

## METHODOLOGIES FOR ASSISTING VETERANS WITH POST-TRAUMATIC STRESS SYNDROME IN NATO COUNTRIES

Răzvan-Lucian ANDRONIC\*, Vasile MARINEANU\*\*, Iulian ȚĂRANU\*\*, Ole BOE\*\*\*

\*Department of Fundamental Sciences, Air Force Academy "Henri Coandă", Braşov, Romania, \*\* Military Psychology Society, Bucharest, România, \*\*\*The Norwegian Police University College, Oslo, Norway

**Abstract:** In Romania, there are officially only 19 soldiers diagnosed with post-traumatic stress disorder (PTSD), according to an official statement from 2018. PTSD affects between 5% and 18% of the personnel who participated in the same NATO missions as the Romanian military. Starting from an official estimate according to which over 55,000 soldiers participated in foreign missions after 1990, PTSD could affect between 2750 and 9900 of the total Romanian participants. This severe underdiagnosis of PTSD had as its main cause the lack of a specific regulatory framework for the protection of veterans in theaters of operations, which would define this condition and recognize it as a source of mental disabilities in veterans in theaters of operations. With the appearance of law 168/2020 and the application rules (in the Ministry of National Defense in February 2021 and in the Ministry of Interior in March 2021) opens the way to real diagnosis of PTSD cases and protection of veterans' rights, provided there is an adequate institutional framework. This paper presents how NATO armies have organized the assistance of veterans with PTSD, with focus on clinical psychology interventions.

**Keywords:** post-traumatic stress disorder (PTSD); intercultural context; veterans

### 1. THE NATIONAL CONTEXT

The participation of the Romanian military personnel abroad in counter-terrorism, peace-support or humanitarian-aid missions (which, in most cases, fall into the category of "veteran from the theaters of operations") began in 1993 and continues at present. More than 55,000 troops were involved in the missions accomplished before the COVID-19 pandemic. In all these years (1993-2020), at least 1,500 people per year were involved and they were assigned missions in at least three different locations on the world map. A "real-time" situation of the missions in which the Romanian military and currently deployed forces are involved can be followed on the page <https://misiuni.mapn.ro/>. Deployment to a theater of operations equates to conducting complex, high-risk missions and exposure to extreme hazards that may leave visible and invisible injuries. A number of 30 servicemen lost their lives, and another 177 servicemen were very seriously injured in the theaters of operations, most of them being classified as disabled. Unseen wounds acquired as a result of exposure to potentially traumatic events have led to the emergence of post-traumatic stress disorder (PTSD) and other comorbid conditions.

The research carried out in various partner countries (with which Romania participates in the same missions, in the same theaters of operations) shows that between 5% and 18% of all military personnel participating in military operations meet the diagnostic criteria for disorders associated with trauma and stress factors (especially post-traumatic stress disorder) or other comorbid conditions such as depression, anxiety or addictions (Moore & Penk, 2011), and their prevalence in the first year is 7% for active military and 11% for retired military (Thomas *et al.*, 2010). For example, in the British military the prevalence is between 4-6%, with insignificant differences between men and women (Hunt *et al.*, 2014). The Israeli armed force records a prevalence of these disorders of approximately 11% of all forces engaged in the conflict (Levi *et al.*, 2018). The research coordinated by Doron (2005) demonstrated that soldiers who have been injured are at high risk of developing severe forms of trauma-related and comorbid disorders, require a longer recovery time and a more difficult reintegration into society, and a cost high, associated with different specific treatment schemes (Amos, 2014).

Relating the 55,000 veterans from 1993-2020 to the minimum 5% threshold results in a minimum of 2,750 of them potentially meeting diagnostic criteria

for PTSDS and comorbid conditions. Given that in Romania, self-initiated access to mental health services is one of the lowest in Europe, and the assistance given to veterans is currently symbolic, it can be assumed that the real number of veterans diagnosed with mental disorders is closer to the maximum threshold of 18%, i.e. 9,900 people) than the minimum.

