Journal of Substance Abuse Treatment 55 (2015) 15–20

Contents lists available at ScienceDirect

Journal of Substance Abuse Treatment

Evaluation of the Current Opioid Misuse Measure Among Substance Use Disorder Treatment Patients

Lisham Ashrafioun, Ph.D. [a,b,*], Amy S.B. Bohnert, Ph.D. [c,d], Mary Jannausch, M.S. [c,d], Mark A. Ilgen, Ph.D. [c,d]

[a] Bowling Green State University, Department of Psychology, 207 Psychology Building, Bowling Green, OH 43403
[b] VA Ann Arbor Healthcare System, Mental Health Service, 2215 Fuller Rd., Ann Arbor, MI 48105
[c] VA Serious Mental Illness Treatment Resource and Evaluation Center (SMITREC), Department of Veterans Affairs Healthcare System, Ann Arbor MI, North Campus Research Complex, 2800 Plymouth Rd Building 14, Ann Arbor, MI 48109
[d] Department of Psychiatry, University of Michigan, Ann Arbor, MI, North Campus Research Complex, 2800 Plymouth Rd Building 10, Ann Arbor, MI 48109

ARTICLE INFO

Article history:
Received 15 July 2014
Received in revised form 2 February 2015
Accepted 22 February 2015

Keywords:
Prescription opioids
Current Opioid Misuse Measure
Substance use disorder

ABSTRACT

The Current Opioid Misuse Measure (COMM) has demonstrated promising psychometric properties among pain clinic and primary care patients. Given the high prevalence of the nonmedical use of prescription opioids among substance use disorder patients, the COMM may also be useful in substance use disorder treatment settings. The purpose of this study was to assess the factor structure and validity of the COMM in a sample of substance use disorder patients. Participants (n = 351) were recruited from a large residential substance use disorder treatment center and completed the COMM and several questionnaires assessing various substance use and health functioning characteristics. Factor analyses yielded a two-factor solution; however, each of the items in the second factor cross-loaded onto the first factor and just one factor was retained. To provide support for this new 11-item COMM, we found that higher scores on this COMM were associated with greater drug use severity, greater endorsement of positive, negative, and pain relief outcome expectancies related to opioid use, increased pain intensity, and decreased physical and mental health functioning. These findings provide initial support for the psychometric properties of this version of the COMM adapted for substance use disorder treatment settings. Given its promising psychometric properties, the 11 items of the COMM to evaluate the nonmedical use of prescription opioids have potential utility among substance use disorder patients. The COMM could be used to examine nonmedical use over the course of treatment and to aid treatment planning. It could also be used in research as an outcome measure.

Published by Elsevier Inc.

1. Introduction

The prevalence of nonmedical prescription opioid use and the number of prescriptions written for opioid analgesics have increased noticeably since 2000 (Compton & Volkow, 2006; Governale, 2010). Research has found that nonmedical prescription opioid use is associated with a number of negative consequences, such as increased medical visits, healthcare costs, emergency department visits, and drug overdoses (Bohnert et al., 2011; Jones, Mack, & Paulozzi, 2013; Leider, Dhaliwal, Davis, Kulakodlu, & Buikema, 2011; Olfson, Wang, Iza, Crystal, & Blanco, 2013; Paulozzi, Kilbourne, & Desai, 2011; Substance Abuse and Mental Health Services Administration, 2013a). Prior research has documented that the nonmedical use of prescription opioids is also common in SUD treatment (Lusted, Roerecke, Goldner, Rehm, & Fischer, 2013; Price, Ilgen, & Bohnert, 2011; Substance Abuse and Mental Health Services Administration, 2013b) with a recent meta-analysis demonstrating that nearly three-fifths of SUD patients reported past-month nonmedical use of prescription opioids (Lusted et al., 2013).

The relatively high prevalence of nonmedical prescription opioid use and pain in SUD treatment suggests a need for a more comprehensive measure of assessing past-month nonmedical use of prescription opioids. SUD treatment settings often rely on the Addiction Severity Index (ASI) to assess recent opioid use. While this is a commonly used measure of substance use in assessing addiction severity (Butler, Villapiano, & Malinow, 2009; Leonhard, Mulvey, Gastfriend, & Shwartz, 2000; McLellan, Luborsky, Woody, & O'Brien, 1980), it may have poor sensitivity for detecting nonmedical prescription opioid use. The ASI uses just one item to assess prescription opioid use and previous research indicates that it underestimates prescription opioid use among SUD treatment settings (Bohnert et al., 2013; Price et al., 2011). The ASI item is focused on "non-prescribed" use of opioids and does not inquire about aberrant use of an opioid that may have occurred in individuals who have a prescription opioid. Nonmedical prescription opioid use consists of a heterogeneous set of behaviors and reasons for use. In some cases, there is a fair degree of nuance required to differentiate between appropriate medical use and inappropriate use by someone who has been prescribed an opioid.

* Corresponding author at: VISN 2 Center of Excellence for Suicide Prevention, Canandaigua VA Medical Center, 400 Fort Hill Avenue, Canandaigua, NY 14424. Tel.: +1 585 393 7577; fax: +1 585 393 7985.
E-mail address: lisham.ashrafioun@va.gov (L. Ashrafioun).

http://dx.doi.org/10.1016/j.jsat.2015.02.007
0740-5472/Published by Elsevier Inc.

