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Motives for Using: A Comparison of Prescription Opioid, Marijuana and Cocaine Dependent Individuals

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Abstract

Identification of the motives for drug use is critical to the development of effective interventions. Furthermore, consideration of the differences in motives for drug use across substance dependent populations may assist in tailoring interventions. To date, few studies have systematically compared motives for substance use across drug classes. The current study examined motives for drug use between non-treatment seeking individuals with current prescription opioid, marijuana, or cocaine dependence. Participants (N = 227) completed the Inventory of Drug-Taking Situations (IDTS; Annis, Turner & Sklar,1997), which contains eight subscales assessing motives for drug use. The findings revealed that prescription opioid dependent individuals scored significantly higher than all other groups on the Physical Discomfort, Testing Personal Control and Conflict with Others subscales. Both the prescription opioid and cocaine dependent groups scored significantly higher than the marijuana group on the Urges or a Temptation to Use subscale. In contrast, marijuana dependent individuals scored highest on the Pleasant Emotions and Pleasant Times with Others subscales. The marked differences revealed in motives for drug use could be used in the development and implementation of specific treatment interventions for prescription opioid, marijuana and cocaine dependent individuals.

Keywords

opiates; marijuana; cocaine; motives; IDTS

1. Introduction

Identification and enhanced understanding of motives for drug abuse is critical for the development of effective prevention efforts, behavioral interventions, and pharmacotherapies (Substance Abuse and Mental Health Services Administration, 2010a). If it is assumed that the majority of substance use is intentional goal-directed behavior, understanding specific motivations that elicit use will improve understanding of drug abuse

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(Pomazal & Brown, 1977). DiClemente (1999), a pioneer in motivation theory, defines motivation as the "causes, considerations, reasons, and intentions that move individuals to perform certain behaviors or set of behaviors" and from this perspective most human behavior can be viewed as motivated whether driven by unconscious motives, self-regulation, or contingencies. Therefore, it is generally understood that motivations to use drugs of abuse are related to the external environment, as well as internal emotions and cognitions. Additionally, motivations for drug use are thought to be related to the specific drug's desired effects. Given the varying pharmacological effects across substances of abuse, motives for consumption likely differ. Rigg and Ibañez (2010) found that the most common motives for non-medical prescription drug use among street-based, primarily poly-illicit, drug abusers were "to get high," "to sleep," and "for anxiety/stress." A recent large web survey of full-time, undergraduate college students identified pain relief, getting high, and experimentation as the most common reasons for nonmedical use of prescription opioids (McCabe, et al., 2007). In another study of college students, expanding experiential awareness (e.g., perceptual and cognitive enhancement) was endorsed more as a motive for marijuana compared to alcohol use (Simons, Correia, & Carey, 2000). Among recent high school graduates, the most common motives for marijuana use were enjoyment, conformity, experimentation, social enhancement, and boredom (Lee, Neighbors, & Woods, 2007). In a survey of Latino gay men, the most common reasons to use stimulants such as cocaine and methamphetamine (MA) were increased energy, sexual enhancement, social connection, coping with stress, and work productivity; users consumed cocaine more often for social connection compared to MA (Diaz, Heckert, & Sanchez 2005). In a study conducted by our group investigating motives to use among alcohol and cocaine dependent individuals, cocaine was more frequently used than alcohol in response to temptations and urges (Waldrop, et al., 2007a). Ecological momentary assessment (EMA), during which participants record activities and mood in real time, has allowed for a more finely detailed approach to study drug use (Shiffman, 2008). In an EMA study of cocaine and heroin abusing outpatients on methadone maintenance, the use of cocaine was significantly associated with reports that they "saw the drug," "were tempted to use out of the blue," "wanted to see what would happen if I used," or "were in a good mood" (Epstein et al., 2009). These varying reports demonstrate important differences in motivations to use; however, comparison of the results is difficult as a standard instrument was not used across studies.

The Inventory of Drinking Situations (Annis, 1982) and the Inventory of Drug-Taking Situations (IDTS; Annis & Martin, 1985) were developed to systematically assess external (e.g., being around others who are using substances) and internal (e.g., feeling depressed) stimuli that trigger or are strongly associated with drug use. The IDTS has been utilized to compare relapse risk between alcohol and heroin dependent individuals (Gaily & Bashir, 2004), to examine the relationship between a history of abuse, sensitivity to daily stressors, and relapse in cocaine dependence (Waldrop, et al., 2007b), and to explore gender differences in drinking (Lau-Barraco, Skewes, & Stasiewicz, 2009). However, to date, responses to the IDTS have not been compared among individuals with other substance dependence diagnoses.

