Acta clin Croat 2002; 41:295-306 Original Scientific Paper

CHRONIC PAIN AND SECONDARY TRAUMATIZATION IN WIVES OF CROATIAN WAR VETERANS TREATED FOR POST TRAUMATIC STRESS DISORDER

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SUMMARY – Numerous consequences of the war in Croatia include a series of psychosocial disturbances. Due to many traumatic experiences, a number of Croatian war veterans have developed posttraumatic stress disorder (PTSD). With its specific symptoms, PTSD has a significant impact on the usual social functioning of the veterans. It is especially pronounced in the family which, on one side, should offer emotional support to its sick member, and on the other hand, suffers most from the condition of one of its members. In most cases, the veterans' wives are those who try to preserve and maintain previous family balance. In the present study, mental consequences of living with a husband suffering from PTSD were investigated. Two groups of veterans' wives were compared: wives of husbands suffering from PTSD and wives of husbands free from PTSD. The following instruments were used: M-PTSD scale for PTSD; HSCL-25 for depression and anxiety; and questionnaires about demographic data and chronic pain. Study results revealed the wives of veterans suffering from PTSD to be significantly more depressive and anxious, to have a higher frequency of symptoms of vicarious traumatization, to have a higher prevalence of painful syndromes resistant to usual medical treatment, as compared with the group of the wives of veterans without PTSD. It is concluded that PTSD in a veteran significantly affects the psychosocial status of his wife, and that she suffers considerably from his illness.

Key words: *Stress disorders – post-traumatic, complications; Combat disorders, complications; Family health; War; Croatia*

Introduction

The war in Croatia has resulted in the development of posttraumatic stress disorder (PTSD) in many a Croatian war veteran in response to their traumatic war experience. It was recognized quite early that besides psychologic and neurophysiologic components of the disorder, the quality and quantity of social support were the key factors not only in the incidence but also in therapeutic options for PTSD.

The 'first-line defence' is family. In the situation of personal imbalance along with war and transition exhaustion of the community, family often remains the only source of support and the only backing for therapeutic procedures. On the other hand, the impact of PTSD on other family members is often overlooked[1].

Human body is a biologic system consisting of many organs with various functions that work in harmony with each other. Family also represents such a system. The family system acts through various forms of transactions. The family structure is an invisible set of functional demands organizing ways of interactions among family members. Considering family as a system includes recognition of family bonds, which are exceptionally strong and which affect their behavior, emotions, values and attitudes. Every family bond and every family member affects other family bonds and other family members. Closeness among

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Received December 14, 2001, accepted September 20, 2002

family members is the reason for their sensitivity towards stress, especially towards traumatic stress, but is also a source of support for every member[2].

Knowing the fact that family represents the primary source of social support for virtually every individual in extraordinary circumstances, crisis situations act systematically on the family irrespective of their type, which means that no one is 'spared'. Inner stresses are woven into the risks of the family growth and development, whereas outer ones come from adjusting to changed circumstances. Any sudden change, incertitude or danger can lead to stress reactions of the entire system[3].

Stress condition is consequently any condition in which our mental and physical balance has been disarranged physically, mentally or socially. In the broadest sense, stress is a physical and mental reaction to outer and inner stressors. Consequently, stress is not a situation in which an individual has found himself but is the reaction to that situation. Stressor is any stimulus that leads the individual into the state of stress. Stress occurs when an individual estimates, in any situation, that there is a disproportion between the demands put on him and his potentiality to resist them. When there is not sufficient social support to help him cope with stress, when the stressor is extremely strong, traumatic, or when personal confrontation resources are weakened, the response to stress can also be pathologic. One of the most common responses to traumatic experience is PTSD[4].

Traumatized family is a family which fights for recovery from damage or is trying to cope with the damage caused by trauma. Family can be traumatized as a whole, however, more often it is one of its members who is traumatized and who develops some of the pathologic responses to trauma. The disorder this family member is suffering from, disorder characteristics, and the very fact of the member's dysfunctionality result in transmission of the traumatization consequences to all other family members. In case of some acute responses the family balance will not be basically disturbed. However, when chronic, longterm disorders such as PTSD develop, the family system is significantly impaired. Family represents the primary source of support, whereas on the other hand family is often the first place where all PTSD symptoms manifest in full range. The usual emotional demands of the family represent an exceptional burden on its ill member. For a traumatized person, the functional social support provided by the family is of less importance than the structural support (which is given by the society). May the former remain the only one, which is often the case in veterans (a retired veteran without a job), no matter how ample, it will never substitute the feeling of social desertion in veterans. A traumatized member plays his role in the family with difficulty. He frustrates the others with his exceptional sensibility and, becoming unsociable, he reduces communication. This is one of as yet best defined aspects of reactions to trauma[5].

PTSD is a delayed or prolonged response to a stressful event or situation of extreme imperilment or of catastrophic nature, which can provoke pervaded perturbation in almost everyone. By its character, it is mostly a chronic illness of long duration that basically disturbs social and family functioning. The incidence of PTSD differs in various situations. It is believed that 15% - 20% of veterans who participated in combat some time in life develop PTSD[6].

