

## Comparing the Level of Dissociative Experience in Prisoners with and without Opioid Dependence Disorder in Shiraz and its Relationship with Other Psychiatric Disorders

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**Objective:** Many psychodynamic oriented psychotherapists believe that people do not become addicted without a reason; they use drugs to avoid painful feelings, thoughts and memories. The present study examines the relationship between the level of dissociation, substance dependence disorder and other psychiatric disorder.

**Methods:** In a descriptive study on prisoners of Adel-Abad prison, Shiraz, Iran, a sample of 4 groups of 29 women, and 30 men with opioid dependence, and 27 women and 30 men without dependence filled out the DES II questionnaire and SCL-90-R. The groups were compared regarding mean of DES with t-test and chi-square and also correlation coefficient for the relationship of DES and other psychiatric disorders.

**Results:** Women with opioid dependence showed the highest score in DES II (mean=48.9) among the groups and men without substance use disorder had the least mean score in DES (24.27). The difference between addict and non-addict groups regarding DES was significant. There was no meaningful relationship between DES II score and 9 aspects of SCL-90-R.

**Conclusion:** The results are suggestive of a relationship between addiction and dissociation. It is supposed if substance use disorder can be explained as a "Chemically Induced Dissociation", or both "Dissociation" and "Substance Induced Disorder" might have common explanations in psychopathology.

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### Introduction

There is no doubt that Substance Use Disorder (SUD) is a major health problem all around the world. Although we have no published national survey regarding epidemiology of SUD in Iran, according to regional studies it has been estimated that about 3 million of the population are in some way involved by SUD and unfortunately the rate is accelerating dramatically in young people (1). The increasing number of consumers of illicit drugs implicates the issue that in spite of developing preventive activities and higher knowledge in the community about the

harms and risks accompanied by using these drugs, the quantity of substance use doesn't show any decrement. This fact brings the notion up that the maladaptive drug using behavior may have some social or personal functioning which prevents its extinction. Those with psychodynamic approach believe that nobody becomes addict without a reason. Some of them explain that people use drugs to avoid painful feelings, thoughts and memories, by producing a "chemical dissociation" (2). Many of drug services nowadays have recognized that the majority of their clients have suffered emotional, physical or sexual abuse in childhood or major psychological traumas during adulthood. These patients lack the self-esteem and ability to trust others. The major issues that affect these seriously damaged and maladaptively defended patients are ambivalence, distrust and dependency which make them to employ dissociation as a

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major defense mechanism (2).

In a different aspect of view “self-medication hypothesis” of Khantzian, based on his clinical observations, supports the belief that some individuals discover that the specific actions or effects of each class of drugs relieve or change a range of painful affect states (3).

Eli Somer (4) in his study on 93 treated patients with Heroin Dependent Disorder at 2003 found that the respondents showed more emotional, physical and sexual traumatization than consecutive admissions to an outpatient stress clinic, and their levels of dissociation were similar to those previously measured in Israeli patients diagnosed with posttraumatic stress disorder and acute stress disorder. He also showed that dissociation levels (measured by DES II) made an independent negative contribution to the prediction of abstinence and without a thorough resolution of trauma-related dissociation, optimal treatment outcome is compromised. Many other researchers have shown the relationship between trauma, dissociation, and SUD (5-10). These studies make the consensus that people who have failed to compensate for the trauma by using dissociation- the strategy that they have gotten used to employ- may reinforce the inefficient defense with self-medicating substances to reduce their level of distress.

In the present study, we tried to test the hypothesis by examining that in similar situations regarding psychological trauma (imprisonment in this case), those with SUD have had a greater tendency than others to employ the mechanism of dissociation. The findings may declare the importance of applying the trauma focused therapies at least in a group of SUD patients.

