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Veterans Living with Alcohol Use Disorder and Posttraumatic Stress Disorder

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ABSTRACT

Background: Mental health is an increasingly talked about issue in the world. Mental health disorders can affect people in a variety of ways, specifically veterans. Posttraumatic stress disorder (PTSD) is common among veterans who fought in combat and can greatly impact a person's daily functioning and skills. It can be hard for veterans with PTSD to ask for help or cope appropriately, and this can often lead to alcohol use disorder. **Purpose:** The purpose of this review was to determine how alcohol misuse plays a role in veterans with PTSD. **Method:** This was a review of pertinent literature complemented with a case study. **Result:** PTSD and alcohol misuse create a strain in every facet of a veteran's life and impede daily functioning. Having both conditions also make for a harder recovery. **Conclusion:** When both medications as well as the appropriate therapy for PTSD, alcohol use disorder (AUD), or both are recognized, individuals can see great progress in not only their overall mental health but also their relationships with their partners and family.

INTRODUCTION

Posttraumatic stress disorder is grueling on the body, mentally and physically, and can be difficult to cope with. A negative coping mechanism that many people seem to turn to is substance use, in this case, alcohol use. A patient in the case study sample has struggled with relapsing many times and has exhibited a pattern of being sober for a couple of months and then relapsing again. Due to this, it can be identified that the patient struggles with impaired coping. Stress-related responses have been tied to the military for a long time. PTSD specifically has been shown in the U.S. veterans who were in service during more recent wars [1]. It has recently been discovered that killing during combat is linked to and even increases the likelihood of developing problematic drinking. Those who have gone through traumatic events such as killing during combat or sexual assault often turn to substances to dull symptoms and self-medicate [1]. The purpose of this review was to determine how alcohol misuse plays a role in veterans with PTSD.

Often when individuals are suffering from a mental illness, substance abuse is not far behind. In this case study sample, the patient is suffering from PSTD and alcohol use disorder. Symptoms of PTSD that this patient is experiencing include vivid nightmares, anxiety, flashbacks, and feelings of detachment from close relationships. These symptoms began to increase as the patient began to abuse alcohol, leading to some life-threatening situations such as driving while heavily intoxicated as well as many instances of blackouts resulting in impaired memory. Other notable characteristics of alcohol use disorder in this patient include drinking alone, the need for alcohol to function daily, and lack of control over drinking. Alcohol dependence led to the disturbance within the patient's close relationships, particularly his marriage (see Figure 1).

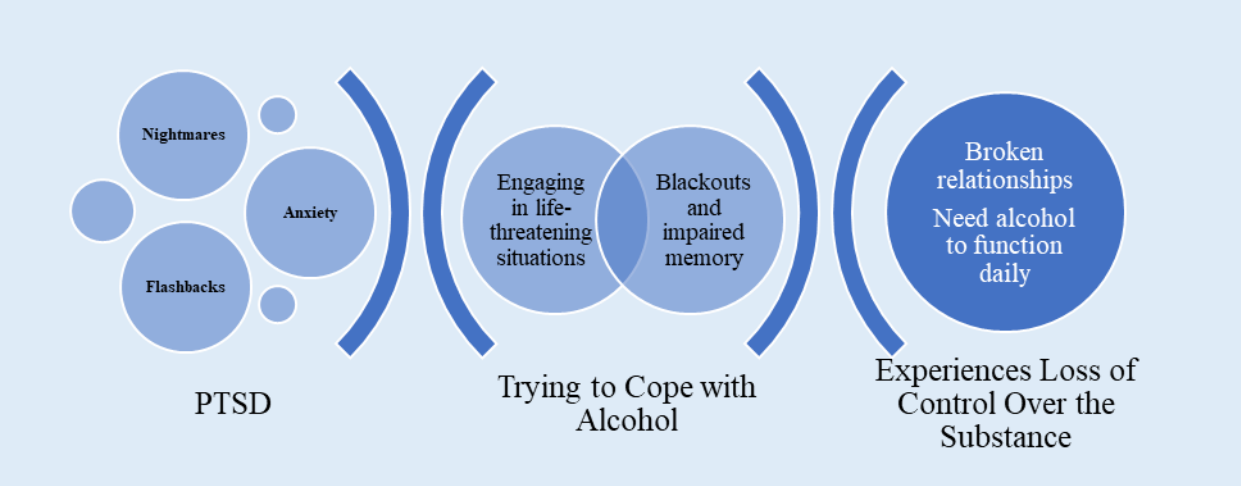

Figure No. 1: Symptoms observed in a patient with PTSD and alcohol addiction.