An important subsection of traumatized families are the families with at least one member suffering from PTSD. Such a family is actually a 'hidden victim of trauma'. PTSD is characterized by a series of symptoms that fundamentally influence the family system functioning. Return of a traumatized person from the battlefield poses great temptation both for him and for his family, challenging the fundamental terms of reference of security, respect, responsibility, identity, autonomy, affiliation and limits[7]. The family will respond to the problem more or less adaptively, depending on its capacity and flexibility as well as on its ability to tolerate changes and giving support. During the father's stay at the battlefield, the family system was functioning in a new, different power distribution. Mother took upon herself many of the father's duties. Upon his return, the father – husband tries 'occasionally' to restore his previous position, most often through aggressive control, but does not endure in doing it, so he becomes unsociable, disappointed, and loses his interest. A traumatized person has been deprived of the protective feeling of omnipotent belonging to the group, thus feeling even more helpless. That is why he tries to revive his battle group through meeting his friends from the battlefield, which in turn estranges him from his family. Fear from identifying with helplessness he then experiences as a communication breakdown, withdrawal, and escape. The relationship with his wife is burdened with oscillations and extremes, from the need of infantile dependence through withdrawal and aggressive defence of his territory[8].

The inability of controlling affects is incompatible with communication with other people. The patient's aspiration for isolation keeps him apart from his family. Comorbidity, a common phenomenon, additionally impairs any

opportunity for quality life. Aggressive reactions expressed towards the wife and children, lowered libido and constant reminding of war traumas are frequently present, along with subconscious regressive gratification which the others perceive as escape from responsibility. Therefore, the attitude of the family and the society is negative. The patient experiences changes of the attitude as disappointment concerning the ideals 'he has fought for'. His feelings of shame and guilt, which entail constant family conflicts, burden the family balance, thus making it difficult to keep the family together[9,10].

A research conducted in Israel in a group of wives of Lebanon war veterans showed a considerable effect of PTSD on the family functioning. Results of this study showed the wives of traumatized veterans to more frequently encounter conflicts and rigidity in their family functioning. Due to the poor family functioning, they developed many psychologic problems. Another research indicated the wives of traumatized veterans to develop mental symptoms varying from feeling of loneliness through mental disturbances that fundamentally impaired their matrimonial and family relationships[7].

Therefore, it is important to emphasize that changes in the behavior of one member of a family lead to the family system dysfunction. Since a married couple experience very strong and reciprocal mutual influence, it is necessary to help the whole family because it is actually the family that is traumatized. The sources of content and discontent for each individual are numerous and different, and the circumstances of his life can enlarge or diminish them significantly. Due to the complexity of PTSD, which affects every aspect of normal functioning, the quality of life of the family system has been essentially disturbed. The loss of interest even for the basic things of daily routine makes the wife of a traumatized husband to take over numerous extra duties. His frequent need of isolation and silence and lower libido she rationalizes by tiredness and exhaustion of her husband-warrior. Because of the husband's impossibility to experience positive emotions, especially those connected with intimacy, tenderness and love, and his difficulties in communication, she feels guilty, anxious and alienated. She is often, wishing to help her husband, exposed to stories about the horrors of war. When disproportion between the demands put on her and her possibility of confrontation occurs, along with inadequate social support, the final result is the loss of psychosocial balance and disorganization. Thereby, the individual's predisposition, i.e. vulnerability also plays a role, although the social (family) environment should also be taken in consideration[11,12].

Due to taking over the burden of total responsibility for her family, constant tension in family relationships, exposure to stories about the horrors of war, impossibility to control her environment, insecurity of her physical survival and maintaining her identity, the feeling of hopelessness in trying to help her traumatized husband, and finally the loss of a loving person, the wife herself becomes victim of the trauma. The reactions that may occur include indirect (secondary, vicarious) traumatization, depression, anxiety, and somatization.

The concept of secondary traumatization was described in 1983 by Figley in members of the families of Vietnam war veterans with PTSD syndrome, who were exposed to stories about the horrors of war told by the traumatized family member and finally became victims of traumatization themselves. Secondary traumatization is traumatization of an individual helper or family member due to listening to painful experiences, other people's fate and exposure to suffering. Every person providing help to others may come up against it. Secondary traumatization can occur during or after conversation, when the person identifies himself with the person he is helping, when his expectations are unreal, or in the lack of social support[13]. All these situations are present during the process of healing in families with a member suffering from PTSD.

Symptoms of the secondary traumatization consequences are similar to those seen in directly traumatized individuals, e.g., nightmares the contents of which are connected with traumatizing experiences of the people being helped, then insomnia, inappetence, lack of interest, depression, anxiety, irritability, chronic exhaustion, the feeling of personality alteration, changed perception of oneself, one's own life and people, absorption in other people's problems, lack of respect, and poor prospects. There may also be some physical symptoms such as headache, indigestion, reduced resistance to infections, and increased consumption of alcohol, drugs, tobacco, or narcotics[14].

