

# Psychiatric Morbidity in Survivors of a Blast

Ariana Reli<sup>1</sup>, Ariel Çomo<sup>2</sup>

<sup>1</sup>Community Center of Mental Health, No. 3, Tirana-Albania

<sup>2</sup>Psychiatric Service, University Hospital Centre "Mother Theresa", Tirana-Albania

**Abstract:** *The aim of the study was to assess the prevalence of PTSD among the survivors in the population of Gerdeci village. This is a cross-sectional study. 10.5% survivors studied fulfilled the criteria for PTSD. PTSD was more common in patients who had witnessed the death of close relative or sustained injuries themselves. Psychiatric complications of these disasters have not been studied systematically. Present paper is an attempt to stress the importance of psychological aspects of these incidents. In the management of survivors psychological aspects should not be neglected.*

**Keywords:** post-traumatic stress disorder, symptoms, prevalence

## 1. Introduction

The term post-traumatic stress disorder (PTSD) denotes an intense prolonged and sometimes delayed reaction to an intensely stressful event. The essential features of a post-traumatic stress disorder are hyper arousal, re-experiencing of aspects of the stressful events, and avoidance of reminders (1). Examples of extreme stressors that may cause this disorder are natural disasters such as floods and earthquakes, man-made calamities such as major fires, terrorist attacks, serious transport accidents, or the circumstances of war, and rape or serious physical assault on the person. The term post-traumatic stress disorder is a relatively new term in psychiatric nosology. During the past two decades posttraumatic reactions to disasters have been investigated systematically (2). Terrorist attacks and bomb blasts have been occurring in the past but after the 9/11 incidents they have attracted more public attention. Major catastrophes represent important opportunities to examine the responses of individuals to a single, extreme, well-defined stressor. This allows investigation of variables within the disaster unique to each individual's experience. In particular, major catastrophes afford the opportunity to study the interaction between features of the traumatic event, the individuals and their circumstances in relation to outcome (3). Hull et al performed a unique long-term follow-up study of the survivors of the world's worst oil platform disaster, the Piper Alpha disaster (4). Twenty-one percent of the survivors were still meeting the most stringent diagnostic criteria for post-traumatic stress disorder (PTSD) over 5 years after the disaster (5). Prevalence of PTSD among groups subjected to unusual stress has been reported to be from 4% to 45%. An ammunition blast occurred at Gerdeci village in March 2008. Victims were women, man and children. Survivors were visited 5 years after the incident and it gave us the opportunity to study the psychiatric complications among the survivors of the amunition blast.

## 2. Patients and Methods

This is a cross-sectional. We interviewed the survivors of the blast in Gerdeci village. They were all present in the gathering where ammunition blast had occurred. Their demographic details were noted including their age, marital status, and socioeconomic status. It was noted whether they

witnessed the death of a family member and whether they themselves were injured. Symptoms were recorded and detailed mental state examination was done. All the civilian victims, who were aged 18 years and above, and were injured by cluster munitions were interviewed. To be included, participants must be mentally competent, have met the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) criteria for PTSD and present with symptoms that lasted more than 1 month (to rule out acute stress disorder). In addition, those who had PTSD symptoms resulting from other traumatic events that occurred in their life were also excluded from the study. The participants must be present for follow-up as well. PTSD reaction index were administered. PTSD reaction index is a scale, which is used in an interview format with the items being marked as being present or absent. A total score of 7 or more indicates a mild level of PTSD, a score of 10 to 12 indicates a moderate level and a score of 12 or more indicates a severe level of PTSD.

## 3. Results

### *Subjects:*

Fifty seven survivors were interviewed. Mean age of the sample was 38 years (range 18-70 years). Almost all were from the lower socioeconomic background. Mean number of siblings was 3.

### *Personal experience:*

Majority of survivors had witnessed their close relatives dying or being seriously injured. Twenty one survivors were injured themselves and they had sustained moderate to severe injuries. Five out of them became unconscious immediately after the blast. One remained unconscious for 24 hours and 9 had remained unconscious for 1 to 10 hours. Twelve out of survivors remembered the event very clearly while rest had some difficulty in remembering the event.

### *Prevalence of PTSD:*

Six out of 57 (10.5%) met the diagnostic criteria of PTSD according to the scales used. Four of them had mild PTSD while one each met the criteria for moderate and severe levels of PTSD.

*Relationship of PTSD with different variables:*

PTSD had a significant relationship with the age of survivors. All individuals suffering from PTSD were below 35 years of age. Educational status, marital status and socioeconomic status did not have statistically significant relationship with PTSD ( $p > 0.05$ ). Witnessing a close relative dying or being seriously injured had a significant relationship with the development of PTSD. Survivors who had moderate or severe PTSD had witnessed their near relative dying in the ammunition blast. The other survivors who did not develop PTSD had not seen any near relative dying in the blast. The difference was statistically highly significant ( $p < 0.01$ ). Injury sustained by the survivors themselves had significant relationship with the onset of PTSD. Patients who were seriously injured or remained unconscious for more than 2 hours had increased chances of having PTSD than those who did not sustain serious injuries ( $p < 0.05$ ).

