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Coping Among Veterans with Post-Traumatic Stress Disorder: Are They Doing More Harm Than Good?



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ABSTRACT

Background: PTSD has been shown to impact many of our military veterans. Navigating the world of PTSD is not an easy task and can put immense stress on veterans leading veterans to seek out coping mechanisms to relieve the stress. Depending on the coping mechanism used, it can result in further negative consequences. Purpose: The purpose of this literature review was to understand how veterans cope with PTSD and recognize the difference between the positive and negative coping mechanisms they adopt. Method: This was a thorough review of pertinent literature. Some of the themes discussed through this study are alcohol abuse, tobacco use, marijuana use, spirituality, and outdoor activities. Findings: While further research into positive and negative coping mechanisms is required, this study shows that although coping mechanisms are individualized for each veteran, there are patterns of positive and negative coping mechanisms displayed. Alcohol, tobacco, and marijuana use are just a few of the negative coping mechanisms that veterans turn to when they cannot cope with the symptoms of PTSD. Research shows that veterans show positive coping mechanisms, including turning to religion and spirituality, leaning on a close support system, and engaging in outdoor activities. **Conclusion:** Each veteran's experience with PTSD is different and, in turn, copes with it in various ways. Healthcare professionals must understand how veterans cope with their stress to guide them in the direction of healthy coping.

INTRODUCTION

Post-traumatic stress disorder (PTSD) is defined as chronic stress response due to experiencing a traumatic event [1]. The current study further investigates how PTSD affects veterans and their mechanisms to cope with stress. This literature review explored positive and negative methods veterans use to cope with symptoms of PTSD. This was a thorough review of the literature on PTSD and coping among veterans. This review also includes case studies. The research question was: What positive and negative mechanisms do veterans use to cope with PTSD?

Background

The National Center for PTSD [2] propagated that individuals who have PTSD may try to deal with their problems in ways that cause more harm than good. Although trauma survivors take action to cope with stress reactions, they put themselves in a position of power. By actively dealing with the trauma in positive ways can result in fewer hopeless feelings [2]. Some examples of negative coping are substance abuse, avoiding others, always staying on guard, avoiding reminders of the trauma, anger and violent behavior, dangerous behavior, and working too much. On the other hand, positive coping mechanisms include talking to others for support, practicing relaxation methods, distracting with positive activities, and talking with a doctor or counselor about trauma and PTSD [3].

Patients with PTSD can experience multiple afflictions, and individual cases vary in their symptoms and causes. Therefore, treatment needs to be tailored to each specific veteran. Common problems experienced by veterans with PTSD are depression, isolation, substance use, suicide/suicidal thoughts, insomnia, nightmares, sleep paralysis, and flashbacks (see Figure 1). Other stress reactions include hypervigilance, trouble remembering significant events, anhedonia, and migraines. PTSD may cause feelings of detachment, fear, horror, anger, shame, and guilt/ self-blame.

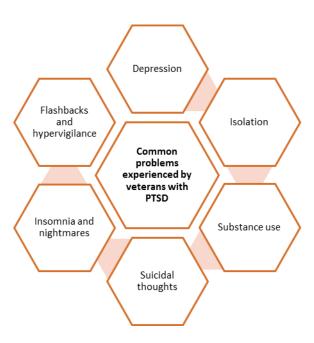


Figure No. 1: Common problems experienced by veterans with PTSD symptoms.

CASE STUDY

The case studies include three individuals with a PTSD diagnosis who presented with positive and negative coping mechanisms. They explained their various coping mechanisms, whether through positive or negative handling. Their stories provide a solid background to the current research on coping among veterans with PTSD. The focus is on their specific coping mechanisms and why these are used. For confidentiality purposes, verbal consent was obtained for the case study.