There are five basic psychologic requirements that have to be met for a helper to adapt to trauma: security, trust, strength, respect, and intimacy. These requirements are the essentials of cognitive schemes that include beliefs, expectations and assumptions about ourselves and the world we live in. When the helper is not able to adapt to trauma, the three basic assumptions or beliefs of himself and the world around him change: the belief in his personal invulnerability, positive attitude towards himself, and belief in the significance of the world. If the psychologic needs necessary for adaptation are not met, secondary traumatization of family members may occur[15].

The reaction of family members to life problems and stress situations is reactive depression with anxiety as one of its symptoms. Depression occurs due to the feeling of helplessness, which develops in stress situations that cannot be avoided or put under control. According to the psychoanalytical theory, depression can occur (develop) as a consequence of insufficient grief, i.e. in situations of the loss of an object of love (husband seems to be lost because he is not the same person as before).

About half of depressed persons complain of physical symptoms such as different painful syndromes (headache, backache, pain in the region of the heart, stomach, etc.), which occur consequentially to emotional tension relief when no more suitable symbolic expression can be found. In this case, the person is preoccupied with physical symptoms and is often unaware of depression[16].

Anxiety is an affective condition of a very unpleasant character, which is similar to mental tension, fear, sadness and sorrow but there always are some specific somatic sensations in correlation wiht specific organs. Therefore, anxiety is a specific condition of subjective feeling of unpleasantness that is always followed by motor changes. Two components are necessary for anxiety to occur: the afferent part of anxiety (historical) indicates that anxiety is a reproduction of past experiences, which is a precondition for increased excitation underlying anxiety; and the efferent part of anxiety which represents disburdening of anxiety by somatization.

To be anxious and to react anxiously means to feel trepidation, groundless consternation, unmotivated timidity, and fear. An anxious person is less effective in everything, even in the capability to relax and rest. The most common type of anxiety presented through 'fear from losing love' or 'fear from social condemnation' is moral anxiety[17,18].

Somatization is a physical complaint without any appropriate organic finding that could explain it, or without known physiologic mechanism that could explain the findings. Somatic complaints are not limited to one organic system or caused by a known disorder. The symptoms are not produced on purpose or malingered. In fact, the symptoms can be explained by controlling or repressing the anger towards the others or even towards oneself, as self-respect is often low. The dynamics is somewhat similar to depression. The psychodynamic explanation shows that repressing of a wish or an impulse manifests itself through physical complaints and the anxiety is then transformed to a specific symptom. It is also a common occurrence in depression as a way of emotional tension relief. Depression is frequently accompanied by chronic painful syndrome[19].

According to Alexander's classical scheme of inception of psychosomatic disorders, the psychosomatic reactions are underlain by the feeling of child's dependence. Concerning the way of going through, there is a possibility of developing the feeling of being less worthy, a narcissistic protest against the feeling of dependence, which can provoke hypercompensation that in turn can lead to competitive aggression or anxiety and feeling guilt. The aggression can provoke hostility, which should be expressed through resistance or escape. Should the block of expression occur, it would lead to the action of the sympathetic nervous system upon the neuroendocrine system, which will manifest as migraine, hypertension, Basedow's disease, cardiac neurosis, arthritis, syncope, and diabetes. The feeling of child's dependence can be expressed as a need of protection. On the other hand, should the block occur, it would lead to the effect of the parasympathetic nervous system on the neuroendocrine system, which will manifest as asthma, fatigue, asthenia, colitis, diarrhea or constipation, and gastroduodenal ulcer[20].

Pain is an experience composed of three groups of factors: physiologic, psychologic and sociologic. The International Association for Pain Observation proposes the following definition of pain: "Pain is an unpleasant sensitive and emotional experience connected to a real or possible damage of tissue or described as such a damage". Pain is always subjective. Each individual learns to use the word through experiences related to injury at a young age. There is no doubt that there is a feeling in a part or parts of the body but it is always unpleasant and therefore represents an emotional experience.

Emotional pain is referred to as distress. It is a state of deep sorrow often associated with fear, anxiety and other negative emotions.

Physical pain caused by tissue damage is a warning mechanism, which informs the individual that there is a tissue damage (injury) or dysfunction of some organ(s).

Psychogenic pain (physical pain with psychogenic causes) occurs with full preservation of the tissue and due to the activity of different factors of psychical etiology, i.e. emotions. The exact mechanism of psychogenic pain occurrence has not yet been fully clarified. The most common aspect of psychogenic pain is psychogenic headache. In persons with highly hysterical characteristics, so-called conversion pain may occur, i.e. specific emotional tension is converted into real pain in a specific body region. Psychogenic pain is indeterminate in many cases; pain localization is often changed, also changing according to mood oscillations. Psychogenic pain rarely occurs during night.

Pharmacotherapy administered to reduce emotional tension often results in psychogenic pain relief[21].