According to 2009 National Survey on Drug Abuse and Health (NSDUH; N=67,500), the most commonly reported illicit drugs consumed are marijuana (6.6%), opioid pain relievers (2.8%), and cocaine (1.7%) (Substance Abuse and Mental Health Services Administration, 2010b). Therefore, examining reasons for use of these substances is of particular relevance, and consequently, marijuana, prescription opioid, and cocaine dependent groups were selected to explore motivational differences in using the primary drug of interest. Based on the extant literature and previous research from our group, we hypothesized that motives to use would vary by substance dependent group with the marijuana dependent group using

more to enhance enjoyment, the prescription opioid dependent group using more in response to pain and physical discomfort, and the cocaine dependent group using more in response to urges and temptations to use.

2. Methods

2.1. Participants

Participants (N = 227) were non-treatment seeking individuals enrolled in one of three laboratory studies between 2008 and 2011: (1) an investigation of the relationship between reactivity to psychosocial stress and drug cue exposure among individuals with current prescription opioid dependence (n = 39); (2) an investigation of the relationship between reactivity to psychosocial stress and drug cue exposure among individuals with current marijuana dependence (n = 106); and (3) a study of the relationship between reactivity to pharmacologic-induced stress and drug cue exposure among individuals with current cocaine dependence (n = 84). Newspaper, internet, radio, and television advertisements were the primary source of recruitment. Institutional Review Board-approved informed consent was obtained before any study procedures occurred. Participants were compensated for their time and effort, ranging from $150 to approximately $450 for studies requiring overnight hospital stays.

2.2. Procedures

2.2.1. Participants—Individuals were screened over the telephone, and if eligible, a clinical interview and a history and physical examination were completed at the Clinical Neuroscience Research Clinic at the Medical University of South Carolina. General inclusion criteria included: Diagnostic and Statistical Manual of Mental Disorders-IV (DSM-IV) criteria for current substance dependence for the respective substance and good health. General exclusion criteria included: pregnancy or nursing; body mass index ≥ 39; major medical or comorbid psychiatric conditions; or meeting DSM-IV criteria within the past 60 days for abuse or dependence on a substance other than the focus of the study in which participants were enrolled.

2.2.2. Assessments—Substance use disorders were assessed with the Structured Clinical Interview for DSM-IV (First, Spitzer, Gibbon, & Williams, 2002). The IDTS (Annis, Turner, & Sklar, 1997), a 50-item self-report form, assessed the types of situations in which individuals most often use their substance of choice (i.e., prescription opioids, marijuana, or cocaine). The IDTS allows for problem scores to be generated for the following eight subscales: (1) Unpleasant Emotions (e.g., depressed mood, boredom, or loneliness); (2) Physical Discomfort (e.g., headache, physical pain, nausea, or trouble sleeping); (3) Pleasant Emotions (e.g., happiness, relaxation, or contentment); (4) Testing Personal Control (e.g., “prove to myself that these drugs are not a problem for me”); (5) Urges/Temptations (e.g., thinking about previous high or seeing a reminder of drug use); (6) Conflict with Others (e.g., fights at home or sense of rejection); (7) Social Pressure (e.g., in presence of others using drugs and expected to join in); and (8) Pleasant Times with Others (e.g., increase enjoyment with friends or celebrations). These eight subscales are then compiled into three global categories: (1) Negative Situations (i.e., Unpleasant Emotions, Physical Discomfort, Conflict with Others); (2) Positive Situations (i.e., Pleasant Emotions, Pleasant Times with Others); and (3) Temptation Situations (e.g., Social Pressure, Urges/Temptations, Testing Personal Control). The IDTS has demonstrated high levels of validity and reliability with a Cronbach coefficient alpha of .95 for the IDTS total (a measure of internal consistency), and a range of .70 to .87 for the six subscales (Turner, Annis, & Sklar, 1997). All participants completed the clinical interview and the IDTS during the baseline visit before any laboratory procedures occurred.