CASE STUDY

This individual was a 36-year-old male who was diagnosed with PTSD and alcohol use disorder. He was in the marine reserves when he was called to serve in the Gulf war at the same time as his brother, who was sadly killed in action. Upon discharge, he returned home with this loss and turned from his parents and to alcohol for support. He became stressed with the anxieties of work and began drinking during business lunches, and soon it was every morning when he woke up. The stress of work and his marriage led to his alcohol use disorder. He had cycled through hospital detoxes, weeklong recovery facilities, and even a few month-long rehabilitations. These events put a strain on his marriage, resulting in a divorce and allowing limited visiting with his children until he was sober. He had several instances of sobriety, but then a stressor would arise, and he would relapse and start the cycle over. He started to recognize a pattern between these stressors and relapses, so he admitted himself to the hospital to prevent another relapse. He was so serious this time about staying sober that his ex-wife moved their children back to where he lives so he could have a better relationship with them.

LITERATURE REVIEW

This literature review is comprised of many unique and thorough research articles and studies on PTSD and alcohol use disorder. We gathered information about alcohol use and PTSD, specifically about pharmacologic and behavioral treatments, the co-occurrence of the disorders,

and how the disorders can affect marriages and relationships. The information presented was gathered mainly from the National Library of Medicine and the university library database, ranging from 2003 to 2021.

Negative Affect Increase Craving for Alcohol

Lyons et al. [2] focused on how negative affect can increase the craving for alcohol in veterans who suffer from PTSD and alcohol use disorder. The combination of PTSD and alcohol use has a much greater and more severe effect on mentality than each diagnosis alone. Alcohol is an easy coping mechanism for individuals suffering from PTSD, and this creates addiction and craving inside the body. Negative posttraumatic cognitions and negative affect are two variables that could increase that craving for alcohol [2]. Feelings of shame, fear, and inability to cope are alleviated when veterans turn to alcohol and can block out those traumatic feelings and experiences. The study included more than 100 veterans seeking treatment for PTSD and alcohol use. They were evaluated on posttraumatic cognitions regarding the world, self, and self-blame on a scale from 1 (totally disagree) to 7 (totally agree). The subjects also filled out self-reports over two months rating their positive or negative effect, alcohol craving (frequency and duration), and an interview to determine the severity of their PTSD using the DSM-5. The results from this indicated that negative affect did create an association between posttraumatic cognitions, cravings, and PTSD and alcohol use disorder diagnoses [2]. Increased stressors and negative feelings can impact an individual's daily functioning, not just with those feelings of shame and guilt, but also with an increased craving to cope and turn to alcohol. Individuals with a negative personality use maladaptive coping mechanisms such as alcohol and other substances [3, 4].

Medication Treatment

Taylor et al. [5] discussed psychotherapy and pharmacologic interventions in the treatment of individuals with PTSD and alcohol use disorder. PTSD is one of the most common mental disorders to present in patients with alcohol use disorder. The rate of individuals with both PTSD and alcohol use disorder is about 43%, with higher rates among veterans, specifically men (about 50%). Some medications help treat PTSD and alcohol use disorder. Naltrexone and topiramate are commonly prescribed when PTSD is the secondary diagnosis behind alcohol use disorder.

When PTSD is the primary diagnosis, patients can expect to be prescribed selective serotonin reuptake inhibitors (SSRIs), more specifically paroxetine and sertraline [5]. Psychotherapy has been seen to be effective in addition to medication. Different types of psychotherapy include exposure and cognitive processing therapy (CPT) for PTSD and cognitive behavioral therapy (CBT) for either both disorders or separately.

Using certified databases, 16 studies were analyzed for research on alcohol use disorder medications, PTSD medications, and psychotherapy treatments. For alcohol use disorder medication, studies determined that naltrexone and topiramate both reduced alcohol cravings but showed no effect on PTSD symptoms [5]. As for PTSD medication studies, individuals taking sertraline spent fewer days drinking while also having a positive effect regarding PTSD symptoms. Psychotherapy studies showed that exposure therapy and CPT remarkably decreased PTSD symptoms, while also decreasing alcohol cravings. The CBT and counseling studies discuss that these treatments were quite beneficial in patients with PTSD or alcohol use disorder but had an even greater impact on patients with both disorders. Only one study researched medication and psychotherapy in conjunction, and the results showed that naltrexone and prolonged exposure therapy were the most effective in reducing both alcohol use and PTSD symptoms [5]. This review determined that medication therapy is effective in treating alcohol use disorder, but not so much with PTSD and that naltrexone and psychotherapy were the most effective combination in treating PTSD and alcohol use disorder (see Figure 2).

