Treatment of Co-occurring Substance Use and PTSD in Active-Duty Military and Veterans

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Learning Objectives

1: Attendees will improve their knowledge and understanding of PTSD and what contributes to the disorder

2: Attendees will learn about treatment modalities commonly used to treat PTSD in both VA and Non-VA treatment facilities.

3: Attendees will learn about barriers to effective treatment, and ways they can improve treatment efficacy for Active-Duty and Military Veterans

Biography

Jessica Utter is a Licensed Professional Counselor in the State of Texas currently serving as the Program Director for Starlite Recovery Center's newest Operation Liberty program. Operation Liberty is a military Honor program dedicated to the treatment of co-occurring mental health and substance use disorders for active-duty military and veterans. Jessica is a 10-year Army veteran herself and brings real-world experience to the treatment of PTSD, C-PTSD, and combat related trauma. Jessica is specially trained in the use of EMDR and is currently training to become a Certified Neurofeedback provider.

What is PTSD?

PTSD stands for **Posttraumatic Stress Disorder**. It can happen after just one traumatic experience or is the result of multiple traumatic experiences over time. The latter is known as Complex PTSD, or CPTSD, and is characterized by personality and behavior changes and increased emotional lability. Reactive Attachment Disorder in children is often the result of trauma or neglect in childhood, and is sometimes considered a precursor to Borderline Personality Disorder and CPTSD.

Up to one month after experiencing a traumatic event, a symptomatic individual will be diagnosed with "**Acute Stress Disorder**". If symptoms continue beyond one month, a diagnosis of PTSD is warranted based on specific diagnostic criteria.

What causes PTSD?

There are two distinct etiologies

1. **Directly experiencing** a traumatic event such as a natural disaster, vehicle or other accident, death or loss of people or things close to us, severe injury or illness, combat-related event, sexual, physical, verbal, or emotional abuse, community or cultural violence, bullying, issues of low socioeconomic status, and/or neglect or parental alienation.

2. **Indirectly experiencing** a traumatic event when hearing about someone else's experience. Known as vicarious trauma, those working in the field of behavioral health, social work, community outreach, healthcare, or other public service fields are especially at risk of PTSD.

Military Specific Trauma

PTSD was largely unheard of before 9/11; at least, to the general population. The last 20+ years of war has not only significantly increased the incidence, and thus awareness of PTSD, but has led to a general misunderstanding of the causes of PTSD.

Many people assume that PTSD is limited only to combat veterans. In fact, many service members themselves have fallen prey to this assumption, resulting in a large number of non-combat veterans who have never asked for help.

- **Military specific trauma includes Combat-related trauma, Moral Injury, Military Sexual Trauma, mistreatment and abuse by upper echelon, drill instructors, first-line leaders, and peers, family separation and loss, the abuses suffered during the era of "don't ask, don't tell", and marginalization/oppression of female service members.**

Symptoms of PTSD

There are different “presentations” of PTSD. These include **Amnesic, Dissociative, Avoidant, and Hyper-Aroused.** How one presents is determined by how many of their symptoms tend to fall into one of these 4 categories.

To meet the diagnostic criteria for PTSD, one must have at least one component of all presentations except dissociation and amnesic.

Symptoms include intrusive memories of the trauma, nightmares, flashbacks, hyper-arousal, avoidance, forgetting key elements of the event, irritability and aggression, hypervigilance, overly negative thoughts about oneself or the world, social isolation, and difficulty concentrating (American Psychiatric Association, 2013)

Dissociation

There are two BASIC types: Depersonalization or Derealization

In **Depersonalization**, the individual disconnects from the **body**. It's like looking at yourself in the mirror…but it isn't you. It's like seeing the trauma happen from the third-person perspective. It's like saying "this isn't happening to me, it's happening to them"

In **Derealization**, the individual disconnects from **reality**. It's like you're not there or like the world doesn't exist.

Dissociation, from the Polyvagal standpoint, is the classic "deer in the headlights", or what we now understand as the freeze response or hypoarousal. The most extreme form of dissociation can be seen in what used to be known as Multiple Personality Disorder (now known as Dissociative Identity Disorder). In this case, the trauma was so extreme that the brain reacted by "splitting" into an entirely new reality as a way to cope.