Patient A

Our first patient fought in the global war on terrorism and is in his mid-30's. This patient has PTSD from his combat experiences, including multiple wounds and loss of friends. He has had this condition for 11 years. This patient has a history of alcoholism starting at age 21 and abuse of prescription opioid pain medicine. He started using opioids at age 20 and used them for five years. This patient also suffered from sleep disturbances and stated that he has trouble falling and staying asleep. This was attributed to an inability to stop intrusive thoughts and disturbing nightmares that he cannot wake up from. The patient also reported experiencing sleep paralysis and severe migraine headaches.

He has experienced financial difficulty due to his inability to stay employed. However, he has an extensive support system that he relies upon. The patient has stayed sober of prescription drugs for six years and no longer drinks liquor. However, he still occasionally drinks beer. The patient still struggles with tobacco use which started at age 17 with off and on periods of use. The longest the patient has gone without smoking was two years. The patient will often go a few months with and a few months without smoking.

The patient has found that being outdoors and engaging in hiking, kayaking, and other moderate exercise has helped relieve some of his PTSD symptoms. This patient has found success in keeping his thoughts in the present by using a thick rubber band around the wrist. He said one good snap stops unwanted intrusive thoughts. The patient attributes his success in cessation of prescription pills to his ongoing family support and support groups composed of like-minded veterans with similar experiences and interests. He also attributes the start and successes of his recovery process to when he became a Christian.

Patient B

Patient B is a 50-year-old male who was seen for a suicide attempt and was admitted voluntarily. He is diagnosed with PTSD, conversion disorder, and major depressive disorder. Due to his experiences in the military, the patient also experiences cardiac complications. He is currently battling sleep disturbances and insomnia. In the past, the patient mentioned that he did not have any noticeable coping mechanisms. His unhealthy relationship with his family led him to suppress his emotions in fear of being abused. The military also taught him to suppress his emotions to be "tough." After years and years of different types of abuse and emotional suppression, he hit a wall.

During the encounter, the patient was very open about his experiences that led to his diagnosis. He retold the stories of how he witnessed multiple suicides while on duty. The patient discussed the various ways he was abused as a child and the emotional neglect he faced while in the military. He is currently struggling with family issues due to his family not liking his current wife. He mentioned that his wife is "the greatest thing that has ever happened to him," and he "would not know what to do without her." Leading up to his suicide attempt, the patient was facing financial difficulty due to the pandemic and his wife losing her job. This was causing

tension between the two, on top of the problem with his family, which resulted in an argument. He said the argument was what leads to his suicide attempt.

This patient is currently a man of faith, which has helped him find ways to cope with the past trauma. He enjoys reading the scripture and assisting others in developing their faith. He hopes that he and his wife will travel to different places and teach others about God and faith when discharged. While speaking with the patient, it was clear how important his faith was to him and how it guided him in his treatment. His faith allows him to hope that he can get better and help others feel better. The patient also mentioned that he enjoys reading and being outdoors.

Patient C

Patient C is a middle-aged male diagnosed with altered mental status, PTSD, and bipolar disorder. This patient was admitted due to smoking "bad" marijuana, which caused him to have a manic episode. While manic, he assaulted his mother. While talking to the patient, he was unaware of his actions and understood that he had to go to court for "doing property damage" at his mother's house. He seemed to have no recollection of what had happened, and no one had told him yet.

The patient was very open and receptive to his treatment. He admitted to using negative coping mechanisms such as smoking marijuana and a lack of self-care. He claimed that he had been in a rut recently at home and could not get out of it. He was not eating healthy nor bathing like he should have been. His days consisted of waking up, sitting on the couch watching television, and smoking marijuana. While in the hospital, he declared that he would take steps to better himself. He has been waking up in the morning before the other patients and getting a 50-minute walk in. He said that starting his day with a walk gives him a fresh start and the motivation he needs to get through the day. He had never had a routine while living alone at home, so he looked forward to continuing this routine outside the hospital.

The patient enjoyed talking about his time living in Alaska for four years. He hopes to go back someday because he enjoys the area and the people. His favorite part about Alaska was the outdoors and all of the activities that he could enjoy. The patient said his mental health was immensely better while living in Alaska because he always had something to do to get his mind

off negative thoughts. He is very passionate about hunting, fishing, and all of the guns he used to own while in Alaska. I could tell the memories he had from Alaska brought his joy by the smile he had on his face while talking about it.