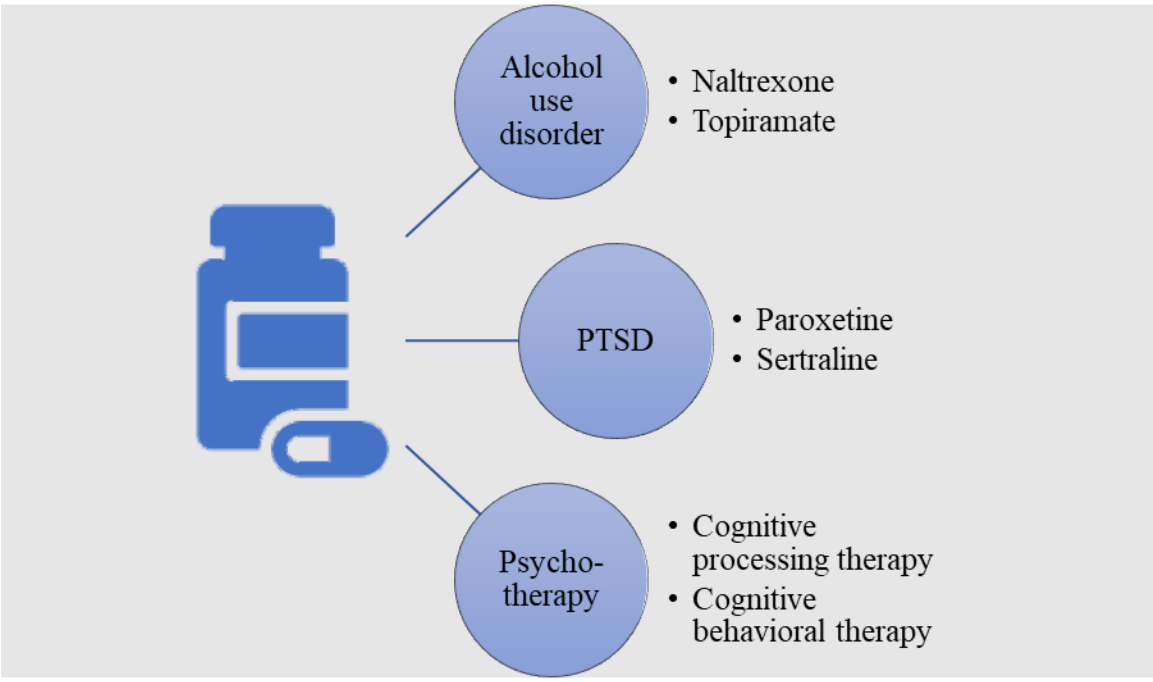

Figure No. 2: Treatments for PTSD and alcohol use disorder

Behavior Treatments

In a study by Flanagan et al. [6], behavioral treatments are evaluated in individuals with alcohol use disorder alone, PTSD alone, and in individuals with both disorders. Treatments for alcohol use disorder include prevention, couples therapy, and relapse mindfulness (see Figure 3). These treatments all provide different interventions to promote new and healthy relationships, potentially rebuild relationships with partners, identify warning signs and triggers for cravings in their environment, and engage in holistic activities such as breath-focused awareness and yoga mindfulness. Results have shown relapse prevention is most effective in reducing alcoholic tendencies and cravings in patients with more severe alcohol use disorder and a harder time utilizing coping mechanisms. Couples therapy has been shown to improve relationship functioning among partners and decrease cravings when the program is followed to completion. Mindfulness therapy studies have produced decreases in cravings and days spent drinking similar to those of standard relapse prevention [6].

Behavioral treatments for PTSD include prolonged exposure and cognitive processing [6]. These therapies focus on improving everyday functioning and relationships, learning effective

communication skills, and decreasing the severity of PTSD symptoms through prolonged exposure to stimuli in a controlled environment, weekly therapy sessions with writing and thoughts on traumatic events and experiences that have increased PTSD symptoms. Results from prolonged exposure and cognitive processing studies showed minor reductions, but mostly maintenance of PTSD symptoms in patients who completed the programs [6]. Like other mental illnesses, more research is needed to evaluate the effectiveness of different therapies in patients with PTSD and alcohol use disorder, as well as other comorbidities.

