

# Somatic Diseases in Patients with Posttraumatic Stress Disorder

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## ORIGINAL PAPER SUMMARY

**Purpose:** Numerous studies indicate that the exposure to traumatic events and psychological trauma is a widespread. Studies also show the frequency of comorbidity of mental disorders in patients with posttraumatic stress disorders (PTSD), while the effects of exposure to traumatic events on somatic health have been neglected for a long time. As PTSD might have a devastating effect on physical integrity and general health, the aim of this study was to show the prevalence of somatic problems in patients with PTSD. **Method:** Analyzed were 217 patients treated in the period from 2005 to 2008 at the Traumatic Stress Disorders Unit of the Department for Psychiatry Tuzla, in which PTSD was diagnosed using DSM IV criteria. The medical records, Harvard Trauma Questionnaire (HTQ) - version for Bosnia and Herzegovina for identification of war traumatic events and PTSD symptoms, modified Domestic Violence Inventory, general questionnaire on socio-demographic data and data related to psychosocial issues were used in this study. Somatic diseases were diagnosed by

ICD-10. Results: The average age of patients was 48.0246.33 years, with somewhat higher prevalence of male patients (136 ys 81). The highest number have completed secondary school (73.3%), were married (88%), employed (61.3%) and, of domicile status (83.4%). Out of 217 patients, in 85.7% the PTSD was related to war traumatic experiences. Somatic complaints and diagnosed chronic somatic diseases were present in 184 or 84.8% patients of both sexes. The highest number of patients had a hypertension, angina pectoris, back pain and degenerative bone diseases, as well as cerebrovascular disease and diabetes. More than three chronic somatic diseases were present in 85 or 39.2% patients with PTSD, and most frequent psycho-social problems were insufficient financial resources and a job loss. **Conclusion:** Based on the results of this study it can be concluded that association of somatic diseases with posttraumatic stress disorder is often present in persons who were exposed to multiple war traumatic experiences and more psychosocial problems.

**Key words:** posttraumatic stress disorder, somatic disease, psychological trauma.

symptoms. In recent years, PTSD has also been recognized as a cause of disability and a factor which increases risk for coronary heart diseases (16). Today, it is also generally accepted that many physical health conditions are related to serious mental disorders. Cardiovascular diseases, hypertension, respiratory disorders, diabetes mellitus and other types of metabolic disorders are associated with mental disorders, while a nature of its association is unclear (17). There were several studies of the association of somatic diseases and PTSD conducted in Bosnia and Herzegovina (18, 19), as well as of the frequency of somatic symptoms in patients with PTSD (20). The aim of this study was to investigate the frequency and types of somatic diseases in psychiatric patients diagnosed with posttraumatic stress disorder using DSM-IV criteria.

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## 1. INTRODUCTION

Numerous studies indicate that the persons exposed to traumatic events may develop a number of psychological problems such as: acute reaction to stress, anxiety, depression, dissociative and posttraumatic stress disorders, and permanent personality changes (1, 2, 3, 4). Previous studies suggest that the exposure to traumatic events increases risk of somatic diseases (5, 6, 7). Also, studies of war veterans showed that war veterans with PTSD more often visit the general practitioner than veterans without PTSD (8, 9). In general practice (ambulance) the patients with PTSD symptoms show multiple non-psychiatric problems (10). Most of the previous studies on association of PTSD with so-

matic complaints focused on war veterans (11). Compared to veterans without PTSD, veterans with PTSD were presented with poor physical health (12). In the abused women population, a prevalent somatic comorbidity with PTSD was found too (13). Kadojic et al. (14) reported that a high ratio of patients with PTSD have unhealthy lifestyles and habits such as heavy smoking, alcohol consumption, low physical activity, obesity, which result in undesirable consequences and lead to development of vascular, degenerative and other types of somatic disorders. Jakovljevic et al. (15) in their study on Croatian war veterans have found a high prevalence of various components of the metabolic syndrome in veterans with PTSD

## 2. SUBJECTS AND METHODS

Out of 333 patients treated at the Traumatic Stress Disorders Unit of the Department for Psychiatry Tuzla in the period from January 2005 to January 2008, the analyzed were 217 patients diagnosed with posttraumatic stress disorder (PTSD) according to DSM-IV criteria (21). The medical records, the Harvard Trauma Questionnaire (HTQ)-version for Bosnia and Herzegovina for identification of war traumatic events and symptoms of PTSD (22), modified Domestic Violence Inventory for identification of domestic violence (23), and the general questionnaire on socio-demographic data and the data related to psychosocial issues were used in this study. Somatic diseases were di-

agnosed according to ICD-10 (24). The results were processed with the use of descriptive statistics. For statistical analysis of data we used SPSS for Windows 10.0 (SPSS Inc., Chicago, IL, USA).

