Dissociative disorders and dissociative symptoms among veterans of the Iraq-Iran war suffering from chronic post-traumatic disorder

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ABSTRACT

Objectives: To evaluate any dissociative disorders in patients with post traumatic stress disorder (PTSD), and find any relationship between dissociation and related variables in these patients.

Methods: A case controlled study carried out among 130 male patients with PTSD, and 130 matched individuals from the normal population. The study was carried out between January and September 2005, at Beheshti Psychiatric Hospital, Kerman, Iran, Demographic data and history of childhood physical abuse and self-harm in both groups were recorded. The severity of PTSD was measured by Davidson PTSD scale in the study group. Dissociative symptoms were evaluated with the dissociative experience scale (DES). For evaluating dissociative disorders, the dissociative disorder interview schedule (DDIS) was used. Data were analyzed by SPSS software.

Results: The mean age (±SD) of veterans was 41.46 (±5.09) years, and the mean age of going to the combat area was 29.4 (±5.015). The mean duration of involvement in combat was 27.8 (±23.44) months. The mean DES score in the study group was 26.01 (±12.31) and was 9.58 (±7.23) in the control group (F=1.171, p<0.0001). The mean score (±SD) of Davidson PTSD scale was 54±96 in the study group. The most prevalent dissociative disorder in the study group was psychogenic amnesia.

Conclusion: Many veterans with the impression of chronic PTSD may have an additional diagnosis of dissociative disorders.

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The term dissociation has been used to describe a wide variety of processes and phenomena.[1] Dissociation can be described as a structured separation of mental processes (for example, perception, conation, emotions, and identity) that are ordinarily integrated in and accessible to conscious awareness.[2] Currently the American Psychiatric Association defines dissociation as a disruption of the usually integrated functions of consciousness, memory, identity, or perception of environment. The Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM IV) dissociative category encompasses dissociative amnesia, dissociative fugue, depersonalization disorder, and dissociative identity disorder.[3] Post traumatic stress disorder (PTSD) is not categorized as a dissociative disorder in either the International Classification of Diseases and Health-related Problems, 10th revision (ICD-10) or DSM-IV. Although symptoms of dissociation are not a necessary criterion for diagnosis in PTSD, many individuals with PTSD report dissociative experiences, particularly peri-traumatically, namely, at the time of trauma.[4,5] Dissociation was also considered as the base mechanism of flashbacks and reenactment in patients with PTSD. Dissociation during reexperience of traumatic events is often manifested as a notable absence of affect. This lack of affect is described as emotional or psychic numbing and may present symptomatically as a restricted range of affect, an absence of emotional responsiveness, detachment, or estrangement from others, or lack of interest in usual activities.[6] The Iraq-Iran war lasted for 8 years and ended approximately 20 years ago. It left many physically and mentally injured veterans. Many of these veterans have suffered from chronic PTSD, and they are frequently referred to psychiatric centers all around Iran for various complaints. In our clinical practice in the past 10 years in Beheshti Psychiatric Hospital in Kerman, Iran, we have observed many complaints in these veterans which are dissociative in phenomena, but cannot be explained by dissociative symptoms, which were directly related to war experiences and their other symptoms of PTSD. In this research, we tried to evaluate dissociation and

probable additional dissociative disorders in veterans of the Iraq-Iran combat.

Methods. In this case controlled clinical study, 130 veterans of the Iraq-Iran war, who met DSM-IV criteria for residual PTSD, and 130 matched individuals from the normal population, as a control group were included. Informed consent was obtained from individuals in the study and control groups, and ethical approval was obtained. Study and control groups were similar in age, educational level, and marital status. Individuals in the control group were citizens of Kerman City never involved in the war, and did not meet criteria for PTSD for any other reasons. The study was carried out between January and September 2005, at Beheshti Psychiatric Hospital, Kerman, Iran. All the veterans who were involved in the study were selected from patients referred to Beheshti Psychiatric Hospital for any reason. Some related behaviors based on our clinical observation were evaluated in both groups. The inclusion criteria consisted of: 1) existence of PTSD criteria based on DSM IV, 2) were not psychotic, and 3) wanted to cooperate in the study. The exclusion criteria included: 1) did not fulfill the criteria of PTSD at the time of referral, and 2) were psychotic or too aggressive at the time of referral. Demographic data were recorded, together with associated behavior dependence based on DSM IV criteria for opioid dependence, history of childhood physical abuse, and history of self-harm. Additional questions regarding the war, including duration of involvement in the war, physical injury during the war, and history of one to one fighting in the war area, were also asked. The severity of PTSD in veterans was evaluated by Davidson PTSD scale. This scale includes 17 items, and each item could be rated from 0 (not at all) to 5 (every day).[7] Dissociative severity was evaluated via dissociative experience scale (DES). We used the scale as its reliability and validity was proven to be acceptable in our community. This scale includes 28 items, and each item is rated from 0 to 100. The mean number of all items is considered as the final score.[8] Scores below 10 were considered non-specific, 10-29 show moderate dissociation, and scores above 30 represent significant dissociation. All respondents were evaluated by dissociative disorder interview schedule (DDIS), a semi-structured interview to discover presence of any dissociative disorder based on DSM IV classification.