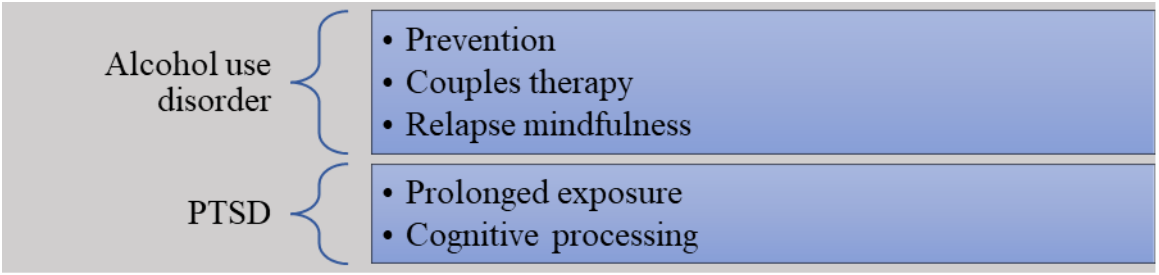

Figure No. 3: Behavior treatments for alcohol use disorder and PTSD

Relationships and Stressors Post-Military

Veterans can be considered a vulnerable population when they return home from deployment because of the multiple stressors and traumas that may have been exposed to during their time serving [4]. In the next study, relationships of veterans with PTSD were examined to determine the dynamic of post-military life. Work, family relationships, secondary diagnoses of depression and/or alcohol use disorder, and satisfaction with life were evaluated [7]. Stressors and trauma during deployment create an extremely high risk for PTSD and psychiatric disorders among veterans, regardless of background, gender, or branch of the military. Specific stressors that will be examined in this study are warfare exposure, sexual assault while deployed, and family issues while deployed. Post-military information that will be examined is family quality, functioning, and satisfaction. Participants were evaluated using many scales and assessments, but only the most relevant scales were explained. The Warfare Exposure assessment determined a veteran's role in combat and what they were exposed to, rating statements from 1 (never) to 6 (daily). The Sexual Harassment Scale assessed any unwanted verbal or physical encounters during deployment with a rating scale from 1 (never) to 4 (many times). The Deployment Family Stressors scale assessed family problems that arose during deployment using closed-ended

questions. The PTSD Checklist assessed PTSD symptom severity by having the veteran recall their most disturbing event while deployed and explain the presence of the symptoms associated with that event in the last several months. Alcohol Use Disorders Identification Test was used to determine each veteran's drinking history, specifically over the past few months. Romantic Relationship Functioning and Satisfaction are scales used to evaluate any intimacy problems and overall satisfaction between the veteran and their partner [7].

Male and female veterans were part of this study, so the results varied amongst the genders [7]. Female veterans experienced much more incidents of sexual assault than male veterans, while the male veterans were exposed to significantly greater warzone stressors (see Figure 4). The differences between genders regarding PTSD symptom severity were minuscule. After further assessments, male veterans had a much higher rate of alcohol abuse and functional impairment in familial relationships than female veterans. Among all veterans, PTSD was linked to lower functioning and satisfaction in daily life and intimate relationships. These low qualities of life due to PTSD have shown an increase in depression and alcohol use disorder diagnoses [7]. PTSD and other psychiatric disorders do not just impact the affected individual but can create a ripple effect on their family life and in the workplace.

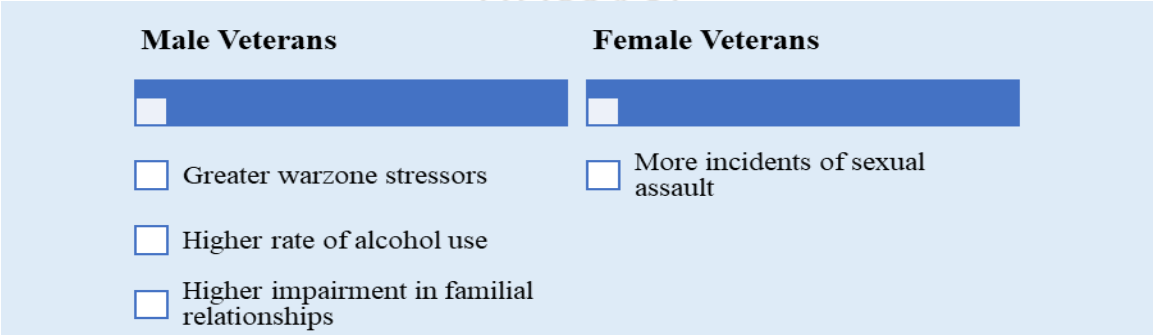

Figure No. 4: Stressors and traumas that may have been exposed to during time serving

