

Relationship between the Level of Motivation and Personality Disorder in Patients with Opioid Dependence Syndrome

Manu Sharma, Sankalp Doda, Devendra Mohan Mathur, Jitendra Jeenger

ABSTRACT

Background: The relationship between the level of motivation and personality disorder (PD) in patients with opioid dependence syndrome is understudied. **Method:** A cross-sectional study was conducted on consecutively selected 100 adult inpatients with opioid dependence syndrome. All participants were assessed on ICD-10-AM Symptom Checklist for Mental Disorders, University of Rhode Island Change Assessment (URICA), Stage of Change Readiness and Treatment Eagerness Scale (SOCRATES 8D), International Personality Disorder Examination (IPDE), and Severity of Opioid Dependence Questionnaire (SODQ). **Results:** Most patients expressed the level of motivation at contemplation level, medium level of recognition for the need for change, and high levels of ambivalence and taking steps for change. PD was diagnosed in 40% of the patients. The most common PD identified was dissocial, followed by an emotionally unstable personality disorder-impulsive type. There was no statistically significant difference in URICA, SOCRATES 8D, or SODQ scores in opioid-dependent patients with and without PDs. Patients with severe opioid dependence reported higher readiness to change. **Conclusion:** Most of the patients with opioid dependence syndrome presenting for treatment are at the contemplation level of motivation. More than one-third of patients with opioid dependence syndrome have PD. A diagnosis of comorbid PD is unrelated to the level of motivation in patients with opioid dependence syndrome. Further multicentric research on personality and PD in a diverse sociocultural population with opioid use disorders is needed.


Key words: *Dependence, motivation, opioid, personality disorder*

Key messages: *Most patients with opioid dependence syndrome presenting for treatment are at the contemplation level of motivation. Patients with severe opioid dependence report higher readiness to change. A diagnosis of comorbid personality disorder is unrelated to the level of motivation in patients with opioid dependence syndrome.*

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How to cite this article: Sharma M, Doda S, Mathur DM, Jeenger J. Relationship between the level of motivation and personality disorder in patients with opioid dependence syndrome. *Indian J Psychol Med* 2020;42:175-81.

Access this article online	
Website: www.ijpm.info	Quick Response Code 
DOI: 10.4103/IJPSYM.IJPSYM_217_19	

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Submitted: 07-May-2019, **Revised:** 22-Jun-2019, **Accepted:** 17-Dec-2019, **Published:** 09-Mar-2020

Motivation is an important first step towards any action or change in behavior. The concept of motivation broadly includes an individual's concerns about or interest in the need for change, his or her goals and intentions, the need to take responsibility and make a commitment to change and sustaining the behavior change, and having adequate incentives for change.^[1-3] Among substance-abusing individuals, motivation and intentions related to the modification of the addictive behavior play an important role in the recovery process. Motivational considerations in recovery from addiction are complex. Findings from numerous studies demonstrate a positive relationship between the motivation for treatment and for change, assessed in multiple ways, and substance abuse treatment outcomes.^[4,5]

Personality disorders (PDs) have their onset in adolescence or early adulthood. They are defined as maladaptive, pervasive, inflexible, and enduring patterns of inner experiences and behaviors that markedly deviate from the expectations of the individual culture.^[6] The prevalence of PDs is higher in individuals seeking treatment and in those who come in contact with the criminal justice system.^[7]

It is possible that substance use disorders (SUDs) with comorbid conditions share common risk factors,^[8] and that the emergence of one disorder increases the likelihood for a comorbid complication.^[9] Furthermore, when two disorders are present, each tends to increase the likelihood that the other persists. Research indicates that patients with SUDs commonly suffer from one or another type of PD.^[10] Evidence from previous studies indicates that the comorbidity of SUD and PD is associated with greater resistance to treatment, higher rates of involuntary treatment, inflexible coping mechanisms, impulsivity, and difficulties with interpersonal relationships.^[11] These factors may directly or indirectly influence the level of motivation for adaptive change. It is likely that PDs account for the high rates of relapse associated with SUD.^[12,13] Comorbidity of PDs with alcohol use disorders seems to be less "destructive" than that with heroin or cocaine use disorders.^[14] Therefore, gaining a better understanding of the relationship between SUD and PDs may have important implications for facilitating behavior change needed for treatment and sustained abstinence among those with substance abuse.^[15] Previous studies are limited by methodological and interpretative problems, making it difficult to draw conclusions. For example, the use of different inclusion and exclusion criteria and assessment instruments for diagnosing PDs.^[10,11] In addition, there is a paucity of published research, especially from the Indian subcontinent, addressing the comorbidity of opioid dependence syndrome (ODS)

and PD. Given this background, the present study was undertaken with the following objectives:

1. To evaluate motivation to change in patients with ODS
2. To evaluate the frequency and nature of comorbid PDs in patients with ODS
3. To study the relationship between the level of motivation and PD in patients with ODS.

