# POSTTRAUMATIC EMBITTERMENT SYNDROME IN PATIENTS WITH POST-TRAUMATIC STRESS DISORDER

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## SUMMARY

Introduction: Post-traumatic embitterment syndrome is a pathological reaction to drastic life events and does not have the tendency to end. This syndrome also occurs relatively frequently in patients with post-traumatic stress disorder (PTSD).

Aim: To investigate post-traumatic embitterment syndrome in patients with post-traumatic stress disorder.

Subjects and methods: A cross-sectional study was conducted on a sample of 200 subjects who were participants in the past war. The research group consists of 100 subjects who participated in the war and have a diagnosis of PTSD, and the control group consists of 100 healthy volunteers who were in the war but were not previously diagnosed with PTSD.

The study used a sociodemographic questionnaire, a self-assessment questionnaire for post-traumatic embitterment syndrome, and a clinical questionnaire for post-traumatic stress disorder.

Results: Subjects with PTSD show a statistically significantly higher level of post-traumatic embitterment syndrome compared to subjects without PTSD. There were no statistically significant differences between the groups that actively and passively participated in the war, between genders, and between the groups with current PTSD and lifetime PTSD.

Conclusion: Subjects with PTSD show a statistically significantly higher level of post-traumatic embitterment syndrome compared to subjects without PTSD.

**Keywords:** post-traumatic embitterment syndrome, patients, post-traumatic stress disorder

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## INTRODUCTION

Numerous catastrophic stressors during the past war in Bosnia and Herzegovina (BiH) had, almost as a rule, a negative impact on human health. Even though 30 years have passed since the war, many war participants still show various psychological symptoms that are the consequences of catastrophic war trauma. Active war participants, especially prisoners of war, wounded, and displaced persons, suffered more than others (1). A characteristic of the war that took place in BiH from 1992 to 1995 is multitraumatization, since there are many of those who were in captivity, displaced, wounded, or otherwise traumatized. Although numerous individual studies were conducted in BiH in the post-war period, no valid documentation or data on systematic research on the consequences of war trauma at the state level exists. Secondary traumatization and systemic stress, quality of life, and burnout in the marriage of traumatized persons have been investigated and described (1-4); the connection between PTSD and aggression, alcoholism, metabolic syndrome and current doubts regarding PTSD (5-8). Kučukalić A (9), Hasanović M (10,11) and many others have also written about various aspects of the psychological consequences of war. In the Republic of Croatia, since the beginning of the war until today, numerous works have been published and various aspects of war trauma have been investigated (12-16). Dealing with and studying the consequences of war has become very topical, with numerous research being conducted and numerous scientific papers being published on the topic of PTSD all over the world (17-19).

PTSD is one of the rare mental disorders for which the cause is known. It is an extremely severe catastrophic trauma that is outside the circle of everyday and common stressful experiences and which leads to intense fear and helplessness. Unlike most disorders, the diagnosis of PTSD relies on the simultaneous association of symptoms with a previous “traumatic” event. People suffering from PTSD continuously and uncontrollably re-experience distressing elements of the traumatic event in the form of intrusive memories and the presence of constant fear (20). Previous research has identified various risk factors that contribute to the development of this disorder, and they arise from the interaction of various personality traits and coping strategies and the individual's recovery ability, psychiatric history and comorbid conditions such as personality disorders, beliefs, and biological factors and social circumstances (21).

Mainstream medicine took a long time to accept the reality that extremely severe and catastrophic stress can lead to temporary or permanent mental disorders. There were some indications in the past that this might be accepted, but it can be said that the beginning of acceptance by mainstream medicine was in 1980. That year, post-traumatic stress disorder was published as a psychiatric nosological entity in the third edition of the Diagnostic and Statistical Manual of Mental Health (DSM-III) of the American Psychiatric Association (22). Only then was it understood that not only weaklings and cowards break down mentally, but that anyone can break down mentally, and it was officially accepted that extreme stress can cause mental disorders. Mainstream medicine accepted

what lay people had known and claimed before and what had existed throughout human history and which is evidenced by numerous literary works.

Post-traumatic embitterment disorder (PTED) is a pathological reaction to drastic life events and does not have the tendency to end. The trigger is an extraordinary negative life event, such as divorce, dismissal, personal insult or belittling. The consequence is severe and long-lasting embitterment. This disorder is divided, not according to the content of the trigger, but according to the temporal connection to the incident. The German psychiatrist Michael Linden (23) and others have emphasized the importance of embitterment. Embitterment is an emotion that is familiar to everyone as a negative feeling in the face of negative life events. People understand what is meant by "embitterment" without professional training, just as everyone knows what fear and anger are. Embitterment, like anxiety, is a reaction to injustice, insult or distrust. Embitterment is tormenting and does not tend to end. In many cases, embitterment fades, while in others it recurs constantly as the event is renewed. With greater intensity, it can limit the entire life and environment with its severe impairment (24-27).