Negative Coping Mechanisms

Negative coping mechanisms provide temporary relief of the problem and make the situation worse, negatively affecting the veteran's health and treatment. Veterans use many negative coping mechanisms that further complicate the symptoms of PTSD. Examples of negative coping mechanisms are alcohol abuse, tobacco use, drug abuse, and seclusion. Negative coping mechanisms strain relationships, finances, and the health of the veteran. Many veterans use negative coping mechanisms to numb their feelings, help them sleep, and temporarily find relief from chronic pain. The use of negative coping mechanisms can result in isolation, homelessness, and difficulty controlling or expressing emotions.

Alcohol is a negative coping mechanism that many veterans turn to confront their stressors, much like patient A. Alcohol is a depressant that can prolong and intensify the negative symptoms of PTSD, like feelings of anxiety, depression, and insomnia. Alcohol lowers the levels of serotonin and norepinephrine in the body. Serotonin is a chemical that affects mood, appetite, sleep, and memory. Norepinephrine controls how the body reacts to different situations and events. Decreased serotonin levels and norepinephrine levels have been linked to depression [4].

As illustrated in Figure 2, often, when veterans are confronted with a stressor, they turn to tobacco products. Tobacco is a significant negative coping mechanism that veterans choose to use, and usage rates in combat veterans are extremely high. The use of tobacco can have long-term adverse health consequences, increase stress, and place financial constraints on veterans.

Individuals who battle PTSD and stress daily can resort to unhealthy coping mechanisms to get through the day. Studies have shown that military veterans are more susceptible to these negative coping mechanisms based on their diagnoses. Cacao [5] states, mental health has been linked to substance use tendencies. A common negative coping mechanism is marijuana use, as seen in patient C. Wilkison *et al.* [6] completed a study about risk perception towards marijuana in veterans with substance use disorders. The majority of the veterans considered marijuana to be a

low-risk substance. One perspective was that marijuana was significantly different from other drugs, being non-addictive, having no withdrawal syndrome, and causing relatively limited behavioral effects [6]. Only a few participants thought marijuana is an addictive substance with significant negative consequences. The participants who think of marijuana as a positive coping mechanism have yet to experience the adverse effects and negative impacts of marijuana [6].

On the other hand, Betthauser *et al.* [1] study concluded that a substantial number of military veterans with PTSD benefit from the use of cannabis to reduce anxiety and insomnia and improve their coping abilities. Marijuana activates cannabinoid receptors, which increase pleasure and alteration of memory processes [1]. Therefore, the conflicting information about marijuana use shows a need for further research on the positive versus the negative effects of marijuana on veterans.

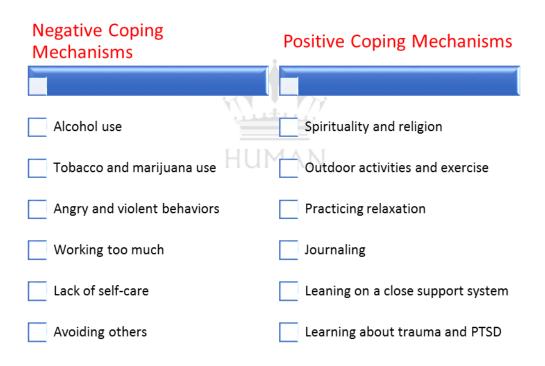


Figure No. 2: Positive and negative coping mechanisms used by veterans with PTSD.