### 3. RESULTS

The average age of the examined group of patients was  $48.02 \pm 6.33$  godine. Out of total 217 patients diag-

Sociodemographic characteristics	N (%)
Sex	
Male	136 (62.7)
Female	81 (37.3)
Education level	
no education	35 (16.1)
primary education	12 (5.5)
secondary school	159 (73.3)
university level	11 (5.1)
Employment	
Employed	133 (61.3)
Unemployed	67 (30.9)
Retired	4 (1.8)
Houswife	13 (6.0)
Marital status	
Married	191 (88.0)
Single	6 (2.8)
Divorced	16 (7.4)
Widow	4 (1.8)
Status domicile/refugee	
Domicile	181 (83.4)
Refugee	36 (16.6)

**TABLE 1.** Sociodemographic characteristics of the study subjects (N=217)

nosed with posttraumatic stress disorder (PTSD) there were 136 male and 81 female. Men and women were of approximate age ( $47.6 \pm 6.9$  vs  $48.7 \pm 5.1$ ). Within the analysed group, the highest number have completed secondary school (159 or 73.3%), were married (191 or 88%), employed (133 or 61.3%) and domicile (181 or 83.4%) (Table 1). With regard to traumatic experiences the 186 (85.7%) patients have had multiple traumas (Table 2). The most common somatic symptoms due to which the patients with PTSD reported a doctor of general practice were choking, pain and feeling of chest constriction (136 or 62.7%), back pain and numbness in the legs (112 or 51.6%), stomach pain and epigastric discomfort (64 or 29.5%), weakness, fatigue, weight loss (56 or 25.8%). Somatic disease was diagnosed in 184 or 84.8% patients. With regard to somatic complaints in patients with PTSD there was no significant difference between group of patients with somatic diseases (n=184) and group of pa-

tients without somatic disease (n= 33). Of somatic diseases the largest number of patients were presented with hypertension, angina pectoris, back pain and degenerative bone diseases, cerebrovascular disease, and diabetes mellitus (Table 3). Out of total 184 patients diagnosed with somatic disease, 85 or 46.2% have had three or more somatic disorders. In regard to traumatic experiences in patients with combat-related trauma, the PTSD was mainly associated with hypertension, angina pectoris, silent stroke and back pain. Concerning traumatic events, three or more somatic diseases were present in 35 patients with combat-related trauma, in 29 patients with traumatic experience related to the loss of the loved one and war trauma, in 16 patients with childhood abuse and war trauma and, in 5 with domestic violence and war traumatic experiences. No significant difference found between men and women with regard to frequency of somatic diseases ( $\chi^2=0.194$ ,  $p=0.659$ ). Most prevalent psychosocial problems the patients reported were insufficient and insecure financial resources (84 or 38.7%), job loss (54 or 24.9%), poor working conditions (52 or 23.9%), inadequate liv-

ditions were related to cardiovascular system, cerebrovascular disease and chronic back pain. Also, it is found in this study that a significant number of patients have had more than three somatic comorbid conditions. In the study carried out in Croatia on the group of war veterans that underwent hospital treatment, the most prevalent somatic comorbid conditions included diabetes mellitus, hypertension, ulcer disease and hyperlipidaemia (25). Weisberg et al. (10) in their study conducted on patients in primary health care found that the patients with PTSD have had considerably more somatic problems compared to patients without PTSD. In the group of 185 patients with PTSD these authors found that the most frequent somatic diseases were anaemia, arthritis, asthma, back pain, diabetes mellitus, eczema and ulcer disease. Leading somatic problems in patients with PTSD enrolled in our study were hypertension, angina pectoris, back pain, cerebrovascular disease, diabetes mellitus, hyperlipidaemia, bronchial asthma. In the group of 47 veterans with PTSD in Croatia, Jakovljevic et al. (15) found that somatic comorbid conditions were present in 27 patients and

Traumatic experiences related to	Sex		Total n(%)
	male n(%)	female n(%)	
Combat	72 (52.9)	6 (7.4)	78 (35.9)
Sudden loss of the loved ones	2 (1.5)	4 (4.9)	6 (2.8)
War events, mobbing	4 (2.9)	4 (4.9)	8 (3.7)
Sudden loss of the loved ones and war trauma	17 (12.5)	14 (17.3)	41 (18.9)
Sudden loss of the loved ones, war event, childhood abuse	4 (2.9)	4 (4.9)	8 (3.7)
Sudden loss of the loved ones, childhood abuse	2 (1.5)	7 (8.6)	9 (4.3)
Mobbing	3 (2.2)	5 (6.2)	8 (3.7)
Accident at work, war events	7 (5.1)	1 (1.2)	8 (3.7)
Childhood abuse	5 (3.7)	6 (7.4)	11 (5.1)
Domestic violence	-	6 (7.4)	6 (2.8)
Domestic violence, war events,	-	11 (13.6)	11 (5.1)
Childhood abuse	20 (14.7)	13 (16.0)	33 (15.2)
Total	136 (100.0)	81 (100.0)	217 (100.0)

**TABLE 2.** Traumatic experiences in patients with posttraumatic stress disorder (N=217)

ing conditions (12 or 5.5%) and other (2 or 1.0%). Out of total number of patients only 13 or 6.1% did not report on the presence of psychosocial problems.