After a unique negative stressful life event, emotional symptoms or behavioral problems such as embitterment, feelings of betrayal, injustice, and aggression toward the perpetrator appear. The diagnosis is made by clinical examination and psychological testing (28). Preliminary results indicate a prevalence of about 2-3% in the general population. Any therapist, social law expert, or lawyer knows of such cases. Increased prevalence is observed when a larger group of people represents the subject of social upheaval. Linden first described this condition after the reunion of Germany (24-26). Embitterment occurs as a reaction to extraordinary, but nevertheless everyday, negative life events such as divorce or dismissal (29).

Treatment of reactive disorders, especially PTED, can be difficult. Embitterment often coincides with a refusal to help. Therapy is often complicated by the patients' fatalistic and aggressive attitudes, which slows down the development of new life perspectives or new perspectives on what has happened. Patients with PTED must learn how to cope with their negative experiences. Cognitive therapy has many established treatment strategies in this regard, such as reframing methods, altering internal dialogue, reality testing, increasing self-efficacy, exposure exercises, problem-solving strategies, and methods for re-establishing social contacts and increasing activity (30). There are particular problems in using such conventional methods with PTED patients, as they respond differently from many other patients, necessitating modification of conventional cognitive interventions. Based on theoretical considerations about the etiology of PTED, and on available empirical findings and clinical experience, we developed "wisdom therapy," a treatment regimen specifically for PTED (31).

The first therapeutic task is to develop a working relationship between the therapist and the embittered patient, who is often distrustful, fatalistic, cynical, and mocking, and who rejects offers of help. In their view, the world must change, not the patient. They may accept treatment if they perceive the therapist as someone who can help find justice. It is important for the

therapist to convey that they appreciate the patient's suffering and clearly understand that an injustice has occurred. This is done so that the patient does not feel that they have to justify themselves again. Treatment of PTED initially requires a lot of empathy and unconditional acceptance from the physician (32).

## RESEARCH GOALS

To investigate the posttraumatic resentment syndrome in patients with posttraumatic stress disorder.

## SUBJECTS AND METHODS

### Subjects

A cross-sectional study was conducted on a sample of 200 subjects who participated in the past war. The study included subjects of both sexes aged 35-65 years. All subjects who were suitable for participation in the study were briefly explained the purpose and goal of the study, and informed consent was requested for participation. Exclusion factors were: refusal to voluntarily participate in the study, and a diagnosis of mental illness, mental disorder, and mental retardation made before the war, age less than 35 and greater than 65 years.

The subjects were divided into two groups.

The research group consisted of 100 subjects who participated in the war and had a diagnosis of PTSD made by an experienced psychiatrist in accordance with the diagnostic criteria of ICD 10, treated in outpatient and inpatient conditions at the Psychiatric Clinic of University Clinical Hospital Mostar.

The control group (N=100) consisted of healthy volunteers who had been in the war but had no prior diagnosis of PTSD. The control group was recruited using the "snowballing" method. The snowballing method is a "snowball" sampling method where the initial study subjects recruit future subjects from among their acquaintances. In this way, the sample size increases like a rolling snowball. This technique is often used in hidden populations where access is difficult for researchers (43).

### Diagnostic instruments

1. The sociodemographic questionnaire consists of questions about gender, age, place of residence during the war, participation in the war, professional education, employment status, occupation, marital status, and current place of residence. The questionnaire was personally designed and specifically created for this study.

2. The Post-Traumatic Embitterment Disorder Self-Rating Scale (PTED) consists of 19 statements to which one answer can be circled from 0 to 4, where 0 represents "does not apply to me at all" and 4 "applies to me completely" and its aim is to assess the level of embitterment caused by negative life events (44).

3. Clinical Questionnaire for Posttraumatic Stress Disorder, Diagnostic Version for Current and Lifetime PTSD (ClinicianAdministred PTSD Scale, CAPS-DX) – Croatian version adapted for assessing the type and severity of PTSD symptoms in soldiers and civilians in accordance with the DSM V classification. It consists of 25 items that encompass PTSD symptoms, according to B, C, D criteria of DSM V. For each item, the respondent assesses the frequency and intensity. Criterion A is for a catastrophic traumatic event, criterion E speaks about the duration of the disturbances, and

criterion F assesses the personal experience of the disturbances, disruption of social and work functioning. The points achieved on the CAPS indicate the type and severity, and the presence/absence of the disorder (45).

### Statistical analysis

The obtained results were processed using descriptive, non-parametric and parametric statistical methods depending on the data distribution., The chi-square test, student t-test, one-way analysis of variance were used to test the difference between groups. Appropriate correlation tests and regression analysis were used to determine the relationship between variables. The sample distribution was tested using the Kolmogorov-Smirnov test. A probability level of $p<0.05$ will be considered as statistically significant.