Dissociation can be ANY coping mechanism designed to disconnect the individual from the emotional and/or physiological disturbance that often comes from remembering the event. At its minimum, compartmentalization is considered a dissociative response.

How does one cope…

Those with PTSD often utilize maladaptive coping mechanisms in order to function in a world that they perceive is unsafe.

- **Avoidance** of anything that has the potential to overstimulate or act as a trauma reminder: such as large crowds, triggering movies or stories, social situations, or certain holidays,
- **Aggression:** used as an attempt to control their environment.
- **Codependency**: Ongoing relationships with people, places, or things that are toxic.
- **Suicidal/Homicidal Ideation and Self-Harm**
- **Maladaptive Substance Use (Next slide)**

Substance Use/Abuse

A number of contributing factors lead to heavy substance abuse in Active-Duty Service Members and Veterans, including:

- **Military culture:** There are quite a few military traditions centering around the use of alcohol, including branch specific balls that utilize "the grog". This is essentially a punch bowl into which every service member in attendance is required to dump a random bottle of alcohol. As part of the tradition, everyone is required to drink (this requirement has been modified recently for some branches due to the increasing number of SM's in recovery).
- **Untreated Acute Stress Disorder that leads to PTSD**. Studies have shown that 3-5 sessions of Prolonged Exposure, EMDR, Stress Inoculation Training, and/or Cognitive-Behavioral Therapy within 2-3 weeks of the traumatic event can reduce or even eliminate PTSD *(Bryant, Mastrodomenico, Felmingham, Hopwood, Kenny, Kandris, Cahill, and Creamer; 2008).* Unfortunately, this isn't an option for SM's still in Theater, and long waitlists for in Garrison behavioral health services make it virtually inaccessible.

Substance Use/Abuse (Cont.)

Stereotyping and Bias: Service Members have a requirement to be "fit for duty" at all times and are assessed for readiness on a regular basis. There is a strong belief that being diagnosed with a mental health condition will render a SM "nondeployable", and therefor end their military career.

Additionally:

- There remains a bias that anyone who seeks behavioral health services is "weak". This is an extension of stereotypes that are passed down over generations.
- Poor understanding of what types of "trauma" constitute a diagnosis of ASD and PTSD.
- Ongoing belief that PTSD is highly "over-reported" in an attempt to increase VA disability benefits.
- Introduction and subsequent failure of many programs designed to increase family awareness of their Service Member's needs after they return from deployment.

Effective Treatment Modalities

There are a number of modalities that are effective in the treatment of PTSD.

- VA approved psychotherapeutic modalities for Depression, Anxiety, Insomnia, and Schizophrenia include Prolonged Exposure Therapy (PE), Cognitive Behavioral Therapies for Insomnia and Depression (CBT-I and CBT-D), Cognitive Processing Therapy (CPT), Dialectical Behavior Therapy (DBT), Acceptance and Commitment Therapy for Depression (ACT-D), Social Skills Training (SST), and various Family Systems modalities. *(Mental Health; 2022)*
- The Department of Veterans Affairs endorses pharmacologic intervention combined with psychotherapy, although the first choice is always psychotherapy *(The management of Posttraumatic Stress Disorder workgroup; 2016).*
- Additionally, the VA endorses the use of PE, CPT, and Eye-Movement Desensitization and Reprocessing (EMDR) specifically for the treatment of PTSD *(PTSD: National Center for PTSD; 2022)*

Effective Treatment Modalities

The VA also endorses the use of several “complementary and integrative health” modalities as a part of a 2-year pilot program known as “Whole Health” *(Whole health; 2021).* These include:

- *Biofeedback*
- *Acupuncture*
- *Massage*
- *Clinical Hypnosis*
- *Meditation, Guided Imagery, Tai Chi/Qi Gong, and Yoga*

The VA's Ambivalence

There is a significant list of modalities to which the VA is ambivalent, simply noting there Is not enough empirical evidence to either back it up nor completely abandon it. These include:

* Transcranial Magnetic Stimulation (TMS), Electroconvulsive Therapy (ECT), Stellate Ganglion Block (SGB), and Vagus Nerve Stimulation (VNS).

These modalities have demonstrated some efficacy, but not enough for the VA or Department of Defense to recommend their use. The disclaimer is "insufficient evidence to recommend for or against" *(PTSD Workgroup; 2016, p. 65).* For this reason, the VA does not currently offer these modalities, but continues to review new and upcoming research.