### Materials and Methods

The study was a cross-sectional one and the participants were 121 literate prisoners of Adel-Abad prison of Shiraz, Iran, who consented to participate in the study. The exclusion criteria were having a major medical or psychiatric problem making them to receive specific medical care, and getting the score of 75 or higher in DES II. Five persons were omitted from the sample and the resting 116 consisted 4 groups of: 1) 29 female addicts

with mean age of 34.2 yrs (SD=9.4), 2) 30 male addicts with mean age of 33.32 yrs (SD=7.86), 3) 27 non-addict females with mean age of 30.85 yrs (SD=9.7), and 4) 30 non-addict males with mean age of 31.29 yrs (SD=9.27). All of them were accused by nearly the same crimes and there was no significant difference between groups regarding age and level of education. All participants filled DES II and SCL-90-R questionnaires in addition to a form of their demographic data and were interviewed to rule out major psychiatric problems other than SUD.

DES II questionnaire has been widely used since 1993 after being introduced by Putnam and Carlson as a highly valid and reliable test for screening dissociative experiences (11). The test was translated by the authors to Persian (Farsi) and the proof was sent to three psychiatrists fluent in Persian and English and they confirmed the validity of the content. Reliability of the questionnaire was examined by split test and Cronbach's alpha, for all applicants, which showed high reliability of the test (split-half reliability coefficient for alternate questions = 0.93; Split-half reliability coefficient for the first and second half of questions = 0.79; and Cronbach's alpha coefficient = 0.95). The test consists of 28 descriptions of different situations and the participant determines the percentage of frequency of experiencing such a situation.

SCL-90 R questionnaire is a widely used screening test for major psychiatric disorders in Iran and its validity and reliability has been shown to be high (12). It evaluates the psychopathology in 9 dimensions of aggression, anxiety, obsession, interpersonal relationships, somatization, psychosis, paranoia, depression, and phobia.

The data obtained from the questionnaire for each group was described by descriptive statistical measures (mean and standard deviation) and for comparing the groups we used t-test and chi-square methods and also correlation coefficient. SPSS 11.5 was the program that we employed for data analysis.

### Results

The two groups of addict against non-addict prisoners were relatively identical in age,

level of education, type of crime committed, and their judge statements; and the statistical comparison by t-test didn't show any significant difference between the groups in these areas. The Pearson correlation coefficient for age and DES-II score was 0.024, which shows no actual correlation between age and dissociative experiences.

Seventy four percent of prisoners (N=44) with SUD versus 43% (N=25) of those without SUD had DES score more than 30; the Pearson Chi-square test showed significant difference between the two groups indicating that more prisoners with SUD were likely to suffer from one of the dissociative disorders. A similar result was obtained for the number of those with DES score more than 40 (highly suggestive of dissociative identity disorder); 57% of those with SUD versus 14% of those without SUD. The mean score of opioid dependent prisoners (Nr=59) in DES-II was 45.85 while nondependent prisoners (Nr=57) got the mean of 29.65 and the difference was statistically meaningful ( $t=4.13$ ,  $P<0.0001$ ). Regardless of opioid dependent disorder there was also a meaningful difference between male prisoners (mean=33.57) and females (mean =42.52) in their DES-II scores ( $t=2.42$ ,  $P<0.017$ ). The comparison of the four groups in the mean score of DES-II is summarized in table 1.

The most common symptoms in the two groups with and without SUD were similar and included respectively: 1- Question number 17, (Some people find that when they are watching TV they become so absorbed in...). 2- Question number 14, (Some people have the experience of sometimes remembering a past event so vividly...). 3- Question number 2, (Some people find that sometimes they are listening to someone talk and they suddenly realized ...).

To compare the scales of SCL-90-R, we used a multivariate analytical model. In this model the independent variable was being

addict or not and dependent variables were the 9 scales of SCL-90-R. The results showed that the addict groups had meaningfully higher scores in aggression, anxiety, obsession, poor interpersonal relationships, somatic complaints, psychotic features, and depression; however the two groups did not show a significant difference in phobia and paranoia. Determining correlation coefficient between the DES-II score and the score of each of the 9 scale of SCL-90-R showed no relationship between these two (Table. 2).