Data were analyzed using χ^2, t-test, analysis of variance, and Pearson regression test using SPSS software version 11.

Results. The mean age (±SD) of veterans was 41.46±5.09 years, mean age (±SD) of going to war was 29.4±5.015 years, and the mean duration (±SD) of involvement in the war was 27.8±23.44 months. The mean score of DES (±SD) in the study group was 26.01±12.31 and was 9.58±7.23 in the control group (F=1.171, p<0.0001). In the study group, 74 (56.5%) received an additional diagnosis of dissociative amnesia, 9 (6.9%) had a diagnosis of dissociative fugue, and 57 (43.8%) had a diagnosis of depersonalization, no one had an impression of dissociative identity disorder. The mean score (±SD) of Davidson scale was 54±96. Individuals in the control group did not receive the diagnosis of any dissociative disorders. Comparison between 3 variables (history of child physical abuse, history of self-harm, and opioid dependence in the study and control groups is shown in **Table 1**. The history of childhood physical abuse was significantly higher in the control group, but the 2 other variables, history of self-harm, and opioid dependence were higher in the study group. Levels of dissociation based on DES score were compared in the study and control group, and results are shown in **Table 2**. Veterans showed significantly more moderate and severe dissociation than the control group. A history of childhood physical abuse in the control group showed that individuals with a positive history had a higher score in DES (T=15.81, p<0.001), but this relationship was not shown in veterans. Statistical analysis among the case group showed that severity of PTSD was not statistically related to self-harm and opioid dependence, however, those that were involved in the first line of war and had history of one to one fighting compared to those without such a history, had more severe PTSD

Table 1 - Comparison between suggested contributing variables among veterans in the case and control groups.

Variable	Study group n (%)	Control group n (%)	Analysis χ^2 (*P*-value)
History of childhood physical abuse	13 (10.3)	31 (24.2)	8.56 (0.004)
History of self-harm	22 (78.6)	2 (1.54)	19.28 (<0.0001)
Opioid dependence	24 (21.8)	3 (2.5)	16.28 (<0.0001)

Table 2 - Comparison between dissociation severity in the case and control groups.

Dissociative experience scale (DES) score	Study group n (%)	Control group n (%)	Analysis χ^2 (*P*-value)
<10 (Non-significant)	11 (8.5)	80 (61.5)	50.49 (<0.0001)
≥10-29 (Moderate)	77 (59.2)	48 (36.9)	16.95 (<0.001)
≥30 (Significant)	42 (32.3)	2 (1.5)	13.77 (<0.001)

Table 3 - Comparison of DES in veterans with dual diagnosis (PTSD, dissociative disorder) and veterans with only PTSD.

Case (N=130)	Mean DES	Analysis χ^2 (*P*-value)
PTSD with dissociative amnesia n=74	30.12	12.82 (<0.0001)
PTSD with dissociative fugue n=9	39.41	12.04 (<0.001)
PTSD with depersonalization disorder n=57	29.18	5.60 (<0.02)

DES - dissociative experience scale,
PTSD - post-traumatic stress disorder

(T=9.05, p=0.03). These veterans had also significantly higher DES score (more than 30), than those with no history of one to one fighting (χ^2 =9.54, p=0.004). Veterans with a history of one to one fighting had a higher score in Davidson's test for measuring severity of PTSD (T=9.05, p=0.03).

Pearson regression test showed that an increase in score of Davidson scale results in an increase in DES score (R=0.51, R2=0.25, T=44.97, p<0.0001). Statistical analysis showed that veterans with an additional diagnosis of dissociative disorders had a higher score in DES than in those without a dual diagnosis; results are shown in **Table 3**.

