



Dissociative Experiences Among Methadone Maintenance Treatment Patients

Mohsen Khosravi ^{1,*} and Maryam Shamekhi²

¹Research Center for Children and Adolescents, Department of Psychiatry and Clinical Psychology, Zahedan University of Medical Sciences, Zahedan, IR Iran

²Department of Psychiatry, Esfarayen Faculty of Medical Sciences, Esfarayen, IR Iran

*Corresponding author: Department of Psychiatry and Clinical Psychology, Zahedan University of Medical Sciences, Zahedan, IR Iran. Tel: +98-5433522636, Email: dr_khosravi2016@yahoo.com

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Abstract

Background: According to “chemical dissociation” hypothesis, it is suggested that substance use disorder patients may not experience a high level of dissociation due to substance use, they may experience some level of dissociative-like states. There are few and albeit contradictory reports about prevalence of dissociative experiences among patients with substance use disorder.

Objectives: The aim of this study was to consider the dissociative experiences among patients referred to Addiction Treatment Clinic of Baharan Hospital of Psychiatry, Zahedan, IR Iran.

Methods: In this descriptive cross-sectional study, 231 patients, referred to MMT Clinic of Baharan Psychiatric Hospital in Zahedan, were studied. Sampling was convenient and patients were divided to two groups, including those receiving less than 60 mg of methadone daily (group A) and those receiving equal or more than 60 mg of methadone daily (group B). Dissociative experiences scale (DES) and addiction severity index (ASI) forms were completed. Finally, data were analyzed by using SPSS version 19 and independent *t*-test.

Results: A total of 231 patients participated in this study. Mean age of patients was 33.9 ± 8.0 ($P = 0.053$). They included 204 males (88.3%) and 27 females (11.7%) ($P = 0.328$). Total mean DES score was 15.3 ± 11.7 . Mean DES scores were 15.6 ± 11.2 in group A and 16.1 ± 11.7 in group B ($t(1) = -0.1, P = 0.827$). Addiction severity index were 0.74 ± 1.69 in patients with DES scores more than 30 and 0.43 ± 1.51 in patients with DES scores less than 30 ($t(1) = 1.1, P \text{ value} = 0.204$).

Conclusions: Based on the current study, it can be concluded that different dosages of methadone induce the same chemical dissociation and this has no significant relationship with different areas of ASI.

Keywords: Dissociative Disorders, Methadone, Substance-Related Disorders

1. Background

Substance use disorder is a major public health problem. A bunch of cognitive, behavioral, and physiological symptoms indicate that patients continues misusing substances while they experience side effects, which is a fundamental part of substance use disorder (1, 2).

Today, substance use disorder has turned to a complicated global problem, particularly in third world countries. Iran is one of the greatest victims of substance abuse due to its geographical location as well as its historical and social background. Despite enormous financial and human resource expenses on drug trafficking over the past two decades, attempts have failed to fulfill people's expectations, since most of the fight was against supply rather than demand (3).

The DSM-5 defines dissociation as “a disruption of

and/or discontinuity in the normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control, and behavior”. Dissociation symptoms can potentially disrupt every area of psychological functioning (1).

A dissociative experience is a defense mechanism in crises and/or coping with stress (4, 5). During a traumatic experience, dissociation enables a person to see the event as an observer, stop feeling pain or distress, and protects the person against awareness of the full impact of what has occurred (6).

Dissociative experiences are more prevalent among specific populations, such as patients with substance use disorder and criminal offenders. It has been said that trauma in the early years is a risk factor for dissociation and substance use disorder yet, there is no clear report about

the association between substance use disorder and dissociation. Chemical dissociation hypothesis may explain this inconsistency. In this hypothesis, some patients with substance use disorder experience dissociative-like states because of chemical consumption thus they may not show high levels of dissociation (7). This means that some affected individuals with opioid use disorder are encouraged to chemically induce a dissociative state to oppose the memories of childhood abuse and related pain experiences as well as taking care of themselves. There is a positive correlation between severity of substance use disorder and severity of childhood abuse. In addition, recovering opioid use disorder patients report higher levels of traumatization compared to outpatients with non-opioid use disorders. Somer et al. claimed that opioid use disorder might be a coping strategy to deal with unfavorable experiences and memories, especially when psychologic coping skills are not efficient enough and the traumatized individual is desperate to find a rapid and effective relief in posttraumatic pain, and when substances are available. When psychologic dissociation is ineffective, traumatized individuals obtain access to consciousness altering substances with rapid chemical dissociation effects and their immediate impact on the mind and body; they may prefer not to rely on their own mental resources for relief. At this stage, the traumatized individual may choose chemical dissociation as a self-medicating alternative. Chemical dissociation can be used as a protection against painful memories and experiences as long as the addicted patient misuses drugs or patients on methadone maintenance treatment misuse methadone as a replacement for illegal drugs (2). Methadone is a synthetic substance which fills brain receptor sites of heroin and other opiates, and during the treatment period, patients consumptions are monitored and using illicit drugs are avoided (2, 8). It seems that methadone is the most effective studied substance for the treatment of opiate-dependent patients (9).

