Published in final edited form as:

J Subst Abuse Treat. 2015 August ; 55: 15–20. doi:10.1016/j.jsat.2015.02.007.

Evaluation of the Current Opioid Misuse Measure among substance use disorder treatment patients

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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 yield 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 has 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.

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Keywords

prescription opioids; Current Opioid Misuse Measure; substance use disorder

1. Introduction

The prevalence of nonmedical prescription opioid use and the number of prescriptions written for opioid analgesics have increased noticeably since 2000 (Compton and 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 et al., 2013; Leider et al., 2011; Olfson et al., 2013; Paulozzi et al., 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 et al., 2013; Price et al., 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 measure commonly used measure of substance use in assessing addiction severity (Butler et al., 2009; Leonhard et al., 2000; McLellan et al., 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.

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; 2010; Meltzer et al., 2011). Butler and colleagues (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 and colleagues (2007; 2010) found that the COMM had good internal

consistency, 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 and colleagues (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 40 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 et al., 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 et al., 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.

3.2. Factor analysis

As examination of Table 2 reveals, the initial analyses yielded a two-factor solution based on having eigenvalues greater than one. Specifically, the eigenvalues for these factors were 7.85 and 1.70 and they accounted from 92.9% of the variance (76.3% and 16.6%, respectively). To increase the accuracy of the solution, we elected to include only those items whose factor loadings were .50 or higher (Comrey and Lee, 1992). Using this criteria, three items were removed from further analysis because they did not have acceptable loadings (i.e., “How often have you had trouble with thinking clearly or had memory problem,” “How often do people complain that you are not completing necessary tasks,” and “How often have you seriously thought about hurting yourself”). An additional three items (i.e., “How often have you been in an argument,” “How often have you had trouble controlling your anger,” and “How often have you gotten angry with people”) were removed from further analysis were removed due to cross-loading. Following the exclusion of these six items, we re-analyzed the data to assess the stability of the results. We retained the one-factor solution given that the factor loadings in the two analyses were comparable for the first component and there were no other eigenvalues greater than 1.0 (see right column of Table 2 for factor loadings, eigenvalue, and percent variance explained). Internal consistency reliability was excellent ($\alpha = .94$).

3.3. Associations between the 11-item COMM and other key characteristics

The COMM was correlated with several measures that were anticipated to be associated with the nonmedical use of prescription opioids. As displayed in Table 3, there were moderate to large correlations between the COMM and drug use severity, several pain medication beliefs, outcome expectancies of pain medications, pain intensity, and physical and mental health functioning (ρ s range from $|.33|$ to $.57$). Pain medication beliefs such as the overall level of pain relief that is possible from pain medications and the possibility of becoming addicted to pain medications were weakly associated with the COMM ($\rho = .22$ and $.13$, respectively). There was no significant relationship between alcohol use severity and the COMM, which provides support for the discriminant validity of the scale.

4. Discussion

The purpose of this study was to assess various psychometric properties of the COMM in residential SUD treatment settings. Although previous research has provided support for the utility of the COMM in pain clinics and primary care settings, SUD researchers and clinicians would benefit from a reliable and valid measure that evaluates the nonmedical use of prescription opioids. Factor analyses on the COMM identified a one-factor solution and suggested the removal of six items when using the scale in an addictions treatment setting. Specifically, the 11 items demonstrated high factor loadings with limited cross loading, explained more than 75% of the scale’s variance, and showed excellent internal consistency. Additionally, greater frequency of these behaviors was associated with greater drug use

severity, greater endorsement of positive, negative, and pain relief outcome expectancies, increased pain, and decreased physical and mental health functioning.

These findings suggest that the 11 items of the COMM that loaded onto the first factor may be best suited to parsimoniously assess nonmedical prescription opioid use in SUD treatment settings. This is in contrast with the other studies assessing the utility of the 17-item COMM in pain clinics and primary care settings. In the original validation study of the COMM, Butler and colleagues (2007) included pain and addiction expert-selected items in the final measure as long they had greater correlations with prescription opioid use than social desirability. This criterion may not be strict enough when assessing opioid use in SUD treatment settings. Furthermore, previous research shows that substance use is among the best predictors of aberrant drug-related behaviors in samples of pain patients (Edlund et al., 2007; Ives et al., 2006; Liebschutz et al., 2010; Michna et al., 2004; Schieffer et al., 2005). Severity of substance use may not be the best predictor of the nonmedical use of prescription opioids in SUD treatment patients given that many of these patients have an extensive history upon admission to treatment. Further research is needed to examine the psychometric properties and measure utility when used with only these 11 items in a SUD treatment sample.