MATERIALS AND METHOD

The present cross-sectional study was conducted in the department of psychiatry of a teaching institute from January 2017 to January 2018. The private sector institute provides multispecialty tertiary level health services to the south-western region of the state of Rajasthan, India. The institutional ethics committee approved the study protocol and written informed consent was obtained from the research participants. The participants comprised of consecutively selected adult (18–65 years of age) inpatients with Diagnostic Criteria for Research-10 (F11.2) diagnosis of opioid dependence syndrome. Based on a confidence interval of 95%, a margin of error of 5%, and estimated prevalence of opioid use of 0.7% in the general population, of whom around 22% are dependent users,^[16] the sample size estimated, using an online calculator (www.surveysystem.com), was 384. The following exclusion criteria were applied: Patient with other substance dependence (except nicotine/caffeine), comorbid psychiatric disorders other than personality disorders, serious or terminal medical illness, clinical condition requiring intensive care management, lack of English language proficiency precluding the use of study tools, refusal to participate in the study, and lack of cooperativeness [Figure 1]. Most patients presenting with opioid dependence at our center are generally managed in the out-patient clinic. However, some are advised hospitalization for the individually tailored management of acute withdrawal symptoms (typically using clonidine, benzodiazepines, nonsteroidal anti-inflammatory drugs, etc.), assessment of general medical status, psychoeducation, and motivational enhancement.

The following tools were used:

1. ICD-10-AM Symptom Checklist for Mental Disorders: This is a semi-structured instrument designed for use by clinicians for the assessment of the main psychiatric symptoms and syndromes in the F0 to F6 categories of ICD-10^[17]
2. University of Rhode Island Change Assessment (URICA): This is a self-assessment tool to assess the levels of a person's readiness to change (motivation) as they progress through the stages of change in modifying their behavior.^[18] The URICA version used in the current study

consists of four subscales; precontemplation, contemplation, action, and maintenance. The questionnaire consists of 32 questions in which each item is allocated a 5-point Likert scale ranging from “strongly agree” to “strongly disagree.” The test contains eight items for each of the subscales. Each response is assigned to one of the subscales, which, in turn, is used to calculate a score that indicates the level of readiness to change. URICA test scores of 9–10, 10–12, and ≥ 12 are indicative of the level of motivation at precontemplation, contemplation, and action level, respectively.^[18] In the present study, URICA was administered on the first day of hospitalization

3. Stage of Change Readiness and Treatment Eagerness Scale (SOCRATES 8D): SOCRATES is an instrument designed to assess the readiness for change in those who abuse alcohol or opioids.^[19] The 19-item version-8 instrument yields three factorially-derived scale scores: recognition (Re), ambivalence (Am), and taking steps (Ts). It is a useful, brief screening instrument for motivation, and the scores have been found to predict the outcome and are used clinically to suggest areas for further discussion. Subscale scores 7–26 indicate very low, 27–30 low, 31–34 medium, and 35 high Re, respectively. Subscale scores 4–8

indicate very low, 9–13 low, 14–15 medium, 16–18 high, and 19–20 very high, Am respectively. Scores 8–25 indicate very low, 26–30 low, 31–33 medium, 34–36 high, and 37–40 very high Ts, respectively.^[19]

