Original article

Posttraumatic Growth in War Captives

Melita Jukić ^{1,2}, Vanja Đuričić ¹

- ¹ Psychiatry Department, National Memorial Hospital "Dr. Juraj Njavro", Vukovar, Croatia
- ² Faculty of Dental Medicine and Health, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia

*Corresponding author: Vanja Đuričić, vanja-djuricic@hotmail.com

Abstract

Numerous studies have investigated the various consequences of traumatic experiences during the war. The most significant disorder that occurs as a result of war traumatization is posttraumatic stress disorder, in addition to which other psychological disorders often can occur. In the last few decades, the number of studies researching the occurrence of posttraumatic growth as a positive outcome of trauma, including that of war veterans, has been growing. Among war veterans, prisoners of war stand out for the intensity of their traumatic experience but also for the appearance and intensity of the pathological outcomes of the trauma. Studies show that in this group of veterans, posttraumatic stress disorder and comorbidity disorders often persist for decades after their release from captivity. There is not much research about the positive outcomes of trauma in these particularly vulnerable populations, and this paper is a review of several different studies, the results of which show that posttraumatic growth is possible even after challenging traumatic experiences such as war captivity.

(Jukić M, Đuričić V^{*}. Posttraumatic Growth in War Captives. SEEMEDJ 2024; 8(1); 40-54)

Received: Jun 9, 2024; revised version accepted: Jun 27, 2024; published: Sep 23, 2024

KEYWORDS: posttraumatic growth, posttraumatic stress disorder, war trauma, captivity

Introduction

Research on war trauma in veterans and its consequences in large numbers refers to the pathological consequences negative, of exposure to traumatic events in war. Many of them also refer to research into the specifics of the traumatic experience in captivity. The results of the study show that the consequences of wartime captivity on prisoners of war (POWs) are manifested in more significant and long-term psychological consequences of this type of trauma compared to the consequences of veterans who were not prisoners. In many studies, exposure to traumatic events in captivity has been shown to have severe implications for mental and physical health, quality of life and functioning in different areas of life (1, 2). Studies have confirmed a higher frequency of posttraumatic stress disorder (PTSD), as well as other psychological disorders, in veterans who were also prisoners in camps compared to veterans who were not prisoners of camps but had experienced combat trauma (3,4). Studies about the long-term negative effects of trauma show that former prisoners of camps have significantly worse consequences for health and everyday functioning even several decades after leaving the camps (5, 6).

A variety of different factors, in addition to the severity of the traumatic experience, affect the occurrence of PTSD and its persistence (7). It is well known that after exposure to traumatic events, not all people will develop significant pathological outcomes of trauma, of which PTSD is undoubtedly the most important, and that some people are more resistant to traumatic events and situations compared to others (8, 9). In addition, after a traumatic experience, there may appear positive consequences called posttraumatic growth (PTG). This complex phenomenon refers to positive changes in traumatized persons, which include changes in different dimensions and areas of life. Studies about the positive consequences of trauma enable a better understanding of the traumatic experience in the posttraumatic period. It represents an essential view of trauma and various responses to traumatic events (10).

Although interest in the positive consequences of exposure to traumatic events has grown significantly in the last few decades, there is not much research about posttraumatic growth in these specific and particularly vulnerable populations of veterans, such as camp prisoners. The aim of this paper is a brief overview of the studies about the posttraumatic growth and resistance of severely traumatized war veterans. With the objective, we emphasized the importance of a different view of psychotrauma, not only through the view of negative, pathological consequences but also through could better understand how we the consequences of psychotrauma and notice the possibilities preventing of pathological outcomes and encouraging more positive outcomes.

Materials and methods

We exhaustively examined the literature published earlier using PubMed, Web of Science, Scopus and Google Scholar. Our search criteria focused on English-language articles using specific keywords, combinations and related terms; see the literature search process flow diagram in Figure 1.

The first identification included the search strategy: (prisoners of war OR veterans in captivity) AND (resilience, posttraumatic growth, OR positive consequences of trauma), and we got 14811 results. Before screening, we removed duplicate records (n = 13,897). Most were citations or illegible (n = 38), and some were not in English (n = 75). We screened 801 records and excluded 676. We sought 125 records for retrieval and we successfully retrieved 89 of them. We assessed 36 records for eligibility, but some were excluded because they had inadequate data (n = 19). We summarized our results of 17 records in Table 1.



Figure 1. Flow diagram of the literature search process

Posttraumatic growth

Posttraumatic growth is a term that refers to the positive consequences of traumatization. It denotes the transformation of an individual exposed to a traumatic experience towards an entirely new way and a higher level of psychological functioning compared to the pretraumatic period (10, 11). It is a complex, often long-term, multi-year process that is the result of suffering, pain and psychological struggle. It is believed that ruminations resulting from traumatic experiences lead to constructive processing and cognitive restructuring, the consequence of which is posttraumatic growth, and according to this interpretation, posttraumatic stress (PTS) and PTG are positively related (12).