Current VA Funded Studies

Another initiative by the Department of Veterans Affairs is in pursuit of the identification and testing of new pharmacological treatments for PTSD. Known as the *PTSD Psychopharmacology Initiative (PPI)* and ongoing since 2016, the program is aimed at accelerating new and more effective treatments for PTSD. These include:

- Topamax, Prazosin, DHEA, Cannabis, Ketamine, Oxytocin, Suvorexant, Doxazosin, Mifepristone, Nitrous Oxide, Pregnenolone, and Glucocorticoid Rec Antagonist *(Office of Research & Development; 2019)*
- Methylphenidate for individuals with PTSD and recent stroke, Topamax and Doxazosin for treatment of co-occurring PTSD and Alcohol Use Disorder, Neurosteroid intervention for PTSD in Iraq/Afghanistan veterans, and the search for noradrenergic biomarkers in PTSD *(Office of Research & Development; 2021)*

FDA Approved Therapies to Note

While the Department of Veterans Affairs will not fully endorse a treatment modality that has yet to meet the VA's standard of care, there are a number of FDA approved modalities that are available to veterans who utilize private insurance. These include:

- Ketamine Infusion Therapy
- Transcranial Magnetic Stimulation
- Stellate Ganglion Block: Injection of anesthetic into the Stellate Ganglion located at the base of the neck. Shown to reduce excitability, hypervigilance, and anxiety/fear.
- Vagus Nerve Stimulator: Internal stimulator not unlike a pacemaker whose electrodes are wrapped around the Vagus Nerve to induce a parasympathetic (relaxation) response.

Ketamine Infusion

There is significant misunderstanding about the safety, use, and efficacy of low-dose Ketamine for the treatment of Depression, PTSD, and Chronic Pain. Discussion:

- Ketamine is an animal tranquilizer and medication used in humans during anesthesia. It is sold on the street as “special K”, and first came to the interest of scientists when addicts seeking treatment remained uncharacteristically euphoric and joyful.
- Ketamine is an NMDA receptor antagonist. The NMDA receptor normally modulates the availability of Glutamate, the main excitatory neurotransmitter important for synaptic plasticity, learning, and memory. Over-excitation of the NMDA receptor leads to “excitotoxicity” and is often implicated in drug induced brain damage and neurodegenerative disorders such as Alzheimer's and Dementia *(Lijffijt, Green, Balderston, Iqbal, Atkinson, Vo-Le, Vo-Le, O'Brien, Grillon, Swann, & Mathew; 2019).*

Ketamine Infusion (Cont.)

Continued from previous slide…

- Studies have shown that excitation of the NMDA receptor leads to Behavioral Activation and sensitization. Due to its involvement in learning and memory, repeated activation leads to a conditioning response that is difficult to “unlearn”. This same response has been implicated in the increased addiction potential in PTSD sufferers *(Lijffijt et al.; 2019)*
- Stress, stimulants such as Methamphetamine, Amphetamine, Cocaine, and Alcohol, anxiety, PTSD, and chronic pain all cause over-excitation of NMDA receptors.
- When Ketamine is administered, it blocks the activity of the NMDA receptor, thus inducing a parasympathetic response. For PTSD, repeated Ketamine exposure has actually been shown to reverse the effects of the traumatic event *(Liriano, Hatten, and Schwartz; 2019)*

Transcranial Magnetic Stimulation and Neurofeedback

TMS is utilized in conjunction with Neurofeedback, TMS or rTMS, utilizes an electromagnetic coil placed strategically over different parts of the cerebral cortex to generate an energy pulse known to stimulate neural activity (Kropotov; 2016).

- A non-invasive procedure, the magnet doesn't touch the head, and the electromagnetic energy only penetrates the cortex about 2-3 centimeters.
- The magnet is set to pulse at different frequencies, depending on the desired effect. At low frequencies (1Hz or below), the energy decreases cortical excitability. At higher frequencies (5-20Hz), it increases cortical excitability (Kroptov, 2016).
- Increasing and decreasing of cortical excitability leads to modulation of brainwave activity. Lower frequency brainwaves (Delta, Theta, and lower Alpha) are predominate in deep-sleep (Delta), first stage of sleep or the hypnogogic stage (Theta), and a state of deep relaxation (lower Alpha).
- Higher frequency brainwaves (high Alpha, Beta, and Gamma) are predominate during awareness (high Alpha and lower Beta), concentration and focus (Beta), peak concentration, insight, and intuition (Gamma).

