

Posttraumatic Stress Disorder and comorbid disorders among Kosovo war veterans

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Abstract

Aim: To assess the prevalence of Posttraumatic Stress Disorder (PTSD) and other comorbid disorders and also to assess the impact of demographic and social factors in deterioration of existing psychological problems in Kosovo War Veterans.

Methods: Data were gathered from a representative sample of 215 Kosovo War Veterans. Subjects were assessed for the presence of lifetime and current DSM-IV TR psychiatric disorders with the following questionnaires: Harvard trauma questionnaire (HTQ), Beck's Depression Inventory and Mini International Neuropsychiatric Interview, Albanian version 5.0.0 (MINI 5.0).

Results: All subjects under study were males (100%), with a mean age of 42.9 ± 7.8 . Criteria for PTSD were met by 113, or 52.6% of the subjects; criteria for PTSD in co-morbidity with Major Depressive Disorders were met by 70, or 32.6% of the subjects, and; criteria for Major Depressive Disorder were met by 77, or 35.8% of subjects. The study has confirmed a significant impact of education, unemployment and poverty in the deterioration of PTSD and other psychological disorders.

Conclusion: Fourteen years after the war, our study has shown that psychological problems among War Veterans should still be considered as a very serious issue. Meanwhile, the demographic and social factors also have had a high impact in the deterioration of the PTSD symptomatology, in the symptomatology of Major Depressive Disorder and other Comorbid Disorders.

Keywords: co-morbidity, depressive disorder, prevalence, PTSD.

Introduction

Throughout human history, man in extreme disturbing events responded with anxiety reactions (1). Posttraumatic stress disorder (PTSD) arises as a delayed or protracted response to a stressful event or situation of an exceptionally threatening or catastrophic nature. Episodes of trauma re-experiencing, intrusive memories, bad dreams or night terrors, emotional numbness, emotional detachment from other people, anhedonia and avoidance of activities are just some of the typical features of posttraumatic stress disorder (2).

Post-traumatic stress disorder is considered as a contribution of four factors: (a) biological and psychological characteristics of the individuals; (b) the history of the individuals; (c) social context; (d) the manner of interpretation and understanding of the reason of being victimized (3). High prevalence of PTSD is characteristic of mobilized military personnel and differs significantly from PTSD prevalence of military reserve effective (4).

Ages of 18-24 are considered more vulnerable than people over 40 years old (5). For the development of PTSD symptomatology, race, gender, marital status, social status, previous traumatic experiences, aggressive behavior and non-tolerance are considered as very important factors (6). The degree of comorbidity is very high in individuals with PTSD, and about two thirds of them manifest at least two other mental disorders. The torture survivors with PTSD have shown more intense depressive symptomatology, and usually are more anxious and express more feelings of guilt; they also manifest a higher degree of social dysfunctions (7). War represents probably the most challenging situation that a human being can experience. Psychological, emotional and cognitive requirements in war environment also cause intense stress to the best prepared soldiers; of course, these traumatic experiences create a great likelihood for development of PTSD to the War Veterans with traumatic experiences (8). In a Croatian study e.g., from 402 examined War Veterans, criteria for PTSD were met by 24.2%, criteria for PTSD in comorbidity

with other diagnoses were met by 61.9%, and only 13.9% of them did not meet criteria for PTSD (9). During the war in Kosovo (January 1998 - June 1999), 18800 people have been killed, of which civilians were over 12000, and over 3900 are recorded as missing. The largest number of massacres occurred in the period March - June 1999. Similar to other wars, killings of civilians in Kosovo has caused severe trauma and high prevalence of PTSD and other anxiety disorders (10).

A survey in 2006 among civilian population of Kosovo, identified a high prevalence of PTSD (22.6%), associated with high prevalence of depressive disorder (43.1%), and emotional distress (43.9%) (11).

Methods

All 215 subjects were randomly selected from the member lists of Kosovo Veterans Association. Subjects were assessed for the presence of lifetime and current DSM-IV TR psychiatric disorders with followed questionnaires: Harvard trauma questionnaire (12) for PTSD, Beck Depression Inventory (BDI) and Mini International Neuropsychiatric Interview, Albanian version 5.0.0 (13);

The HTQ algorithm requires the presence of at least one of the four re-experiencing symptoms, at least three of seven symptoms of emotional numbness and at least two of the five symptoms of emotional arousal. Beck Depression Inventory consisted of 22 items, with response options by 4-point Likert Scale. M.I.N.I consisted of 20 modules with different items and four Likert points.