Only when a person experiences severe distress and an internal struggle to overcome pain can radical positive changes eventually occur after cognitive restructuring. According to other interpretations, PTS and PTG are negatively correlated, and PTG is a means of neutralizing pathological outcomes; that is, the higher the PTG, the lower the pathological outcomes of the traumatic experience (13). In this context, PTG is the mechanism of coping with trauma.

Authors	Examinees	Research objects	Results		
Singer, 1981	Former prisoners of the Vietnam War	Trauma, personality, stress disorders, posttraumatic psychology	Despite severe traumatization, some detainees are more resistant than others and have fewer pathological outcomes.		
Segal et al. 1976	Without	Review of the POW literature	The adaptive response to captivity can evolve into PTG. Factors that contribute to the		
Nardini, 1952	Prisoners in Japanese camps in World War II	Intensity of trauma; predictors of surveillance	survival of severe trauma are strong motivation to live, emotional stability, a sense of humor, a sense of obligation for others, courage, opportunism and military experience.		
Sledge, et al. 1980	Former prisoners in the Vietnam War	The intensity of trauma, the intensity of distress, and PTG	Positively correlated PTG with the level of psychological suffering and physical injury (The most significant in the field of self-concept, understanding others and life priorities). There is a positive correlation between trauma intensity		
Feder et al. 2008	Former prisoners in the Vietnam War	Intensity of traumatic experience (length of imprisonment), optimism, religiosity, social support, age at the time of research as predictors of PTG	optimism and PTG, and there is a positive correlation between positive religious confrontation and PTG, most significant in the dimension of spirituality, increase in faith, and sense of purpose in life.		
			correlation between psychopathology and PTG.		
Segovia et al. 2012	Former prisoners in the Vietnam War	predictors of resilience (PTSD, optimism, age at time of confinement, military rank, psychopathic and antisocial personality traits, length of confinement and solitary confinement)	Optimism, a more mature age and officer status during captivity were the most significant positive predictors of resilience.		
Solomon et al. 1999	Detainees from the Yom Kippur War and a control group of veterans	Positive and negative psychological consequences (life satisfaction, symptomatology, social relations, view of selves, interest in family) of war captivity, and the contribution of specific stressors and coping in captivity and at homecoming to positive and negative changes.	Detainees had more significant positive than adverse outcomes but without a significant difference compared to the positive outcomes of the control group. Severe traumatization was a resource for personal growth.		
Erbes et al. 2005	Former prisoners in the Vietnam War and Korean war	Predictors of PTG (trauma, personality, history of development, social support, PTSD)	Positive affect, PTSD and social support were significantly correlated with the total PTG. A significant correlation of other variables and individual dimensions of PTG was also recorded		
King et al. 2015	Vietnam ex-POWs	Sociodemographic features, training, social support, traumatic experience	A more mature age, a higher level of education and married life during captivity and physical torture contribute to positive adjustment during life.		
Table is continued on the next page.					

Table 1. Posttraumatic growth and resilience in camp captives

Ursano et al. 1986	Former Vietnam POWs	Pathological outcomes of trauma and well-being	Found that repatriates who reported having benefited from their experience had been in captivity for a significantly higher average number of days; the authors found no differences in psychiatric diagnoses between the benefited and non-benefited groups.
Sledge et al. 2018	Former Vietnam POWs and a control group of combat veterans	Positive and negative consequences of captivity	Prolonged confinement positively correlated with personal growth and negative consequences.
Andersen 1975	Former Vietnam POWs	Traumatic experience and PTG	Prolonged confinement positively correlated with personal growth and growth in relationships with others.
Solomon and Dekel, 2007	Israeli ex-POWs and a control group of combat veterans	Predictors of positive (PTG) and negative consequences (PTSD); correlation of PTSD and PTG	Ex-POWs reported higher growth than controls, and participants who reported intermediate levels of PTSD symptoms reported the highest posttraumatic growth. Loss of control and active coping during captivity were two factors
Dekel et al. 2011	Israeli former prisoners of the Yom Kippur War	predictors of posttraumatic growth (PTG) and posttraumatic stress disorder (PTSD).	that predicted both PTG and PTSD. Self-controllability predicted PTG, while sociodemographic factors predicted PTSD when controlling for PTSD and PTG. The results highlight the complex relationship between beneficial and pathogenic trauma outcomes by showing that while some
Dekel et al 2012	Israeli former prisoners of the Yom Kippur War and controls	Association between PTSD, other psychopathologies and PTG;	not. Individuals with PTSD reported higher PTG levels across times than those without PTSD; relations of PTG to depression and anxiety were not significant Compared to controls, ex-POWs endorsed higher levels of
Lahav et al. 2016	Ex-POWs and matched a control group of non-POW combat veterans of the Yom Kippur War	The mediating role of dissociation in the relation between PTG and World Assumptions (WA)	dissociation, PTG and negative WAs. In comparison to ex-POWs without PTSD and controls, those who had PTSD endorsed negative WAs and a greater degree of PTG and dissociation. WAs were negatively correlated with dissociation and positively correlated with PTG. PTG was positively correlated with dissociation.
Zerach et al. 2013	Israeli ex-POWS and combat veterans of the Yom Kippur War	Relationship between PTSD and PTG and resilience	PTG is positively correlated with PTSD symptoms based on the negative link found between PTG and resilience.