## RESULTS

### Sociodemographic characteristics of the sample

Table 1 shows the differences in sociodemographic characteristics between the groups with and without PTSD. Subjects with PTSD were significantly more likely to be unemployed and retired, had a higher divorce rate, and were less likely to have resolved their housing issues; there were no statistically significant differences in the other variables shown in the table.

**Table 1.** *Sociodemographic Characteristics of the Sample, Group With and Without PTSD*

| | Group | | | | $\chi^2$ | p |
|---|---|---|---|---|---|---|
| | No PTSD | | PTSD | | | |
| | N | % | N | % | | |
| Sex | | | | | 0 | 1 |
| M | 89 | 88,1 | 88 | 88,9 | | |
| F | 12 | 11,9 | 11 | 11,1 | | |
| Participation in combat | | | | | 1,051 | 0,305 |
| Active | 79 | 78,2 | 84 | 84,8 | | |
| Passive | 22 | 21,8 | 15 | 15,2 | | |
| Job | | | | | 27,966 | **<0,001*** |
| Paid employment | 50 | 49,5 | 15 | 15,2 | | |
| Retired | 30 | 29,7 | 51 | 51,5 | | |
| Unemployed | 20 | 19,8 | 32 | 32,3 | | |
| Other | 1 | 1,0 | 1 | 1,0 | | |
| Marriage | | | | | 9,825 | **0,013*** |
| Married | 87 | 86,1 | 78 | 78,8 | | |
| Single | 13 | 12,9 | 10 | 10,1 | | |
| Divorced | 0 | 0,0 | 7 | 7,1 | | |
| Lives with partner | 1 | 1,0 | 4 | 4,0 | | |
| Housing conditions | | | | | 16,088 | **0,003*** |
| House/apartment owned | 84 | 83,2 | 68 | 68,7 | | |
| House/apartment owned by spouse | 6 | 5,9 | 1 | 1,0 | | |
| Rented house/apartment | 3 | 3,0 | 9 | 9,1 | | |
| At parents' house | 8 | 7,9 | 14 | 14,1 | | |
| Collective center | 0 | 0,0 | 5 | 5,1 | | |
| Temporary accomodation assigned by the government | 0 | 0,0 | 2 | 2,0 | | |
| Smoking | | | | | 0,303 | 0,582 |
| No | 61 | 60,4 | 55 | 55,6 | | |
| Yes | 40 | 39,6 | 44 | 44,4 | | |

*Fisher's exact test

**Table 2.** *Sociodemographic Characteristics of the Sample, Group With and Without PTSD*

| | Group | | | | t | p |
|---|---|---|---|---|---|---|
| | No PTSD | | PTSD | | | |
| | X̄ | SD | X̄ | SD | | |
| Age | 51,82 | 7,549 | 50,96 | 6,700 | 0,854 | 0,394 |
| Years of education | 12,19 | 1,963 | 11,51 | 2,305 | 2,258 | **0,025** |
| Income | 1149,01 | 686,731 | 734,34 | 451,112 | 5,057 | **<0,001** |
| Household members | 4,19 | 1,759 | 3,72 | 1,623 | 1,967 | 0,051 |
| Children | 2,13 | 1,426 | 1,94 | 1,300 | 0,981 | 0,328 |

Table 2 shows the differences in sociodemographic characteristics between the groups with and without PTSD. Subjects with PTSD had significantly lower incomes, while there were no statistically significant differences in the other variables shown in the table.

**Table 3.** *Sociodemographic Characteristics of Groups With Active and Passive Combat Participation*

| | Combat participation | | | | $\chi^2$ | p |
|---|---|---|---|---|---|---|
| | Active | | Passive | | | |
| | N | % | N | % | | |
| Sex | | | | | 85,988 | **<0,001*** |
| M | 161 | 98,8 | 16 | 43,2 | | |
| F | 2 | 1,2 | 21 | 56,8 | | |
| Job | | | | | 6,859 | 0,069* |
| Paid employment | 52 | 31,9 | 13 | 35,1 | | |
| Retired | 72 | 44,2 | 9 | 24,3 | | |
| Unemployed | 37 | 22,7 | 15 | 40,5 | | |
| Other | 2 | 1,2 | 0 | 0,0 | | |
| Marriage | | | | | 1,064 | 0,845* |
| Married | 135 | 82,8 | 30 | 81,1 | | |
| Single | 19 | 11,7 | 4 | 10,8 | | |
| Divorce | 5 | 3,1 | 2 | 5,4 | | |
| Lives with partner | 4 | 2,5 | 1 | 2,7 | | |
| Housing conditions | | | | | 14,772 | **0,005*** |
| House/apartment owned | 127 | 77,9 | 25 | 67,6 | | |
| House/apartment owned by spouse | 3 | 1,8 | 4 | 10,8 | | |
| Rented house/apartment | 7 | 4,3 | 5 | 13,5 | | |
| At parents' house | 21 | 12,9 | 1 | 2,7 | | |
| Collective center | 3 | 1,8 | 2 | 5,4 | | |
| Temporary accomodation assigned by the government | 2 | 1,2 | 0 | 0,0 | | |
| Smoking | | | | | 0,125 | 0,723 |
| No | 96 | 58,9 | 20 | 54,1 | | |
| Yes | 67 | 41,1 | 17 | 45,9 | | |

