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Secondary Traumatization of Wives of War Veterans with Posttraumatic Stress Disorder

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Aim To determine the symptoms of secondary traumatic stress and possible influences of demographic and socioeconomic factors on the occurrence of secondary traumatic stress in wives of war veterans with posttraumatic stress disorder (PTSD).

Method The study included 56 wives of war veterans diagnosed with PTSD and treated at the Center for Psychotrauma in Rijeka, Croatia. A short structured interview was conducted with each woman to collect demographic and socioeconomic data. The women independently completed an adapted 16-item version of Indirect Traumatization Questionnaire to determine the presence of secondary traumatic stress symptoms, which corresponded with PTSD symptoms as defined by the fourth edition of the Diagnostic and Statistical Manual for Mental Disorders.

Results Out of 56 veterans' wives included in the study, 32 had six or more symptoms of secondary traumatic stress, whereas only 3 had none of the symptoms. Twenty-two women met the diagnostic criteria for secondary traumatic stress. Women with secondary traumatic stress were married longer than those without it (mean ± standard deviation, 19.1 ± 9.1 vs 13.2 ± 7.8 years, respectively; $P = 0.016$). Eleven of 22 women with secondary traumatic stress and 8 of 34 women without secondary traumatic stress were unemployed ($P = 0.05$).

Conclusion As more than a third of war veterans wives met the criteria for secondary traumatic stress, any treatment offered to veterans with PTSD must address the traumatization of their family.

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The Croatian 1991-1995 war caused a wide range of psychological and psychosocial difficulties in war veterans (1). Many of them were diagnosed with posttraumatic stress disorder (PTSD), which has considerably disrupted their social and emotional functioning (2,3). The veteran's difficulties in everyday life mostly affect his family, while the family is expected to provide all the support that he needs (2). The wife and children witness his sleepless nights, restless dreams, and absentmindedness that sometimes lasts for hours or even days, and avoid upsetting him as much as possible (2,4-6). His low frustration threshold, lack of patience with children, inability to carry on with his family role, great expectations, and verbal and physical aggressiveness heavily influence the relationship with his spouse, children, parents, and the rest of the family (4,7-10).

Previous research showed that close and long-term contact with an emotionally disturbed person may cause chronic stress, which in time in persons providing help leads to various emotional problems, such as higher levels of depressive symptoms and anxiety, problems in concentration, emotional exhaustion, pain syndromes, and sleeping problems (2,3,6). One third of wives of Croatian veterans treated for PTSD met the criteria for secondary traumatization (2). In case of posttraumatic disorders, Figley (10,11) believes that empathy toward the traumatized person may induce significant emotional agitation in other family members and calls this phenomenon the secondary stress reaction to catastrophe. Other authors used different terms for this phenomenon, such as compassion fatigue, secondary traumatic stress, and vicarious trauma (11-13). However, the mechanism of transmission of posttraumatic stress onto persons who witnessed or learned about the trauma exposure of the close ones is still rather unknown (11).

Secondary traumatic stress is defined as natural emotional reaction to the traumatic experience of a significant other (10,14). Secondary traumatization is the stress caused by providing help, or wishing to help, and offering emotional support to a traumatized person. Secondary stress disorder as a syndrome is almost identical to PTSD except that indirect exposure to the traumatic event through close contact with the primary victim of trauma becomes the criterion A (10). The symptoms of secondary traumatization are similar to those present in directly traumatized persons: nightmares about the person who was directly traumatized, insomnia, loss of interest, irritability, chronic fatigue, and changes in self-perception, perception of one's own life, and of other people (10). Physical symptoms may also be present, including headaches, indigestion, susceptibility to infections, and increased use of alcohol, drugs, or tobacco (2,12).