Table 1. Posttraumatic growth and resilience in camp captives (continued)

According to some studies, PTG and the negative consequences of traumatization are mutually independent and can take place

simultaneously without significant correlation (14). Two concepts of PTG are distinguished in the studies: real posttraumatic growth and Southeastern European Medical Journal, 2024; 8(1) illusory growth. In doing so, illusory PTG refers to short-term, adaptive mechanisms that enable immediate, short-term overcoming of trauma. At the same time, real PTG means fundamental changes and growth resulting from long-term confrontation and adaptation (15).

PTG can include various changes, such as personal growth, including increasing personal strength, improving relationships with other people, experiencing the world differently, appreciating the value of life and new life opportunities, and changes in the spiritual and religious spheres (16, 17).

Several different factors can affect whether a person will have posttraumatic growth after a traumatic experience or not. PTG shares most predictors with posttraumatic stress disorder, which is recognized as the most significant pathological outcome of trauma. Thus, the possibility of PTG will depend on personality traits, maturity, education, marital status during the traumatic experience and social support after the trauma experienced. In large part, the possibility of PTG is determined by the type and intensity of the traumatic experience (11). In addition, according to research, PTG is not even possible without pathological consequences, the most significant of which is PTSD, so PTG also depends on the negative consequences of the traumatic experience. A meta-analysis of 77 cross-sectional studies showed that PTG is significantly correlated with PTSD symptoms, which are symptoms of evasive behavior and intrusive thoughts about the traumatic experience (18). Considering the different results of research into the relationship between PTSD and PTG, some authors conclude that it is probably the influence of applied research methods, and in some studies, too little time flows from exposure to traumatic events. Research has shown that personality traits such as optimism, extroversion and opportunism enable a different view of traumatic experiences. For example, optimism makes it possible to find meaning in a traumatic experience and, consequently, posttraumatic growth (19, 20).

The authors of the research emphasize that growth occurs in those people who perceive the

traumatic experience as a new opportunity in life, as the possibility of experiencing a higher level of adaptation after the traumatic experience, and it is difficult for those people who are fixated on the negative consequences of traumatization (21, 22).

It was observed that, in addition to the fact that people can experience numerous negative consequences of traumatization, many people do not have significant consequences; that is, they show resistance to traumatic experiences (23). At the same time, it is emphasized that resistance is not the same as PTG because it excludes the development of significant adverse, pathological outcomes of trauma (8, 24). Those who retain mental stability after exposure to a traumatic event and return relatively painlessly and quickly to the pretraumatic level of functioning are considered resistant persons. Some authors believe that cognitive processes that protect against distress and enable PTG are the basis of resistance (4, 25). In addition to investigating factors that can lead different outcomes of traumatization, to research also analyzes the relationships between negative and positive consequences of relationships and the between trauma resistance and negative consequences of trauma and PTG (26).

War captivity

Numerous studies about the war captivity and its consequences confirmed that this form of traumatization stands out in many ways and that it represents one of the most difficult human experiences in terms of its specifics (27). When talking about war veterans who experienced this form of traumatization, it is emphasized that after exposure to combat action, which is also a trauma of high intensity, camp captives are exposed to a completely different type of traumatization (2). Detention is characterized first by duration. Most often, it is a long, and in many cases, multi-year stay in the camp, in conditions of isolation from the outside world, lack of information and communication with neighbors (28).

During their captivity, captives are exposed to repeated and continuous traumatic events and to living in inhuman and inappropriate conditions. Often, captivity is characterized by inappropriate hygienic conditions, lack of water, food, medicine and adequate medical care. Staying in the camp almost regularly includes various forms of torture and mistreatment, either psychological or physical. Beating, sexual abuse and being in solitary confinement are only part of the everyday life experienced by many captives of the camp (29, 30).

In addition to personally experiencing various traumatic situations, captives often witness by others (31, mistreatment 32). What distinguishes traumatization in captivity from that on the battlefield is, among other things, the specific relationship among captives, that is, the interpersonal relationship aimed at a person. Within this relationship, the captive is entirely dependent on other captives, and there is a feeling of powerlessness and loss of control over the situation in which they find themselves and complete uncertainty about what they will have to endure in captivity until they leave captivity. Research emphasizes that both release from captivity and adaptation to regular civilian life are often highly stressful periods, especially if the captivity lasts a long time (5).

Predictions of resilience and posttraumatic growth among camp prisoners

Personality traits, sociodemographic factors, social support, and religiosity

Although there are many studies about the phenomenon of posttraumatic growth in the veteran population, there are significantly fewer that talk about the positive consequences of trauma in veterans who were captives of the camps. When discussing the effects of traumatization. particularly severe traumatization resulting from years of imprisonment, it is essential to acknowledge that the traumatic experience can produce diverse outcomes that are not always detrimental, but these depend on numerous factors. It was also

noted that there are many resistant captives for whom serious, long-term pathological effects of traumatization did not occur (33).