Individuals with PTSD and SUD conditions need to adopt positive coping mechanisms to make progress in their treatment and ultimately develop ways to actively deal with their traumas during everyday life [8]. When dealing with these diagnoses, an individual can have either maladaptive or adaptive coping mechanisms. Maladaptive mechanisms can lead to more severe signs of depression and other psychosocial disorders, and it can lead to substance use disorder, which is

very prevalent in veterans with PTSD [3]. Behaviors exhibited in some veterans after returning home were gambling, substance use, depression symptoms, suicide ideations, moral injury, and anger [9].

Social Functioning

Simpson *et al.* [10] conducted a study of social functioning and treatment of individuals living with PTSD and alcohol use disorder compared to individuals with PTSD and drug use disorder. Groups of individuals with only one of the three disorders were also part of this study. The authors gathered data on the prevalence of disorders over the past year, social functioning, other chronic psychiatric comorbidities, and treatments. Lifetime disorders that were assessed are as follows: major depression disorder, social anxiety disorder, generalized anxiety disorder, borderline personality disorder, and any past or present suicidal ideations. Lifetime alcohol/drug use is also an important factor in determining the past-year prevalence of alcohol/drug use. Information about all psychiatric disorders and treatment was obtained using the Alcohol Use Disorder and Associated Disabilities Interview Schedule-DSM-5 version [10].

The results indicated individuals with PTSD and drug use disorder were more likely to suffer from a substance use disorder in the past year than individuals with PTSD and alcohol use disorder [10]. PTSD symptoms remained the same for both groups. The results also showed that both groups of comorbid disorders were more likely to be veterans and unmarried, compared to those suffering from only one of the psychiatric disorders. Those in the PTSD/alcohol use disorder group were more likely to suffer from the major depressive disorder as well as generalized anxiety disorder and attempted suicide compared to those only suffering from PTSD. Results did show that individuals suffering from PTSD/drug use disorder are the most impaired socially and in psychiatric functioning. It is discussed that out of the comorbidities, PTSD is the driving force behind social instability and psychiatric impairment. Across all groups, suicidal ideation and attempt rate were high, noting around half of the participants in both comorbidity groups [10].

Blackburn [11] focused on psychosocial factors, such as social, personal, family, medical, financial, academic, and occupational factors. A problem that many veterans face is the sense of isolation. This can make them withdraw from society, family, and friends. By isolating, they are

hindering their ability to grow after they return home from deployment [11]. There is also evidence that social support is associated with lower PTSD symptom severity in trauma-exposed people [12].

PTSD and Quality of Life

Another study featured in this review is focused on the consequences of PTSD on the work and family life of veterans, and if veterans from post-9/11 warfare can easily return to life the way it was before deployment [13]. Some veterans struggle financially once they return home, and the psychological effects of PTSD can create problems with work, intimate relationships, school, and much more, leading to a lower quality of life. Data was collected using the PTSD Checklist – Military Version, Beck Depression Inventory - Primary Care, Alcohol Use Identification Test – Consumption (AUDIT–C), Inventory of Psychosocial Functioning (IPF), and Relationship Assessment Scale. The PTSD Checklist was used to rate how bothered the veterans were by their symptoms and those responses were compared to the PTSD criteria in the DSM. Beck Depression Inventory consists of seven statements and the veterans rate their depression symptom prevalence on a scale of 1 (strongly disagree) to 5 (strongly agree). AUDIT-C is a screening tool used to assess an individual's alcohol misuse for the past three months. IPF helped to assess the veteran's level of functioning while at work, with higher scores indicating greater impairment. This scale also helped to determine job satisfaction using descriptors, such as meaningful or meaningless [13].

