

The Role of Extreme Sports in the Therapeutic Management of Post-Traumatic Stress Disorder

Ben Jiang 03/2024

Post-traumatic stress disorder (PTSD) has been a long existing phenomenon among human and animals. According to Mayo Clinic, one of the best clinics that has been ranked number one in the United States for seven consecutive years in the *U.S. News & World Report's* Best Hospital Honor Role (Harder), PTSD is a healthy condition that is triggered by experiencing or witnessing a life terrifying, possibly life-threatening event (Mayo Clinic Staff). Symptoms to this disorder includes anxiety and emotional instability, intrusive nightmares and flashbacks, blocking memories and avoidance of related activity, and decreasing ability of experiencing positive mood (Thomas and Jaque, 365). Humans are not the only victims of PTSD. Biology expert Liana Y. Zanette and her colleagues at Western University, London, department of biology and psychology conducted a study indicating animals also experience PTSD like changes in their brains after experiencing predator-induced fear. However, PTSD are crucial to animals' survival due to high neuronal activation, which contributes their reaction speed and escaping of predators (35). Yet, the symptom of PTSD is considered negative to human. The National Center of PTSD reported about 6% of the American population has experienced PTSD, and the population remained at high level. In 2020, a massive population of 13 million Americans has PTSD. The institute also reported that veterans are more prone to PTSD compared with civilians (National Center for PTSD). A paper investigating in PTSD published in the *American Journal of Play* has a noticeable finding that dancers and athletes also experience an above average rate of PTSD diagnosis compared with the general population (Thomas 363).

These studies grasp attention to these three special groups, who's occupation typically derives a higher frequency of PTSD among individuals. Special care and treatments are needed to cure and at least mitigate the disordering symptoms of PTSD for these specialized groups.

Attention is drawn to extreme sports, as a possible treatment of PTSD. Public increasingly craved of extreme sports over the past years, and it has even gained more popularity after COVID-19 (Towey). For the rock-climbing sector, the estimated number of participants in the U.S. kept increasing from 10.28 million to 10.35 million in 2021 during the pandemic. This number is still becoming larger (Statista). There are incidents that reflects the essence of extreme sports which is exposing ourselves to extreme risks. Simone Biles, the top gymnastics athlete in at a world level that is expected to win the gold medal in the Tokyo Olympics withdrew from attending due to her fear of falling and causing serious injuries (Thompson). Despite the risks extreme sports might pose in prevalent of fear, they also tend to help people cope with fear. My experience of skiing in the outskirts of Beijing perfectly demonstrates this phenomenon. The more afraid I was from falling, the more frequent I tripped and rolled over. However, when I gave up keeping perfectly balance, I skied smoothly and even unlocked movements I never tried before, this relief of my fear is realized through endeavoring. A study conducted by Katrina V. Kessler from Saybrook University insisted that extreme sports such as frontier mountaineering has a positive impact in "friending fear", which refers to using fear as a guidance and messenger to help detect danger and ensure safety during extreme sports (Kessler 102). Other studies suggests that extreme sports have positive effects on mental health, which might indicate the efficacy of extreme sports as a potential treatment of PTSD (Clough 965).

PTSD for Veterans are the most serve and prevalent of all. Hope Torres, a USAF veteran and prior law enforcement officer also Doctor of Education in Community Care and Counseling

at Liberty University School of Behavioral Science, asserts that due to exposure to distinct stimuli such as “gun fires, chemical hazards, explosions, patrol ambushes...” and other elements of war, veterans’ PTSD is referred to as D-PTSD, which is more complex than regular civilian PTSD (3). One study regarding PTSD in veterans identified three key themes: Effects of the Activity, Military Resemblance, and Confronting Triggers (Torres 84). Activity was among the top three effectiveness. Veterans participated in the study expressed certain extent of craving for sport activities. After combative sport and weightlifting, “release” was frequently described by participants, allowing lower degree of stress and less attention on negative emotions. Activities also triggers focus by actively engaging in challenges. Participants pointed out activities enables them to be focusing on achieving goals and not distributing attention in their own state of mind (Torres 87-91). A systematic review has proven that physical activity showed multiple benefits for the psychological wellness of combatant veterans who are physically injured (Caddick 10). The positive relationship between physical activity and the release and focus effect can indicate efficacy of extreme sports treating D-PTSD. Extreme sport usually require stronger physical engagement such as bicking, parachuting, and tube surfing. Simultaneously, these extreme activities need high extent of concentration to stay safe, which is also beneficial to D-PTSD curing. Another study investigating competitive motorsport’s effect in treating PTSD of disabled veterans also derived several key elements that needs to be implemented. Since participants veterans are injured, the extreme sport they can do is restricted. “Familiar environment, team spirit, adrenaline rush, competition and equality” are unique traits of competitive motorsports which makes them effective to disabled veterans. These characteristics of this particular extreme sport allows participants to socialize, achieve sense of accomplishment, and embrace their own body, which all leads to a healthier lifestyle (Serfioti 7566). Several case studies synthesized

above really demonstrate how extreme sports is advantageous and effective as a treatment for combatant veterans due to the mental health benefits it brings, positive stimuli in releasing anxiety and negative emotions, strengthening concentration and focus, and ultimately builds up to a healthy recovery mode that mitigates the negative effects of PTSD.