Acute pain is of short duration and usually points to an injury or disease. It usually subsides after breaking out and disappears upon appropriate treatment. Chronic pain is of long duration (three or more months), it does not have a warning character any longer as it may persist after therapy, i.e. upon completion of the process of treatment. It need not be constant but may recur and persist even for months. It may sometimes occur without any visible injury or disease and, which is most important, it often would not subside upon the use of standard pain killers. Two emotional states, depression and anxiety, contribute most to the intensified sense of pain. The most intense sense of pain develops with the feeling of hopelessness, helplessness and forlornness, i.e. in the state of dejection. The association between the intensity of pain and anxiousness is even stronger[22,23].

Aim of the Study

The presenting clinical picture of PTSD deeply disturbs family relationships. It primarily includes the symptoms of intensified alertness, emotional estrangement from the family, and difficulties in resuming acceptance of the person's role in the family, which all have unfavorable effects on other family members. In such a situation, patients' wives are especially exposed, at the same time being those who are expected to provide the patient with appropriate support. On the other hand, they are also in charge of keeping family balance. Therefore, it is expected that PTSD in Croatian veterans would also cause mental problems in their wives.

In line with the working hypothesis, the aim of the study was to determine whether:

(a) the wives of PTSD veterans show signs of secondary traumatization,

(b) the wives of PTSD veterans show a higher rate of depression or anxiety, and

(c) the wives of PTSD veterans show a higher rate of painful syndromes as a somatic equivalent of anxiety.

Subjects and Methods

Study protocol

The process of sample selection consisted of two steps. Two groups of veterans were selected first in order to determine the presence of signs of secondary traumatization in the wives of PTSD veterans. The basic selection and inclusion criteria were the presence or absence of PTSD symptoms and marital status. Group 1 included 40 veterans, members of the Club of Veterans treated for PTSD. They all were married. Group 2 subjects (n=40) were chosen by random selection from those who had no mental disturbances upon their return from the war that would require psychiatric intervention. They met the criteria of having no PTSD symptoms and being married. The absence of symptoms was determined by use of the Mississippi self-evaluation scale for PTSD. Sixty subjects were interviewed and forty of them were found to meet the inclusion criteria. The two groups of veterans were matched by age, education and level of traumatization.

The second step was recruitment of the selected veterans' wives. Study group included 40 wives of the veterans treated for PTSD. Forty wives of the veterans free from PTSD symptoms served as a control group. A battery of tests were used in both groups of women. Study subjects were asked to read the questionnaires and were given verbal instructions where necessary. They all entered the study on a voluntary basis, with anonymity of the information obtained and potentially published being warranted.

Study instruments

Four questionnaires were used:

1. *Mississippi Scale for Combat-Related PTSD* (M-PTSD), structured by Keane, Cadell and Taylor in 1988, which is used as a scale of self-evaluation. The questionnaire consists of 35 questions with 5 graded answers each, from 'never' through 'always'. The questionnaire result is obtained by adding the scores of answers with 10 combined inverse statements (2, 6, 11, 17, 19, 22, 24, 27, 30, 34). The result cut-off is 107. Thus, a score <107 indicates that PTSD does not exist, whereas a score >107 shows that PTSD is present. The scale is highly consistent and is one of the most widely used instruments.

2. *The questionnaire about basic information,* which was structured specifically for this study, included questions on basic demographic data (age, sex, level of education, employment status, self-evaluation of the psychosocial family status).

3. *Hopkins Symptom Checklist (HSCL), Croatian translation,* was used as a questionnaire for determination of the existence of symptoms of anxiety and depression. It consists of 25 questions with 4 graded answers each. The first 10 questions are related to the symptoms of anxiety and the remaining 15 questions to the symptoms of depression. If

the sum of answers divided by the sum of questions exceeds 1.75, the result is considered positive.

4. *Questionnaire about chronic pain* was specifically structured for this study and consisted of 8 questions with possible answers on the localization and other characteristics of painful syndromes.

Statistics

Statistical analysis of the data collected was done by the Windows SPSS software. Quantitative data were analyzed by use of frequency charts and expressed as absolute numbers and percentage. Qualitative data were expressed as statistical significance, determined by use of χ^2-test and Pearson's R coefficient of correlation[24,25].

Results

A total of 80 subjects divided into two groups were included in the study. Group 1 included 40 wives of war veterans treated for PTSD, and group 2 serving as control group comprised of 40 wives of war veterans free from PTSD symptoms. The two groups were matched by age (mean age 39.6, age range 20-57 years) and level of education (ranging from elementary school through university degree).

Secondary traumatization in the wives of Croatian war veterans

The two groups of women were first distributed M-PTSD questionnaire for rapid screening for PTSD. The results obtained by M-PTSD showed 30% of group 1 women to manifest PTSD symptoms satisfying the criteria for the diagnosis of PTSD, of course, without A criterion, whereas none of the group 2 women had such symptoms. The borderline inclusive (cut-off) score on the M-PTSD scale was 107 (Table 1).