*Fisher's exact test

Table 3 shows the differences in sociodemographic characteristics between the groups with active and passive participation in the war. A significantly higher rate of women was in the group with passive participation in the war, a significantly lower percentage of subjects with passive participation had their housing issue resolved, and there were no statistically significant differences in the other variables shown in the table.

## Post-traumatic embitterment syndrome

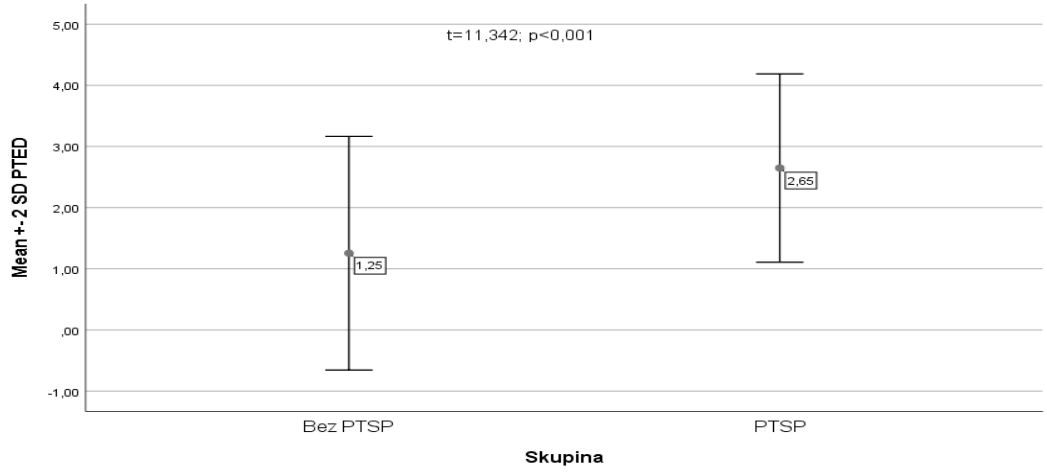


**Figure 1.** *PTED levels between groups with and without PTSD*

The figure shows the differences in PTED levels between groups with and without PTSD, as can be seen in the figure, subjects with PTSD had significantly higher PTED levels compared to subjects without PTSD.

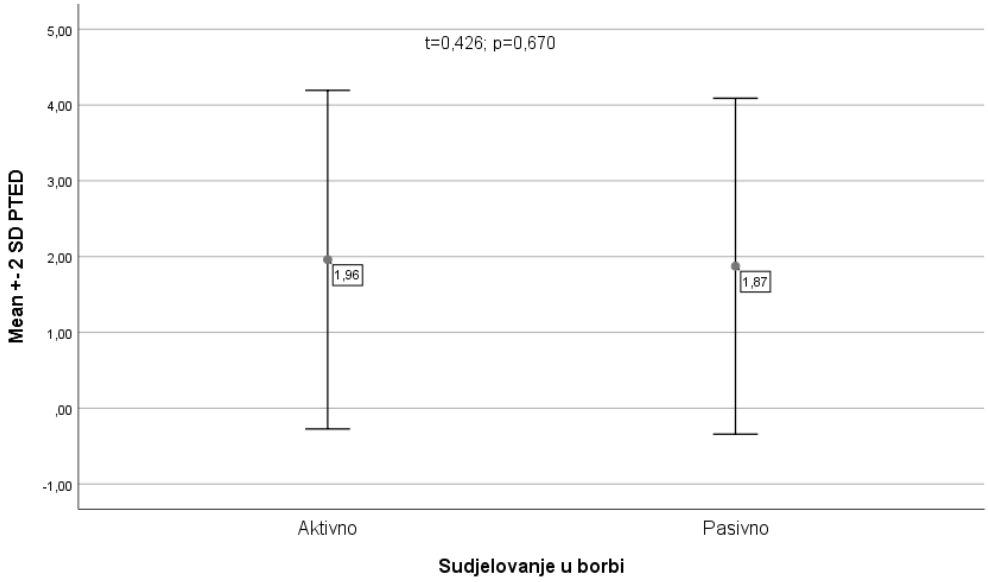


**Figure 2.** *Level of PTED between groups that actively and passively participated in the war*

The figure shows the differences in the level of PTED between the groups that actively and passively participated in the war. As can be seen in the figure, there were no statistically significant differences between the groups.