Researchers investigated posttraumatic growth in severely traumatized veteran populations from various perspectives. Research that included prisoners of war in camps where conditions were often brutal and the captivity lasted a long time showed that a person could survive even in such highly traumatic situations and get different benefits. These experiences taught many people incredible personal strength and the comprehension that they underestimated their capacity to endure extreme stress. For many, the captivity situation they found themselves in resulted in drastic transformations, altering their perception of themselves, their lives and their priorities, all while employing various defense mechanisms such as humor, denial and reality testing. Some captives found solace in their firm resolve to endure the horrors of captivity (2, 34). Many of them also stated that they perceived their release from captivity as a new birth and an opportunity for a new beginning. An analysis of the experiences of many of those who survived captivity in World War II resulted in a way of confronting the trauma of captivity and recognizing the most common models of surviving captives' behavior. The authors assert that specific behaviors and personality traits in individuals who survived Japanese captivity in the Pacific region likely played a significant role in their survival, considering that 60 percent failed to survive (35).

The captives in Vietnam also exhibited characteristics that helped them survive complex and long-term captivity. Researchers found strong motivation to survive, higher intelligence, emotional stability, moderate emotional sensitivity or insensitivity, empathy and caring for others, a sense of humor, opportunism, controlled fantasizing, designed and successful resistance, courage and military experience as predictors of survival (36, 37). Other studies agree with these findings: people who used more ego defense mechanisms, like rationalization, denial, humor and a strong belief that things would work out for the best, survived captivity more easily (38).

Other research involving former camp prisoners also demonstrated that personality traits could the level of distress after influence traumatization, as well as the potential for positive outcomes from exposure to traumatic events. Thus, in Vietnamese captives, optimism positively correlates with PTG, and the authors comment on the two-way relationship between optimism and the consequences of traumatization. They believe those with a higher level of optimism simultaneously had the opportunity to process and positively reshape a challenging traumatic experience. On the other hand, they think that because they were welltrained and prepared for even the most difficult experiences, their training contributed to their development of optimism, which led them to PTG (37).

The authors of the study on Vietnamese veterans. which tested resistance. also emphasize the importance of optimism. Over 37 years after confinement, almost 60 percent of those included in this study did not receive a diagnosis of psychiatric disorder, which was a criterion for viewing them as resistant (39). The variables examined were age at the time of confinement, military rank, time in solitary confinement, antisocial and psychopathic personality traits, symptoms of PTSD after release from detention and optimism. Researchers found that the most significant predictors of resilience were a more mature life, optimism and less expectancy of the time of confinement. Other research also confirms that extraordinary insight, self-confidence, optimism and greater capacity for growth are positive predictors of PTG (4,40) and demonstrated that the absence of active confrontation and weaker emotional control contributed to the adverse outcomes of traumatization (41).

Religiosity and spirituality are important aspects of life that, at the same time, represent the dimensions of a possible PTG. Some studies involving detainees have investigated the relationship between religiosity and PTG. The case of camp captives also demonstrated that religiosity, as a stress-confrontation strategy, enhances spirituality and fortifies faith. However, this research did not study social support as a significant posttraumatic predictor of both the negative and positive consequences of traumatization (37). A twelve-year longitudinal study involving American veterans and former camp prisoners found a positive correlation between total PTG and social support and the growth of spirituality. They also recorded significant growth in interpersonal relations and found a positive correlation with social support (42).

Some studies recognize life stressors, the transition into old age, and the retirement phase as predictors of negative psychological outcomes. They investigated how social support for former captives in old age and a positive view of the war experience can contribute to positive changes, like adaptation to normative stressors later in life (28).

Some sociodemographic factors have proven to be significant, not only in terms of the resources at a person's disposal in traumatic situations but also in subsequent life stressors. It was concluded from the analysis of the subjects who were Vietnamese captives and who were severely traumatized and exposed to torture that a more mature age, a higher level of education, and married life during captivity can, on the one hand, represent a protective factor in the context of the development of negative consequences of traumatization and, on the other hand, contribute to positive adaptation in the long-term during life (43, 44).

Intensity of traumatic experience

Feder and colleagues examined several factors in the relationship with PTG among Vietnamese veterans and former camp captives, including the connection between the intensity of the traumatic experience and posttraumatic growth. The length of imprisonment determined the intensity of the traumatic experience, which positively correlated with PTG. According to them, PTG significantly increased in those captives who endured a more extended period of captivity and thus experienced more

Southeastern European Medical Journal, 2024; 8(1)

significant, longer traumatization (37). Moreover, in another study involving Vietnam veteran camp detainees, the correlation between length of confinement and well-being was positive (38, 45).