2.3. Statistical Analyses

Differences in demographic variables between the groups of interest were determined using chi-square and Kruskal Wallis tests. Kruskal Wallis tests were used to determine overall group differences in IDTS Factors and summary scores. The pair-wise group comparisons were examined with Wilcoxon rank sum tests. A p-value of <0.05 was considered a significant finding. To test the association between global and individual IDTS Factor scores and group, generalized linear models were used with the Factor scores as the dependent variable and group as the independent variable. Differences in a number of demographic variables resulted in inclusion of the demographics as covariates. Due to multiple comparisons, Bonferroni adjustment was applied to p-values obtained from these models; thus, a $p<0.006$ was considered a significant finding. For Factors in which group was a significant predictor or exhibited a trend towards significance, an incremental series of exploratory models were run by adding demographic variables in the order of significance based on the full model. These models were examined to better understand the antagonism and synergism between the demographic variables and the independent predictor, group, and their overall effects on the factor scores. All analyses were performed in SAS (SAS/STAT software, Version 9.2, SAS Institute Inc., Cary, NC, USA).

3. Results

3.1. Demographic Information

As can be seen in Table 1, significant group differences were revealed in most demographic characteristics. Participants in the prescription opioid group were more likely to be female compared to the marijuana and cocaine groups ($p=0.02$), and more likely to be Caucasian as compared to individuals in the cocaine group ($p<0.0001$). Individuals in the marijuana group, as compared to individuals in the prescription opioid and cocaine groups ($p<0.0001$, $p<0.0001$, $p=0.01$, and $p<0.0001$, respectively), were significantly younger, had a higher education level, were more likely to be employed, and less likely to smoke cigarettes. Also of note, the cocaine group consisted predominantly of crack cocaine dependent individuals (65%).

3.2. IDTS Factor Scores

3.2.1. Global IDTS Scores—As shown in Table 2, the IDTS summary scores were significantly different among the three drug groups prior to the introduction of covariates. The prescription opioid dependent group was significantly more likely than the cocaine and marijuana groups to use for Negative Situations ($p=0.01$). The marijuana group was significantly more likely than the prescription opioid and cocaine groups to use for Positive Situations ($p<.0001$). Finally, the cocaine group was significantly more likely than the marijuana and prescription opioid groups to use because of Temptation Situations ($p=0.02$).

3.2.2. Subscales—Prior to the introduction of covariates, the initial analysis, as seen in Table 3, showed that Factors 2 (Physical Discomfort), Factor 3 (Pleasant Emotions), Factor 4 (Testing Personal Control), and Factor 8 (Pleasant Times with Others), were significantly different among the prescription opioid, cocaine and marijuana groups ($p=<0.0001$, $p=0.0004$, $p=<0.0001$, and $p=0.0001$, respectively). The prescription opioid group was more likely to use because of Physical Discomfort ($p<0.05$), Testing Personal Control ($p<0.05$), and Conflict with Others ($p<0.05$). The marijuana group was more likely to use to elicit Pleasant Emotions and Pleasant Time with Others. The cocaine group's pattern of use more closely followed that of the prescription opioid group, with less use in Factor 3 (Pleasant Emotions) and Factor 4 (Testing Personal Control situations), than the marijuana group. However, similar to the marijuana group, the cocaine group used less in response to Factor 2

(Physical Discomfort) and Factor 6 (Conflict with Others) than the prescription opioid dependent group.

3.2.3. Adjusted Model Results—The demographic variables used as covariates included gender, race, education level, smoking status, employment level, and age, as these were the statistically significant different among the three groups. The groups did not differ on marital status (Table 1). After adjusting for covariates and multiple comparisons in the Global IDTS Scores, group and gender were significant predictors of the Global Negative Situations score ($p=0.006$ and $p=0.0002$, respectively). Employment status also trended towards significance ($p=0.06$). Group was a significant predictor of the Global Positive Situations score ($p=0.04$); however, after controlling for multiple comparisons, group was no longer considered a significant predictor ($p>0.006$). Employment level also trended towards significance ($p=0.09$). With respect to the Global Temptation Situations score, group, gender, and employment level were all trending towards significance; however, none reached the desired level of $p<0.006$ after controlling for multiple comparisons ($p=0.08$, $p=0.06$, and $p=0.09$, respectively).