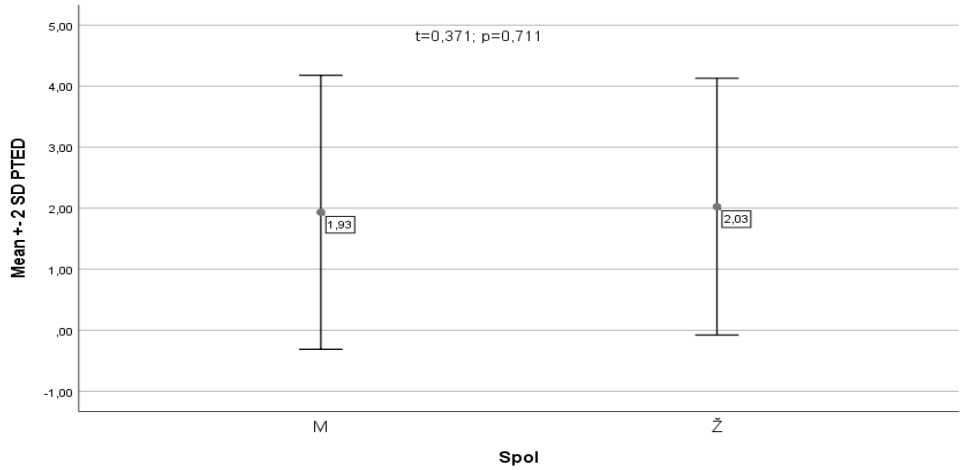


**Figure 3.** *PTED levels between sexes*

The figure shows the differences in PTED levels between sexes. There were no statistically significant differences between the groups, as can be seen in the figure.

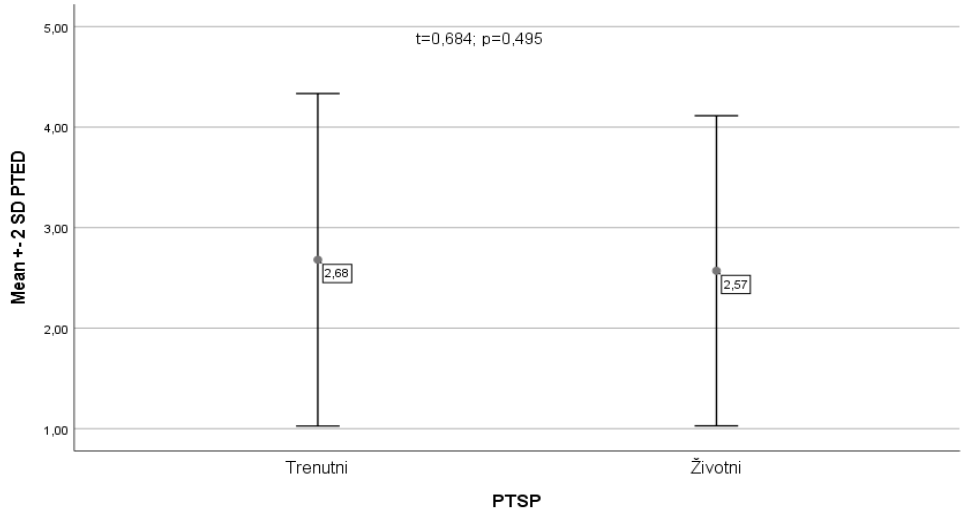


**Figure 4.** *PTED level between groups with current and lifetime PTSD*

The figure shows the differences in PTED level between groups with current and lifetime PTSD. There were no statistically significant differences between the groups as can be seen in the figure.