Table 1. Secondary traumatization in wives of war veterans with or without PTSD

	Wives of veterans with PTSD		Wives of veterans without PTSD		Total	
	n	(%)	n	(%)	n	(%)
Yes	12	(30)	0	(12)		(15)
No	28	(70)	40	(100)	68	(85)
Total	40	(100)	40	(100)	80	(100)

p=0.05

Depression and anxiety in the wives of war veterans

Both groups of women were administered HSCL questionnaire to assess the presence of symptoms of depression and of anxiety. The results are presented in Tables 2 and 3, respectively.

Depression in the wives of war veterans

The group of wives of war veterans treated for PTSD showed a higher percentage of the symptoms of depression than those married to war veterans free from PTSD (75.0% *vs*. 37.5%). The difference was statistically significant (p=0.05) (Table 2).

Table 2. Depression in wives of war veterans with or without PTSD

	Wives of veterans with PTSD		Wives of veterans without PTSD		Total	
	n	(%)	n	(%)	n	(%)
Yes	30	(75)	15	(37.5)	45	(56.75)
No	10	(25)	25	(62.5)	35	(43.75)
Total	40	(100)	40	(100)	80	(100)

p=0.05

Anxiety in the wives of war veterans

The group of wives of war veterans treated for PTSD showed a higher percentage of the symptoms of depression than those married to war veterans free from PTSD (77.5% *vs*. 32.5%). The difference was statistically significant (p=0.05) (Table 2). Results of these three basic tests are presented in Fig. 1.

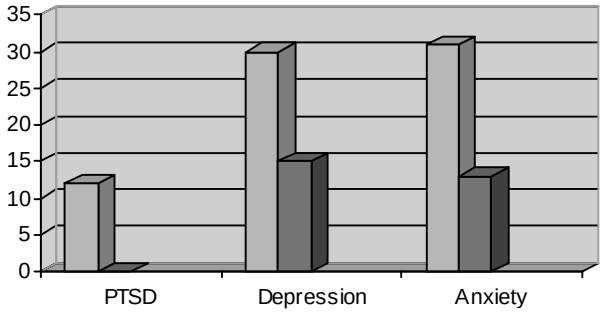

Fig. 1. Secondary traumatization, depression and anxiety in wives of war veterans with (▩) *and without* (■) *PTSD*

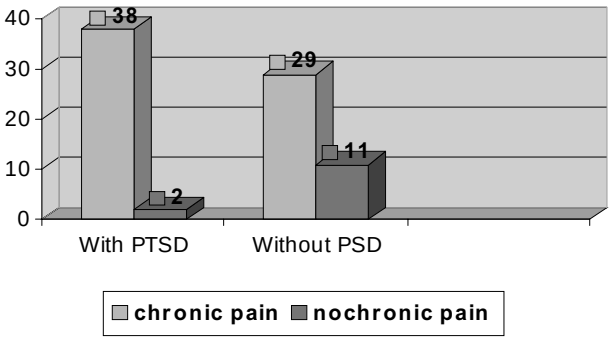

Fig. 2. Chronic pain in wives of war veterans with and without PTSD

Chronic pain in the wives of war veterans

The wives of war veterans with PTSD had a significantly higher prevalence of chronic pain than those married to war veterans without PTSD (Table 4, Fig. 2).

Table 3. Anxiety in wives of war veterans with or without PTSD

	Wives of veterans with PTSD		Wives of veterans without PTSD		Total	
	n	(%)	n	(%)	n	(%)
Yes	31	(77.5)	13	(32,5)	45	(55)
No	9	(25.5)	27	(67,5)	35	(45)
Total	40	(100)	40	(100)	80	(100)

p=0.05

Chronic pain and depression

There were 67 subjects suffering from chronic pain. The wives of war veterans treated for PTSD had a higher prevalence of intensified depression associated with painful syndromes than the wives of war veterans free from PTSD (Table 5, Fig. 3).

Table 4. Chronic pain in wives of war veterans with or without PTSD

	Wives of veterans with PTSD		Wives of veterans without PTSD		Total	
	n	(%)	n	(%)	n	(%)
Yes	38	(95)	29	(72.5)	67	(83.75)
No	2	(5)	11	(27.5)	13	(16.25)
Total	40	(100)	40	(100)	80	(100)

p=0.05

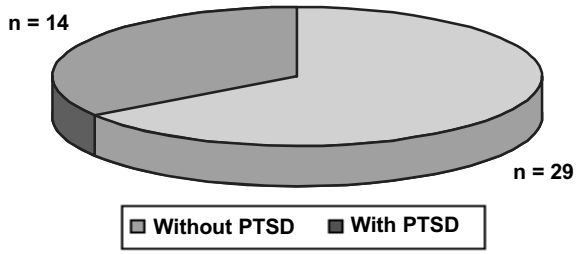

Fig. 3. Concurrent symptoms of depression and chronic pain in wives of war veterans with and without PTSD

Table 5. Symptoms of depression and chronic pain in wives of war veterans with or without PTSD

	Wives of veterans with PTSD		Wives of veterans without PTSD		Total	
	Chronic pain		Chronic pain			
	n	(%)	n	(%)	n	(%)
Yes	29	(76.3)	14	(48,3)	67	(64.2)
No	9	(23.7)	15	(51,7)	13	(35.8)
Total	38	(100)	29	(100)	80	(100)

p=0.05

Chronic pain and depression according to age, employment status and level of education

Employed women showed a comparable prevalence of chronic pain with and without depression, whereas unemployed women had a higher prevalence of chronic pain and depression concurrence (Table 6). Also, chronic pain associated with depression was more common among women with lower level of education (Table 7). Chronic pain associated with depression was most commonly recorded in the 36-40 age group. The prevalence of chronic pain without depression increased progressively with age (Table 8).