Positive Coping Mechanisms

Positive coping mechanisms are techniques the veteran uses to manage the symptoms of PTSD and other psychological manifestations. A few positive coping mechanisms observed include exercise, hiking, journaling, and religion/spirituality. Positive coping mechanisms help veterans

manage symptoms of PTSD and allow for interventions for triggers. Many veterans learn to adapt to the traumatic experience that arises from war. The concept of adapting to pre-event functioning is known as resilience [7]. Social support is also an essential positive coping mechanism that allows the veteran to open up to friends or family and confronts the problem head-on, reducing the traumatic event's negative feelings. Post-traumatic growth is the measurement of increased closeness in relationships, personal strength, spiritual change, and life appreciation [7]. Overall, positive coping mechanisms improve the quality of life and treatment outcomes of veterans who have PTSD.

METHOD

When collecting data for this study, the databases used were The Cumulative Index to Nursing and Applied Health Literature (CINAHL), Clinical Key, and ProQuest Health between the years 2015 and 2021. This literature review consisted of information regarding various PTSD coping mechanisms. The focus of data collection was on substance use, spirituality, and outdoor activities. At the same time, we were focusing on outlining why these coping mechanisms are used and whether they are helpful or not. The keywords searched include *veterans*, *PTDS*, *marijuana*, *coping*, *alcohol*, *tobacco*, *spirituality*, *and outdoor activities*.

LITERATURE REVIEW

Lyons *et al.* [4] examined the relationship between negative trauma-related cognitions and psychosocial functioning in veterans with PTSD and alcohol use disorder (AUD). They found that AUD is commonly found in veterans with PTSD and that AUD complicates treatment and negatively impacts veterans' long-term health outcomes. Other findings of this study were that individuals with PTSD/AUD have more severe PTSD symptoms than those with PTSD alone [4]. The researchers examined the relationships between the negative trauma-related cognitions and psychosocial functioning using multiple linear regression analyses in 145 veterans, 90% were male, and the average age was 41. The participants had to meet DSM-5 criteria diagnosis for PTSD and AUD [4].

The findings supported the hypothesis; negative trauma-related cognitions would be associated with poor psychosocial functioning, even when controlling for PTSD symptom severity and alcohol disorder severity. Researchers also found that negative trauma-related cognitions about the self, world, and self-blame would be associated with psychosocial functioning. These findings provide additional support for the emotional processing theory. Suggesting that individuals who see themselves as unable to handle the distress associated with PTSD may potentially also view themselves as incompetent in their abilities to fulfill roles and duties in areas like relationships, occupations, and education [4].

A similar study conducted by McDevitt-Murphy *et al.* [8] found that combat veterans are at a greater risk for alcohol misuse. This study links the motives for drinking of combat veterans with PTSD. Sixty-seven veterans participated in this study and were examined with a 27-item questionnaire assessing correlations between PTSD severities, alcohol misuse, and drinking motives. The findings suggested that as many as 36% of veterans who have had combat deployments engage in alcohol misuse. McDevitt-Murphy *et al.* [8] determined the motive of drinking was to cope with anxiety and depression. This study also determined that alcohol abuse was not a symptom but rather a method used by veterans to cope with the stress caused by PTSD. The veterans were using alcohol as a means to numb their emotions, to avoid reexperiencing traumatic events, and to avoid the triggers to their PTSD [8].

Veterans with PTSD are more likely to have drinking problems and engage in binge drinking. Binge drinking is defined as consuming more than 4-5 drinks in a short period of 1-2 hours [8]. Veterans consume alcohol to distract them from symptoms of their PTSD and help them temporarily forget or cope with the causative event or events. However, drinking alcohol has many adverse effects on the brain. It makes it harder for the veteran to concentrate, be productive, and reduce the veteran's quality level of life [8].

Tobacco use is highly prevalent among veterans with PTSD, and veterans have a higher tobacco use rate than those without PTSD. Ashendorf *et al.* [9] found that acute nicotine positively affects cognitive performance. However, chronic tobacco use has a negative effect and is associated with reductions in cognitive performance, slowing down processing speed, and

generally performs poorly when not using tobacco. Veterans use tobacco to help them concentrate and to enable them to think more clearly [9].