Shifting to the remaining two groups, a study published on the peer reviewed interdisciplinary Journal *American Journal of Play* conducted study on PTSD among athletes and dancers. Both groups has a higher portion percentage of PTSD compared with general public. According to statistics from experiment, dancers exhibits an abnormal number of 25.4 percent, athletes has a rate of 13.3 percent, while contrastingly 8.7 percent the participant representing the average person has of PTSD. The unsettling percentage for PTSD among these two groups are vital to be solved. Yet, a portion of the mental illness are related to sexual assault, which exceeds the reaching distance of extreme sports and physical exercises (Thomson 10-13). While PTSD can be treated regularly like the general public since similar kinds of symptoms are presented with only a few differences in severity. Despite medical and psychological treatments to PTSD, including novel approaches such as extreme sports, PTSD should also be considered from a social aspect. By establishing legal restriction to regulate and diminish sexual assault and over possible traumatic incidents, the percent population suffering from PTSD can also possibly descend. The most comprehensive solution in treating PTSD is used physical activities, extreme sports being a sector of that, combined with psychological treatments, and to minimize the population exposed to possible harmful traumatic events.

References

- Caddick, Nick, et al. “The impact of sport and physical activity on the well-being of combat veterans: A systematic review.” *Psychology of Sport and Exercise*, vol. 15, no. 1, 2014, pp. 9-18, <https://doi.org/10.1016/j.psychsport.2013.09.011> Accessed 30 Apr, 2024. <https://www.sciencedirect.com/science/article/pii/S1469029213001027>
- Clough, Peter, et al. “Adventurous Physical Activity Environments: A Mainstream Intervention for Mental Health.” *Sports Medicine*, vol. 46, no. 7, 20 Feb. 2016, pp. 963–968, Accessed 30 Apr, 2024. <https://link.springer.com/article/10.1007/s40279-016-0503-3#citeas>
- Harder, Ben. “America’s Best Hospitals: The 2023-2024 Honor Roll and Overview.” *US News & World Report, U.S. News & World Report*, 1 Aug. 2023, <https://health.usnews.com/health-care/best-hospitals/articles/best-hospitals-honor-roll-and-overview>
- Kessler, Katrina V. “Friending Fear: A Classic Grounded Theory Study Of Frontier Mountaineering.” Saybrook University ProQuest Dissertations Publishing, 2019. <https://www.proquest.com/openview/e23b764f818cb80f75cda1194bddb596/1.pdf?pq-origsite=gscholar&cbl=18750&diss=y> Accessed 30 Apr, 2024.
- Mayo Clinic Staff. “Post-Traumatic Stress Disorder (PTSD).” *Mayo Clinic, Mayo Foundation for Medical Education and Research*, 13 Dec. 2022, <https://www.mayoclinic.org/diseases-conditions/post-traumatic-stress-disorder/symptoms-causes/syc-20355967>
- National Center for PTSD. “How Common Is PTSD in Adults?” *U.S. Department of Veteran Affairs*, 3 Feb. 2023, https://www.ptsd.va.gov/understand/common/common_adults.asp
- Serfioti, Danai and Hunt, Nigel. “Extreme Sport as an Intervention for Physically Injured Military Veterans: The Example of Competitive Motorsport.” *Disability And Rehabilitation*, vol. 44, no. 24, 2022. pp. 7566–7574, <https://doi.org/10.1080/09638288.2021.1985630> Accessed 30 Apr, 2024.
- Statista. “Participants in Climbing US 2019.” *Statista Research Department*, 22 Apr. 2024, <https://www.statista.com/statistics/191233/participants-in-climbing-in-the-us-since-2006/>
- Thomas, Paul and Jaque, S. Victoria. “Visiting The Muses: Creativity, Coping, and PTSD in Talented Dancers and Athletes.” *American Journal of Play*. Vol.8, no.3, Spring, 2016. pp.363-378. Accessed 30 Apr, 2024.
- Thompson II, Marcus. “Thompson: Simone Biles and the Most Human Meaning of Courage.” *The Athletic*. Jul 28, 2021. Accessed 30 Apr, 2024.
- Towey, Hannah. “People Craving Adrenaline Are Fueling a “Major Increase” in Demand for Extreme Sports after a Year at Home.” *Business Insider*, 10 Jul. 2021, <https://www.businessinsider.com/extreme-sports-demand-adrenaline-activities-increases-after-year-at-home-2021-7>

Torres, Hope Angelina, "Phenomenological Study on Use of Sports and Exercise for Veterans with PTSD." *Doctoral Dissertations and Projects*. 2022.

<https://digitalcommons.liberty.edu/doctoral/4031> Accessed 30 Apr, 2024.

Zanette, Liana, et al. "Predator-Induced Fear Causes PTSD-Like Changes in the Brains and Behavior of Wild Animals." *Scientific Reports*. Vol.9, 2019. <https://doi.org/10.1038/s41598-019-47684-6> Accessed 30 Apr, 2024.