In 2018, the first information concerning the soldiers in Romania diagnosed with PTSD - 19 people was published (Sasu, 2018) and subsequently, no more relevant information was published in this regard. This severe underdiagnosis had as its main cause the lack of a specific regulatory framework for the protection of veterans, which was created with the enactment of Law 168/2020 (which was enforced by the Ministry of Defense starting with February 2021 and by the Ministry of Internal Affairs starting with March 2021) and which opens the way to the actual diagnosis of PTSD cases and the protection of veterans' rights, subject to the enforcement of appropriate intervention methodologies. Next, the main categories of interventions practiced in other NATO states are presented (call-center type services, self help groups, computerized platforms for evaluation and psychological intervention by means of virtual reality equipment).

## 2. CALL-CENTER SERVICE FOR DISABLED VETERANS

In 2015, there was published the first conceptual framework for the implementation of telemedicine in the Romanian military context, through the use of technology, including telephone means (Marineanu, 2015), which was later updated, in the context of the COVID-19 pandemic. This framework is currently being implemented through a volunteer program (<https://www.militarypsychology.ro/sustinem-veteranii/>) to improve the efficiency/responsiveness of the national public health system.

Although most psychologists prefer face-to-face contact with clients or patients who require long-term support, the telephone psychological service provides a viable alternative in the delivery of psychological assistance. Several researches indicate that psychological services delivered remotely, by telephone or online, in most cases, have been able to lead to similar results to conventional psychological interventions (Hilty *et al.*, 2013; Nelson & Sharp, 2016).

The telephone psychological support service for veterans is mainly aimed at promoting healthy behaviors and managing stress. It operates by applying standard procedures, which include various protocols useful for reducing the negative effects of emotional reactions and maladaptive behaviors, developing the ability to manage stress by veterans from theaters of operations, as well as strict intervention protocols, applicable in situations of psychological crisis, (applicable when high-risk behaviors are identified, such as suicide attempts or acts of violence).

Telephone psychological assistance for veterans is carried out by volunteer psychologists, who provide free services to those experiencing intense psycho-behavioral reactions, including manifestations of clinical intensity and requiring focused intervention. This remote psychological support service for veterans follows the principles of best practice guidelines, based on scientific evidence, specific to crisis intervention and psychological first aid.

## 3. SERVICES FOR SELF HELP GROUPS

Numerous studies have highlighted the importance of having social support for people who belong to vulnerable groups, including veterans with disabilities or who have mental or behavioral health problems (Richard *et al.*, 2017). By social support we mean the support provided by family members, comrades and people with whom they interact systematically in different normal life situations (for example, doctors, commanders, staff of public institutions), called *support groups or networks*. Functional interaction with these groups is one of the strongest protective factors against PTSD symptoms, supports and optimizes the progress made following the provision of specialized psychological assistance, respectively facilitates socio-professional and family integration (Daniel & Owen, 2017; Campos *et al.*, 2016).

Also, the existence of support groups that offer veterans the opportunity to share personal experiences and feelings, adaptive coping strategies, or other information that may contribute to their mental and behavioral health has been shown to be an important predictor of rapid remission of PTSD symptoms or comorbid ones (anxiety, depression, addictions, etc.), respectively of socio-professional reintegration (Schweitzer *et al.*, 2006). Proescher *et al.* (2020) conducted a research that demonstrated that there are no differences related to gender, age, professional training or the intensity of the traumatic event in

terms of the positive impact that group support has on the person in need. Another study showed that veterans who had a stable support network over time had fewer relapses, no comorbidities, and fewer medical problems (Gros et al., 2020).