For the individual IDTS Factor scores, gender was shown to be a significant predictor of Factor 1 (Unpleasant Emotions; $p=0.002$), while employment level trended towards significance ($p=0.04$). Group was not a significant predictor of Factor 1 (Unpleasant Emotions; $p>0.006$). Group was a significant independent predictor of Factors 2 (Physical Discomfort; $p<0.006$) and Factor 4 (Testing Personal Control; $p<0.0001$). Gender was also found to be a significant predictor of Factor 2 (Physical Discomfort; $p=<0.0001$), and gender, race, and employment level trended towards significance for Factor 4 (Testing Personal Control) with $p=0.02$, $p=0.04$, and $p=0.05$, respectively. In the model for Factor 3 (Pleasant Emotions), group was not found to be significant, but gender and employment status exhibited a trend towards significance ($p=0.02$ and $p=0.05$, respectively). Group and race showed trends towards significance in the model for Factor 6 (Conflict with Others) with $p=0.01$ and $p=0.07$, respectively, and gender was found to be a significant predictor after controlling for multiple comparisons ($p=0.001$). In the model for factor 8 (Pleasant Times with Others), group exhibited a trend towards significance ($p=0.02$). There were no significant findings or trends shown in the models for Factor 5 (Urges and Temptation) or Factor 7 (Social Pressure to Use).

3.2.4 *Exploratory Analyses*—A set of exploratory analyses for each IDTS factor were run to determine the antagonism and synergism between the independent predictor, group, and the set of covariates in order to better understand the relationship between the group variable and the individual IDTS factor scores. Group was a significant independent predictor of Factors 2 and 4 (Physical Discomfort and Testing Personal Control, respectively), regardless of which demographic variables were added into the models (Bonferonni adjusted $p<0.006$ for group in both models). Group also showed a trend towards corrected significance for Factor 3 (Pleasant Emotions; $p<0.05$), with employment level, gender, and education level in the model; however, when age was added to the model, antagonism among the variables in the model caused the p-value of group to rise above 0.05 level. The addition of smoking status and/or race did not change these results. Group showed trends towards significance in the models for Factors 6 and 8 (Conflict with Others and Pleasant Time with Others, respectively) when all covariates were in the model ($p<0.05$). With regard to the Factor 6 model (Conflict with Others), the p-value for group rose above the Bonferroni cut-off of $p<0.006$ when smoking status, age, and education level were added to the model. Group was a significant predictor of Factor 8 (Pleasant Times with Others), both univariately and when smoking was added into the model ($p<0.006$); however, once age was added, and after controlling for multiple comparisons, group was no longer a significant predictor. A trend towards significance remained as each additional covariate

was added to the model ($p<0.05$), even though it did not reach the Bonferonni cutoff. Group was not a significant predictor of Factors 1, 5, or 7 (Unpleasant Emotions, Urges and Temptation, and Social Pressure to Use, respectively) in univariate or multivariate models.

4. Discussion

4.1. Interpretation of Results

Findings revealed a number of similarities, as well as significant differences, in motives for drug use among the three different substance dependent groups. Almost half of participants across all three groups used their primary substance of choice in response to Unpleasant Emotions, Urges and Temptations, and Social Pressure. Individuals with marijuana dependence, however, were more likely to use marijuana with friends and for increased enjoyment and pleasure. In contrast, individuals with prescription opioid and cocaine dependence were more likely to take drugs in response to urges or a temptation to use. Uniquely, individuals with prescription opioid dependence were more likely to identify Physical Discomfort, such as pain or difficultly falling asleep, as a primary trigger for substance use.

In part, the noted differences are not surprising given the disparities among the three groups. However, the group differences observed in demographic variables are fairly representative of the demographic differences in clinical populations using these substances, making the results clinically relevant. The marijuana group was significantly younger, better educated, employed at higher rates, and smoked cigarettes at lower rates than the prescription opioid and cocaine groups. The prescription opioid group was predominantly female and Caucasian compared to the marijuana and cocaine groups. The vast majority of all three groups were unmarried. These findings are consistent with previous research. For example, on average, marijuana use is initiated at a younger age (17 years) compared to cocaine (20 years) or pain relievers (22 years) (SAMSHA, 2010). Similar to the prescription opioid group in the current study, the Kentucky Treatment Outcome Study (KTOS) found a greater proportion of prescription opioid users presenting for publicly funded treatment were female, Caucasian, unmarried, and unemployed compared to non-users (Mateyoke-Scrivner, et. al., 2009). The primarily crack cocaine group's demographic data was consistent with previous research reporting that these users, compared to powdered cocaine users, are more likely to be male, African-American, less likely to have a high school education, and report lower income levels (Vaughn, et al., 2010).