The research that analyzed the level of psychological suffering and physical injury also found a positive correlation between PTG, the subjective feeling of well-being and the intensity of trauma measured through the view of experiencing traumatization during captivity. respondents had undergone highly The traumatic experiences, and the authors concluded that the recorded growth, which includes feelings of personal benefit from these challenging experiences and a sense of mercy, could be interpreted as a defense mechanism, with denial serving as the foundation for this growth. Most subjects suffered severe physical consequences because of their highly traumatic experiences. PTG was recorded in the areas of personal growth, a better understanding of oneself, the creation of new priorities in life and the improvement of relationships with other people, and was observed in significantly more prisoners than in the control group of subjects of veterans who were not prisoners of the camps (35).

The study from 2018, which is a continuation of the previous research by the same author, also confirms personal growth, specifically in terms of self-concept and interpersonal relationships. Compared to the veterans in the control group, they observed a rise in the detainees' selfconfidence and self-esteem and a significant increase in their empathy, concern for others, understanding of the importance of interpersonal relationships, and faith in others. Growth in relations with other people was most evident in the relationships with veterans and other detainees, and many detainees emphasized the feeling of creating a new family. These relations with veterans were also significant for the control group of veterans who were not prisoners of the camp. Simultaneously, a growing sense of love and the significance of family emerge. This type of growth was significantly greater in the group of detainees than in the control group of veterans. A smaller

number of detainees also report growth in the field of work functioning, considering captivity a unique experience in a positive sense. This applies to those provided with preferential opportunities for educational advancement in a military career after imprisonment. Simultaneously, the growth in this area of functioning pertains to individuals who were in captivity for a relatively short period, typically around eight months. Those who have spent several years in captivity express negative consequences, such as a sense of lost time due to challenges in returning to work and the loss of new knowledge and skills. Emotional exclusion and difficulties expressing feelings were more pronounced among the camp's prisoners. At the same time, symptoms of increased irritability and a lack of compassion dominated the control group of veterans. Somatic disturbances were also more prominent among the camp inmates, which was a direct consequence of the conditions in captivity (46).

A study involving Vietnamese veterans who spent six or seven long years in captivity revealed that during captivity, the detainees developed an exceptional connection, and challenging experiences led to growth in the areas of personal growth and interpersonal relations. The same study reports that while many captives experienced growth in their interpersonal relationships, others struggled to comprehend the life challenges after confinement. A good number of them remained connected with other detainees, but their families suffered, and many had their marriages broken up (47).

King et al. conducted a longitudinal study at various points in time, ultimately 30 years after leaving the camp, to analyze the impact of extreme traumatic experiences on the positive and negative consequences of severe traumatization (43).

Solomon et al. also discussed the long-term positive outcomes of a severe traumatic experience during confinement. Eighteen years after their imprisonment, the subjects had severe physical and psychological difficulties. Compared to veterans who were not prisoners of war and had only combat experience, they have a higher number of positive outcomes. Surviving severe physical torture during confinement is, in some ways, a resource for the growth of personal strength and further life stressors (41).

Relationship between negative and positive captivity outcomes

The results of research dealing with the relationship between the pathological outcomes of traumatization and PTG are different and indicate the complexity of this relationship. In some cases, this correlation is positive. In some studies, negative and positive consequences are independent. Some findings suggest that medium-intensity distress predicts PTG (37, 41). The authors analyzed the relationships of pretraumatic, peritraumatic and posttraumatic factors with positive and negative trauma outcomes in a longitudinal prospective study that followed Israeli veterans for 30 years. The results showed that PTG and PTSD share some predictors but not all, and the authors emphasize the complexity of these relations. Some pre-traumatic factors predicted only PTSD but not PTG, whereas self-control was only associated with PTG. Trauma exposure, loss of control and active confrontation were the only common predictors of PTSD and PTG (48).

Solomon and Dekel's prospective study looked at the positive and negative effects of trauma on camp prisoners and a control group of veterans over 30 years old at different times. It was discovered that veterans who had been prisoners in camps had more harmful effects, such as more PTSD and a stronger PTG 30 years after the Yom Kippur War (41).

Dekel and colleagues, in a longitudinal study during the 17 years after confinement, analyzed the relationship between PTSD and PTG, with PTG being assessed at two and PTSD at three points in time later; PTG predicted initial PTSD. In the same study, they also addressed the relationship between anxiety, depression and PTG, and the results showed that these relationships were not significant (49). Research confirms that camp captives use dissociations as a defense mechanism in conditions of detention when escape is not possible, changing their perception of reality and minorizing the objective situation (27). Lahav et al. investigated the influence of oscillations that developed after the traumatic experience on the later development of posttraumatic growth in prisoners of war. They also examined whether real or illusory growth was a defense mechanism. In addition to PTG, Lahav's research has also examined the world experience. specifically the world assessment (WA), using the world assessment questionnaire in both the detainee and control groups, as well as PTSD. When it came to captives, there was a higher PTG, a worse assessment of the world, and more pronounced dissociations compared to the control group. Dissociations play an intermediate role in the relationship between PTG and WA. In other words, negative WA is associated with more dissociations and a larger PTG. PTSD was more prevalent in detainees than in the control group, and it was associated with a more negative perception of the world, more pronounced dissociations and greater PTG (40).