Post-traumatic stress disorder is one of the least researched topics in Albania. Submunitions inflict various injuries due to their easily 'pickable' nature. Biomechanical injuries resulting from cluster munitions have been discussed in a series of research articles (6) however, psychological tribulations remain to be explored. Post-traumatic stress disorder (PTSD) is a mental health problem that an individual may develop after experiencing or witnessing a life-threatening event, like combat, a natural disaster, a car accident or sexual assault. PTSD affects 7%–8% of the general population at some point during their lifetime (7) however, the prevalence is much higher among certain subgroups, including active-duty military personnel, and civilians exposed to blast injuries and war-related traumas. Submunition blasts can affect mental health, yet largescale studies that focus on the short-term and long-term impact are missing. Such information may help screening programmes in targeting high-risk populations and raise awareness against the harm induced by cluster munitions and similar weaponry (8-10).

Psychiatric complications of these disasters have not been studied systematically. Present paper is an attempt to stress the importance of psychological aspects of these incidents. In the management of survivors psychological aspects should not be neglected.

#### **4. Conclusion**

Some ways that are often suggested for PTSD patients to cope with this illness include learning more about the disorder as well as talking to friends, family, professionals, and PTSD survivors for support. Joining a support group may be helpful. Other tips include reducing stress by using relaxation techniques (for example, breathing exercises, positive imagery), actively participating in treatment as recommended by professionals, increasing positive lifestyle practices (for example, exercise, healthy eating, distracting oneself through keeping a healthy work schedule if employed, volunteering whether employed or not), and minimizing negative lifestyle practices like substance abuse, social isolation, working to excess, and self-destructive or suicidal behaviors. As the use of the Internet continues to expand, so will Internet psychiatry. This is particularly true

given that it may be quite useful in specifically providing access to psychotherapy for individuals with PTSD. Other areas that researchers are targeting to improve recovery for PTSD sufferers include expanding research on eye movement desensitization and reprocessing (EMDR), studying how PTSD can be more specifically treated in various ethnic groups, and discovering how to best prevent people from developing the illness. For military personnel, the more access to care that can be made available and the more comfortable active duty and veteran military men and women can be made to seek those services, the better the outcome that can be expected for service individuals with PTSD.

#### **References**

- [1] Greist J. Posttraumatic Stress Disorder (PTSD). Merck Manual. 2014 <https://www.merckmanuals.com/professional/psychiatric-disorders/anxiety-and-stressor-related-disorders/posttraumatic-stressdisorder-ptsd?qt=PTSD&alt=sh>
- [2] Amoroso, T; Workman, M (July 2016). "Treating posttraumatic stress disorder with MDMA-assisted psychotherapy: A preliminary meta-analysis and comparison to prolonged exposure therapy.". *Journal of psychopharmacology* (Oxford, England). **30** (7):
- [3] Spont, MR; Williams JW, Jr; Kehle-Forbes, S; Nieuwsma, JA; Mann-Wrobel, MC; Gross, R (2015). "Does This Patient Have Posttraumatic Stress Disorder?: Rational Clinical Examination Systematic Review.". *JAMA*. **314** (5):
- [4] Bovin, Michelle J.; Marx, Brian P.; Weathers, Frank W.; Gallagher, Matthew W.; Rodriguez, Paola; Schnurr, Paula P.; Keane, Terence M. (2015). "Psychometric properties of the PTSD Checklist for Diagnostic and Statistical Manual of Mental Disorders-Fifth Edition
- [5] Hull AM, Alexander DA, Klein S. Survivors of the Piper Alpha oil platform disaster: long term follow-up study. *Br J Psychiatry* 2002; 181: 433-438.
- [6] Nemeroff CB, Bremner JD, Foa EB, et al. Posttraumatic stress disorder: a state-of-the-science review. *J Psychiatr Res* 2006;40:1–21
- [7] Brewin CR, Andrews B, Valentine JD. Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *J Consult Clin Psychol* 2010;68:748–66.
- [8] Freedman SA, Brandes D, Peri T, et al. Predictors of chronic posttraumatic stress disorder. A prospective study. *Br J Psychiatry* 2009;174:353–9.
- [9] Johnson H, Thompson A. The development and maintenance of post-traumatic stress disorder (PTSD) in civilian adult survivors of war trauma and torture: a review. *Clin Psychol Rev* 2008;28:36–4
- [10] Reist, C (2015). Post-traumatic Stress Disorder. Compendia, Build ID: F000005, published by Epocrates.com