Although the least effective dose of methadone is 60 mg daily, it seems that a dose of 40 to 50 mg per day and even lower has satisfactory results as well. Increasing the dose of methadone (especially equal and more than 60 mg per day) in patients with substance use disorder may improve long-term outcome, yet it may increase side effects, such as long QT syndrome, cardiac conduct disorders, infertility, osteoporosis, and chronic gastroenterology (constipation) (8).

Although data on the association between substance use disorder and dissociation are not defiantly demonstrative, there are evidences that the two phenomena are re-

lated (2).

2. Objectives

The current study was conducted to investigate the prevalence of dissociative disorders among patients with substance use disorder referred to the Addiction Treatment Clinic of Baharan Hospital.

3. Methods

This descriptive cross-sectional study was conducted on 231 patients referred to MMT Clinic of Baharan Hospital of Psychiatry in 2015. Sampling was convenient.

Individuals younger than 18 and older than 50 years, with a history of physical illness, psychosis or mania, homeless people, those cancelling the treatment during study, besides imprisoned or detainees' imminent people, and those with serious medical conditions were excluded.

Patients were compared in two groups of less than 60 mg of methadone (group A) and those, who received equal or more than 60 mg of methadone per day (group B). The prevalence of dissociative experiences was investigated in all participants. Dissociative experiences scale (DES) was used to assess the dissociative experiences of patients. The DES was developed in 1986 by Bernstein and Putnam. This scale has been published and used in 400 studies and different societies. More than 35 studies have evaluated this scale (10).

This questionnaire consists of 28 questions and must be completed by patients. Item scores range from 0 (never) to 100 percent (always). This questionnaire has three factor structures, including amnesic dissociation, experiences of depersonalization, de-realization, and absorption and imaginative involvement (11). The total score for the whole scale is achieved by calculating the average score for all items, by adding all item scores and dividing the total by 28; the cut-off point was 30 (12). The internal consistency of DES among items was high at $\alpha = 0.70$; test-retest reliability is appropriate at $r = 0.84$ (Bernstein and Putnam, 1986) and coefficient alpha for the current sample was 0.94 (13). In Sajadi et al.'s study, Cronbach's α was 0.92 (14).

The addiction severity of patients was also evaluated according to the addiction severity index (ASI). The ASI is a semi-structured interview and can be conducted for individuals trained by clinicians and researchers. The ASI investigates seven aspects of a patient's life, including medical, employment/support, drug and alcohol use, legal, family/social, and psychiatric. The ASI obtains lifetime infor-

mation about problematic behaviors as well as problems within the past 30 days.

The ASI-Lite contains 22 less questions than the ASI, and omits items relating to severity ratings and a family history grid. Predictive validity was around 0.76 to 0.91 and its sensitivity and specificity was 0.85 and 0.8, respectively. The reliability of the test was 0.91. Internal consistency with Cronbach's α was 0.65 to 0.89 (15-18).

Informed consents were signed by all participants. All patients, who referred to MMT Clinic of Baharan Psychiatric Hospital during the study period, were asked to express their conscious satisfaction after providing necessary explanations about the method of implementation and objective of the project as well as completing the DES-predefined survey patiently and accurately. According to the answers to DES, the prevalence of their dissociative experiences was assessed. The relationship between addiction severity and dissociative disorders of patients were also examined. Finally, results of all surveys were analyzed by SPSS version 19 and independent *t*-test.

4. Results

A total of 231 patients participated in this study. The mean age of patients was around 33.9 ± 8.0 . Two hundred and four (88.3%) patients were male and 27 were female. The mean age of patients in each group of A and B was 33.1 ± 8.6 and 34.3 ± 7.8 , respectively ($t(1) = -0.93$, $P = 0.455$). Mean DES score was 15.6 ± 11.2 in group (A) and 16.1 ± 11.7 in group (B) ($t(1) = -0.1$, $P = 0.827$) (Table 1).

Table 1. Mean Age and DES in Each Group

	A (Less Than 60 mg of Methadone)	B (Equal or Above 60 mg of Methadone Daily)	<i>t</i>	P Value
Age	33.1 ± 8.6	34.3 ± 7.8	-0.93	0.455
DES scores	15.6 ± 11.2	16.1 ± 11.7	-0.1	0.827

Fifty patients in group A (13%) and 14 patients in group B (12.1%) had DES scores more than 30 (Table 2).