Pericot-Valverde [10] found that individuals with PTSD have high levels of nicotine dependence and heavy use of tobacco products. Veterans with PTSD have a three times greater smoking rate than the general population, and the percentage of veterans with PTSD who smoke is as high as 66% [10]. The researchers suggested that individuals with PTSD smoke cigarettes to lessen or cope with symptoms of their PTSD. Smoking only temporarily relieves stress, and chronic use of tobacco increases the level of stress for the user and heightens PTSD symptoms. Pericot-Valverde *et al.* [10] concluded that these veterans also experience greater difficulty quitting smoking with poorer cessation outcomes due to their PTSD symptoms.

Wilkinson *et al.* [6] defined risk perception as "perceptions of the negative effects of using drugs." Within the study, there were 31 veterans interviewed and asked a range of questions [6]. The questions consisted of what they knew about marijuana, if they think it is harmful, their thoughts on legalization and if legalization will change people's perceptions of marijuana. The most prominent idea was that marijuana is a low-risk substance and that it should be legalized. The minority opinion was that marijuana has negative consequences [6]. The belief that marijuana holds a lower risk than other substances appeared to make the participants deny any information about the risks of marijuana despite receiving considerable education.

In a similar study, Betthauser *et al.* [1] discussed evidence regarding the use of cannabis to treat symptoms of PTSD among military veterans. The study explains the three core symptoms of PTSD- reexperiencing, avoidance and numbing, and hyperarousal. These symptoms increase the veteran's motivation to use cannabis as a coping mechanism [1]. The researchers explain the need for more research into the treatment effects on PTSD symptoms (see Figure 3). Their study showed a significant number of military veterans with PTSD who used cannabis products to control their symptoms, with some reporting an improvement in anxiety and insomnia [1].



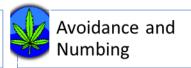




Figure No. 3: Symptoms experienced by veterans with PTSD and their use of cannabis.

Military deployments place service members at high risk for substance use and a greater strain on mental health status. Cancio[5] conducted a study to determine the connection between military service, substance abuse, and mental health. The study concluded that pre-9/11 veterans struggle with depression and anxiety and have higher cocaine and prescription drug use [5]. Post 9/11 veterans have higher rates of depression and PTSD and encounter a greater use of marijuana, methamphetamines, and prescription medications. These statistics display a need to develop prevention interventions that incorporate mental health components that help veterans build emotional resilience and coping mechanisms [5].

Religion and spirituality among veterans are a topic within research that has been ongoing. According to Lusk *et al.* [11], spirituality and religion are important aspects of veterans' wellbeing, but their role in suicide is understudied. Sharma *et al.* [12] discuss the importance of religion/spirituality in mental health. However, there have been inconsistencies in the distinction between religion and spirituality. Lusk *et al.* [11] recruited 30 participants at an outpatient mental health (MH) division of a large VA medical center who self-reported a history of significant suicide ideation or previous suicide attempt. Participants were required to be engaged in MH treatment and have a low acute risk for suicidal intent or attempts. Those excluded from the study included veterans with cognitive impairments who could not give informed consent or did not have a current MH provider. Interviews were conducted to analyze themes associated with religion/spirituality. The themes identified that religion/spirituality could discourage suicidal ideation, help with coping, and facilitate meaning and coping [11]. This study also found a small group of individuals who felt religion/spirituality led to increased suffering due to an inability to live up to religious/spiritual expectations.

Sharma *et al.* [12] discussed the association between religion/spirituality (R/S) and mental health with functional outcomes. A total of 3,157 veterans were sampled from the National Health and Resilience in Veterans Study (NHRVS). The veterans were separated between three groups

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based on the Duke University Religion Index: high R/S, moderate R/S, and low R/S [12]. The results found that a high R/S was associated with decreased risk for mental health issues and increased gratitude, purpose in life, and post-traumatic growth. Moderate R/S did not have as much impact, but it was higher than low R/S, especially with a decreased risk for lifetime major depressive disorders [12].

