Risk among Combat Veterans with Post-traumatic Stress Disorder: The Impact of Psychosocial Factors on the Escalation of Suicidal Risk

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ABSTRACT

Introduction: The purpose of this study was to (a) evaluate the influence of post-traumatic stress disorder (PTSD) and other comorbid disorders on suicidal risk among combat veterans and (b) evaluate the impact of psychosocial factors on the escalation of suicidal risk.

Methods: Data were gathered from a random and representative sample of 215 Kosovo War veterans. Subjects were assessed for the presence of lifetime and current psychiatric disorders according to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Revision (DSM-IV TR) using the following questionnaires: Harvard Trauma Questionnaire (HTQ), Beck's Depression Inventory (BDI) and Beck's Suicide Intent Scale (BSIS).

Results: Suicidal ideations were observed in 44 (20.5%) of the 215 subjects. High suicide risk was found in 31.8% veterans diagnosed with

PTSD and comorbid major depressive disorder. In addition, high suicide risk was also observed in the group of unemployed veterans, veterans dissatisfied with social/economic attainment and veterans dissatisfied with living conditions.

Conclusion: Our study showed that socioeconomic factors contributes to the deterioration of symptoms of major depression, PTSD and other comorbid disorders, with a direct impact of worsening suicidal ideations and suicidal behavior among war veterans.

Keywords: Suicidal ideation/behavior; combat veterans, PTSD, psychosocial factors

INTRODUCTION

Post-traumatic stress disorder (PTSD) is predicated on the experience of traumatic events (1). It is frequently seen as a comorbidity with major depressive disorder, anxiety, generalized anxiety disorder, panic disorder and personality disorder (2). Military personnel exposed to traumatic events are among the most at-risk populations for PTSD (3). Psychological and emotional problems among the Vietnam War veterans were reported to be present >20 years after the war and these problems were also correlated with veterans' social position and economic attainment (4). It has been documented that social support shows a stronger protective action against traumatization. Compared with other groups, cases with low social support were more bothered by the majority of PTSD symptoms (5). On the other hand, age and educational level were more correlated to the model of verbal aggression. Older age and higher educational level lead to a more mature form of aggression, i.e., verbal aggression instead of physical aggression (6).

Patients with lifetime PTSD and comorbid major depressive disorder were significantly more likely to have attempted suicide and had more suicidal ideations than subjects without a history of PTSD (7). Quality of life may be negatively impacted by PTSD and decreased quality of life has been shown to be associated with suicidal behavior (8). Some other data shows that patients living in communities with higher incomes were less likely to commit suicide. Those results indicated that individuals who are part of communities with low social supportive environment are more likely to attempt suicide and are more likely to choose a particularly violent means of suicide (9).

To the best of our knowledge, this study is the first one studying the prevalence of PTSD and other comorbid disorders among Kosovo War veterans, aiming to assess the influence of these disorders on suicidal behavior and suicidal risk. We confirmed from Kosovo War Veterans Association that none of the veterans have taken part in any of psychological or psychosocial rehabilitation programs.

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 psychiatric disorders according to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Revision (DSM-IV TR) using the following questionnaires: Harvard Trauma Questionnaire (HTQ), Beck's Depression Inventory (BDI) and Beck's Suicide Intent Scale (BSIS).

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Frequencies and association between variables were examined. Demographic, clinical and social variables were compared in subjects with lifetime PTSD, major depressive disorder and anxiety disorder. The t-test was used for continuous variables and the chi-square test was used for categorical variables. In addition, correlation between variables was compared using Pearson's correlation coefficient.

RESULTS

The descriptive characteristics of the studied subjects are displayed in Table 1. All subjects (n=215) in the study were males (100%) with a mean age of 42.9 [standard deviation (SD) 7.8] years; among them, 85.6% were married, 42.8% were unemployed, 13% were temporary employed, 63.75% were dissatisfied with life achievements, 79.5% were dissatisfied with the financial situation and 52.6% were dissatisfied with living conditions. According to rank distribution, most subjects (85.6%) were soldiers.