The Relationship Assessment Scale helped to gather information about whether the veteran was single or married, living with a partner, or living alone, and to decide if there were impairments with these relationships [13]. Among the male veterans, 90% reported that they were employed full time, felt financially stable, and only about 15% of those men were somewhat functionally impaired at work at times. As for family life, 75% of male veterans were married or living with a significant other, and about half of them said to have had some impairment with their romantic/intimate relationships. For male veterans with PTSD, 20% more than males without PTSD reported being unemployed. For veterans with PTSD who were employed, 50% of them reported being slightly impaired at work. Roughly, the same number of male veterans with and without PTSD reported being married or living with an intimate partner, but men with PTSD had

more instances with impairments in romantic relationships. These men with PTSD were also strongly dissatisfied with their relationships [13]. Many veterans are satisfied with their life, income, and occupation, but suffering from PTSD can greatly increase the risk and potential for dissatisfaction and impairment at work and in relationships.

DSM-5 Criteria for PTSD and Alcohol Misuse

This study was conducted to examine the relationship between PTSD symptoms as classified in the *DSM-5* and alcohol misuse in military veterans. Alcohol use disorder often occurs in patients with PTSD. These comorbid rates of alcohol misuse are high among the veteran population and can lead to strained family relationships, poorer quality of life, and occupational impairment [14]. Samples of data were collected from veterans, specifically those who reported drinking problems, at an outpatient clinic over ten months. All participants were interviewed before progressing further into the study; they were given self-report screens, AUDIT, and PTSD Checklist for *DSM-5*, to gather a baseline of their drinking habits and PTSD symptoms. The mean total AUDIT scores and PCL-5 total scores were both higher than the recommended score. The results showed a positive correlation between PTSD symptoms and alcohol abuse [14]. These findings confirm that veterans are at an increased risk of PTSD symptoms which can lead to comorbid alcohol misuse.

Marital Distress

One study that was examined was that of the correlation between alcohol abuse and marital distress with a focus on the interdependence theory perspective. Within this article, it is mentioned that in 10-45% of marriages, one partner either has had a history of alcohol use disorder or currently has a diagnosis of alcohol use disorder [15]. As a result of this, it can be noted that in these marriages where there is a partner with alcohol use disorder, there are lower levels of marital satisfaction, as well as higher rates of depression, anxiety, and psychological distress, not to mention increased rates of physical and/or emotional abuse [15]. This then leads to the discussion of the interdependence theory. To be simply put, interdependence theory is when a person's behavior, emotion, and cognition are mirrored by what their partner exudes, this then influences their partner's outcomes [15].

Alcohol Dependence Without PTSD

Another study showed the drinking patterns of veterans with alcohol dependence with and without PTSD. Veterans with dual diagnoses had more severe symptoms as well as more psychological and medical problems and overall lower quality of life. It can be noted that 4.7-24.5% of veterans who were in combat in Iraq and Afghanistan developed PTSD [16]. This study was interesting in that it was found that veterans with alcohol dependence alone reported a higher number and heavier drinking days than the veterans with comorbid PTSD. Within the PTSD group, it can be mentioned that veterans with combat exposure were reported to have higher rates of drinking. An important finding is that while veterans with alcohol dependence alone reported higher rates of drinking than the comorbid PTSD veterans, the comorbid PTSD veterans showed to have higher levels of alcohol-related symptoms while simultaneously having lower rates of consumption [16].

Intimate Relationships

In a study by Meis *et al.* [1], relationships between post-deployment soldiers with PTSD and their partners were analyzed. Many veterans who have experienced war and/or combat have an increased risk of developing alcohol use disorder and PTSD. This comorbid disorder is among the most common, for example, this affected as much as 75% of Vietnam veterans [17]. The participants within this study were Army National Guard soldiers who were deployed to Iraq; they were surveyed one month before and two to three months after a 16-month deployment. Three aspects were measured onset of PTSD, alcohol use, and overall marital satisfaction. The PTSD checklist was used to measure symptoms of PTSD both before and after deployment, a score of 50 or higher indicating at least moderate ratings of PTSD. Similarly, the alcohol use disorder test was used to measure post-deployment problems with alcohol use, a score of eight or higher indicating probably hazardous drinking levels [17]. Of these results, 15.8%, 22.1%, and 30.5% of soldiers showed positive for PTSD, relationship distress, and alcohol dependence, respectively. Soldiers who tested positive for PTSD were more likely to also suffer from relationship distress than those who had a negative result. While it can be noted that pre-existing negative emotionality predicts post-deployment PTSD, even with the pre-existing post-deployment PTSD trauma, PTSD symptoms were largely correlated with lower quality

relationships [17].