This investigation was an extension to previous research that utilized the COMM as a crude, dichotomous measure of nonmedical prescription opioid use (Ilgen et al., 2011b; Price et al., 2011). In these studies, an individual was considered to be using prescription opioids nonmedically if they responded at least “rarely” on one out of six selected items from the COMM. The dichotomous measurement of nonmedical prescription opioid use can result in a decrease effect size and result in a loss of individual information (MacCallum et al., 2002). In the present analyses and consistent with previous research, we found that the COMM was significantly associated with greater prescription opioid outcome expectancies, depression, pain intensity, and physical functioning (Price et al., 2011). As these studies suggest, the nonmedical use of prescription opioids may be marker for greater severity of addiction and poorer physical and mental health functioning even among the relatively severe group of patients seen in residential SUD treatment.

Our findings are also consistent with previous research indicating that pain medication outcome expectancies and beliefs were significantly associated with nonmedical prescription opioid use (Ilgen et al., 2011b; Schieffer et al., 2005). The outcome expectancies were among the most highly correlated variables with COMM scores. Although previous research indicates that pain is often under-treated in SUD treatment settings and that those who are self-medicating with nonmedical use of prescription opioids have fewer SUD symptoms (Boyd et al. 2006), we interpret these findings as providing support for the scale’s validity. Prescription opioid outcome expectancies are associated with past prescription opioid use (Ilgen et al., 2011b) and outcome expectancies of other substances predict future substance use (Aarons et al., 2001; Galen & Henderson, 1999; Kilbey, Downey, & Breslau, 1998; Shafer et al., 1991; Sher et al, 1996).

Regarding other prescription opioid beliefs, in their sample of pain clinic patients, Schieffer and colleagues (2005) reported that the specific belief about medications with the strongest

association with the nonmedical use of opioids was the perception that the prescription opioids could be addictive. Specifically, in models adjusted for other prescription opioid-related beliefs, co-occurring psychopathology, and functioning, they found that a greater sense that the medication could be addictive was associated with a greater likelihood of nonmedical prescription opioid use. However, in the present study, we found that the perception that prescription opioids were addictive had the weakest association with the nonmedical use of prescription opioids of all of the specific pain medication beliefs that were examined. This could reflect in treatment settings (i.e., pain clinic vs. SUD treatment center). For example, patients in SUD treatment settings are more likely to be using other substances and, by comparison, may view prescription opioids as somewhat less potentially-addictive than other drugs of abuse. We found that beliefs about having improved functioning with unrestricted access to pain medications and needing more pain medications compared to others with pain were the types of medication-related beliefs with the strongest associations with nonmedical prescription opioid use. This raises the potentially important link between perceptions of need for pain relief and/or the efficacy of opioids and engagement in the nonmedical use of prescription opioids. Addictions treatment programs may want to assess for the patients' perceptions of their pain-related needs and look for potentially effective methods to address these concerns, such as cognitive behavioral interventions for those with SUDs and chronic pain (Ilgen et al., 2011a). Efficacy data are needed on these approaches in this population before it is known whether non-pharmacological approaches to managing chronic pain are associated with improved functioning and reduced substance use after treatment.

There are several limitations of this study. Specifically, it was conducted in one residential treatment center in the Midwest and results might not generalize to other settings or locations. Patients in residential treatment settings may represent individuals with more severe SUD compared to outpatient treatment samples. In addition, patients in residential treatment are in a more restricted environment and may have fewer opportunities to use prescription opioids compared to those in outpatient treatment. Although all participants presumably had a SUD diagnosis, we did not have access to the clinical records so we were not able to verify this or describe the specific diagnoses of the sample. Additional research is needed to replicate the factor structure identified in the current study and to enhance the generalizability of the current findings. Furthermore, this study did not assess other psychometric properties of the COMM that require multiple waves of data collection such as test-retest reliability and predictive validity.

Although initial research of the COMM in pain clinics support the test-retest reliability (Butler et al., 2007), it is unclear the extent to which COMM scores are associated with future substance use or other treatment outcomes. There may also be additional behaviors indicative of the nonmedical use of prescription opioids that are not included in the COMM that are particularly salient in this patient population, such as combining opioids with alcohol or other drug use. Additionally, some of the wording of items may not be applicable for those participants who are not prescribed opioid analgesics. While one way to address this concern could be to add a "not applicable" choice, slight rewording could also alleviate this concern. For example, if item 16 was worded "How often have you used pain medicine for symptoms other than pain" (the only modification to this item was deletion of "your"),

then the response choice “Never” would be applicable regardless if an individual is being prescribed opioid analgesic. Furthermore, we did not first ask participants if they had ever used prescription opioids in the past 30 days and the COMM was administered to some individuals who may have not taken any prescription opioids during this time. Researchers and clinicians should consider including an initial item asking about any prescription opioid use in the past 30 days so that the COMM is administered to only those who report use. By endorsing use in the past 30 days and not endorsing any COMM items, this could also help identify those SUD treatment patients who are receiving prescription opioids for legitimate pain and are taking them as prescribed.