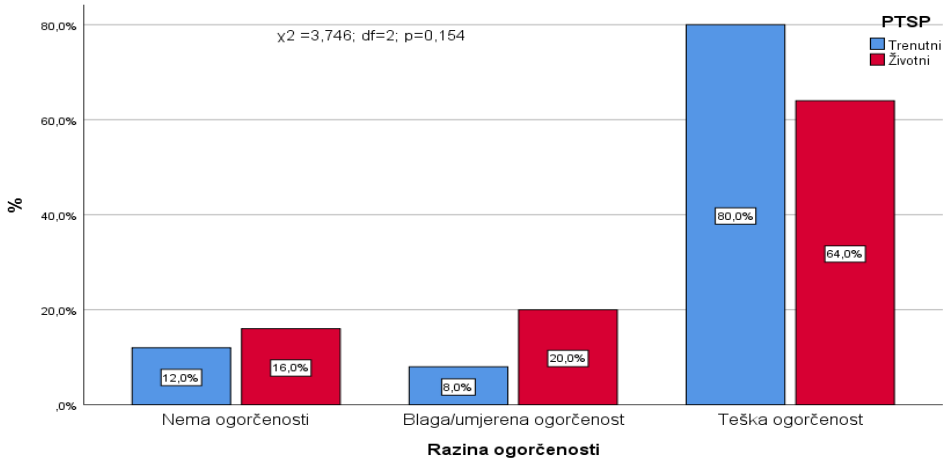


**Figure 5.** *PTED scores between groups with current and lifetime PTSD*

The figure shows the differences in PTED scores between groups with current and lifetime PTSD. As can be seen in the figure, there were no statistically significant differences between the groups.

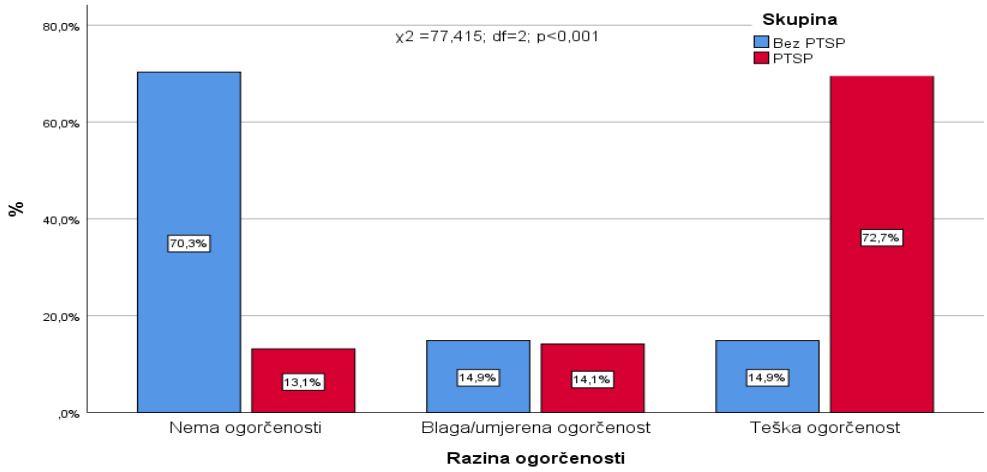


**Figure 6.** *PTED scores between PTSD and non-PTSD groups*

The figure shows the differences in PTED scores between PTSD and non-PTSD groups. As can be seen in the figure, subjects without PTSD were most represented in the non-embitterment group, while those with PTSD were most represented in the severe embitterment group. The observed differences were statistically significant.

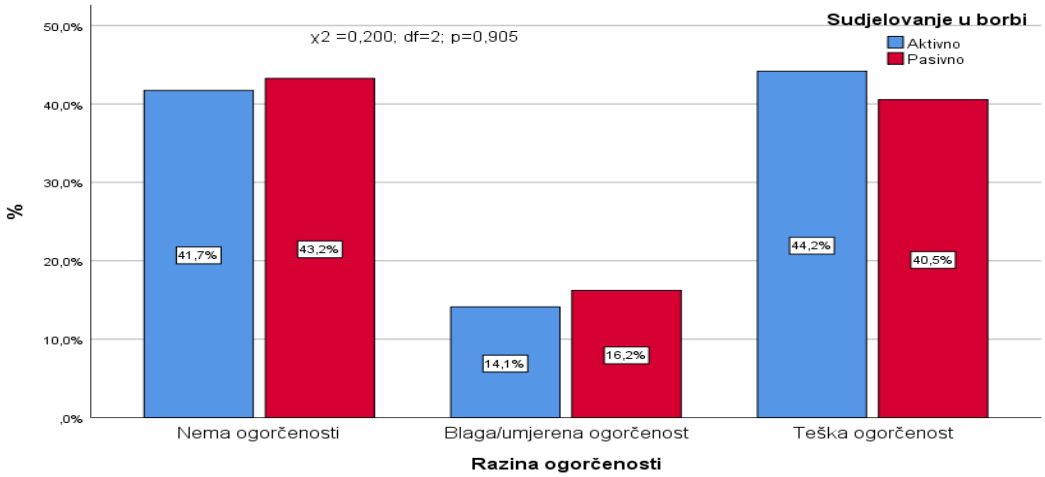


**Figure 7.** *Level of PTED between groups that actively passively participated in the war*

The figure shows the differences in the level of PTED between groups that actively and passively participated in the war. As can be seen in the figure, there were no statistically significant differences between the groups.