Table 2. Frequency of Patients with DE Score More Than 30^a

Methadone	DES More Than 30, No. (%)	DES Less Than 30, No. (%)	Total, No. (%)
Group A	15 (13)	100 (87)	115 (100)
Group B	14 (12.1)	102 (87.9)	116 (100)
Total	29 (12.6)	202 (87.4)	231 (100)

^a Values are expressed as No. (%).

The ASI was 0.74 ± 1.69 in patients with DES scores more than 30 and 0.43 ± 1.51 in patients with DES scores less than 30 ($t(1) = 1.1$, P value = 0.204); therefore, general index and its areas were not statistically significant among both groups (Table 3).

5. Discussion

In Somer et al.'s study, the detoxified and the MMT patients were compared, which demonstrated that the prevalence of dissociative disorders were higher in detoxified group around three folds compared with MMT patients. Trauma history and addiction severity were similar between the two groups. Consequently, the higher incidence of dissociative disorder among detoxified patients may be related to the nature of the two treatment methods. This theory is in agreement with chemical dissociation. Chemical dissociation can be used as a protection against painful memories and experiences as the addicted patient misuses drugs or patients on methadone maintenance treatment misuse methadone as a replacement for illegal drugs (2). However, the recovered opioid use disorder patients may feel pain, distress, and unfavorable emotions, which may force them to seek an alternative psychologic coping mechanism since they lost their protective blunting cover made by the drug (19, 20). Although pathologic dissociation is destructive in many ways, it can be offered as a powerful mechanism to suppress traumatic experiences and memories (21).

In the current study, there was no difference on DES among patients treated by different dosages of MMT. Also, ASI was the same in patients with and without dissociative disorders.

Considering a cut-off point of 30 on the DES, 15.3% of the participants had dissociative disorders. This rate was lower than Tamar-Gurol et al.'s study (24.3%) and higher than Tutkun et al.'s study (10.2%) and Ghafarinezhad et al. (9.9%) (22-24).

Kianpoor et al. calculated the mean DES scores of prisoners as 45.8% and indicated that 74% of their study subjects scored higher than 30. However, imprisonment may justify these high rates (25). In general, it seems that the rate of dissociative disorders is higher among individuals with history of addiction in Iran compared with other countries (24). Nevertheless, further studies should be done to evaluate this hypothesis. On the other hand, some researchers including Schafer et al. refused to accept the relationship between dissociative disorders and drug abuse (26).

Table 3. Comparing the Areas of Addiction Severity in Patients Based on DES

N	DES Scores	Mean \pm SD	t	P Value
Medical				
29	More than 30	0.87 \pm 1.25	-0.35	0.805
202	Less than 30	0.94 \pm 0.99		
Drug use				
29	More than 30	2.47 \pm 0.91	2.4	0.107
202	Less than 30	2.11 \pm 0.75		
Legal				
29	More than 30	0.87 \pm 1.19	2.21	0.180
202	Less than 30	0.56 \pm 0.71		
Employment				
29	More than 30	1.40 \pm 0.74	-0.23	0.891
202	Less than 30	1.43 \pm 0.63		
Family-social functioning				
29	More than 30	2.67 \pm 1.05	2.43	0.111
202	Less than 30	2.32 \pm 0.69		
Psychological status				
29	More than 30	1.87 \pm 1.05	0.42	0.613
202	Less than 30	1.71 \pm 0.98		
Mean ASI				
29	More than 30	1.69 \pm 0.74	1.1	0.204
202	Less than 30	1.51 \pm 0.43		

According to Ghafarinezhad et al.'s study in 2013, who studied patients treated with methadone and healthy non-addicted people as the control group, it was indicated that the prevalence of dissociative disorders was significantly higher in the case group in comparison with control group (24).

In another study by Karadag et al. in 2005, conducted on 215 patients with substance use disorder, who were included voluntarily in the study, they concluded that according to DES, 36.7% of subjects were affected by dissociative disorders. Prevalence of such disorders was higher among young people compared with the elderly and patients with this disorder had greater willingness to use a number of drugs simultaneously.

5.1. Conclusions

Based on the current study, it can be concluded that different dosages of methadone induces the same chemical dissociation, and this has no significant effect on different areas of ASI. According to the higher incidence of side effects with equal or more than 60 mg methadone per day,

the sensible reason to increase the dose of methadone may be the patient's unwillingness to take the drug and to keep the patient at the MMT. Despite studies done in this area, further studies are required to be conducted to obtain definite results.

This study had several limitations. The first was the use of convenient sampling and self-report data gathering. Furthermore, this was a cross sectional study with a relatively small sample size.

Footnotes

Conflict of Interests: It is not declared by the author.

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Patient Consent: Informed consents were signed by all participants.

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