Communication with Partners

As shown in Figure 5, family life and communication are largely affected when an individual is struggling with substance use disorder and/or PTSD. A study on Vietnam veterans with PTSD found that these veterans were less likely to express themselves as well as be communicative with their partners, thus leading to less satisfactory marriages, this also included instances of aggression towards their partners, especially when arousal symptoms were reported [18]. These veterans completed an assessment called the Family Assessment Device (FAD) in which 60 questions were asked regarding topics such as communication, behavior control, and affective involvement. Each of these responses was marked on a four-point scale of responses ranging from strongly disagree to strongly agree, higher scores indicating that of unhealthy family dynamics and vice versa with lower scores. The main categories that caused the most stress on these relationships were avoidance, withdrawal, alcohol abuse, intrusion, and anger. It was found that couples therapies, family therapy, as well as other interventions were found to be beneficial in helping these relationships when these issues arose [18].

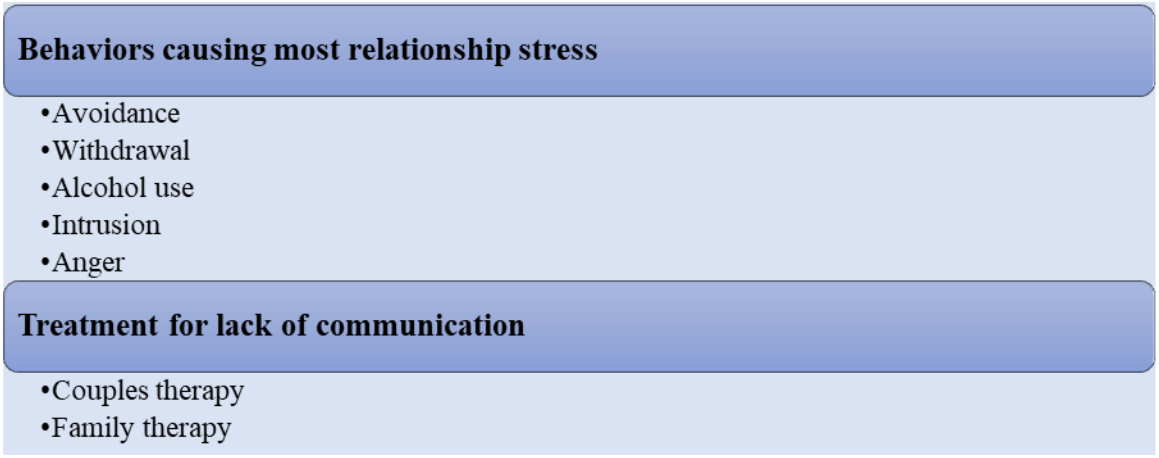

Figure No. 5: Behaviors causing most relationship stress and treatment options

Symptom Cluster

One study found there are several predictors of alcohol misuse, including demographic, depression, and PTSD. These can place a veteran at risk, especially if they are younger and

served in the Army or Marine Core like Patient A did. The results show that Veterans with PTSD or depression specifically were two times as likely to misuse alcohol as those without PTSD or depression [19]. The main use of alcohol was found to be for numbing emotions. Alcohol is being used by veterans as a way to self-medicate and detach from negative emotions [19]. This study confirmed that certain characteristics can put veterans at risk for developing alcohol misuse. Bartone and Homish [20] also confirmed that the risk for depression is very significant in the military due to exposure to stressful life experiences, such as combat exposure.

Summary of Review

As shown in Figure 6, this literature review, including a multitude of studies, demonstrates how symptoms of PTSD and alcohol use disorder exacerbate each other. It has not been discovered which one causes the other, but they often walk hand in hand. PTSD and alcohol misuse create a strain in every facet of a veteran's life and impede daily functioning. Having both conditions also make for a harder recovery.