Differences in motives related to physical discomfort remained significant after controlling for multiple comparisons and covariates. Individuals with prescription opioid dependence reported using substances more often to relieve Physical Discomfort than did individuals with marijuana or cocaine dependence. The nonmedical use of prescription opioids is a growing area of public health concern with the proportion of substance abuse treatment admissions for prescription opioid abuse increasing more than fourfold between 1998 and 2008 (Substance Abuse and Mental Health Services Administration, 2010). As opioids are routinely used for the treatment of pain, using prescription opioids in response to physical discomfort among the prescription opioid dependent is not unanticipated; however, it does appear to be a specific motive for aberrant consumption in the prescription opioid dependent group. Other studies investigating prescription opioid use among non-treatment seeking prescription opioid dependent individuals have reported pain as one of the main reasons for taking these medications (Back, Lawson, Singleton, & Brady, in press). Taken together, these investigations highlight the prevalence of somatic concerns among prescription opioid users, and suggest that effective interventions for prescription opioid dependence need to include alternative strategies for managing pain. As pain and physical discomfort may be real struggles for individuals with opioid dependence, addressing these symptoms may

require both somatic and psychosocial interventions. Cognitive behavioral therapy (CBT), in particular, has been consistently found to be effective in the treatment of chronic non-cancer pain (CNCP) and current guidelines also suggest progressive relaxation, biofeedback, and therapies focused on functional restoration as potentially beneficial therapeutic options (Chou, 2009).

The prescription opioid and cocaine dependent groups were more likely to identify Testing Personal Control as a motive for use, as compared to the marijuana group. The perception of personal control is generally a desirable state, resulting in positive effects and reactions (Burger, 1989). One of the motivations to engage in challenging situations may be to develop a sense of mastery and competence and to serve as a means to combat the sense of being “out of control”, a common feature of substance use disorders (White, 1959). In a recent large treatment study of marijuana dependent adults, long term abstinence was predicted by the use of coping skills and, in particular, self-efficacy for maintaining sobriety (Litt, et al., 2008). Research has indicated that the experience of mastery in a situation promotes self-efficacy (Bandura, 1977). From this perspective, therapies that increase coping and refusal skills leading to successful experiences, are useful strategies to improve self-efficacy, and reduce the sense of being “out of control” (Marlatt & Gordon, 1985). The marijuana group was unique compared to the other two groups in motivations related to Pleasant Emotions and Pleasant Times with Others. As such, lifestyle management with a goal of finding alternative positive reinforcement in the natural environment might be particularly relevant in the treatment of marijuana-dependent individuals. For example, the Community Reinforcement Approach encourages progressive involvement in alternative non-drug related pleasurable social activities (Meyers, Roozen, & Smith, 2011). Alternatively, trials of positive reinforcement with voucher-based contingency management have been found to be efficacious in promoting abstinence in marijuana dependent individuals (Budney, 2000). Of note, the marijuana group was the most educated, youngest, and least likely to smoke cigarettes. In a 1997 US national self-administered survey of over 17,000 college students, marijuana use was associated with being male and single, spending more time with friends, and spending less time studying (Bell, Wechsler, & Johnston, 1997). DeMarce and colleagues (2005) examined confidence ratings in ability to resist marijuana in high-risk situations among adult marijuana users, and found that participants had lower self-efficacy ratings for non-psychologically distressing situations as compared to psychologically distressing situations, further suggesting that marijuana is more likely to be used in times of Pleasant Emotions.

4.2. Limitations

As participants in the studies were non-treatment seeking, the results may not generalize to treatment-seeking individuals. As people contemplate change and enter treatment, the motivations to use may change and diminish. Re-assessment of motivations at different time points in the treatment process could potentially be useful in tailoring specific strategies to decrease the risk of relapse. Repeated structured assessments, such as the IDTS and clinical evaluations of motives, are potentially useful options in addressing motivation to use over time. Significant demographic differences and number of participants in the groups may also limit the comparability; however, as previously discussed, the samples likely represent different substance dependent populations within clinical populations. Information gathered in the study was retrospective, which may have biased responses, as retrospectively recalled motives to use may differ from information gathered in the moment (Ferguson & Shiffman, 2011). However, the IDTS is a well studied and validated instrument employed in both clinical and research settings, and as such, was considered an appropriate instrument to assess the specific aim of this study.