Members of these support groups go through training programs (National Health Services, 2001; Sirati-Nir *et al.*; Sunderland & Mishkin, 2013) where they are taught and assimilate information about the problems faced by veterans with disabilities, they learn how to approach them, they learn about crisis intervention and psychological first aid, communication methods and techniques aimed at facilitating a good socio-professional integration. In essence, this approach is oriented towards the recovery of the person, the development of his or her potential, the improvement and maintenance of the quality of life. The key elements are focusing on the person, capitalizing on their potential, respectively the relationship based on empathy and respect, having as benefits the feeling of social belonging, the reduction of stigma and social and professional reintegration (Sunderland, 2013).

Many countries, such as Great Britain, Germany, Canada, the United States of America or Australia have coherent government programs and policies that support the creation of support groups and networks for military veterans with disabilities or who have mental health problems. These programs aim at encouraging active social involvement, facilitating professional retraining, completing studies, obtaining a job, as well as accessing medical services, which in the long term lead to a substantial reduction in the costs borne by health budgets. Findings from several studies suggest that social support received from family members and members of local communities may play a greater protective role than social support received from military sources in regard of long-term PTSD symptoms severity (Adams, 2017; Blais, 2021). For example, good dyadic relationship dynamics within marriage significantly contribute to PTSD recovery (Ein-Dor, 2010, Kimhi, S., & Doron, H. (2013).

#### **4. COMPUTERIZED PLATFORM FOR PSYCHOLOGICAL EVALUATION AND INTERVENTION**

Recent studies have highlighted the undeniable effectiveness of computerized and online solutions used to provide psychological support services at a high quality standard (Varker *et al.*, 2019). Although there are some voices that challenge the

effectiveness of this type of mental and behavioral health services, Mohr *et al.* (2014) showed that there is no qualitative or quantitative difference between solutions offered on computerized platforms and *face to face* ones. Moreover, the former have been shown to be highly effective in diagnosing and calibrating intervention in certain categories of patients (e.g., people with disabilities) and in psychiatric disorders (depression, anxiety, and post-traumatic stress disorder) (Turgoose *et al.*, 2018). Computerized platforms can be used both in actual psychological assessment and in the process of psychological intervention. They offer a number of advantages: easy access, extremely low costs, increased psychological comfort, online and offline use, increased confidentiality, reduction of stigmatization of the person, flexibility, useful databases in the therapeutic approach and observation over time of the state of mental and behavioral health.

This type of platform offers a complete package of solutions that can be used for psychological evaluation in different contexts (psychodiagnosis, psychological intervention, psychological evaluation to determine work capacity, etc.).

The instruments used assess different categories of psychological factors with relevance to health and illness that are grouped into four domains (David, 2016): (1) The domain of life events, which aims at potentially traumatic life events; (2) The domain of mental health components, aimed at dysfunctional psycho-behavioral manifestations or symptoms of mental disorders (Emotional Distress Profile, EDP); (3) The domain of etiopathogenetic mechanisms, targeting general vulnerability factors, such as central and intermediate functional descriptive and inferential cognitions, general irrational evaluative cognitions and *local vulnerability* factors (*DAS Dysfunctional Attitudes Scale*); (4) The domain of sanogenesis mechanisms, which aims at the coping capacity of each person, their own ways to control and reduce emotional distress, the ways of acquiring other meanings in life and connecting to a social support (CERQ - Cognitive Emotion Regulation Questionnaire, SACS - Strategic Approach to Coping Scale).

