

POST-TRAUMATIC STRESS DISORDER IN CROATIAN WAR VETERANS; INCIDENCE AND PSYCHOSOCIAL FEATURES

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ABSTRACT

The paper examines the incidence of post-traumatic stress disorder in a sample of 3217 Croatian war veterans, and the influence of different features of pre-war, wartime and post-war status of the respondents on the onset of the disorder. Based on the results of two different instruments used (Mississippi Combat Scale and Watson PTSD Interview), 25% war veterans were classified in the "partial PTSD" category (the disorder diagnosed on 1 instrument), whereas 16,22% were denoted as "true PTSD" (the disorder diagnosed on both instruments administered).

Although the PTSD incidence in veteran population is primarily ascribed to exposure to war stressors, recent studies highlight the importance of pre-war, war-time and post-war psychosocial features (family stability, family relations, social life, possible alcohol and drug use) in onset and development of the disorder. Therefore, in the second part of the research respondents with comparable number of war stressors experienced were singled out from the basic sample, and categorized into three groups: "no PTSD", "partial PTSD" and "true PTSD". Differences in pre-war, war-time and post-war status features among the three sub-groups were examined by discriminative analysis, which revealed the influence of the pre-war connative status and social functioning of war veterans on the onset of PTSD, as well as on the onset of acute and chronic health problems in veteran population during and after the war.

PTSD is a set of reactions emerging in normal people exposed to abnormal traumatic events and situations. PTSD symptoms are primarily a response to specific trauma experiences and in a first (acute) stage can be considered as part of psychological recovery process. Acute combat stress and post-traumatic distress are by no means sign of weakness or cowardice, as was the dominant belief in the centuries-long history of warfare, but a natural warning that human beings are not robots insensitive towards terrors of war. Events occurring in the battlefield leave trace on their witnesses -regardless of how well they have been selected, trained and motivated, they cannot avoid the shock at the extent and degree of human suffering they witness to or are affected themselves.

The first shock, or acute combat stress, in time may grow into a disorder nowadays known as post-traumatic stress disorder, which is characterized by coexistence of three groups of symptoms: re-experiencing, avoidance and increased arousal. Post-traumatic stress disorder victims are torn between the "shadows of the past" and inability to forget, tension, irritability and violent outbursts of anger, which alternate with periods of exhaustion, dumbness, depressiveness, withdrawal and isolation.

However, PTSD need not necessarily develop in all individuals exposed to a traumatic experience. In peace-time (e.g. cases of sudden death of a close person, rape, terrorist attack, serious accidents, disaster or another traumatic situation) incidence of the disorder ranges between 0,5% and 7%, whereas in combatants it varies from 15 % to up to 50% of cases. Also, progression of the disorder from acute stage, noticeable within first months following the trauma, into chronic form, characterized by extended disturbances, will occur in some individuals, whereas most those affected will recover spontaneously. Whether post-traumatic stress disorder will occur, how severe and whether it will grow into a chronic condition depends on the features of traumatic experience but also on complex interaction of intervening biological, psychological and social factors.

This paper aims to provide answers to two basic questions concerning the problem of the post-traumatic syndrome in Croatian war veterans:

- 1) what is the incidence of post-traumatic stress disorder in veteran population and
- 2) what features of psychosocial status of Croatian veterans (pre-war, wartime and post-war status) could have facilitated the onset and development of the disorder regardless of the features of the traumatic experience.

At this occasion we will present only some results of an extensive research on post-traumatic stress disorder in Homeland Defence War veterans.

PROCEDURE

The research was conducted on a sample of 3217 male respondents who were demobilized veterans of the Homeland Defence War. They were asked to fill a comprehensive set of questionnaires. This paper will present results from 4 questionnaires

- 1) GENERAL DATA QUESTIONNAIRE covering psychosocial features of respondents from pre-war, war-time and post-war period - a total of 69 variables analysed
- 2) WAR TRAUMATIC EXPERIENCES QUESTIONNAIRE - assessing types and incidence of traumatic war experiences and containing 40 variables in total
- 3) WATSON PTSD Interview containing 17 items related to PTSD symptoms in accordance with the DSM categorization and
- 4) M-PTSD QUESTIONNAIRE by Keane et. al., widely known as the Mississippi Combat Scale containing 39 items

Table 1. In the first part of the research respondents were categorized into three sub-groups, based on the results from two measures of PTSD:

- A - "no PTSD"** (below the diagnostic criteria on both questionnaires);
B - "partial PTSD" (meeting the diagnostic criteria on one questionnaire)
C - "PTSD" (meeting the diagnostic criteria on both questionnaires)