Chronic pain characteristics in the wives of war veterans with and without PTSD

Backache and headache were the most commonly reported painful syndromes in the wives of war veterans. The wives of war veterans without PTSD reported a comparable distribution of painful syndromes at different localizations (Table 9, Fig. 4).

Seeking medical help for chronic pain

The wives of war veterans with and without PTSD were found to have sought medical help for the manage-

Table 6. Symptoms of chronic pain with and without depression according to employment status

	Employed		Unemployed		Lost employment		Total	
	n	(%)	n	(%)	n	(%)	n	(%)
Chronic pain with depression	19	(28.4)	24	(35.8)	0	0	43	(64.2)
Chronic pain without depression	17	(25.4)	6	(9.0)	1	(1.5)	24	(35.8)
Total	36	(53.8)	30	(44.7)	1	(1.5)	67	(100)

p>0.05

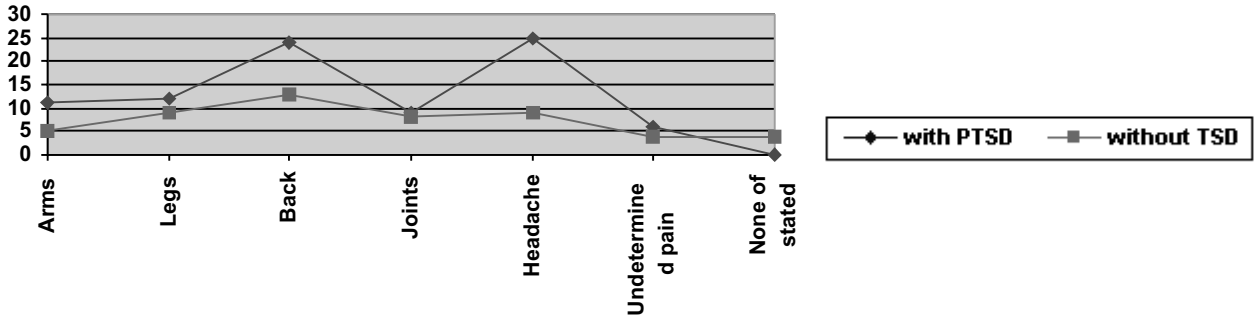

Fig. 4. Pain localization in wives of war veterans with and without PTSD

Table 7. Symptoms of chronic pain with and without depression according to level of education

	No elementary school		Elementary school		High school		University		Total	
	n	(%)	n	(%)	n	(%)	n	(%)	n	%
Chronic pain with depression	2	(2.98)	18	(26.9)	21	(31.34)	2	(2.98)	43	(64.17)
Chronic pain without depression	0	(0)	3	(4.5)	14	(20.9)	7	(10.44)	24	(35.82)
Total	0	(2.98)	21	(31.34)	35	(52.23)	9	(100)	67	(100)

p>0.05

Table 8. Symptoms of chronic pain with and without depression according to age

	Age group (yrs)													
	20-25		26-30		31-35		36-40		41-45		>45		Total	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Chronic pain with depression	6	(9)	8	(12)	9	(13.4)	12	(1)	5	(7.5)	3	(4.5)	43	(64.2)
Chronic pain without depression	1	(1.5)	2	(3)	2	(3)	7	(10)	7	(10.5)	5	(7.5)	24	(35.8)
Total	7	(10.5)	10	(15)	11	(16.4)	19	(18)	12	(18)	8	(12)	67	(100)

p<0.05

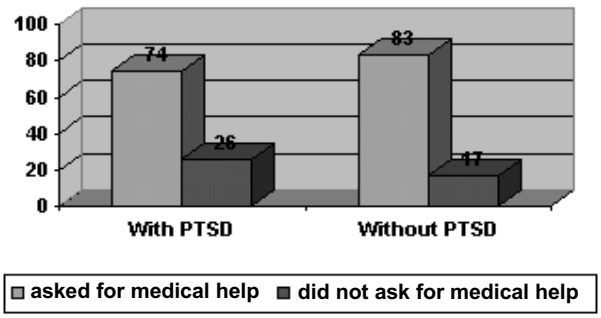

Fig. 5. Medical help in the treatment of chronic pain in wives of war veterans with and without PTSD

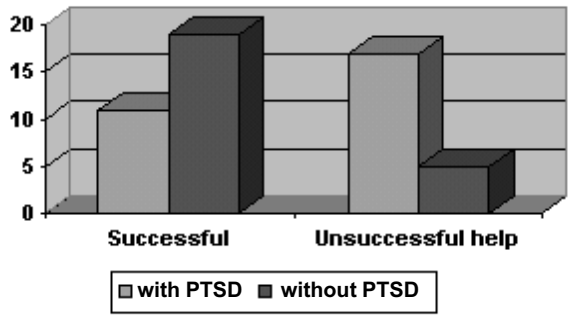

Fig. 6. Efficacy of medical aid provided to wives of war veterans with and without PTSD

ment of chronic pain at a comparable rate. The difference did not reach statistical significance (Table 10, Fig. 5).