#### **5. INTERVENTIONS USING VIRTUAL REALITY (VR) EQUIPMENT**

Post-traumatic stress disorder is a common and disabling disorder that often involves avoidance

behavior of traumatic stimuli, behavior that blocks patients' healing and recovery. Among the many approaches that have been used for the treatment of PTSD, exposure procedures in combination with cognitive-behavioral therapy have the best therapeutic results and the best scientific documentation. Prolonged exposure in this case involves confronting the person with the stimuli associated with the trauma, with the aim of reactivating the traumatic memory and integrating corrective information at the level of the traumatic memory. Thus, the pathological elements of the traumatic memory are modified, reducing anxiety and helping the subject to understand the trauma as a specific event and not a representation of a dangerous world and reduced personal competence. In this context, virtual reality exposure therapy, through its multiple functionalities, makes possible multisensory exposure (visual, auditory, kinesthetic and olfactory) to environments that feel "as if they were real" and that increase adherence and patients' tolerability to therapy, without having the financial and time constraints compared to the real world. Thus, this intervention represents a more advantageous alternative to traditional exposure-based therapies, which minimizes avoidance and facilitates emotional processing by helping the patient access the trauma and heal it in a much shorter time frame (Rothbaum *et al.*, 2008).

In addition, virtual reality allows the therapist to expose the patient to conditions that might be unsafe or accessible at very high cost in the outside world. Numerous clinical studies attest to the usefulness and effectiveness of using virtual reality in the treatment of post-traumatic stress disorder, demonstrating that it improves exposure and allows treatment to be applied to a wider segment of the population, such as patients who cannot imagine the stressful environment, or for those which cannot be directly confronted with it, as happens in the case of post-traumatic stress generated by exposure to traumatic events in military theaters of operations (Difede, 2007; Rizzo, 2009; Rothbaum, 2001).

Military actions are probably some of the most challenging situations a human being can experience. The physical, emotional, cognitive, and psychological demands of a combat environment place enormous stress on even the best-trained military personnel. Virtual reality applications are being developed, implemented, and successfully used to identify and treat operational stress disorders in veterans. The ability of virtual technology to create controlled, multi-sensory and

interactive environments in which human behavior can be stimulated and measured offers possibilities for clinical assessment and treatment that are not possible using traditional methods.

Virtual reality offers relevant treatment scenarios for soldiers who develop stress symptoms as a result of exposure to combat theaters, as well as comorbid conditions (anxiety, depression, different types of addictions). In this context, the researcher has the opportunity to adapt each visual, auditory, olfactory, and kinesthetic exposure scenario to the traumatic experience of the person undergoing treatment and to control what is presented to the subject. In addition, the virtual reality system offers the possibility of physiological pulse measurement, skin electrical conductivity and breathing monitoring, generating additional information on the patient's working parameters.

Numerous studies in the specialized literature confirm the effectiveness of this technology in the treatment of post-traumatic stress disorder in the military population, proving to be more effective than traditional therapy in terms of acceptance, benefit in terms of treatment and clinical success. Through its attractive and non-traditional aspect, this treatment approach also addresses the issue of stigma, proving to be more attractive to veterans who are reluctant to seek help through what they perceive as traditional dialogue therapies (Rizzo *et al.*, 2011).

The positive results obtained in this area encourage researchers to further gather feedback from the military and develop improved applications for using virtual simulation for other purposes such as: neurocognitive assessment and rehabilitation, creating experiential contexts in which individuals can learn emotional, cognitive coping strategies and behavioral, determining patterns of behavior and physiological responses that may predict risk for developing a disorder. Thus, virtual reality enhances the mechanisms and procedures of classical psychotherapy by creating fictitious, safe and controllable environments that can increase the emotional commitment and acceptance of patients, thus reducing the risk of negative feelings (e.g. shame, emotional pain, embarrassment) and the damage caused by them.