All subjects (n=215) were divided into four age-groups. Also, frequencies and association between variables were examined. Demographic, clinical and social variables were compared in subjects with lifetime PTSD, depressive disorders and an anxiety disorder by using t-test for continual variables and chi-square for categorical variables; also correlation between variables was compared using Pearson's correlation factor.

Results

All subjects (n=215) in the study were males (100%), with mean age of 42.9 ± 7.8 , veterans of ages 36-45 with 47.4% were most represented, followed by age group of 46-55 with 24.7%.

Criteria for PTSD were met by 113 or 52.6% of subjects and criteria for Major Depressive Disorder were met by 77 or 35.8% of subjects. Detailed results have been displayed in Table 1.

Table 1. DSM-IV TR diagnoses

| Diagnoses | N=215 | Percent |
|---|-------|---------|
| Posttraumatic Stress Disorder (PTSD) | 113 | 52.6 |
| Major Depressive Disorder in comorbidity with Posttraumatic Stress Disorder | 70 | 32.6 |
| Major Depressive Disorder | 77 | 35.8 |
| Recurrent Depressive Disorder | 68 | 31.6 |
| Depressive Disorder, melancholic symptoms | 41 | 19.1 |
| Acute Depressive Disorder | 21 | 9.8 |
| Life-long Panic Disorder | 34 | 15.8 |
| Anxiety Disorder | 30 | 14 |
| Agoraphobia | 18 | 8.4 |

Changes in mood have been verified also with Beck Depression Inventory. Results revealed that 39 (18.1%) of veterans manifested moderate

depression, 17 (7.9%) manifested severe depression and other 17 (7.9%) manifested symptomatology of extreme depression (Table 2).

Table 2. Depressive symptomatology based on results of Beck Depression Scales

| Beck Depression Scale | N=215 | Percent |
|-----------------------------|-------|---------|
| 0-10 Normal Humor | 106 | 49.3 |
| 11-16 Mild disturbance | 19 | 8.8 |
| 17-20 Borderline Depression | 17 | 7.9 |
| 21-30 Moderate Depression | 39 | 18.1 |
| 31-40 Severe Depression | 17 | 7.9 |
| >40 Extreme Depression | 17 | 7.9 |

Criteria for Major Depressive Disorder in comorbidity with PTSD were met by 32.6% of veterans, and only in 3.3% of cases Major Depressive Disorder has been diagnosed as a single disorder. Recurrent Depressive Disorder in comorbidity with PTSD has been diagnosed in 29.8% of cases, in 12.6% of cases PTSD in the

comorbidity with Panic Disorder and in 13.5% of cases PTSD in comorbidity with Anxiety Disorder.

Our study revealed an average positive correlation ($r = 0.57$) between PTSD and Depressive Disorder. All other obtained results were assessed for degrees of reliability $\alpha = 0.000$ to $\alpha = 0.3$, for degrees of freedom $df = 1$ and for levels of χ^2 -factors (Table 3).

Table 3. Correlations of psychological disorders with PTSD

| Psychological disorders/ Correlations with PTSD | Co-morbid with PTSD | | Without PTSD | | total | Percent | x ² | df | r | P |
|--|------------------------|---------|-----------------|---------|-------|---------|----------------|----|------|-------|
| | N | Percent | N | Percent | | | | | | |
| Major Depressive Disorder | 70 | 32.6 | 7 | 3.3 | 77 | 35.8 | 70.7 | 1 | 0.57 | 0.000 |
| Recurrent Depressive Disorder | 64 | 29.8 | 4 | 1.9 | 68 | 31.6 | 68.9 | 1 | 0.56 | 0.000 |
| Acute Depressive Disorder | 13 | 6 | 8 | 3.7 | 21 | 9.8 | 0.81 | 1 | 0.06 | 0.369 |
| Life-Long Panic Disorder | 27 | 12.6 | 7 | 3.3 | 34 | 15.8 | 11.68 | 1 | 0.23 | 0.001 |
| Anxiety Disorder | 29 | 13.5 | 1 | 0.5 | 30 | 14 | 27.2 | 1 | 0.36 | 0.000 |

Besides depressive disorder, anxiety and panic disorders, social factors have played major role in the deterioration of PTSD. Our study has confirmed a significant impact of education, the unemployment

and poverty in the deterioration of PTSD and other psychological disorders. This study has confirmed also the existence of a negative average correlation between present social factors and PTSD (Table 4).