4.1 Conclusions

These limitations notwithstanding, this study provides initial support for the psychometric properties of an 11-item version of the COMM. Existing measures assessing prescription opioid use, such as the Addiction Severity Index and the Brief Addiction Monitor, comprise few items that ask respondents if and how many days, in the past 30, prescription opioids were used. Given the high prevalence of pain and nonmedical use of prescription opioids in SUD treatment (Lusted et al., 2013; Price et al., 2011; Rosenblum et al., 2003; Trafton et al., 2004), using a more extensive measure of nonmedical prescription opioid use, such as the COMM, would be beneficial. Clinicians and researchers could use this modified COMM for ongoing assessment of nonmedical prescription opioid use over the course of SUD treatment. These assessments could be used as a treatment planning tool to aid in clinician decision making (e.g., changing frequency of visits, urine screens) and facilitate patient-clinician dialogue regarding use.

Although pain is common in SUD treatment, the COMM could be used to assess prescription opioid use outside the context of pain treatment considering that not all patients who use prescription opioids have pain. Nonetheless, given the genesis of this assessment measure in pain treatment settings, the tool may be particularly useful for individuals in addictions treatment whose prescription opioid use is related to pain. The current investigation suggests that removal of the items with relatively weak factor loadings and weaker association with clearer indicators of nonmedical prescription opioid use may allow for a more parsimonious assessment. This modified version used in SUD settings may provide more accurate insights about relationships between clinical factors and prescription opioid use because it eliminates of extraneous items that are less relevant to this group. On the other hand, eliminating these items could result in change in the way the measure is perceived by respondents. For example, we eliminated most of the items that do not directly ask about aberrant opioid use, which appears to enhance the face validity of the COMM making the purpose of the assessment more readily apparent. Therefore, if using the 11-item COMM it may be beneficial to conduct urine screens to corroborate self-report on the COMM. Additional developmental research of the shortened measure is needed. For researchers, the COMM could be used as an outcome measure to assess the comparative efficacy of treatments designed to reduce medication use. Given the brevity of this modified COMM, researchers could administer it at baseline and follow-ups with relative ease.

Acknowledgments

We appreciate support for this study from NIDA grant R01DA029587. Dr. Ashrafioun's work was supported in part by the Office of Academic Affiliations, Advanced Fellowship Program in mental Illness Research and Treatment, Department of Veteran Affairs.

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Highlights

- We examined the psychometric properties of the Current Opioid Misuse Measure (COMM).
- The COMM was best interpreted as one-factor with excellent internal consistency.
- The COMM was significantly associated with key substance use characteristics.
- The COMM showed promising psychometric properties in addiction treatment settings.
- Clinicians could use the COMM to track prescription opioid use in treatment.

Table 1

Participant demographic, substance use, pain, and health status characteristics

Characteristic	Overall sample N = 344
Demographics	
Age (Mean, SD)	35.5 (10.8)
Male	258 (76%)
White	226 (66%)
Currently married/partnered	62 (18%)
Unemployed	286 (84%)
Current Living arrangement	
All controlled environment (Jail, Inpatient treatment, group home, etc.)	113 (33%)
All other living arrangements (Own, Rent, live w/Family or Friends, etc.)	193 (57%)
Homeless	34 (10%)
Substance use	
Non-prescribed opiate/analgesic use-past 30 days (% yes) [†]	88 (26%)
Heroin use-past 30 days (% yes) [†]	76 (22%)
Alcohol use-past 30 days (% yes) [†]	156 (47%)
Non-prescribed sedatives-past 30 days (% yes) [†]	72 (21%)
Cocaine use-past 30 days (% yes) [†]	134 (39%)
Cannabis use-past 30 days (% yes) [†]	113 (33%)
Past month frequency (days) of prescription opioid use (Mean, SD)	3.7 (8.9)
Alcohol Addiction Severity (Mean, SD)	0.30 (0.24)
Drug Addiction Severity (Mean, SD)	0.29 (0.31)
COMM (Mean, SD)	11.4 (12.0)
Pain Medication Beliefs	
Improved pain control with personal control of meds (Mean, SD)	3.3 (1.0)
Possibility of addiction (Mean, SD)	3.9 (1.3)
Better function in activities of daily living with free access to meds (Mean, SD)	2.9 (1.4)
Effects of pain meds on mood (Mean, SD)	3.7 (1.2)
Amount of meds needs compared to others (Mean, SD)	2.9 (1.4)
Pain Medication Expectancies	
Pleasure/Social Enhancement (Mean, SD)	58.1 (48.4)
Negative Experience Reduction (Mean, SD)	53.1 (39.4)
Pain Reduction (Mean, SD)	45.4 (21.4)
Health status	
Any pain (% yes)	275 (80%)
Usual pain level (Mean, SD)	3.9 (2.9)
Physical functioning (Mean, SD) ^{††}	48.0 (10.7)