## BIBLIOGRAPHY

1. Camposa, F.; Sousab, A.; Rodriguesa, V. & António Marquesa, (2016). Practical guidelines for peer support programmes for mental health problems. *Revista de Psiquiatria y Salud Mental* (English Version). vol.9, issue 2. 97-110. DOI: 10.1016/j.rpsmen.2016.04.001

2. Difede, J.C. (2007). Virtual reality exposure therapy for the treatment of posttraumatic stress disorder following September 11, 2001. *Journal of Clinical Psychiatry*. 68 (11). 1639–1647.
3. Gros, D.; Flanagan, J.; Korte, K.; Mills, A.; Brady, K. & Back, S. (2016). Relations among social support, PTSD symptoms, and substance use in veterans. *Psychology of Addictive Behaviors*. 30(7). 764–770. <https://psycnet.apa.org/doi/10.1037/adb0000205>;
4. Hilty D.M., Ferrer D.C., Parish M.B., Johnston B., Callahan E.J., Yellowlees P.M. (2013) The Effectiveness of Telemental Health: A 2013 Review. *Telemedicine and e-Health*. 19(6). 444–454. <https://doi.org/10.1089/tmj.2013.0075>
5. Mărineanu, V. (ed.). (2015). *Manual pentru pregătirea psihologică și controlul stresului operational*. Bucharest: CTEA.
6. Masoud S.; Morteza, K. & Abolfazl R. (2016), The Effect of Social Support Skill-training Group Intervention on Perceived Social Support in Veterans with Posttraumatic Stress Disorder. *Iranian Journal of Nursing and Midwifery Research*. 23(4). 272–276. doi: 10.4103/ijnmr. IJNMR\_165\_16
7. Mental Health Commission of Canada. (2021) *Guidelines for the Practice and Training of Peer Support*. Toronto: Hope and Me. Mood Disorders Association of Ontario.
8. Nelson, E. & Sharp, S. (2016) A Review of Pediatric Telemental Health. *Pediatric Clinics*, 63(5). 913–931. <https://doi.org/10.1016/j.pcl.2016.06.011>
9. NHS. (2021). Peer support worker. *NHS* [online]. URL: <https://www.healthcareers.nhs.uk/explore-roles/psychological-therapies/roles-psychological-therapies/peer-support-worker> [Accessed on April, 2025].
10. Proescher, E.; Aase, D.; Passi, H. & Greenstein N. (2020). *Impact of Perceived Social Support on Mental Health, Quality of Life, and Disability in Post–9/11 U.S. Military Veterans*. *Armed Forces & Society*. Vol.48, issue 1. <https://doi.org/10.1177/0095327X20919922>
11. Adams, R.E.; Urosevich, Th.G.; Hoffman, S.N.; Kirchner, H.L.; Hyacinthe, J.C., Figley, Ch.R.; Boscarino, J.L. & Boscarino, J.A. (2017). Social Support, Help-Seeking, and Mental Health Outcomes Among Veterans in Non-VA Facilities: Results from the Veterans' Health Study. *Military Behavioral Health* 5(4). 393–405. doi: 10.1080/21635781.2017.1333067
12. Rizzo, A.R. (2009). Virtual reality exposure therapy for combat related PTSD. In P. J. Shiromani, T. M. Keane, & J. E. LeDoux (Eds.), *Post-traumatic stress disorder: Basic science and clinical practice*. Totowa, NJ: Humana Press/ Springer Nature. 375–399.
13. Rizzo, A.; Parsons, T.; Lange, B.; Kenny, P.; Buckwalter, J.; Rothbaum, B.; Difede, J.; Frazier, J.; Newman, B.; Williams, J. & Reger, G. (2011). Virtual Reality Goes to War: A Brief Review of the Future of Military Behavioral Healthcare. *Journal of Clinical Psychology in Medical Settings*. 18(2). 176–187. doi: 10.1007/s10880-011-9247-2.
14. Rothbaum, B.; Difede, J. & Rizzo, A. (2008). *Therapist Treatment Manual for virtual reality exposure therapy: Posttraumatic stress disorder in Iraq combat veteran*. Atlanta, GA: Virtually Better.
15. Sasu, D. (2018, February 6). Câți militari români suferă de sindromul de stres posttraumatic? MAPN are o lipsă acută de psihologi. *Libertatea* [online]. URL: <https://www.libertatea.ro/stiri/19-militari-2133380> [Accessed on April, 2025].