4. International Personality Disorder Examination (IPDE): The IPDE contains a self-administered screening questionnaire that can identify those patients whose scores suggest the presence of a PD, and then the IPDE clinical interview can be administered. Results from the IPDE semi-structured interview allow the examiner to assign a definite, probable, or negative diagnosis for each ICD-10 PD.^[20] In the present study, the screening section of the IPDE was administered to all patients after 7 days of hospitalization, and those who screened positive were subjected to the detailed assessment of PDs.
5. The Severity of Opioid Dependence Questionnaire (SODQ) consists of five main sections of questions corresponding to (1) quantity and pattern of opiate use, (2) physical symptoms of withdrawal, (3) effective symptoms of withdrawal including craving, (4) withdrawal-relief drug-taking, and (5) rapidity of reinstatement of withdrawal symptoms after a period of abstinence.^[21] When completing the questionnaire on the first day of hospitalization, the respondent is instructed to focus his/her attention on a recent typical period of opiate use chosen by himself/herself. The SODQ was designed for self-completion; however, it can also be administered by the researcher. Items are scored on a four-point scale ranging from “never or almost never” (scored 0), through “sometimes” (1) and “often” (2), to “always or nearly always” (3). The total scores are calculated by summing together scores from the withdrawal sections. The reinstatement section has not been included in these total scores due to some conceptual and practical difficulties with this section.^[22]

The study tools in the English language were administered by the psychiatry resident and ratified by the consultant psychiatrist. A few participants sought clarification; it was rendered and restricted to a minimum without influencing the meaning and interpretation of the tool item(s).

Data analysis

Statistical analyses were done using the Statistical Package for Social Sciences for Windows, version 16 (SPSS Inc., Chicago, Ill., USA). Continuous variables were expressed as mean with standard deviation. All statistical analyses were done at a 95% confidence interval, and $P < 0.05$ was considered statistically significant.

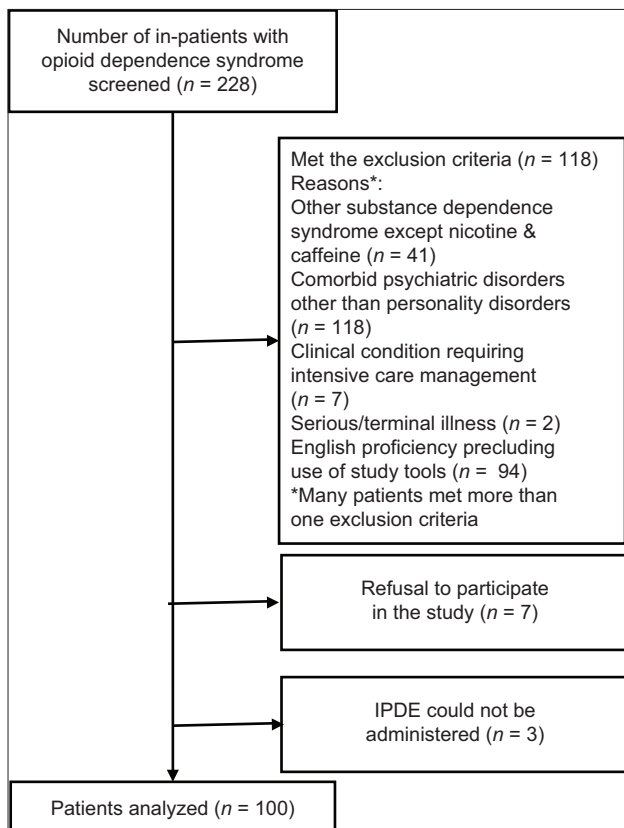


Figure 1: Flowchart of the study procedure

RESULTS

During the study period, 228 patients were screened, and data for 100 patients were analyzed [Figure 1]. The mean (\pm SD) age of onset of opioid use and duration of opioid dependence was 19.64 (\pm 2.71) years and 6.87 years (\pm 3.83) years, respectively. The intravenous route was the predominant route of opioid use in 38% of the patients.

Table 1 shows the characteristics of the study sample. Most patients expressed the level of motivation at the contemplation level, medium level of recognition for the need for change, and high levels of ambivalence and taking steps for change [Table 2]. Forty percent of the patients were diagnosed with PD. The most common type of PD diagnosed was dissociative, followed by an emotionally unstable PD-impulsive type (30%), emotionally unstable PD-borderline type (6%), and anxious PD (3%). There was no statistically significant difference in URICA, SOCRATES, or SODQ scores in opioid-dependent patients with and without PD [Table 3]. There were no statistically significant differences observed regarding other sociodemographic variables. Significant positive correlations were observed between the severity of opioid dependence and the level of motivation ($r = 0.47, P = <0.001$) and readiness to change (SOCRATES Re: $r = 0.35, P = <0.001$; Am: $r = 0.37, P = <0.001$; Ts: $r = 0.34, P = <0.001$).