The "Joining Forces" initiative (JFI) is a nationwide organization focused on educating nurses on veteran health challenges, especially PTSD. Angel [7], focused on resilience and post-traumatic growth (PTG) when coping with adverse life events. According to the JFI, nurses play an important role in PTSD screening by asking the question, "Have you ever served in the military?" [7]. Connecting veterans to other veterans are one of the best ways for veterans to develop resilience and PTG. It allows the veterans to discuss their experiences and feelings, which can help to decrease PTSD symptoms. Volunteering, athletic competition, and mentorships have also helped veterans develop resilience.

Outdoor activities have recently been studied to determine the benefits of psychological health. Wheeler *et al.* [13] goal were to evaluate the use of supplemental outdoor recreational activities on military veterans with PTSD. Two studies were conducted to determine the benefits of social interaction with outdoor exposure. The first study consisted of 30 participants who performed in a group activity, such as angling, equine, or archery. Psychological means and PTSD symptoms were assessed two weeks before the intervention, two weeks post-intervention, and four months after the intervention [13]. The second study was a waitlist controlled angling experience based on study one. There were 25 participants split between the intervention and waitlist control group. Similarly, to study one, measures were taken two weeks prior and two weeks following the intervention with a 4-month follow-up [13]. Both studies found an improvement in PTSD symptoms and overall psychological wellbeing.

The current research is supportive of the development of care for veterans. The difficulties of war may lead to more negative coping mechanisms to deal with the symptoms of anxiety and PTSD. Alcohol use disorder is a very common mechanism used among veterans to cope. However, alcohol is used as a distracter to avoid triggers and suppress negative emotions. Tobacco and marijuana use are also common coping tools to relieve stress and anxiety. In the

veteran's eyes, these substances' benefits provide more relief, that they ignore the substances' negative effects, especially with marijuana. However, substance use increases due to the development of tolerance and an increase in stress due to needing more. On the positive end of coping mechanisms, religion and spirituality have been found to help veterans manage the symptoms of PTSD.

DISCUSSION

Based on the literature review findings, each veteran copes differently, and the mechanisms used may be positive or negative. The diagnosis of PTSD is complex, and each individual can develop different symptoms as seen in our three case studies. The complexity of each individual and PTSD requires more research to be completed to provide adequate interventions to help veterans. As noted in Figure 4, the veterans who develop positive coping mechanisms or seek support from other veterans or medical staff are more likely to develop resilience and heal from their traumas.

When caring for a veteran with PTSD, it is essential to reflect on one's feelings and beliefs about substance abuse and religion/spirituality. As a care provider, it is important to not transfer one's own experiences and feelings onto the patient. Transference can hinder patient-centered care and impede the trust and openness of a patient. If personal feelings are too strong, it is vital to contact someone in charge to provide a different assignment. If one is under-educated or uncomfortable with a topic, such as religion, it is important to contact those leaders to help the patient. An intervention that has been identified to help with an open conversation between the patient and caregiver is to create a safety plan. A safety plan is a vow to one's community, such as family and friends, to reach out to them when one struggles before performing an action that could harm [11].



Figure No. 4: Outcomes for veterans who choose positive or negative coping mechanisms.

More research needs to be done to identify interventions for veterans coping with PTSD. As of now, the best intervention is early action and recognition of negative coping mechanisms. Nurses will be one of the first healthcare team members in contact with veterans, so it is important to ask specific questions during the assessment to identify the veteran's needs. The first question to ask is to identify if the patient was a member of the military. If the patient responds yes, then it is important to identify the impact that their service had on them. An individual can ask, "How has being in the military added meaning to your life?" It is also important to educate the veteran on what PTSD is and the symptoms that can arise from the diagnosis. Educating on resilience and post-traumatic growth can also help veterans identify a goal they may like to achieve. Future research can look more into interventions for the prevention of substance abuse among veterans.

