 6 months (0–10)	Chronic Pain (<i>n</i> =274)	No Chronic Pain (<i>n</i> =379)	<i>P</i>
Category 1 (coping) ^a	3.6	3.5	.638
Felt anxious	4.8	5.2	.164
Ill or in pain not from withdrawal	5.7	2.9	<.001
Felt sad	3.8	3.8	.947
Angry/frustrated with self	3.5	3.8	.304
Felt bored	2.8	3.8	<.001
Angry/frustrated due to relationship	3.1	3.4	.254
Worried about a relationship	2.9	3.2	.215
Felt others were being critical	2.0	1.9	.611
Category 2 (social) ^a	2.9	3.9	<.001
Someone offered prescription opioids	3.5	4.6	<.001
With others having a good time	2.8	4.1	<.001
Saw others using	2.3	3.0	<.005
Category 3 (cues/craving/withdrawal) ^a	3.9	4.5	<.001
Ill or in pain from wanting prescription opioid	7.8	8.1	.288
Saw prescription opioids & had to give in	4.8	5.7	.002
Good mood & wanted to get high	3.8	5.0	<.001
Tempted out of the blue	1.9	2.5	.02
Wanted to see what would happen	1.1	1.3	.270
TOTAL RFU score	3.5	3.9	.022

^aSubscales names are based on the original instrument (Zywiak, 1996)

Table 4

Logistic regression of the association between reasons for using prescription opioids and chronic pain status

<u>Predictor variables</u>	<u>Adjusted odds ratios (95% CIs)</u>
Age	1.03 (1.01–1.05)
Male	1.17 (0.81–1.69)
RFU Total (excluding pain)	0.82* (0.75–0.91)
RFU Pain	1.27* (1.21–1.34)

* $p < .001$, CI = confidence interval, RFU = Reasons for Use Questionnaire