Discussion. Long before the term PTSD was used in medical literature, physicians had seen how frightening events that threaten an individuals' life could evoke a stereotyped distressful psychological state in people. Man-made disasters often were followed by many psychological problems and psychiatric disorders in survivors. Currently, the disorder that was identified with the term PTSD is the best-known disorder following disasters. Thygeson et al[9] examined Danish survivors of the German concentration camps of World War II seeking compensation at the time of their repatriation and at follow up intervals for up to 20 years after repatriation. They found that approximately 68% of survivors had some symptoms currently described as PTSD, leading to disability 2 years after repatriation. Retrospective studies of the course of illness in American World War II prisoners of war have shown a 50% rate of PTSD according to DSM-III criteria, one year after repatriation and 29%, 40 years after repatriation.[10] A retrospective study among Vietnam war veterans showed that the prevalence of PTSD was 15% a long time after the war ended.[11] The PTSD was the first disorder to develop after the war in most patients, followed soon after by generalized anxiety, phobias, and depression.[12]

The relationship between PTSD and dissociation was never a matter of concern in medical literature, as we discussed in the introduction. In recent years, dissociation as a variable, which could predict the prognosis of PTSD in the future years of its occurrence was referred to in research. Recent studies indicated that persistent dissociation is a stronger predictor of chronic PTSD than dissociation during the accident. Persistent dissociation at 4 weeks remained a significant predictor of PTSD severity at 6 months, when pre-accident tendency to dissociate, or initial dissociation may put people at risk for PTSD. Many are able to compensate by post-event processing, or only those who continue to dissociate may be at a high risk of persistent problems.[13] In this study, we showed that veterans with more severe PTSD had a higher score of dissociation in DES. In the control group, dissociation was related to the history of childhood physical abuse, but there was no such relationship in veterans, however, they experienced dissociation significantly higher than the control group, so we concluded that their dissociative symptoms were related to their PTSD, and history of childhood trauma could not be considered as a predisposing factor for further dissociation in them. According to our clinical observation, self-harm and opioid dependence are 2 frequent findings in veterans. There are not sufficient data to claim that these 2 findings are exclusively due to dissociation, but we suggest that dissociation can play a role in the mechanism of these behaviors. It was proven that dissociation is one of the contributing factors to self-mutilation.[14] However, we know that substance abuse, except cocaine, increased in parallel with PTSD symptoms, and patients reported that these substances were beneficial for their symptoms. These findings are consistent with the hypothesis that patients with PTSD self-medicate their PTSD symptoms with substances.[15]

At this time, approximately 20 years have passed since the end of the Iraq-Iran war, yet we see many veterans referred to psychiatric clinics all around Iran for various reasons. Simply, we can attribute these referrals to the chronicity of their PTSD. However, in the current view, it is recommended if, in contrast to our expectation, the patient's day to day work, family relations, or physical health grow more impaired and mental distress expands rather than recedes, then the patient must be reassessed rather than presumed to have a complicated (chronic, delayed) form of PTSD.[16] The reassessing mental heath worker should keep in mind that many symptoms reported by patients with PTSD, are not limited in this syndrome. Many of these symptoms are observed in other psychiatric syndromes. For example, difficulty in falling asleep and concentration. As patients with PTSD may have a dual diagnosis, and a second disorder may exist in axis I, we want to refer to dissociative disorders as a possible second diagnosis, which may be the source of some symptoms. It is probable that a patient with

chronic PTSD, has another co-morbid diagnosis. We consider that dissociative disorders as a second diagnosis, are more prevalent than previously thought in PTSD. We found more than half of veterans with residual PTSD had at least one dissociative disorder based on DSM IV criteria. These additional diagnoses may be ignored in clinical evaluation, and were attributed to dissociative symptoms that belong to PTSD per se. It is possible that the initial stress that caused PTSD, initiated another dissociative disorder, which complicates the first diagnosis. Soldiers involved in the first line of war, and had a history of one to one fighting had a higher dissociative score and experienced more severe symptoms of PTSD, requiring more attention and rehabilitation. The diagnosis of PTSD based on its symptoms alone without paying attention to co-morbidity of other disorders, especially dissociative disorders, may mislead the therapeutic rehabilitative and prognostic proposals offered to these patients.

The 8-year Iraq-Iran war left many survivors suffering from several organic and psychiatric problems. The PTSD is the most prevalent and well-known sequel of any disaster, such as war. Studies regarding the Iraq-Iran war are limited. In one study,[17] the authors showed that, using chemical weapons increased the prevalence of PTSD in special areas. Finally, we want to refer to some of the limitations in this study. This retrospective study evaluated only veterans who were self-referred to the psychiatric clinic, and those that did not attend for psychiatric treatment were not involved in sampling. As many years have passed since the end of the war, many veterans may suffer from factors that are not directly due to war, such as poverty, over medication, and addiction. These problems may affect their clinical features.

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