CONCLUSION

Coping with PTSD can be a complicated and challenging process for many veterans. Some develop negative coping mechanisms, such as substance abuse, and others develop positive mechanisms, such as religion/spirituality. Each individual's experience with PTSD is different, which means each individual's way of coping is different. Early identification of PTSD and coping mechanisms is key to the healing process of trauma. In addition, providing an environment for open conversation can help establish a trusting relationship, leading to the veteran's growth. As more research is conducted on PTSD and veteran coping, more interventions will become available to guide healthcare providers in treating PTSD.

REFERENCES

- 1. Betthauser, K., Pilz, J., & Vollmer, L. E. (2015). Use and effects of cannabinoids in military veterans with post-traumatic stress disorder. *American Journal of Health-system Pharmacy*,72(15), 1279-1284. doi:10.2146/ajhp140523
- 2. National Center for PTSD. (2020a). Negative coping and PTSD. Retrieved from https://www.ptsd.va.gov/gethelp/negative_coping.asp
- 3. National Center for PTSD. (2020b). Coping with traumatic stress reactions. Retrieved from https://www.ptsd.va.gov/gethelp/coping_stress_reactions.asp
- 4. Lyons, R., Haller, M., Curry, I., Norman, S. B. (2020). The relationship between negative trauma-related cognitions and psychosocial functioning in veterans with post-traumatic stress disorder and alcohol use disorder. *Substance Abuse*, *41*(1):132-138. DOI: 10.1080/08897077.2019.1635957
- 5. Cancio, R. (2020). Causal modeling of substance use and mental health among male military veterans. *Journal of Substance Use*, 25(3), 271-276. DOI: 10.1080/14659891.2019.1683904
- 6. Wilkinson, S. T., van Schalkwyk, G. I., Davidson, L., &D'souza, D. C. (2016). The formation of marijuana risk perception in a population of substance-abusing patients. *Psychiatric Quarterly*, 87(1), 177-187. doi:10.1007/s11126-015-9369-z
- 7. Angel, C. M. (2016). Resilience, post-traumatic stress, and post-traumatic growth: Veterans' and active-duty military members' coping trajectories following traumatic event exposure. *Nurse Education Today*, 47, 57. doi:10.1016/j.nedt.2016.04.001
- 8. McDevitt-Murphy, M., Luciano, M., Tripp, J., &Eddinger, J. (2017). Drinking motives and PTSD-related alcohol expectancies among combat veterans. *Addictive Behaviors64*, 217-222.doi:10.1016/j.addbeh.2016.08.029
- 9. Ashendorf, L., Shrik, S., & Kelly, M. (2019). Tobacco use and cognitive functioning in veterans of the conflicts in Iraq and Afghanistan. *Developmental Neuropsychology*, 44 (5), 409-416. doi:10.1080/87565641.2019.1632862
- 10. Pericot-Valverde, I., Elliott, R., Miller, M., Tidey, J., &Gallema, D. (2018) Post-traumatic stress disorder and tobacco use: A systematic review and meta-analysis *Addictive Behaviors* 84, 238-247. doi:10.1016/j.addbeh.2018.04.024
- 11. Lusk, J., Dobscha, S., Kopacz, M., Ritchie, M., & Ono, S. (2018). Spirituality, religion, and suicidality among veterans: A qualitative study. *Archives of Suicide Research.*,22(2), 311 DOI: 10.1080/13811118.2017.1340856
- 12. Sharma, V., Marin, D., Koenig, H., Feder, A., Iavoviello, B., Southwick, S., &Pietrzak, R. (2017). Religion, spirituality, and mental health of U.S. military veterans: Results from the National Health and Resilience in Veterans Study. *Journal of affective disorders*. 217, 197-204. doi:10.1016/j.jad.2017.03.071
- 13. Wheeler, M., Cooper, N. R., Andrews, L., Jamie, H. H., Juanchich, M., Rakow, T., & Orbell, S. (2020). Outdoor recreational activity experiences improve military veterans with post-traumatic stress disorder: Positive findings from a pilot study and a randomized controlled trial. *PLoS One*, 15(11). doi:10.1371/journal.pone.0241763



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