Table 4. Correlation between present social factors and PTSD

| Social characteristics/ Correlation with PTSD | n=215 | | With PTSD | | Without PTSD | | x ² | df | r | P |
|--|-------|------|-----------|------|--------------|------|----------------|----|-------|-------|
| | N | % | N | % | N | % | | | | |
| Unmarried | 25 | 11.6 | 15 | 7 | 10 | 4.7 | 1.82 | 3 | 0.07 | 0.08 |
| Married | 183 | 85.6 | 93 | 43.3 | 90 | 41.9 | 1.82 | 3 | 0.07 | 0.08 |
| Elementary education | 140 | 18.6 | 24 | 11.2 | 16 | 7.4 | 30.52 | 4 | -0.33 | 0.000 |
| High school education | 104 | 48.4 | 68 | 31.6 | 36 | 16.7 | 30.52 | 4 | -0.33 | 0.000 |
| Unemployed | 92 | 42.8 | 68 | 31.6 | 24 | 11.2 | 31.2 | 3 | -0.26 | 0.000 |
| Temporary employed | 28 | 13 | 30 | 14 | 61 | 28.4 | 31.2 | 3 | -0.26 | 0.000 |
| With no incomes | 89 | 41.4 | 66 | 30.7 | 23 | 10.7 | 39.4 | 4 | -0.42 | 0.000 |
| With very low incomes (<100 €/M) | 10 | 4.7 | 6 | 2.8 | 4 | 1.9 | 39.4 | 4 | -0.42 | 0.000 |
| Unsatisfied with financial status | 171 | 79.5 | 92 | 42.8 | 36 | 16.8 | 57 | 5 | -0.48 | 0.000 |
| Military status/ Soldier | 184 | 85.6 | 101 | 47 | 83 | 38.6 | 9 | 3 | -0.16 | 0.280 |
| Military status/ Ranked officer | 19 | 8.8 | 5 | 2.3 | 14 | 6.5 | 9 | 3 | -0.16 | 0.290 |
| Lost family members | 58 | 27 | 42 | 19.5 | 16 | 7.4 | 12.5 | 1 | -0.24 | 0.000 |

Discussion

This study has confirmed that age, marital status, education and social status (poverty) have played an important role in the appearance or not of psychological problems among War Veterans (14). Meanwhile, social support and the rebuilding of trust have proven a positive effect in reducing the symptomatology of psychological disorders (15).

Compared to other countries, the obtained data from Kosovo War Veterans shows a very high prevalence of PTSD (52.6%).

In Vietnam Veterans e.g., criteria for PTSD were met by 30.9% of veterans (16), PTSD in Afghanistan Veterans have been presented in 11.6% of subjects (17) and similar situation occurred with Iraqi

Veterans, where PTSD has been diagnosed in 20% of subjects (18). Compared to Kosovo War Veterans, lower prevalence of PTSD has been evidenced also in Croatian Veterans (20.4%) (9). The high degree of manifestation of the PTSD (52.6%) symptomatology and Major Depressive Disorder (35.8%) can be explained by the fact that Kosovo veterans have been witnesses of massive civilian departure and massive massacres against civilians. Furthermore, in many cases they were under strong exposure to life-risk and stress. Also, often they were forced to fight for the protection of the civilian population and their families. Usually families with a KLA fighter have been consistently targeted by opposing military and paramilitary forces (19). The high prevalence of PTSD in Kosovo War Veterans, besides to the trauma exposure, has to do also with the influence of cultural factors specific to the Kosovo population. From cultural and social perspective Kosovo Albanians are well known for their pride, patriotism, manhood, bravery, allegiance, loyalty, devotion to family, commitment to the preservation and appreciation of the moral values (20). All those features have played a direct

impact in the War Veterans' behavior, in their attempts to minimize individual problems, and in their continual protection efforts against stigmatization.

The impacts of all those factors have gradually directed veterans into self-isolation. Having lived in unfavorable social conditions, marginalized by society, not recognition of merits and delays in the establishment of justice have influenced the high frustration and manifestation of evidenced psychological problems with direct impact on the patterns of their behavior.

Conclusion

In conclusion, our study showed that psychological problems even 14 years after the war still remain very high, and also demographic and social factors have contributed in deterioration of symptomatology of PTSD, Major Depression Disorder and other co-occurring disorders.

Finally, our study confirms urgent needs for establishment of psychological rehabilitation programs, as well as programs for social and economic rehabilitation of War Veterans.

Conflicts of interest: None declared.

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