Type of medical aid administered

Conservative methods of treatment were used at a comparable rate in the two groups of women. Psychotherapy as a method of treatment was less frequently recommended in the group of wives of war veterans with PTSD (Table 11).

Efficacy of medical aid in the wives of war veterans

A total of 52 women asked for medical help. This help was less efficacious in the wives of war veterans with PTSD irrespective of the type of treatment (Table 12, Fig. 6).

Discussion

The study included 80 women divided into two groups of 40 women according to the presence (group 1) or absence (group 2) of PTSD in their husbands, Croatian war veterans. The women's mean age was 39.6 (range 20-57) years, and their level of education ranged from elementary school to university degree.

Study results yielded a statistically significant difference between the two groups of women in the prevalence of secondary traumatization manifestations. As many as 30% of group 1 women suffered indirect traumatization, whereas no such case was recorded in group 2, supporting the concept according to which the wives of traumatized veterans are often exposed to stories about the horrors of war and, trying to help their traumatized husbands they identify themselves with the husbands' experiences and feelings of fear and guilt to eventually become victims of trauma themselves. Re-experience, intensified alertness and emotional numbness can also arise from family atmosphere and from a husband who shows stormy reactions to any petty thing, who often suffers from nightmares and troubled sleep, who tends to isolate himself from the others, and who is often indifferent for the occurrences in daily family life.

Study results pointed to a statistically significant difference in the prevalence of the symptoms of depression and anxiety (Tables 2 and 3). As expected, a higher per-

Table 9. Pain localization in wives of war veterans with or without PTSD

Localization	Wives of veterans with PTSD	Wives of veterans without PTSD	Total
	(n)	(n)	(n)
Arms	11	5	16
Legs	12	9	21
Back	24	13	37
Joints	9	8	17
Headache	25	9	34
Undetermined pain	6	4	10
None of stated	0	4	13

Table 10. Medical help in the treatment of chronic pain

	Wives of veterans with PTSD		Wives of veterans without PTSD		Total	
	n	(%)	n	(%)	n	(%)
Yes	28	(73.70)	24	(82.80)	52	(77.61)
No	9	(26.32)	5	(17.24)	15	(22.39)
Total	40	(100)	29	(100)	67	(100)

p=0.05

Table 11. Type of medical aid administered

	Wives of veterans with PTSD (n)	Wives of veterans without PTSD (n)
Medicaments	20	17
Physical therapy	13	10
Psychotherapy	2	6
None of stated	10	5

centage of the symptoms of depression and anxiety was found in group 1 (75.0% and 77.5%) than in group 2 (37.5% and 32.5%). The wives of PTSD husbands are exposed to pressures of responsibility and commitments for the entire family; they are exposed to emotional, verbal and physical abuse, they suffer from the feeling of helplessness and guilt for the husband's condition, thus losing self-confidence, self-regard and eventually self-esteem. Living with a constant feeling of hopelessness and fear from losing love as well as from social condemnation for not being capable to offer due support to their husbands, they create the basis for mourning and develop the symptoms of depression and anxiety. Depression is, among other things, a sign of losing an important object. Indeed, the wives of war veterans suffering from PTSD have lost their husbands in some way. They will never be 'the same' again. Closeness among family members disappears. The wives often lose their sexual partner as well as family support. In fact, they are multiple losers. Once depression has developed, it will additionally aggravate the feeling of inadequacy, which is often seen in the wives of war veterans with PTSD.

In our study, a statistically significant difference was found in the prevalence of chronic pain manifestations between the two groups of women (Table 4). The higher percentage of chronic pain in group 1 than in group 2 (95.0% *vs*. 72.5%) is further corroborated by the following explanation. Due to having to take over the burden of complete responsibility and commitments in the family while being deprived of the husband's support and assistance, the wives of traumatized veterans live in constant anxiousness, which they partly cannot verbalize and partly are not even aware of. They begin to develop the symptoms of chronic pain, thereby justifying their failure. Painful syndrome is often the only form of asking for help that has been left to them.

Our results showed a statistically significant difference in the prevalence of concurrent manifestation of the symptoms of depression and chronic pain between the two groups of women (Table 5). The higher percentage of this concurrence in the group of wives of war veterans treated for PTSD (76.3%) supports the concept according to which depression, in a situation when a person cannot find a more suitable way to express the emotional tension, can manifest through physical symptoms, in this case through chronic pain.