DISCUSSION

The present cross-sectional, observational study was conducted with the aim to evaluate the relationship between motivation in terms of readiness to change and PD in patients presenting for treatment for opioid use disorders at a tertiary care center. The prevalence of opium use is more in the south-western region of Rajasthan, India due to geographical, sociocultural, and economic factors.^[23]

The subjects in the present study were predominantly middle school educated, young, employed men from the low socioeconomic background, living in an urban area. Most were married and staying with their spouse. A previous household survey^[24] and hospital-based study^[25] have reported the prevalence of opioid use in females to be 0.5% and 5.2%, respectively. In our study, females accounted for 2% of the study sample, which is consistent with the findings reported by Chaturvedi and colleagues.^[26] As the prevalence of opioid dependence in females was low in our sample, the interpretations of our findings apply largely to males with ODS.

At our center, most patients seeking treatment for opioid use disorder are usually advised by their families to do so,

Table 1: Sociodemographic characteristics of the study population

	Group	Frequency	Percentage
Age (in years)	18–39	74	74.0%
	40–65	26	26.0%
Sex	Male	98	98%
	Female	02	2.0%
Religion	Hindu	50	50%
	Muslim	50	50%
	Primary school	24	24%
	Middle school	48	48%
	High school	16	16%
	12 th /predegree	04	4%
Domicile	Degree	06	6%
	Postgraduate	02	2%
	Urban	60	60%
	Rural	40	40%
Family income (rupees)	1000–20000	77	77%
	21000–40000	14	14%
	41000–60000	05	5%
	81000–100000	03	3%
	>100000	01	1%
Family type	Nuclear	64	64%
	Joint	36	36%
Family history of drug use	Alcohol	18	18%
	Opioid	10	10%
	Tobacco	84	84%
Medical conditions	HIV	10	10%
	Hypertension	14	14%
	Diabetes	12	12%
	Tuberculosis	5	5%
	Chronic obstructive pulmonary disease	2	2%
	Lumbar radiculopathy	2	2%
Psychosocial problems due to drug use	Financial	95	95%
	Interpersonal/Family	90	90%
	Employment	80	80%
	Legal	12	12%

HIV – Human Immunodeficiency Virus

Table 2: Level of motivation, readiness to change, and severity of opioid dependence in the study population

Measure	Mean \pm SD (n=100)
URICA	11.60 \pm 0.94
SOCRATES (RE)	32.75 \pm 3.28
SOCRATES (AM)	18.48 \pm 1.95
SOCRATES (TS)	36.00 \pm 3.25
SODQ	55.50 \pm 6.10

URICA – University of Rhode Island change assessment scale; SOCRATES – Stages of change readiness and treatment eagerness scale; SOCRATES (RE) – Recognition; SOCRATES (AM) – Ambivalence; SOCRATES (TS) – Taking steps; SODQ – Severity of Opiate Dependence Questionnaire; SD – Standard deviation

and some are introduced by their drug-detoxified peers. There is a relative paucity of Indian data on motivation profiles of patients seeking treatment for opioid-related problems. In the context of the evaluation of the level of motivation, results indicate that most patients were

Table 3: Relationship between level of motivation, readiness to change, and severity of opioid dependence with presence or absence of personality disorders

Variable	Mean score (\pm SD) in patients with Personality Disorder ($n=40$)	Mean score (\pm SD) in patients without Personality Disorder ($n=60$)	<i>t</i>	<i>P</i>
URICA	11.74 (\pm 0.68)	11.50 (\pm 1.07)	1.25	0.21
SOCRATES (RE)	32.68 (\pm 3.08)	32.80 (\pm 3.42)	0.18	0.85
SOCRATES (AM)	18.40 (\pm 1.82)	18.53 (\pm 2.04)	0.33	0.74
SOCRATES (TS)	35.95 (\pm 2.68)	36.03 (\pm 3.60)	0.12	0.90
SODQ	54.73 (\pm 6.57)	56.02 (\pm 5.76)	1.03	0.30

URICA – University of Rhode Island change assessment scale; SOCRATES – Stages of change readiness and treatment eagerness scale; SOCRATES (RE) – Recognition; SOCRATES (AM) – Ambivalence; SOCRATES (TS) – Taking steps; SODQ – Severity of Opiate Dependence Questionnaire; SD – Standard deviation

in the contemplation level. This may imply that some patients come to participate in the treatment without being fully motivated and ready to make changes, which possibly leads to a high dropout or relapse rate as found in other studies.^[27,28] Our observation with regard to the level of motivation in opioid users is consistent with the results of a hospital-based study in northern India.^[29] Contrastingly, North American researchers have reported that 52% of chronic opioid users have high motivation for treatment. It may be possible that treatment-seeking and motivation for change in Indian adults with opioid dependence are influenced by physical, drug-related, cultural, and psychosocial factors that merit further study.