**Table 2.** The amount of correlation coefficient between scales of SCL-90-R, and the score of DES

9 scales of SCL-90-R	Correlation Coefficient
Aggression	0.12
Anxiety	0.11
Obsession	0.11
Interpersonal relationship	0.13
Somatic complaints	0.17
Psychosis	0.17
Paranoia	0.01
Depression	0.09
Phobia	0.07

## Discussion

Generally, the findings of this study give us an idea about a significantly higher frequency of dissociative experiences among prisoners with SUD compared with prisoners without SUD. The mean DES score of addict group was (45.85) which is much higher than what Eli Somer (7) and Karadag (10) found respectively in Israel (21.27) and Turkey (24.5). The two fold mean score in our study comparing with other researches may be firstly due to the different sample populations. Our sample consisted of prisoners with SUD where the two other sample were patients recovering from SUD. As apparent, imprisonment by itself can bring up various unbearable stresses which can make the person to employ the mechanism of dissociation more than normal population. Secondly, we expect that the prisoners exaggerate their problems for gaining

**Table 1.** Comparison of mean scores of groups in DES-II

Group	Number	Mean score	St deviation	df	t	p
Men with opioid dependence disorder	30	42.87	16.74	58	4.13	0.0001
Men without opioid dependence disorder	30	24.27	18.9			
Women with opioid dependence disorder	29	48.94	20.4	54	2.59	0.012
Women without opioid dependence disorder	27	35.64	17.67			

some benefits. And thirdly, the obvious cultural differences between Iran, Turkey and Israel can explain dissimilar results. Dunn et al. (6) showed in their study that only 16% of addict war veterans in USA had score 30 and more in DES, where the rate was 36.7% for those in treatment of substance dependency disorder in Karadag et al. study in Turkey (10) and 74% of the sample population in our study got scores of more than 30 in DES questionnaire. In another study in Turkey on 104 patients at an addiction center, Tamor et al. (13) found that 37 patients had scores  $\geq 30$  comparing to only 21 patients who scored  $\leq 10$  on the DES. They also showed that the majority of dissociative substance users (about 60%) reported the existence of dissociative experiences before starting substance use. The fact that the rate of dissociative experiences among SUD patients in Turkey is about twice USA and that it was nearly two fold in Iran against Turkey confirms the importance of culture in this case.

As we expected, women with SUD have the highest mean score in DES (48.94); and the second highest level of dissociative experience belonged to the group of men with SUD (mean=42.87). Men without SUD had the least mean score (24.27). These findings are in accordance with the higher prevalence of dissociative disorders in women than men that has been declared in many other researches (14,15) and also the higher DES scores of addict patients comparing with non-addicts were found in different studies (7,10,16). The predictable results can implicitly support the relative validity and reliability of the measures too. It may also be concluded that women who are more vulnerable to trauma and employ more dissociative responses, are at higher risk for co-occurrence of SUD and dissociative disorders. The statistically meaningful differences between the four groups suggest that while all of the prisoners bear a lot of intolerable stresses in the prison, those who suffer from SUD are the ones who are more likely to have dissociative experiences. This finding confirms the results of other similar studies (4-8,10). Few numbers of studies that found no relationship between dissociation and SUD, like Schäfer et al. (17) study on alcoholic

patients in Hamburg, Germany, makes us to be more cautious in interpretation of the results.

We found that the depersonalization and absorption/derealization subscale symptoms (18) are more frequent in our study sample as a whole and these are the same symptoms aggravated by use of opioids as its main effects on thought and emotions. It means that at least in a group of prisoners, or people under unbearable stresses, using substances is a way for controlling their emotional pain through amplifying their old problematic dissociative strategies by substances, whenever the dissociative defense is not by itself enough for coping with the situation.

Although the addicts had higher frequency of psychiatric symptoms in SCL-90-R than non-addict prisoners, but there was no meaningful correlation between these symptoms and dissociation. So, it can be logical to suppose dissociative symptoms and other psychiatric problems as independent variables. Evren et al. (19) found the interrelationship between Alexithymic phenomena, dissociation and chronic anxiety among men with alcoholism. The different findings of the study might be due to applying a more specific questionnaire for Alexithymia in this research rather than our study that used a more general screening test (SCL-90-R). These findings may authenticate clearly the contributory relationship of stress and dissociation with substance use disorder or as Khantzian (3) uttered substance use is an effort for "chemical dissociation"; or one can suppose that both dissociation and SUD might have common contributory factors in their psychopathologic development. This debate asks for more researches in the subject.

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