A statistically significant correlation was found between the status of employment and manifestations of chronic pain and depression (Table 6). The highest proportion of women suffering from chronic pain were unemployed (37.8%), suggesting that depression and chronic pain could be the result of spending most of the time indoors, doing housework and family duties, without much possibility to communicate with other people. Unemployed women depend on their husbands materially and socially, which makes them more sensitive and unequal in their relationships. A higher percentage of women with chronic pain and without depression were employed (25.4%), where the presence of pain could be attributed to their exhaustion at the work place.

Table 7 shows a statistically significant correlation between the manifestation of chronic pain and depression in the two groups of women according to the level of education. Coexistence of chronic pain and depression was most common in the women with high school and elementary school education, whereas chronic pain without depression was more common among the women with high school and university education. These results were explained by the definitions of somatization, depression and anxiety in persons with lower education, i.e. with their helplessness and dependent position. Thus, the manifestation of depression is increased in individuals with lower educational level.

The results presented in Table 8 did not yield any significant correlation between the manifestation of chronic pain and depression according to age. Chronic pain with-

Table 12. Efficacy of medical aid

	Wives of veterans with PTSD		Wives of veterans without PTSD		Total	
	n	(%)	n	(%)	n	(%)
Efficacious	11	(39.3)	19	(79.2)	52	(57.69)
Failed	17	(60.7)	5	(20.8)	15	(43.30)
Total	28	(100)	24	(100)	67	(100)

p=0.05

out depression was more common in older age, which was presumably the consequence of physiologic changes in the neuromuscular system and degenerative changes that are more pronounced with age. Coexistence of chronic pain and depression was more common in middle aged women. Table 9 shows the wives of war veterans suffering from PTSD to report headache and backache in most cases, i.e. the localizations characteristic of psychogenic chronic pain.

Analysis of data on medical assistance (Table 10, Fig. 5) did not show any statistically significant difference in the prevalence of seeking medical help between the two groups of women, however, a statistically significant difference was observed concerning the medical aid efficacy (Table 12, Fig. 6). While the medical aid provided to the wives of war veterans free from PTSD proved efficacious in most cases (79.2%), in the wives of veterans suffering from PTSD this aid mostly failed (60.7%), indicating that the cause of pain has psychologic characteristics and that pain will persist until an appropriate psychologic assistance is provided and the psychosocial balance is restituted. Table 11 shows that a high percentage of subjects were treated with medicaments, whereas only a very small number of women asked for psychological help. This clearly points to the severity and persistence of pain as well as to the relatively poor interest in the possible psychologic component of chronic pain.

Conclusions

The results of the study pointed to the following conclusions:

1. The wives of war veterans suffering from PTSD have a high prevalence of the signs of secondary traumatization.
2. These women are significantly more depressive and anxious than the wives of war veterans free from PTSD.
3. Chronic pain is more common in the wives of war veterans suffering from PTSD. In this group of women, coexistence of chronic pain and depression, mostly manifesting as headache and backache, is more common, whereas the usual therapeutic modalities usually fail.

It is concluded that PTSD in war veterans significantly affects the psychologic status of their wives, who therefore suffer considerably from their illness.

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Sažetak

KRONIČNA BOL I POSREDNA TRAUMATIZACIJA KOD SUPRUGA HRVATSKIH VETERANA DOMOVINSKOG RATA LIJEČENIH OD POSTTRAUMATSKOG STRESNOG POREMEĆAJA

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Posljedice rata u Hrvatskoj uključuju psihološke i socijalne poremećaje. Mnogi su hrvatski ratni veterani zbog brojnih traumatskih iskustava oboljeli od posttraumatskog stresnog poremećaja (PTSP). Sa svojim specifičnim simptomima PTSP značajno utječe na svakodnevno društveno funkcioniranje ovih ljudi. To se osobito osjeća u obitelji koja bi s jedne strane trebala pružati emocionalnu potporu svom oboljelom članu, dok s druge strane obitelj najviše trpi zbog tog stanja u kojem se nalazi jedan od njezinih članova. Supruge branitelja u većini su slučajeva one koje nastoje očuvati prijašnju ravnotežu u obitelji. U ovom smo ispitivanju razmotrili psihičke posljedice življenja sa suprugom koji boluje od PTSP-a. Ispitane su dvije skupine supruga branitelja: skupina supruga branitelja koji boluju od PTSP-a i skupina supruga branitelja bez PTSP-a. Pritom smo rabili sljedeće ispitne instrumente: ljestvicu M-PTSD za PTSP, HSCL-25 za depresiju i anksioznost, te upitnike za demografske podatke i kroničnu bol. Rezultati su pokazali da su supruge branitelja koji boluju od PTSP-a značajno depresivnije i anksioznije, češće pokazuju simptome posredne traumatizacije i češće pate od bolnih sindroma u kojima uobičajena medikamentna terapija ne daje rezultata nego supruge branitelja bez PTSP-a. Zaključeno je da PTSP u branitelja značajno utječe na psihofizičko stanje njegove supruge te da ona trpi znatne posljedice uslijed njegove bolesti.

Ključne riječi: *Stresni poremećaji – post-traumatski, komplikacije; Borbeni poremećaji, komplikacije; Obiteljsko zdravlje; Rat; Hrvatska*