Previous research suggests that the processes of change have clinical relevance with drug use severity, problem acknowledgment, and concern about use.^[30] Greater problem severity was associated with higher levels of interpersonal help-seeking and internalized motivation.^[31] The present investigation found that patients with more severe opioid dependence reported higher readiness to change. There is evidence that higher levels of motivation are related to more severe substance use.^[32,33] An explanation for the positive correlation between the severity of opioid dependence and the level of motivation could be that greater problems confer greater readiness to change.

In a clinic-based study from north India, 13.2% of the patients attending addiction services over an 11-year period had non-substance-related psychiatric disorders.^[34] However, no national-level data are available on comorbidity in patients with opioid use disorders.

Rates of PD in opioid users, using DSM-III criteria and evaluating all possible diagnoses, have ranged from 11% to 68%.^[35-38] We found the prevalence of PD to be 40% using the IPDE. These differences are partly accounted for by the variations in sampling characteristics such as the distribution of gender and age, treatment setting, and specific diagnostic criteria employed, for

example, whether substance-related characteristics are excluded from the diagnosis.^[39] It should be noted that the reported rates do not include PD not otherwise specified (DSM) or mixed PD (ICD-10). In some earlier studies, the evaluation for PD was done during the patients' inpatient stay, which may be associated with increased symptom reporting.^[36,40] Dissocial PD was the most identified PD in our study, followed by an emotionally unstable PD-impulsive type. This is in congruence with previous studies, which showed a high prevalence of PDs, especially dissocial PD, in subjects with opioid dependence.^[41-43] Therefore, our investigation reiterates the fact that PDs are highly prevalent in individuals with ODS.

Our results indicate that readiness to change is unrelated to PD [Table 3]. Most empirical studies of motivation with regard to treatment have focused on treatment outcome rather than the initial motivation to seek treatment.^[44,45] Our findings support the notion that resistance to (or the low motivation for) change and short treatment duration should not be considered attributes inherent to PD but rather independent patient attributes.^[46] In a study by Verheul *et al.*^[46] motivation for the change was unrelated to personality pathology but moderated the relationship between Axis II diagnoses and relapse such that personality pathology was a strong predictor of relapse among the less motivated individuals but not among the more motivated individuals. To our knowledge, little is known from India about the level of motivation to seek treatment, in PD patients.

The present study is encumbered by the cross-sectional design and a small sample size limited to English-speaking males at a single center. The estimated sample size could not be attained as the present investigation was a time-bound project. Ninety-four patients were excluded due to a lack of English proficiency. At our center, most of the patients are Hindi-speaking. Due to the absence of validated URICA and SOCRATES scales in the Hindi language, only English-speaking patients were recruited for the present study. These

factors limit the generalization of the findings. Patients who are generally motivated seek treatment. Therefore, there may be a potential selection bias. Self-reported instruments are encumbered by the possibility of recall bias and self-report bias. It is likely that patients with dissocial or emotionally unstable traits misrepresent or manipulate study tools and provide more socially desirable responses. Another potential limitation could be that DSM separates state- and trait-based disorders on two axes and provides for clusters of PDs, while the ICD-10 diagnostic guidelines do not place the PDs and state disorders on a separate axis or subdivide PDs into clusters.

Despite its limitations, the novelty of the present investigation is that it adds to Indian hospital-based data on comorbid PDs in opioid dependence and their relationship with motivation. The relative merits also include the exclusion of other comorbid psychiatric disorders and the use of valid instruments to diagnose PD and evaluate motivation. Research from India is needed to further elucidate the relationship of PD with relapse and treatment outcome in patients with opioid dependence and the cultural factors in the diagnosis of PD in Indian patients.

CONCLUSION

Most of the patients with ODS presenting for treatment are at the contemplation level of motivation. More than one-third of patients with ODS have PD. Dissocial PD is the most common, followed by emotionally unstable PD. A diagnosis of comorbid PD is unrelated to the level of motivation. Further multicentric research on personality and PD in a diverse sociocultural population with opioid use disorders is needed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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