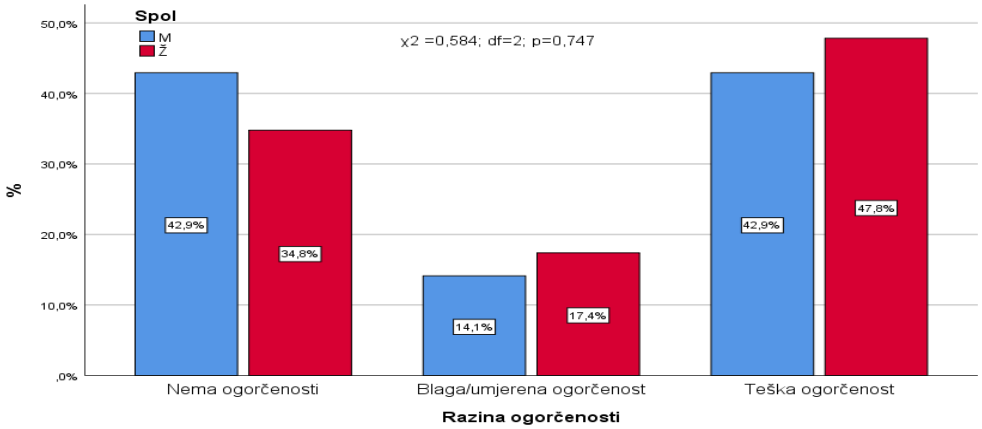


**Figure 8.** *PTED level between sexes*

The figure shows the differences in PTED level between sexes. There were no statistically significant differences between the groups, as can be seen in the figure.

## DISCUSSION

This is the first study in BiH that examined post-traumatic embitterment syndrome and its impact on the onset, development and outcome of PTSD, as well as on the level of symptoms. Subjects with PTSD had a statistically significantly higher level of post-traumatic embitterment syndrome compared to subjects without PTSD.

Sociodemographic characteristics are important items that in any case have an impact on the development of psychological disorders, including PTSD. There are different data from the literature that show to what extent they will be of importance, but in any case they contribute to the prediction of the development of PTSD, and in some cases they influence

the relationship between the intensity, development and outcome of the clinical picture of PTSD.

In the sample of this study, the average age of subjects suffering from PTSD was 50.96 years, and in a sex comparison, the male subjects of this study were 51.28 years old and the female subjects of this study were 52.30 years old, and the reason for this is the long period of time that has passed since the end of the last war until this study. When it comes to age, the data from the literature are different and some indicate a higher prevalence of PTSD in the younger population (36), others emphasize the connection between PTSD and older age (37), while in our study, the age limit did not prove to be a statistically significant predictor for the occurrence of PTSD, which is in line with a study from 2008 (38), and neither the age limit nor the difference between sexes is statistically significant. Years of education showed a statistically significant difference when it comes to male and female subjects, as well as a statistically significant difference in favor of male subjects who owned an apartment compared to female subjects, which also supports the age of the subjects and the cultural (dis)opportunities of our climate. When it comes to active and passive participation in combat, out of 100 subjects with PTSD, 84 were exposed to active combat, and 15 subjects to passive combat. Subjects with PTSD were significantly more likely to be unemployed and retired than controls, and had significantly lower incomes, as is consistent with the research of Breslau et al. in 1995 (39), and de Jong et al. in 2001 (37), and as is shown by numerous other studies. Also, in this study, subjects with PTSD had a higher divorce rate, seven subjects out of a hundred, compared to none without PTSD, as is also indicated by the data from the literature of DiGrande et al. (40). We did not find any statistically significant differences in sociodemographic characteristics between subjects with current and lifetime PTSD. Many other authors have investigated the influence of sociodemographic characteristics on the onset, development, and outcome of PTSD (41-43).

Many studies show that adequate social support is associated with better outcomes after exposure to toxic substances (44), rape (45), and combat experience (46). However, the social aspect can play a role in the stressor itself, as in the case of war, genocide, or man-made disasters in which the dominant experience is the loss of control over the social environment (47). Various studies of traumatic stress emphasize that appropriate behavior of the environment is necessary for the victim to overcome the traumatic event. Schafer et al. (48) distinguish between emotional, material, and informational support. Emotional support includes factors that contribute to the person feeling loved, appreciated, accepted, and that others are willing to take care of him. Material support includes direct assistance in the form of money, gifts, or privileged use of various government services.

The reaction of the environment, support, but also rejection, and often ambivalent attitudes towards victims, unambiguously affect the recovery process. Social support can prevent or mitigate the effects of stressors, enable a person to confront a stressful situation more successfully, and help mitigate or eliminate the harmful effects of stress (49). The preservation, cohesiveness and adaptability of the family

is especially important during the recovery period, where additional stressors play a role, such as separation, losses, injury, psychological traumatization or existential threat of family members (50).