In the second part, from the three subgroups the respondents with equal number of traumatic war experiences (based on the TCWE-USTBI - WAR TRAUMATIC EXPERIENCES QUESTIONNAIRE) were isolated. The criterion chosen was the results on the USTBI Questionnaire as a dominant figure in the C subgroup (respondents with PTSD), which was 21 (out of total 40 traumatic experiences listed in the Questionnaire). In this way new three subgroups were made:

A1 (N=47)

B1 (N=42)

C1 (N=34) equal in number of number of traumatic war situations experienced (21)

Among the groups defined as A1, B1 and C1, by means of simple ANOVA, differences in the pre-war, war-time and post-war status features were examined. The presence of latent dimensions of differences among the groups observed was tested by discriminative analysis, separately within each subgroup of variables as predictive sets.

RESULTS AND DISCUSSION

1. INCIDENCE OF POST-TRAUMATIC STRESS IN HOMELAND DEFENCE WAR VETERANS

In order to obtain as complete and objective answer as possible on the incidence of PTSD in Croatian war veterans, the authors compared results of the research in question with the results of two previously conducted studies. (Table 2).

Table 2. CROATIAN WAR VETERANS UP TO DATE EPIDEMIOLOGICAL PTSD STUDIES

STUDY	N	INSTRUMENTS	PTSP (%) LOWER LIMIT	PARTIAL PTSP (%)	PTSP (%) UPPER LIMIT
Gustović, Komar (1994)	384	PTSD - I	14,0	17,0	31,0
Kušević, Vukušić, Lerotić (1998)	3504	M-PTSD PTSD - I	14,6 16,6	10,4	27,0
Komar, Vukušić (2000)	3217	M-PTSD PTSD - I	16,2	25,5	41,7

The first research on the incidence of PTSD in Croatian war veterans was conducted in 1992 and 1993 on a sample of 384 respondents - professional soldiers, reserve personnel and demobilized; administered was Watson's clinical interview by experts - psychologists and psychiatrists.

The other research involved analysis of results on a sample of a total of 3504 male respondents (demobilized veterans); the instruments administered included the Mississippi Combat Scale (M-PTSD) and Watson PTSD interview. The paper presents the data on the incidence of PTSD on each measure separately.

In the research here discussed, which is the third research of PTSD incidence in our country, the most conservative and the strictest criterion of PTSD diagnosis was used, whereby only veterans showing results above the criteria in both instruments used were singled out.

As noticeable, the percentage of respondents with diagnosed PTSD remained similar across the three projects (from 14 % to 16,6%). In each project the category "partial PTSD" was included, comprising respondents in a wide range of incidence from 10,4 % to 25,5%. In the first instance in the "partial PTSD" were respondents who missed one symptom to be categorized as "PTSD" by the Watson PTSD Interview criteria. In the second project "partial PTSD" had less strict criteria, therefore it included respondents revealing at least a few signs of the disorder in the interview. In the third project the category "partial PTSD" referred to respondents meeting diagnostic criterion on 1 instrument applied. The Introduction of the category "partial PTSD" is a result of two factors, one consisting in shortcomings of the existing measurement procedures, evinced best by the discrepancy in determining PTSD with two

different instruments on the same sample. The other reason is in the very nature of the disorder, whence in respondents revealing some symptoms at the time of research in time the true disorder may develop.

In conclusion, the results of the existing research on PTSD incidence in Croatian war veterans suggest that at this moment at least 14-16% of population participating in the Croatian Homeland Defence War suffer from post-traumatic stress disorder. This figure is very probably the lower limit of incidence, whereas the upper limit could be inferred ranging from 25 up to over 40%, which, it should be noted, could change or remain at the same level, depending upon the treatment of veterans by social environment, especially on existing programmes of psychosocial assistance as well as on the availability, type and intensity of professional treatment of individuals with psychological disturbances caused by war experience.

2. THE ROLE OF PSYCHOSOCIAL FEATURES IN ONSET AND DEVELOPMENT OF POST-TRAUMATIC STRESS DISORDER

In our attempts to throw light on specific role and significance of psychosocial features of veterans in onset and development of PTSD, in the second part of the research three sub-groups of respondents were formed, differing in current psychological status but comparable in the number of traumatic war experiences. The differences in their pre-war, wartime and post-war psychological status were analysed separately. Earlier studies were set on the association between type and intensity of trauma and disorder, whereas the recent ones increasingly focus on factors preceding the trauma, the circumstances of the traumatic event as well as on the events following it. The answers to these questions would not only ensure a better insight into the post-traumatic stress disorder, but also have practical value in terms of taking appropriate prevention measures and of a improved organization of therapy.