4.3. Conclusions

To our knowledge, this is the first study to compare differences and similarities in motivations for drug use across varying substance abusing populations. Motivational differences for drug use were found across the different substance dependent groups, with the marijuana dependent group using more in response to enhancing enjoyment and social times with others. The prescription opioid and cocaine dependent groups tested personal control more than the marijuana group. The prescription opioid group identified pain and bodily discomfort more commonly than the other two groups. Recognition of common problematic triggers for drug use can aid clinicians in the identification of drug-using situations. Further, appreciation of motives unique to sub-populations of substance dependent individuals can aid in the development of tailored strategies to help patients cope with high-risk situations as part of treatment and aftercare.

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Highlights

- Motives to use differ among substance dependent populations.
- Utilizing the IDTS, the marijuana dependent group was more likely to use to elicit pleasant emotions.
- The prescription opioid dependent group was more likely to take opioids in situations related to pain and physical discomfort than the marijuana and cocaine dependent groups.
- Cocaine and prescription opioid dependent groups used in tempting settings more than the marijuana group.

Table 1

Demographic Characteristics (N = 229)

Characteristics	Prescription Opioid (n = 39)	Marijuana (n = 106)	Cocaine (n = 84)	p-value
Age, Mean (SD)	37.4 (12.6)	25.4 (8.2)	41.6 (9.3)	**<0.0001**
Gender, % Male	41.0	67.0	63.1	**0.02**
Race				
% Caucasian	87.2	60.4	28.6	**<0.0001**
% African American	7.7	34.0	71.4	
Marital Status, % Married	20.5	8.5	11.9	**0.14**
Employment Status, % Employed[a]	38.5	52.8	32.1	**0.01**
Smoking status, % Smoker	84.6	45.3	83.3	**<0.0001**
Education, % High School Graduate	**33.3**	**73.6**	**29.8**	**<0.0001**

[a] Full or Part Time

Table 2

IDTS Summary Scores among Individuals with Prescription Opioid, Marijuana or Cocaine Dependence

IDTS Summary Score	Prescription Opioid	Marijuana	Cocaine	
	M (SD)	M (SD)	M (SD)	p-value
Global Negative Scale	149.5 (89.2)	104.9 (54.4)*	101.8 (61.9)*	0.01
Global Positive Scale	100.5 (56.6)	125.1 (34.8)*	97.3 (45.0)*^	<0.0001
Global Temptation Scale	140.6 (88.7)	115.1 (54.3)	140.1 (59.6)^	0.02

Unadjusted group comparisons done with Kruskal Wallis

Pairwise comparisons done with Wilcoxon

* = p<0.05 compared with Opiates

^ = p<0.05 compared with Marijuana

Table 3

Inventory of Drug Seeking Situations among Individuals with Opiate, Marijuana or Cocaine Dependence

IDTS Factor	Prescription Opioid	Marijuana	Cocaine	
	M (SD)	M (SD)	M (SD)	p-value
Factor 1: Unpleasant Emotions	51.5 (34.3)	44.5 (21.8)	43.8 (24.6)	0.55
Factor 2: Physical Discomfort	54.8 (24.8)	34.1 (19.9)*	28.2 (21.2)*^	<0.0001
Factor 3: Pleasant Emotions	49.4 (31.5)	60.7 (19.8)*	47.5 (25.0)^	0.0004
Factor 4: Testing Personal Control	43.1 (33.0)	20.8 (20.1)*	38.7 (23.4)^	<0.0001
Factor 5: Urges/Temptation	53.8 (28.3)	49.8 (20.9)	54.8 (21.7)	0.36
Factor 6: Conflict with Others	43.2 (34.8)	26.3 (21.2)*	29.8 (24.4)	0.06
Factor 7: Social Pressure to Use	43.6 (34.8)	44.5 (24.2)	45.7 (26.3)	0.81
Factor 8: Pleasant Time with Others	51.1 (30.2)	64.4 (20.4)*	49.7 (27.6)^	0.0001

Unadjusted group comparisons done with Kruskal Wallis

Pairwise comparisons done with Wilcoxon

* = $p<0.05$ compared with Opiates

^ = $p<0.05$ compared with Marijuana