The social system also provides models of how to adapt after the trauma has occurred (51). The models of intervention that are proposed in the face of disaster are, in part, social movements that mobilize beliefs and support networks and provide cultural permission to express emotions and seek help (52). Research shows that people seeking monetary compensation have more pronounced disturbances within the scope of PTSD diagnosis than individuals with this disorder who are outside the process of seeking compensation and litigation (53-56), which is often present in our environment.

Compared to other sociodemographic characteristics, many studies show that the severity of the traumatic event is the strongest predictor of the development of PTSD (57,58). Some studies have found an association between the number of traumatic events and PTSD (59), while others have denied this association (60). Data from the literature show that urban environments are a predisposing factor for the development of PTSD, due to a greater number of stressors and less social support as a result of alienation (61,62). Several studies indicate that the risk of developing PTSD increases in urban living circumstances, especially in the female population (63). The increased risk of developing PTSD in urban environments is explained by a greater number of potential traumatic events, such as violence (61).

In their research, Shalev et al., 2019., linked female sex, lower education, and interpersonal trauma with a higher risk of PTSD, while previous risk factors such as age, marital status, and type of trauma did not prove to be significant predictors of PTSD (62).

Although official medicine and psychiatry have only been talking about PTSD for the past forty years, our scientific knowledge about PTSD is increasing, but there are still many uncertainties and doubts. Therefore, it is necessary to continue research and investigate this insufficiently researched issue because new cognitions about it could increase our knowledge, reduce the number of sufferers, make treatment more effective and improve the quality of life of those suffering from PTSD.

Post-traumatic embitterment syndrome represents a threat to the basic belief system and is a reaction to social injustice, job loss and similar life events that lead to psychological shock and the breakdown of a person's basic beliefs and values. Similar to PTSD, the characteristic symptoms of post-traumatic embitterment syndrome are intrusive thoughts and memories of a certain event (63). In post-traumatic embitterment syndrome, the predominant emotion is embitterment, while in PTSD it is anxiety or panic. Embitterment, a feeling that is familiar to most people, is like anxiety, a reaction to injustice, insult or distrust.

We, mental health experts in BiH, unfortunately had the opportunity to participate in the war events (1992-1995) and to practically and theoretically increase our knowledge in the field of psychotraumatology. For the last ten years, we have been actively involved in the regional European project Molecular Mechanisms of PTSD, in which we, together with colleagues from Croatia,

Kosovo and Germany, have been researching the genetics and epigenetics of war-related PTSD. We published our results in 2016 and 2018 (64), and then in 2019 (65-71). In addition to scientific papers, we are sure that this has helped us understand different aspects of PTSD, all with the aim of better assisting in the treatment of our patients suffering from PTSD.

## CONCLUSIONS

1. Subjects with PTSD show a statistically significantly higher level of post-traumatic embitterment syndrome compared to subjects without PTSD.
2. There are no statistically significant differences between the groups that actively and passively participated in the war, between sexes, and between the groups with current PTSD and lifetime PTSD.

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# POSTTRAUMATSKI SINDROM OGORČENOSTI U OBOLJELIH OD POSTTRAUMATSKOG STRESNOG POREMEĆAJA

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## SAŽETAK

Uvod: Posttraumatski sindrom ogorčenosti je patološka reakcija na drastične životne događaje i nema tendenciju prestanka. On se relativno često pojavljuje i u oboljelih od posttraumatskog stresnog poremećaja (PTSP).

Cilj: Istražiti posttraumatski sindrom ogorčenosti u oboljelih od posttraumatskog stresnog poremećaja.

Ispitanici i metode: Provedena je presječna studija na uzorku od 200 ispitanika koji su bili sudionici proteklog rata. Istraživačka skupina sastoji se od 100 ispitanika koji su sudjelovali u ratu i imaju dijagnozu PTSP-a, a kontrolna skupina sastoji se od 100 zdravih dragovoljaca, koji su bili u ratu ali nemaju od ranije postavljenu dijagnozu PTSP-a.

U istraživanju su korišteni sociodemografski upitnik, samoocjenjujući upitnik posttraumatskog sindroma ogorčenosti i klinički upitnik za posttraumatski stresni poremećaj.

Rezultati: Ispitanici s PTSP-om pokazuju statistički značajno veću razinu posttraumatskog sindroma ogorčenosti u odnosu na ispitanike bez PTSP-a. Između skupina koje su aktivno i pasivno sudjelovale u ratu, između spolova, te između skupina s trenutnim PTSP i životnim PTSP nemastatistički značajnih razlika.

Zaključak: Ispitanici s PTSP-om pokazuju statistički značajno veću razinu posttraumatskog sindroma ogorčenosti u odnosu na ispitanike bez PTSP-a.

**Ključne riječi:** posttraumatski sindrom ogorčenosti, oboljeli, posttraumatski stresni poremećaj

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