Zerach et al. analyzed the relationship between posttraumatic stress, resilience and posttraumatic growth at several points in time in a longitudinal study involving Israeli veterans from the Yom Kippur War. They also examined anxiety and depression and found that camp captives had significantly higher rates of PTSD, anxiety and depression than the control group of other veterans. The results demonstrated that resistant subjects did not develop PTSD or PTG. There was a significant correlation between PTG and PTSD, whereas the correlation between PTG and anxiety and depression was less significant. Simultaneously, the experienced trauma and PTSD have a substantial correlation with anxiety and depression. The authors conclude that both former camp captives and control group veterans who did not experience captivity can manifest salutogenic resources either through resistance or through PTG (26).

Family dynamics change during captivity and separation from the family, mainly when the captivity is long-term, and many captives Southeastern European Medical Journal, 2024; 8(1) describe negative consequences for the family and their place within it. Distance, a sense of loss of role and importance in the family, and marital relations led to the breakup of the family and divorce for numerous former captives, who felt as though they had lost valuable time during their captivity. However, as time progresses, the second part of prisoner experiences growth through enhanced relationships, a heightened sense of family appreciation and a deepening sense of love. Personal growth compensates for lost time, suffering, family, business, social losses and stigmatization (46). In general, although they experience growth in many areas, the dominant feeling in captives is lost time, the inability to make up for it and the feeling that they will always lag behind those who did not have this loss of time. Those captives who were more successful in work, education and careers before captivity had a greater sense of loss, and it was a laborious and long-term process of establishing a new everyday life after captivity (5).

The results of research into the consequences of traumatizing war veterans during captivity, which is considered one of the most difficult human experiences, showed that in addition to severe pathological outcomes, it is also possible to experience positive outcomes even after such severe traumatic experiences. The development of positive consequences of trauma, which we call posttraumatic growth, is influenced by a whole series of factors. To better understand psycho-trauma to prevent or mitigate unwanted outcomes and enable posttraumatic growth, further research regarding resistance and posttraumatic growth and their predictors is necessary.

Acknowledgement. None.

Disclosure

Funding. No specific funding was received for this study. **Competing interests.** None to declare.

Conclusion

References

1. Engdahl B, Dikel TN, Eberly R, Blank A. Comorbidity and course of psychiatric disorders in a community sample of former prisoners of war. Am J Psychiatry. 1998 Dec;155(12):1740–5.

2. Jukić M, Filaković P, Požgain I, Glavina T. Health-Related Quality of Life of Ex-Prisoners of War Affected by Posttraumatic Stress Disorder 25 Years After Captivity. Psychiatr Danub. 2019 Jun;31(2):189–200.

3. Eberly RE, Engdahl BE. Prevalence of somatic and psychiatric disorders among former prisoners of war. Hosp Community Psychiatry. 1991 Aug;42(8):807–13.

4. Jukić M, Talapko J, Škrlec I, Čičak P, Jukić M, Lukinac J, et al. A Cross-Sectional Study of Psychiatric Comorbidity in Croatian Homeland War Veterans Who Were Held as Prisoners of War and Are Affected by Posttraumatic Stress Disorder. Psychiatr Danub. 2022;34(3):464–74.

5. Ursano RJ, Benedek DM. Prisoners of war: long-term health outcomes. Lancet (London, England). 2003 Dec;362 Suppl:s22-3.

6. Jukić M, Malenica L, Đuričić V, Talapko J, Lukinac J, Jukić M, et al. Long Term Consequences of War Captivity in Military Veterans. Healthcare. 2023;11(14):1993.

7. Brewin CR, Andrews B, Valentine JD. Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. J Consult Clin Psychol. 2000 Oct;68(5):748–66.

8. Bonanno GA. Loss, trauma, and human resilience: have we underestimated the human capacity to thrive after extremely aversive events? Am Psychol. 2004 Jan;59(1):20–8.

9. Agaibi CE, Wilson JP. Trauma, PTSD, and resilience: a review of the literature. Trauma Violence Abuse. 2005 Jul;6(3):195–216.

10. Tedeschi RG, Calhoun LG. Beyond the concept of recovery: growth and the experience of loss. Death Stud. 2008 Jan;32(1):27–39.

11. Linley PA, Joseph S. Positive change following trauma and adversity: a review. J Trauma Stress. 2004 Feb;17(1):11–21.

12. Levine SZ, Laufer A, Hamama-Raz Y, Stein E, Solomon Z. Posttraumatic growth in adolescence: examining its components and relationship with PTSD. J Trauma Stress. 2008 Oct;21(5):492–6.

13. Aldwin CM, Levenson MR, Spiro A. Vulnerability and resilience to combat exposure: can stress have lifelong effects? Psychol Aging. 1994 Mar;9(1):34–44.