After expert evaluation, DSM-IV TR criteria for PTSD were met by 113 (52.6%) of the 215 subjects. The criteria for PTSD with comorbid major depressive disorder were met by 70 (32.6%) of the subjects and criteria for major depressive disorder were met by 77 (35.8%) of the subjects (Table 2).

PTSD prevalence among Kosovo combat veterans (52.6%) in our study was higher than among Kosovo civilians with trauma experiences (22.6%); however, compared with civilians (41.7%), the prevalence of major depressive disorder in war veterans (35.8%) in this study was lower (11).

Subjects with lifetime PTSD as a comorbidity with other psychiatric disorders were significantly more likely to have experienced a higher suicide behavior. Apart from the high suicidal risk among veterans diagnosed with PTSD (31.8%), high suicidal risk was observed in veterans with major depressive disorder as a comorbidity with PTSD (31.8%). High suicidal risk has been reported in the group of veterans dissatisfied with life achievements (25%), dissatisfied with social/financial situation (31.82%) and among war veterans dissatisfied with living conditions (27.27%). In our study, a moderate negative correlation ($r=-0.50$) was observed between PTSD with comorbid disorders and veterans' suicidal behavior. The results also indicated a weak correlation between social factors and veterans' suicidal behavior ($r=0.26-0.28$); (Table 3). In addition, the individual interviews with the war veterans have revealed one characteristic aspect: all the war veterans who participated in our study denied abuse of prohibited drugs.

DISCUSSION

To the best of our knowledge, this study is the first to examine the association between PTSD and social factors and correlations of those factors to suicide risk among Kosovo War veterans.

PTSD prevalence was 52.5% in the study participants, which was higher than that in similar studies with Vietnam War veterans (21.5%) and Croatian War veterans (31–41%) (12, 13). In our work with Kosovo War veterans, we have drew some specific details from which the reason for this high prevalence of PTSD can be predicted. Kosovo War veterans were involved in guerrilla resistance against opposing forces; all fighting was near their family homes, with clear evidence of multiple risks for them and their families. Furthermore, factors such as not being adequately equipped, being under continued life risk, being witnesses of massacres against civilians, protecting the large number of deportees have dramatically increased veterans' emotional sufferings, with a direct impact on the later development of lifetime PTSD.

Table 1. Subjects social characteristics

	No	%
Group age, years		
<35	42	19.5
36–45	102	47.4
46–55	53	24.7
>56	18	8.4
Civil status		
Unmarried	25	11.6
Married	183	85.6
Divorced	3	1.4
Widowed	4	1.9
Employment		
Unemployed	92	42.8
Temporary employed	28	13
Permanently employed	91	42.3
Pensioner	4	1.9
Monthly incomes		
No incomes	89	41.4
Very low incomes (<100 €/Month)	10	4.7
Low incomes (100–200 €/Month)	41	19.1
Average incomes (200–400 €/Month)	39	18.1
High incomes (>400 €/Month)	36	16.7
Military ranks		
Soldier	184	85.6
Noncommissioned officer	10	4.7
Ranked officer	19	8.8
High officer	2	0.9
Life satisfaction		
Dissatisfied with life achievements	137	63.7
Dissatisfied with social/financial situation	171	79.5
Dissatisfied with living conditions	113	52.6

Table 2. Psychiatric diagnoses/DSM-IV-TR

DSM-IV TR Diagnoses	No	%
Post-traumatic stress disorder (PTSD)	113	52.6
Major depressive disorder in comorbidity with PTSD	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

Table 3. Psychiatric disorders, social status and veterans disabilities/suicide risk