### 4. DISCUSSION

In our study comorbid somatic diseases were diagnosed in 184 or 84.8% patients with posttraumatic stress disorder. Most prevalent comorbid con-

ditions were degenerative bone diseases, hypertension, diabetes mellitus, coronary diseases, while Solter et al. (26) found an increased value of serum lipids in the group of war veterans with PTSD. In our study, 8.3% patients with PTSD have had a high values of serum lipids, and opposite to the above mentioned studies, 17.1% were presented with cerebrovascular

Somatic diseases	Sex		Total N (%)
	male (n=136) n (%)	female (n=81) n (%)	
Hypertension	63 (46.3)	34 (41.9)	97 (44.7)
Angina pectoris	25 (18.4)	9 (11.1)	34 (15.7)
Cerebrovascular disease	25 (18.4)	12 (14.8)	37 (17.0)
Hyperlipidaemia	9 (6.6)	9 (11.1)	18 (8.3)
Cortical cerebral atrophy	41 (30.1)	17 (20.9)	58 (26.7)
Back pain and degenerative bone diseases	48 (35.3)	37 (45.7)	85 (39.2)
Bronchial asthma	9 (6.6)	6 (7.4)	15 (6.9)
Diabetes mellitus tip 2	12 (8.8)	3 (3.7)	15 (6.9)
Hepatitis B	4 (2.9)	1 (1.2)	5 (2.3)
Adenoma prostatae	4 (2.9)	-	4 (1.8)
Hysterectomy	-	9 (11.1)	9 (4.1)
Hyperthyreosis	3 (2.2)	6 (7.4)	9 (4.1)
Colon irritabile, Ulcus disease	4(2.9)	4 (4.9)	8 (3.7)
Morbus Parkinson	-	2 (2.5)	2 (0.9)
Anaemia	-	2 (2.5)	2 (0.9)
Obesity	-	4 (4.9)	4 (1.8)
Psoriasis vulgaris	1 (0.7)	4 (4.9)	5 (2.3)
No somatic complaints	24 (17.6)	9 (11.1)	33

**TABLE 3.** Comorbid somatic diseases in posttraumatic stress disorder patients (N=217)

disease and 44.7% with hypertension. Back pain, chronic pain and degenerative bone diseases were found in 39.2% patients with PTSD, which is similar to the results from other studies (10, 15, 27). The results of this study showed that the patients with PTSD associated with somatic comorbidity, as well as those without somatic comorbidity complained to their general practitioners on a number of somatic problems. The results of many studies of war veterans (20, 28) indicate the association of PTSD with somatisation, which is the existence of somatic complaints with no organic causes. Somatization and other psychological conditions such as dissociation and affective dysregulations are frequent accompanied psychological conditions that might occur in various combination of symptoms in traumatized persons and represent a wide spectrum of individual adaptation to trauma (29). But, somatic complaints with clear organic damage indicate that the persons with traumatic experiences, in our sample these are multiple war trauma, loss of the loved ones, domestic violence and childhood abuse, show difficulty in adaptation to trauma and impaired ability to verbalize traumatic experiences (28). Seng et al. (30) in their study of the group of women with PTSD found a high prevalence of somatic comorbid conditions such as dyspareunia, endometriosis and colon irritabile. In this study in 11.1% of women the hysterectomy is done, and

the highest number of women have had hypertension (41.9%), chronic back pain and degenerative bone disease (45.7%). Also, a high rate of somatic comorbid conditions is found in girls with PTSD (31). Possible risk factor for development of comorbid somatic conditions with multiple traumas in our group of patients included psychosocial problems such as job loss, insufficient financial resources, poor working conditions and inadequate accommodation. A considerable number of studies indicate that life stressing events affect physical health (32).

Based on the results gained in this study it can be concluded that somatic comorbid conditions have increased in frequency in patients with posttraumatic stress disorder and, that the highest number of patients with multiple war trauma develop three or more somatic diseases in the poor psychosocial milieu. Also, the results gained indicate a possibly greater risk for cardiovascular, cerebrovascular, musculoskeletal and endocrinology diseases in patients with PTSD. The limitation of this study is that there was no control group of patients with other types of mental disorders. Also, the patients enrolled in this study were only those treated in the hospital. The results indicate that the patients with PTSD require a comprehensive approach in the assessment of overall health status as well as in the treatment.

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