A few studies investigated the effects that PTSD in war veterans had on their spouses (5,15,16). Dekel et al (5) in their qualitative study on the marital perceptions of 9 wives of veterans with PTSD found that being employed and having known their husbands before the war was very important to the wives of PTSD-diagnosed veterans. Various demographic variables, such as age, ethnicity, education level, or social support, were not found to influence the perceived burden and psychological distress in partners of veterans with PTSD (16). Apart from qualitative study by Dekel et al (5), our literature search of the PILOTS and EPNET bibliographical databases with the key words secondary traumatization, wives, PTSD, war trauma, sociodemographics, socio economics, education level, employment, income, and several others did not find any studies that specifically investigated the relationship between the socioeconomic status and the level of secondary traumatization symptoms or the association between the duration of marriage and the occurrence of secondary traumatization in veterans' wives.

Due to the exposure to stress, caused by the husband's PTSD symptoms or other psychiatric and health conditions, often combined with

his insufficient social and emotional support and increased demands, the veterans' wives are at an increased risk of specific mental problems related to the life with mentally disturbed husband (3,17-19). Given the recent war in Croatia and relatively high percentage of war veterans with combat-related PTSD, we expected secondary traumatic stress in their wives and female partners to be relatively frequent and that the duration of their life together, number of children, economic situation, and (un)employment would influence the occurrence of secondary traumatic stress.

The aim of this study was to determine whether the wives of war veterans with PTSD had symptoms of secondary traumatic stress and to evaluate the possible influence of demographic and socioeconomic factors on the occurrence of secondary trauma stress in these women.

Participants and method

Participants

The study comprised the wives of war veterans with PTSD included in the intensive treatment program at the Center for Psychotrauma in Rijeka from January until December 2005. The veterans who had problems with drug abuse or opiate addiction were not included in the intensive treatment program and their wives were not contacted. Of 99 war veterans, 87 had a female partner or a wife and 56 of them participated in the study.

The study was approved by the Ethical committee of Rijeka University School of Medicine, as part of research on Family and PTSD.

Method

Veterans included in psychotherapy program were notified by the program leader about the study that would include their partners. The purpose of the study was explained to them. Veterans were asked to inform their partners about the study and provide contact telephone numbers, so that a conversation with the partner or wife could be arranged. After being explained about the purpose of the study, 31 out of 87 veterans' partners or wives refused to participate in the study. The reasons were lack of time, inability to leave from work, and distant place of residence. Thus, the response rate was 64%. The study was conducted at the premises of the Center for Psychotrauma. Each woman who agreed to participate in the study signed the informed consent. A short structured interview to provide demographic and socioeconomic data was conducted individually. During the interview, the women were asked if they had sought professional psychological help for the problems they might be having due to their husband's illness and whether they think they need such help. Each woman completed the self-assessment questionnaire independently. None of the women included in the study experienced direct war related trauma.

Instruments

Demographic questionnaire. The instrument was created for the purpose of this study to collect data on age, education level, number of family members, number of children, duration of marriage, employment status, and the monthly income.

Indirect Traumatization Questionnaire. To collect data on the symptoms of the secondary traumatization, we used a modified version of the Indirect Traumatization Questionnaire (20). The questionnaire consisted of 16 items related to the secondary traumatization symptoms, which corresponded to the symptoms of PTSD as defined in the fourth edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (21). The first item in the questionnaire inquired if the wife had knowledge about the trauma experienced by her husband (A criterion). If the answer to this item was positive, the wife was asked to continue with the questionnaire. The next four items referred to the re-ex-

periencing of traumatic events (criterion B), six items referred to the avoidance symptoms (criterion C), and the last five items referred to the symptoms of increased arousal (criterion D). The wives were asked to indicate (yes or no answer) if they had experienced the particular symptom within the previous month. Every "yes" answer was scored 1 and "no" answer was scored 0. Thus, the total score range was 0-15, where 0 meant that none of the symptoms were present, and 15 that all the symptoms were present. To meet the diagnostic criteria for secondary traumatic stress, the woman had to have at least 2 re-experiencing symptoms, 3 avoidance symptoms, and 2 symptoms of increased arousal. Factor analysis of principal components confirms the existence of three factors that subsequently explain 59% of variance. The internal consistency (Cronbach α) was 0.88.