Psychiatric disorders and social status	No	%	Low risk/ No.	%	Medium risk/ No.	%	High risk/ No.	%	Pearson chi-square	Likelihood ratio	Degrees of freedom	Pearson's R	p
Post-traumatic stress disorder (PTSD)	113	52.6	16	14.16	13	11.50	14	12.39	45.41	58.48	3	-0.41	0.000
Major depressive disorder in comorbidity with PTSD	70	32.6	14	20.00	12	17.14	14	20.00	74.10	79.00	3	-0.50	0.000
Major depressive disorder	77	35.8	14	18.18	12	15.58	14	18.18	74.10	78.00	3	-0.50	0.000
Recurrent major depressive disorder	68	31.6	10	14.71	13	19.12	14	20.59	78.60	83.40	3	-0.45	0.000
Major depressive disorder, melancholic symptoms	41	19.1	7	17.07	8	19.51	11	26.83	64.55	52.90	3	-0.40	0.000
Acute depressive disorder	21	9.8	3	14.29	1	4.76	0	0.00	2.78	3.94	3	-0.04	0.005
Life-long panic disorder	34	15.8	6	17.65	2	5.88	7	20.59	19.98	15.78	3	-0.20	0.000
Anxiety disorder	30	14.0	4	13.33	3	10.00	3	10.00	3.58	3.23	3	-0.12	0.000
Agoraphobia	18	8.4	3	16.67	0	0.00	1	5.56	11.07	7.36	3	-0.18	0.001
Dissatisfied with life achievements	137	63.7	15	10.95	12	8.76	11	8.03	32.47	38.46	15	0.28	0.000
Dissatisfied with social/financial situation	171	79.5	15	8.77	13	7.60	14	8.19	31.40	44.80	15	0.27	0.000
Dissatisfied with living conditions	113	52.6	14	12.39	10	8.85	12	10.62	32.22	39.86	18	0.26	0.000
The war disabled	16	7.4	2	12.5	2	12.5	5	31.3	20.70	13.74	3	0.16	0.005
Family members assassinated during the war	58	27.0	5	8.62	5	8.62	6	10.34	3.22	3.00	3	0.07	0.359
Missing family	23	10.7	3	13.04	2	8.70	2	8.70	1.70	1.50	3	0.09	0.644

Our study has several conclusions. First, among war veterans with PTSD and other comorbid disorders, suicidal risk is predictable. Screening for PTSD and major depressive disorder should be performed routinely in all rehabilitation programs and in all military facilities dedicated for veterans (14). The effective health-based suicide prevention strategies would contribute to the early identification of cases with high suicide risk (15). Second, socioeconomic factors have played an important role in the daily functioning of war veterans, those factors have fostered worsening of existing psychological problems, with a direct impact on increasing of suicidal risk behavior. Depression, marital status and low incomes have been identified as additional confounders of the association between PTSD and suicide (16). In addition, nonpsychiatric factors, such as unemployment and divorce, have been reported as foster factors for high case fatality rates in suicide acts committed by veterans (17). Third, continual efforts should aim for the restoration of justice, reconciliation and social reconstruction, while priority needs to be given to social, occupational and economic rehabilitation; such activities will contribute to the decrease of suicidal ideations and suicidal behavior (18). Finally, this study highlights the need for an integrated approach to the problems that combines political/economical actions, with special attention to the mental health consequences of war veterans and their effective treatment. The data suggest that the exposure to combat or witnessing atrocities is insufficient to explain the development of suicidal behavior in military personnel that cannot be explained on the basis of the diagnosis of mental disorder (19). In addition, some other data confirm that higher case fatality rates in suicide acts committed by such individuals; in other words, suicide in such individuals is more likely to be caused by nonpsychiatric factors, such as unemployment (20).

Our study showed that socioeconomic factors contributes to the deterioration of symptoms of major depression, PTSD and other comorbid disorders, with a direct impact on the worsening of suicidal ideations and suicidal behavior among war veterans. The smaller the country, the more urgent the needs. In this regard, our study confirms the urgent need for the establishment of psychological rehabilitation

programs as well as programs for social and economic rehabilitation of war veterans.

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