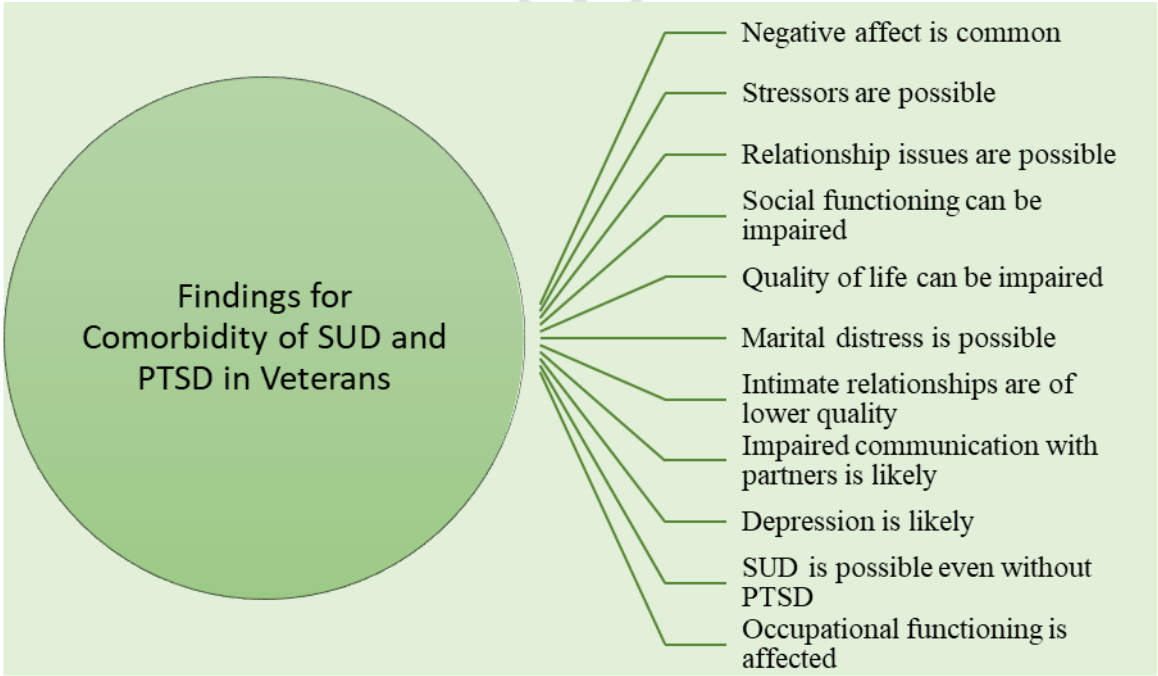

Figure No. 6: Literature findings for comorbidity of SUD and PTSD in veterans

DISCUSSION

The patient in the case study who served in the Gulf War is part of the 12% of veterans diagnosed with PTSD. He has been living with the dual diagnosis of PTSD and alcohol use disorder for a few years now. This has negatively impacted his relationship with his family through divorce, estrangement from his mother at one moment in time, and damaged relationships with children. The most beneficial interventions found for those with posttraumatic stress disorder and accompanying alcohol use disorder are psychotherapy and pharmacological interventions. Those with PTSD struggle greatly in everyday life and require therapy to build better-coping skills to deal with old memories and triggers and change patterns of thinking. Exposure therapy and cognitive behavioral therapy have been particularly valuable.

Pharmacological means are useful to help treat symptoms for both disorders. SSRIs can be helpful when PTSD is the primary diagnosis while naltrexone and topiramate are often prescribed when PTSD is secondary to alcohol use disorder. These treatments have been shown to not only decrease PTSD symptoms but also reduce alcohol cravings. Other interventions include relapse prevention, couples therapy, and mindfulness. These treatments work to promote healthy relationships and identify stressors or triggers for the affected individual. Relapse prevention and couples therapy have been shown to reduce alcoholic tendencies due to encouraging healthy coping strategies instead of turning to substances. The goal of any treatment is to reduce symptoms and improve activities of daily living. To reduce the effects of PTSD, Reynolds-Erspamer *et al.* [9] recommend providing social support, focusing on internal feelings, creating short-term goals, and setting up with services.

CONCLUSION

Veterans who experience PTSD as well as an accompanying substance abuse disorder such as alcohol use disorder, are often at a higher risk for family and marital issues. Events that can lead to PTSD and subsequently AUD that were observed were combat/war exposure as well as sexual harassment, as well as a combination of pre-existing mental illnesses such as anxiety and/or depression. Taking care of one's mental health is one of the first steps of treatment; this can be done by taking medications such as SSRIs. Other ways of treatment include different types of therapies such as psychotherapy, couples therapy, and family therapy. When both medications,

as well as the appropriate therapy for PTSD, AUD, or both, are recognized, individuals can see great progress in not only their overall mental health but also their relationships with their partners and family.

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