Statistical analysis

To determine the differences between the two groups, *t*-test was applied if normal distribution of the data was confirmed by Kolmogorov-Smirnov test, and Levene test for homogeneity of variance showed no significant differences in the variance between the groups. When parametric tests could not be applied, χ^2 test was used. $P<0.05$ was considered significant. Regression analysis was preformed as well. All statistical analyses were performed with the Statistical Package for Social Sciences for Windows v. 11.0 (SPSS Inc., Chicago, IL, USA).

Results

Women included in the study were between 27 and 56 years old and were married for 1-35 years (Table 1). Forty out of 56 completed high school, 12 had only elementary education, and 4 had university education. The number of household members ranged between 2 and 6, and most families had 3 children. Eighteen of them were unemployed, but none of them were on disability or sick leave. Their monthly income ranged between €0 and 2700, with the average of €671 per month (Table 1).

All study participants met the criterion A, ie, they had knowledge about their partner's trauma. Only 3 of 56 women included in the study did not have any of the symptoms of secondary traumatic stress. Twenty-one women had up to 5 symptoms, 19 had between 6 and 10 symptoms, and 13 women had 11 or more symptoms of secondary traumatic stress. Seventy percent of the wives reported emotional disturbance, with recalling of their partner's traumatic experience; 63% of the wives reported avoidance of thoughts and feelings about their partner's traumatic experience; and 56% of the wives reported periods

Table 1. Comparison of veterans' wives who did and those who did not meet the diagnostic criteria for secondary traumatic stress (STS)*

Characteristic	Group of wives (mean ± standard deviation)			*P*
	full sample	with STS (n = 22)	without STS (n = 34)	
Age (years)	39.9 ± 7.2	41.9 ± 8.7	38.8 ± 6.0	0.156†
Education (years)	11.4 ± 1.9	11.0 ± 1.7	11.7 ± 2.0	0.198†
Monthly income (Euro)‡	678.1 ± 369.1	579.9 ± 324.2	762.2 ± 378.4	0.099†
Duration of marriage (years)	15.4 ± 8.7	19.1 ± 9.1	13.2 ± 7.8	0.016†
Duration of husband's treatment (years)	3.6 ± 3.7	3.0 ± 3.9	4.0 ± 3.7	0.341†
No. of employed women	37	11	26	0.050§
Education level (No. of women):				0.332§
elementary	13	6	7	
secondary	40	16	24	
university	3	0	3	
No. of children (median, range)	2 (0-3)	2 (0-3)	2 (0-3)	0.435§
No. of household members (median, range)	4 (2-6)	4 (2-5)	4 (2-6)	0.845§

*Secondary traumatic stress criteria corresponded with the diagnostic criteria for posttraumatic stress disorder as defined in the fourth edition of Diagnostic and Statistical Manual of Mental Disorders (21).
†*t* test.
‡Exchange rate for Euro on February 1, 2007.
§χ^2 test.

of rage and annoyance after learning about their partner's traumatic experience.

When we analyzed how many women met the diagnostic criteria for secondary traumatic stress that corresponded with the DSM-IV criteria for PTSD (ie, at least two symptoms of re-experiencing the traumatic events, three avoidance symptoms, and two symptoms of increased arousal), we found that, although over a half of women reported more than half of the symptoms, only 22 of 56 women met these criteria (21). The women who met these criteria were compared with those who did not meet the criteria (n = 34) to determine possible differences in demographic and socioeconomic characteristics. There were no significant differences between these two groups of women in age, monthly income, duration of husband's treatment, education level, or number of children and household members (Table 1). However, women who met the diagnostic criteria for secondary traumatic stress were married significantly longer (Table 1) and were unemployed significantly more often than women who did not (Table 1). Only 11 (32%) women who did not meet the criteria for the secondary traumatic stress were married prior the Croatian 1991-1995 war, compared with 12 (54%) of women who met the criteria for diagnosis.