14. Salsman JM, Segerstrom SC, Brechting EH, Carlson CR, Andrykowski MA. Posttraumatic growth and PTSD symptomatology among colorectal cancer survivors: a 3-month longitudinal examination of cognitive processing. Psychooncology. 2009 Jan;18(1):30–41.

15. Charney DS. Psychobiological mechanisms of resilience and vulnerability: implications for successful adaptation to extreme stress. Am J Psychiatry. 2004 Feb;161(2):195–216.

16. Powell S, Rosner R, Butollo W, Tedeschi RG, Calhoun LG. Posttraumatic growth after war: a study with former refugees and displaced people in Sarajevo. J Clin Psychol. 2003 Jan;59(1):71–83.

17. Cann A, Calhoun LG, Tedeschi RG, Taku K, Vishnevsky T, Triplett KN, et al. A short form of the Posttraumatic Growth Inventory. Anxiety Stress Coping. 2010;23(2):127–37.

18. Helgeson VS, Reynolds KA, Tomich PL. A meta-analytic review of benefit finding and growth. J Consult Clin Psychol. 2006 Oct;74(5):797–816.

19. Fredrickson BL. The role of positive emotions in positive psychology. The broaden-and-build theory of positive emotions. Am Psychol. 2001 Mar;56(3):218–26.

20. Mattson E, James L, Engdahl B. Personality Factors and Their Impact on PTSD and Post-traumatic Growth is Mediated by Coping Style Among OIF/OEF Veterans. Mil Med. 2018 Sep 1;183(9–10):e475–80.

21. Zoellner T, Maercker A. Posttraumatic growth in clinical psychology - a critical review and introduction of a two component model. Clin Psychol Rev. 2006 Sep;26(5):626–53.

22. Lotfi-Kashani F, Vaziri S, Akbari ME, Kazemi-Zanjani N, Shamkoeyan L. Predicting Post Traumatic Growth Based upon Self-Efficacy and Perceived Social Support in Cancer Patients. Iran J cancer Prev. 2014;7(3):115–23.

23. Frazier P, Conlon A, Glaser T. Positive and negative life changes following sexual assault. J Consult Clin Psychol. 2001 Dec;69(6):1048–55.

24. Hobfoll SE, Tracy M, Galea S. The impact of resource loss and traumatic growth on probable PTSD and depression following terrorist attacks. J Trauma Stress. 2006 Dec;19(6):867–78.

25. Bernstein M, Pfefferbaum B. Posttraumatic Growth as a Response to Natural Disasters in Children and Adolescents. Curr Psychiatry Rep. 2018 May 16;20(5):37.

26. Zerach G, Solomon Z, Cohen A, Ein-Dor T. PTSD, resilience and posttraumatic growth among ex-prisoners of war and combat veterans. Isr J Psychiatry Relat Sci. 2013;50(2):91–9.

27. Scoglio AAJ, Rudat DA, Garvert D, Jarmolowski M, Jackson C, Herman JL. Self-Compassion and Responses to Trauma: The Role of Emotion Regulation. J Interpers Violence. 2018 Jul;33(13):2016–36.

28. King DW, King LA, Park CL, Lee LO, Kaiser AP, Spiro A, et al. Positive Adjustment Among American Repatriated Prisoners of the Vietnam War: Modeling the Long-Term Effects of Captivity. Clin Psychol Sci a J Assoc Psychol Sci. 2015 Nov 1;3(6):861–76.

29. Tennant C, Goulston K, Dent O. Australian prisoners of war of the Japanese: post-war psychiatric hospitalisation and psychological morbidity. Aust N Z J Psychiatry. 1986 Sep;20(3):334–40.

30. Tsur N, Shahar G, Defrin R, Lahav Y, Ginzburg K. Torturing personification of chronic pain among torture survivors. J Psychosom Res. 2017 Aug;99:155–61.

31. Neria Y, Solomon Z, Ginzburg K, Dekel R, Enoch D, Ohry A. Posttraumatic residues of captivity: a follow-up of Israeli ex-prisoners of war. J Clin Psychiatry. 2000 Jan;61(1):39–46.

32. Sutker PB, Allain AN, Winstead DK. Psychopathology and psychiatric diagnoses of World War II Pacific theater prisoner of war survivors and combat veterans. Am J Psychiatry. 1993 Feb;150(2):240–5.

33. Singer MT. Viet Nam prisoners of war, stress, and personality resiliency. Am J Psychiatry. 1981 Mar;138(3):345–6.

34. Segal J, Hunter EJ SZ. Universal consequences of captivity: Stress reactions among divergent populations of prisoners of war and their families. Int Soc Sci J. 1976;28:593–609.

35. Sledge WH, Boydstun JA, Rabe AJ. Self-concept changes related to war captivity. Arch Gen Psychiatry. 1980 Apr;37(4):430–43.

36. NARDINI JE. [Survival factors in American prisoners of war of the Japanese]. Am J Psychiatry. 1952 Oct;109(4):241-8.

37. Feder A, Southwick SM, Goetz RR, Wang Y, Alonso A, Smith BW, et al. Posttraumatic growth in former Vietnam prisoners of war. Psychiatry. 2008;71(4):359–70.