Characteristic	Overall sample <i>N</i> = 344
Mental health functioning (Mean, SD) ^{††}	41.1 (12.9)

[†] Past 30 day substance use is derived from the Addiction Severity Index

^{††} Mental and physical health functioning scores are derived from the SF-12.

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Table 2

Descriptive statistics, factor structure, and factor loadings of the Current Opioid Misuse Measure

Items	Mean (SD)	Factors		
		1	2	1*
1. How often have you had trouble with thinking clearly or had memory problems?	2.0 (1.3)	.44	.28	-
2. How often do people complain that you are not completing necessary tasks (i.e., doing things that need to be done, such as going to class, work, or appointments)?	1.2 (1.2)	.47	.32	-
3. How often have you had to go to someone other than your prescribing physician to get sufficient pain relief from your medication (i.e., another doctor, the ER)?	1.0 (1.3)	.66	-.04	.65
4. How often have you taken your medications differently from how they are prescribed?	1.3 (1.5)	.82	-.16	.83
5. How often have you seriously thought about hurting yourself?	0.5 (0.9)	.44	.28	-
6. How much of your time was spent thinking about opioid medications (having enough, taking them, dosing schedule, etc.)?	1.0 (1.4)	.78	-.25	.81
7. How often have you been in an argument?	2.0 (1.1)	.45	.62	-
8. How often have you had trouble controlling your anger (e.g., road rage, screaming)?	1.5 (1.2)	.49	.64	-
9. How often have you needed to take pain medications belonging to someone else?	1.0 (1.4)	.89	-.11	.90
10. How often have you been worried about how you're handling your medications?	0.8 (1.2)	.74	-.21	.76
11. How often have others been worried about how you're handling your medications?	1.0 (1.4)	.82	-.21	.84
12. How often have you had to make an emergency phone call or show up at the clinic without an appointment?	0.7 (1.0)	.61	-.11	.63
13. How often have you gotten angry with people?	2.9 (1.1)	.44	.59	-
14. How often have you had to take more of your medication than prescribed?	1.1 (1.4)	.86	-.23	.89
15. How often have you borrowed pain medication from someone else?	1.2 (1.4)	.89	-.14	.90
16. How often have you used your pain medicine for symptoms other than for pain (e.g., to help you sleep, improve your mood, or relieve stress)?	1.2 (1.5)	.83	-.16	.85
17. How often have you had to visit the emergency room?	1.2 (1.2)	.55	.06	.53
Eigenvalues (% variance explained)		7.85 (76%)	1.7 (17%)	6.8 (93%)

Note. Values in bold represent the factor assignment for each unique item. Items without an assigned factor were dropped from the measure due to low factor loadings or cross-loading.

* Re-analysis following item removal

Table 3

Spearman correlations between the 11-item Current Opioid Misuse Measure (COMM) scores and clinical factors

Characteristics	Correlations (95% CI)
Alcohol Addiction Severity	0.07 (−0.03, 0.18)
Drug Addiction Severity	0.43 ^A (0.34, 0.51)
Past month frequency of prescription opioid use	.40 ^A (0.31, 0.49)
Pain Medication Beliefs	
Improved pain control with personal control of meds	0.22 ^A (0.11, 0.31)
Possibility of addiction	0.13 ^A (0.02, 0.23)
Better function in activities of daily living with unrestricted access to meds	0.48 ^A (0.39, 0.56)
Effects of pain meds on mood	0.33 ^A (0.24, 0.42)
Amount of meds needed compared to others	0.56 ^A (0.48, 0.63)
Pain Medication Outcome Expectancies	
Pleasure/social enhancement	0.51 ^A (0.43, 0.39)
Negative experience reduction	0.57 ^A (0.49, 0.63)
Pain reduction	0.57 ^A (0.50, 0.64)
Any pain experienced	0.28 (0.17, 0.38)
Usual pain level	0.39 ^A (0.29, 0.47)
Physical functioning	−0.33 ^A (−0.42, −0.23)
Mental health functioning	−0.39 ^A (−0.47, −0.29)

^A
p < 0.05