The results of regression analysis showed that both duration of marriage and employment status were significant predictors ($R^2 = 0.258$, $P<0.001$) of the number of secondary traumatic stress symptoms. Together they explain 23.0% of the variance of the criterion, ie, symptoms of secondary traumatic stress. Both of predictors were statistically significant: duration of marriage explains 19.4% of the variance ($r^2 = 0.194$, $P = 0.001$) and the employment status explained 9.3% of the variance $r^2 = 0.093$, $P = 0.024$).

During the interview, the women were asked if they had sought professional psychological help for the problems they might be having due to their husband's illness. Those who gave a negative answer were asked if they thought they needed such help. Two-thirds of 56 study participants (n = 36) thought they needed professional psychological help, but only 4 of them had actively sought help. Eighteen of 22 women who met the diagnostic criteria for secondary traumatic stress and 22 of 34 women who did not meet these criteria believed they needed professional psychological help.

Discussion

We found that a half of the wives of war veterans with PTSD had 6 or more symptoms of secondary traumatic stress. Only 3 did not have any of the symptoms. Previous studies that investigated the causes of secondary traumatization in wives of Israeli veterans with PTSD (3,6), Dutch veterans (22), and Vietnam war veterans (15,23) found that the mental and physical health condition of the person that suffered a direct trauma influenced the mental and physical health of the person providing support, and that veterans' wives manifested a wide range of mental and physical symptoms corresponding to the symptoms of PTSD. Koić et al (2) found that one third of wives (30%) of veterans diagnosed with PTSD met the criteria for secondary traumatic stress. Our study results not only confirmed the findings reported by these authors, but showed that even a larger proportion (39%) of veterans' wives suffered from secondary traumatic stress.

It is obvious that living with a traumatized person significantly influences other family members, especially the wife, who is expected to be empathic and provide the greatest support to her ill husband. These expectations are imposed on her not only by the husband, but also by the rest of the family and the environment, and reflect the common perception of the woman's role in the family (10,19), especially the veteran wife's role (24). On the other hand, veterans' wives are responsible for establishing and maintaining the balance in the family, usually by assuming the

role of the communication moderator, compensating for their husband's lack of emotional engagement with other family members, especially children (5,15,19,24,25). Frequently, the wives assume a large part of emotional, practical, and financial responsibilities for their family. Solomon (4) described this phenomenon as a redistribution of roles and redivision of work. The wife's overfunctioning is a way for her to avoid conflict with her traumatized partner by making fewer demands on him (3-5). This type of behavior may end up in a vicious circle: the overfunctioning of the wife enables the underfunctioning of her husband, who in turn increases his demands from the wife. Overfunctioning and full day care for the family may create the feelings of resentment and exhaustion in the overburdened wife, which increases the stress and vulnerability for depression and leads to the loss of identity. Wives, as well as parents of veterans with PTSD, believe that their love can cure their husbands. The increased responsibility is associated with the tendency to oscillate between the feeling of guilt for marital problems and resentment, accusing the veteran of being the cause of the problems (4,15). Solomon (4) calls this phenomenon the "empathy trap." The wife has little control over her husband's PTSD, but nevertheless feels responsible for his well-being. Many wives also succumb to AlAnon's "Three C" concept: they believe that they *cause* their husband's problems, they can *control* them, and they can *cure* them. Lyons (15) cites other authors who found that wives often assumed the role of caretaker and many got married believing that they could "change him for the better." Because of their deep emotional engagement, these women are not able to set the limits and thus experience the "caregiver overload" that corresponds with the severity of their partner's symptoms.