38. Holloway HC, Ursano RJ. The Vietnam veteran: memory, social context, and metaphor. Psychiatry. 1984 May;47(2):103–8.

39. Segovia F, Moore JL, Linnville SE, Hoyt RE, Hain RE. Optimism predicts resilience in repatriated prisoners of war: a 37-year longitudinal study. J Trauma Stress. 2012 Jun;25(3):330–6.

40. Lahav Y, Kanat-Maymon Y, Solomon Z. Posttraumatic Growth and Dyadic Adjustment among War Veterans and their Wives. Front Psychol. 2017;8:1102.

41. Solomon Z, Dekel R. Posttraumatic stress disorder and posttraumatic growth among Israeli ex-pows. J Trauma Stress. 2007 Jun;20(3):303–12.

42. Erbes CR, Dikel TN, Eberly RE, Page WF, Engdahl BE. A comparative study of posttraumatic stress disorder assessment under standard conditions and in the field. Int J Methods Psychiatr Res. 2006 Jun;15(2):57–63.

43. Sager Z, Nathan S, Doherty K, Pless Kaiser A, King KD, Topor DR, et al. Traumatic disclosures in the life stories of older Vietnam era veterans. J Am Geriatr Soc. 2022 Oct;70(10):2967–72.

44. Elliott P, Biddle D, Hawthorne G, Forbes D, Creamer M. Patterns of treatment response in chronic posttraumatic stress disorder: an application of latent growth mixture modeling. J Trauma Stress. 2005 Aug;18(4):303–11.

45. URSANO RJ, WHEATLEY R, SLEDGE W, RAHE A, CARLSON E. Coping and Recovery Styles in the Vietnam Era Prisoner of War. J Nerv Ment Dis. 1986 Dec;174(12):707–14.

46. Sledge W, Rozanova J, Dorset J. Twenty-Seven-Year Follow-Up of Vietnam Air War USAF POWs and Matched Controls Not Captured: A Qualitative Study. Psychiatry. 2018;81(1):41–53.

47. Andersen RS. Operation homecoming: psychological observations of repatriated Vietnam prisoners of war. Psychiatry. 1975 Feb;38(1):65–74.

48. Dekel R, Solomon Z. Marital relations among former prisoners of war: contribution of posttraumatic stress disorder, aggression, and sexual satisfaction. J Fam Psychol. 2006 Dec;20(4):709–12.

49. Dekel S, Peleg T, Solomon Z. The relationship of PTSD to negative cognitions: a 17-year longitudinal study. Psychiatry. 2013;76(3):241–55.

Author contribution. Acquisition of data: MJ, VĐ Administrative, technical, or logistic support: MJ, VĐ Analysis and interpretation of data: MJ, VĐ Conception and design: MJ, VĐ Critical revision of the article for important intellectual content: MJ, VĐ Drafting of the article: MJ, VĐ Final approval of the article: MJ, VĐ Guarantor of the study: MJ, VĐ

Posttraumatski rast u ratnih zatočenika

Sažetak

Uvod: Brojna su istraživanja pokazala da je zatočeništvo često ekstremno traumatsko iskustvo. Karakterizirano je izloženošću zatočene osobe dugotrajnom i ponavljanom traumatiziranju, odnosno nizu traumatskih događaja i situacija različitoga karaktera. Zbog svojih osobitosti, zatočeništvo se smatra jednim od najtežih ljudskih iskustava. Dobro je poznato da boravak u zatočeništvu dovodi do značajnih negativnih posljedica po psihičko zdravlje, od kojih je najznačajniji razvoj posttraumatskoga poremećaja, ali i drugi psihički poremećaji. Narušeno psihičko zdravlje dovodi i do disfunkcionalnosti u različitim područjima života te značajnog pada kvalitete života. Osim patoloških posljedica izloženosti traumatskim događajima, istraživanja su potvrdila da različiti oblici traumatiziranja mogu dovesti do pozitivnih posljedica.

Cilj: Cilj ovoga rada je pokazati da je posttraumatski rast, odnosno pozitivne promjene nakon traumatskoga iskustva, moguć i nakon najtežih traumatskih iskustava, kao što je to iskustvo ratnoga zatočeništva.

Materijali i metode: Provedena je opsežna pretraga literature na PubMedu i Google Scholaru. Koristeći ključne riječi, srodne pojmove i različite kombinacije istih, odabrani su najrelevantniji radovi koji se bave pozitivnim posljedicama psihotraume, odnosno zatočeništva.

Rezultati i zaključak: Kod osoba koje su iskusile ratno zatočeništvo, iskustvo traume koje je po mnogočemu specifično i koje dovodi do ozbiljnih negativnih psihičkih posljedica, može doći i do pozitivnih posljedica traume. Istraživanja ukazuju da pozitivne posljedice ne umanjuju patološke ishode traume, a na razvoj pozitivnih promjena utječu različiti čimbenici.