The Current Opioid Misuse Measure may be useful in assessing prescription opioid use in SUD treatment settings. This measure has demonstrated predictive validity and can be utilized to monitor continued use. Additionally, the psychometric properties of the COMM have undergone several examinations in more than one setting (Butler et al., 2007; Butler, Budman, Fanciullo, & Jamison, 2010; Meltzer et al., 2011). Butler et al. (2007) developed the Current Opioid Misuse Measure (COMM) for researchers and clinicians to assess past-month nonmedical use of prescription opioids. The COMM is comprised of 17 items that assess frequency of aberrant drug-related behaviors (e.g. taking medications belonging to somebody else, taking more medication than what was prescribed) as well as other behaviors that are more prevalent in pain patients who use prescription opioids nonmedically relative to other pain patients (e.g., difficulty controlling anger, emergency department use). In samples of pain patients, Butler et al. (2007, 2010) found that the COMM had good internal consistency and test–retest reliability, and that a score of nine or greater on this scale was a good indicator of the nonmedical use of prescription opioids.

The utility of the COMM has since been evaluated in primary care settings as well. Meltzer et al. (2011) found that a score of 13 or higher was indicative of the nonmedical use of prescription opioids. In addition, in support of the construct validity, COMM scores were significantly higher among those meeting DSM criteria for opioid dependence compared to non-dependent patients and those meeting dependence criteria for other substances. Taken together, these studies suggest that the COMM has promising psychometric properties among patients in pain clinic and primary care settings.

Because the COMM was originally developed to assess the nonmedical use of prescription opioids among pain clinic patients, the scale in its current form may be less applicable to those in SUD treatment settings. Evaluating the utility of the COMM in SUD treatment settings would allow for the identification of a scale that is more relevant and appropriate for this population. This study aimed to assess the factor structure of the COMM and potential item reduction. Additionally, to assess other aspects of the COMM's validity, this study also sought to examine the associations between COMM scores and other measures of substance use, pain, and health functioning. We expected that higher scores on the COMM would be associated with greater addiction severity, increased endorsement of beliefs such as outcome expectancies, one's response to, relief from, and potential for addiction to pain medications, increased pain, and decreased physical and mental health functioning.

2. Material and methods

2.1. Participants and procedure

Research staff recruited participants from January to November 2009 as part of the screening process from an ongoing randomized trial from a residential SUD treatment center that serves individuals with difficulties from all substances of abuse in a large Midwestern metropolitan area. Individuals who could read English and provide informed consent were eligible to participate. Those eligible individuals who were interested received additional information and provided written consent to participate. We included participants regardless of whether or not they had used prescription opioids or if they were experiencing pain in order to capture a more heterogeneous and representative sample within the recruitment site. Participants ($n = 351$) completed the set of measures described below and were compensated for their participation. We excluded 7 participants because they did not complete each of the 17 items on COMM, which left a sample of 344 participants.

2.2. Measures

2.2.1. Prescription opioid misuse

We used the 17-item COMM (Butler et al., 2007) to assess frequency of behaviors associated with the nonmedical use of prescription opioids. The rating scale on the COMM ranges from 0 ("Never") to 4 ("Very Often"), with higher scores indicating greater nonmedical use of prescription opioids.

2.2.2. Substance use

We used the drug severity composite score of the Addiction Severity Index (McLellan et al., 1980) to assess substance use. The scores for alcohol and drug use composites range from 0 (no endorsement of any problems) to 1 (maximal endorsement of all problems). There is strong support for the psychometric properties of the ASI (Butler et al., 2009; Leonhard et al., 2000; McLellan et al., 1980). Individual items on the ASI asking about use of specific substances (e.g., heroin, cocaine) were also used. The ASI includes an item about prescription opioids that reads "How many days in the 30 days before treatment have you used non-prescribed opiates/analgesics".

2.2.3. Beliefs about pain medications

Beliefs about pain medications were assessed using the Pain Medication Expectancy Questionnaire (PMEQ) and the Pain Medication Beliefs Questionnaire (PMBQ). The PMEQ (Ilgen et al., 2011b) consists of 38 items designed to assess outcome expectancies associated with prescription pain medications. This scale consists of three subscales (Pleasure/social enhancement, Negative experience reduction, and Pain reduction) comprised of statements that respondents are asked to rate the likelihood of each from 0 ("Not at all") to 10 ("Very likely"). Previous research supports the psychometric properties of this measure (Ilgen et al., 2011b). The PMBQ (Schieffer et al., 2005) is a five-item measure that assesses beliefs about one's response to, relief from, and potential for addiction to pain medications. Previous research found that items on the PMBQ were higher among pain patients with substance abuse problems compared to those who were not (Schieffer et al., 2005).

2.2.4. Pain

Pain intensity was assessed using the Numeric Rating Scale of pain intensity (NRS; Farrar, Young, LaMoreaux, Werth, & Poole, 2001), which ranges from 0 ("No pain at all") to 10 ("Worst pain imaginable").

2.2.5. Health functioning

Mental and physical health functioning was assessed using the Short Form Health Survey (Ware, Kosinski, & Keller, 1996). Item responses are used to calculate composite scores on the Physical Components Summary and Mental Component Summary scales. Previous research supports the various aspects of reliability and validity of this measure (Ware et al., 1996).

2.3. Data analyses

We calculated frequency counts, means, and standard deviations on the background and substance use history characteristics to summarize these features of the sample. We analyzed the 17-item COMM using exploratory factor analysis with the unrotated principal components extraction method (Clark & Watson, 1995). Factors were selected whose eigenvalues were greater than 1.0. To assess various aspects of the COMM's validity, we evaluated Spearman correlations between the factors derived from the factor analysis and relevant clinical measures.

3. Results

3.1. Sample characteristics

Overall, three-fourths (75.9%) of the sample was male and 65.7% identified themselves as White. The mean age of the sample was 35.5 ($SD = 10.8$) and 84.4% reported being unemployed. See Table 1 for additional demographic, substance use, and health status characteristics.