Statistically significant differences among the three sub-groups were found for 10 out of 28 examined pre-war psychosocial features (Table 3). The respondents with PTSD differed from the "no PTSD" group in coming from large families, in bad relationships with mothers during their adolescence; in fathers prone to alcohol; in lower educational level; in more frequent school drop-outs and part-time student status; in problematic relationship with their environment and in irregular serving in the military. Discriminative analysis of differences among the 3 groups of respondents with respect to pre-war psychosocial status 2 statistically significant discriminative functions were found. By level of projections of some of the variables the first discriminative function was defined as FAMILY PROBLEMS IN ADOLESCENCE FACTOR, and the other as PROBLEMS IN PRE-WAR SOCIAL FUNCTIONING FACTOR. The results obtained agree with the results of the recent studies by King et. al. (1996, 1998), who found significant association between PTSD and the poor pre-war social and economic status, poor relationship with parents, family instability and early traumatic experiences. In general the results obtained support hypotheses on PTSD predisposition resulting from troubled childhood, problematic relationship with the environment and accumulated effect of stressful experiences dating from adolescence.

TABLE 3 DOMINANT PRE-WAR STATUS FEATURES OF VETERANS WITH DIAGNOSED PTSD

<i>FEATURES</i> :	<i>DISCRIMINANT FUNCTIONS:</i>
large families bad relationship with mother in the adolescence father prone to alcohol poor family relationships in general	FAMILY PROBLEMS IN ADOLESCENCE
lower educational level frequent drop-outs frequent history of part-time students problems in military term of service frequent interruptions in military term of service	PROBLEMATIC RELATIONSHIPS WITH SOCIAL ENVIRONMENT

The three sub-groups differed only in three variables out of 16 war-time status and behaviour features (Table 4). Veterans with PTSD (C1) were wounded more times and sought medical assistance more often because of psychological and health problems. In other wartime status features no statistically significant changes were found, which could be taken as empirical proof of comparability of the groups examined by the criterion of exposure to war experience. High degree of the exposure seems to have prevailed over those of confidence in commanders, level of trainedness, volunteering versus mobilized status, and even the time period spent in combat. Discriminative analysis yielded 1 statistically significant function, defined as FACTOR OF ACUTE HEALTH PROBLEMS RESULTING FROM COMBAT DEPLOYMENT. A review of post-war status features in veterans with PTSD reveals a sad situation characterized by deterioration of the disorder accompanied by lack of support in the social environment, proneness to social isolation, alcoholism and drug use and impaired health in general.

TABLE 4 DOMINANT WARTIME STATUS FEATURES OF VETERANS WITH PTSD

<u>FEATURES</u> :	<u>DISCRIMINANT FUNCTIONS:</u>
<ul style="list-style-type: none"> - wounding - sought assistance during the war because of psychological disturbances - sought assistance for other health problems 	<p>ACUTE HEALTH PROBLEMS RESULTING FROM WAR DEPLOYMENT</p>

TABLE 5 DOMINANT POST-WAR STATUS FEATURES OF VETERANS WITH PTSD

<u>FEATURES</u> :	<u>DISCRIMINANT FUNCTIONS:</u>
<ul style="list-style-type: none"> - specific health consequences due to wartime deployment - poor overall health condition - seek help from mental health professionals - confide war traumas to physicians only - re-socialization problems - poor social life - bad economic status in general - war deployment adversely affected family relationships - proneness to alcohol following mobilization - proneness to drugs following mobilization - taking hard losing fellow-combatants to war - taking hard deaths of innocent civilians to war - more mobilized for illness - demobilized unwillingly - seeking the Invalid-of-War status 	<p>CHRONIC HEALTH PROBLEMS</p>

Among the other results to highlight is the fact that the by pre-war, wartime and post-war features the group of veterans with partial PTSD is much more comparable to the "no PTSD" group than the group with developed PTSD.

Each research of the role of psychosocial features is confronted with limitations in the choice of variables available. In this study too there were not data on the cognitive and emotional pre-war, wartime and post-war status of veterans, and it did not include all cognitive and social features that can be found in real life. It is our opinion, however, that the results presented in this study are supportive enough of the hypothesised considerable influence of social factors on the onset of post-traumatic stress disorder. Broken family and conflict with the environment in one's adolescence increase the risk of onset of post-traumatic stress disorder later on in life, whereas lack of social support following traumatization opens the door to chronic state and new problems (addiction, impaired health, suicidal ideas). As in wartime

conditions PTSD casualties multiply, so does the entire community become more responsible, all the more so it is about redeeming the people who were ready to risk their life to defend others.