We found that wives of the veterans with PTSD who met the diagnostic criteria for secondary traumatic stress were married longer and more often unemployed than wives who did not meet these criteria. Other factors, such as number of children and household members, education, monthly income, age, and duration of husband's treatment, were not significant discriminators. It is possible that these variables present everyday life problems and equally affect everybody. Difficulties we talk about reflect the emotional relationship between the spouses, which becomes burdened by the husband's illness. The association between the duration of marriage and secondary traumatic stress symptoms, which was found in our study, may be explained by the fact that longer exposure to the husband's illness causes more serious consequences in the wife. In our study, a half of the women that met the criteria for secondary traumatic stress got married before the Croatian 1991-1995 war, and a third of wives who did not meet the criteria got married prior to 1991.

In our experience, patients with PTSD often say about themselves that they have changed and become different persons who also behave differently toward others. Their wives also describe them as emotionally distant, irritable, and unable to participate in everyday family life as they had before the war (5,15). The wives who knew their husbands before the war had more difficulties accepting their husband's illness and the fact that they had changed. Dekel et al (5) emphasized the importance of the common past, ie, positive experience in the relationship before the war, which made the need to "make things as they were before" all the greater. The husband's active service in the war was a more traumatic experience for them than for women who first met their partners after the war. It is important to notice that women who have been married for 19 years went through a considerable amount of distress for the well-being of their husbands during the war as opposed to the wives who have been married for 13 years on average and married after the war. The emotional and psychological distress of having the husband in active service

might have made them more vulnerable for developing secondary traumatic stress.

Unemployed wives spend more time at home, are more financially dependent on their husbands, have smaller social network, and feel less useful, which additionally aggravates their psychological problems (5). Taking care of their husbands becomes the main focus of their lives (15). These women often become an "around-the-clock service" dedicated to fulfilling their husband's needs, for which they receive little gratification (4,5,15,24). This may explain our finding that more women with secondary traumatic stress were unemployed. Our study results support the findings of the qualitative study of Israeli women by Dekel et al (5) who reported that being employed gave them the sense of independence and separateness from their husbands who suffer from PTSD. Also, the results of regression analysis support the importance of the duration of marriage and employment status in predicting the secondary traumatic stress symptoms.

Our study results showed that veterans' wives had psychological difficulties and they needed professional help, which is in accordance with previous reports (5-7). However, while as many as two-thirds of our study participants confirmed they needed help, only a few actually sought help. Dekel et al (5) noted that heavy burden carried by these women might have made it difficult for them to seek treatment and persist in it. There are several possible explanations for this finding. It is possible that the wives of the veterans undergoing treatment expected their husbands to be cured, which would consequently alleviate their difficulties, or they believed they had no right to complain given what their husbands had gone through in the war. Feeling guilty for not being a "good enough" wife could also be a possible reason (4). Also, the stigma of asking for psychological help should also be taken into account.

The mechanism of development of secondary traumatic stress is insufficiently known but the family dynamics might have an important role in it. While treating posttraumatic stress disorder in war veterans, it is important to involve the wives as well, since the treatment can only have success if it manages to cure the family system as a whole. Researches showed that the level of distress on the part of the wives is higher with the higher level of husbands' impairment (3). However, Beckham et al (3) also found that the perceived caregiver burden was a stronger predictor of their own adjustment than the severity of their husband's PTSD. Therefore, any treatment offered to men with PTSD must work on supporting and empowering the wives and focus on assisting the family in learning how to cope with the stress and trauma (3).

The limitations of our study are the small and incomplete (convenience) sample. Also, the rejection rate was high. We cannot say if the women who refused to participate in the study had less or more problems than those who agreed to participate. Our study did not include the wives of war veterans who were not diagnosed with PTSD. Further research should be more extensive and investigate more personal variables such as other mental health problems, early traumatization, and the level of partner's PTSD symptoms, the frequency and impact of the secondary traumatic stress symptoms as well as the social support the wives receive.

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