Dissociative Experiences Among Methadone Maintenance Treatment Patients

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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 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 continue 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 dissocia-
tive. Chemical dissociation hypothesis may explain this in-
consistency. In this hypothesis, some patients with sub-
stance use disorder experience dissociative-like states be-
cause of chemical consumption thus they may not show high levels of dissociation (7). This means that some af-
fected individuals with opioid use disorder are encour-
gaged to chemically induce a dissociative state to oppose
the memories of childhood abuse and related pain ex-
periences as well as taking care of themselves. There is a pos-
itive correlation between severity of substance use disorder
and severity of childhood abuse. In addition, recover-
ing opioid use disorder patients report higher levels of
traumatization compared to outpatients with non-opioid
use disorders. Somer et al. claimed that opioid use disor-
der 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 sub-
stances 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 dis-
sociation can be used as a protection against painful mem-
ories and experiences as long as the addicted patient mis-
uses drugs or patients on methadone maintenance treat-
ment 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 im-
prove long-term outcome, yet it may increase side effects,
such as long QT syndrome, cardiac conduct disorders, in-
fertility, osteoporosis, and chronic gastroenterology (con-
stipation) (8).

Although data on the association between substance
use disorder and dissociation are not defiantly demonstra-
tive, 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 dif-
frent 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 amnestic 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 reliabil-
ity 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 $\alpha$ 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 in-
dividuals trained by clinicians and researchers. The ASI in-
vestigates seven aspects of a patient’s life, including medi-
cal, employment/support, drug and alcohol use, legal, fam-
ily/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 $\alpha$ 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).

| Age       | A (Less Than 60 mg of Methadone) | B (Equal or Above 60 mg of Methadone Daily) | $t$   | $P$ 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).

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).
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 elderlies 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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