Transcranial Magnetic Stimulation and Neurofeedback (Cont.)

- **TMS on its own helps to modulate brainwave activity. However, combined with Neurofeedback….**
  - A Quantitive EEG (QEEG) is first utilized to gather a summary of the client's current baseline brainwave state during given tasks
  - The brain is active at all times, and ALL brainwave states are present at ALL times in various locations throughout the cortex. Electrodes must be placed at strategic points on the scalp to ensure readings are being taken from the corresponding structure of the brain.
  - The client will be asked to complete certain tasks, such as a guided imagery task designed to induce a state of relaxation. If readings show that the client stays in a predominate state of High Alpha or Beta, it suggests he suffers from Anxiety., as these waveforms should only be seen during concentration and focus. Alternatively, if the client is asked to perform a mathematical, puzzle matching, or spatial task but shows predominate low Beta and Alpha waveforms, it is suggestive of depression as these waveforms should only be predominate during concentration.
  - TMS and Neurofeedback are similar in that they each modulate brainwave activity over time, and both do so through the use of electrical current. However, neurofeedback combines cortical stimulation via electrical current with operant conditioning to promote lasting behavior changes. The individual learns to modulate his or her own brainwaves through training. TMS is often combined with neurofeedback for the same reason. TMS is indicated for depression while Neurofeedback can be used for depression, insomnia, PTSD, anxiety, eating disorders, personality disorders, ADHD, OCD, and Substance Use Disorder.

Psychotherapies Explained

EM**DR: Utilizes bilateral stimulation through eye-movements, knee taps, oscillating tones, or hand buzzers to reduce the subjective disturbance from a traumatic memory. These remove the negative stimulus by pairing the memory with a more neutral one (BLS).**

- Think of Prolonged Exposure, but without the exposure.
- Is NOT talk therapy. However, the VA does endorse an eclectic approach by combining EMDR with CBT. In fact, some studies suggest that the greatest benefit from EMDR is having the opportunity to talk about the trauma
- Repeated BLS moves the body and mind memory as well as the image that is currently stored in the Amygdala to the prefrontal cortex.

Psychotherapies Cont…

PE: Prolonged Exposure therapy starts by helping the individual understand what he or she is feeling. The individual rates his anxiety while thinking about the traumatic memory, and learns to control it by deep breathing, grounding and centering, and/or distraction. As his ability to control his fight or flight response improves, he is gradually exposed to varying degrees of the stimulus until he is desensitized to it. Sometimes, the opportunity arises to allow the individual to experience real-life exposure, such as the case when treating a phobia. PE requires that the individual tells and retells the story, sometimes asking them to record the story for repeated playback. The therapy is in the exposure to the constant telling and retelling, which often removes the emotional or physical connection.

Barriers to Effective Treatment

Despite the endorsement from the VA and DoD of these treatment options, each VAMC is limited by what their clinic can provide at any one time. The modalities they endorse will change from one clinic to the next, so while the VA as a whole may endorse the use of EMDR, many clinics do NOT provide it or are forced to put the veteran on a waitlist due to high demand

The Department of Veterans Affairs follows a much higher standard of efficacy, and will not promote, endorse, or provide a modality that hasn't been rigorously studied and tested. So many opportunities that are available via private insurance are not available with the VA.

Many VAMC's have huge waitlists, and a veteran may be expected to wait months before they can get the help they need. The Community Care Network partnership allows the VA to send their veterans to civilian providers if that center cannot serve their needs in a timely manner, but not all VAMC's are willing to do this.

Barriers Continued…

Ongoing stereotyping, bias, judgement, and fear about what will happen if a service member reports PTSD or substance use.

Medication limitations for deployable service members: A great many medications that could be effective are not authorized for service members if they are to maintain a “mission ready” status.

PCS to OCONUS duty stations where young service members have no family and typically choose not to bring their spouses. Limited access to off-base resources.

Overwhelmed Military Treatment Facilities that cannot provide the behavioral health services that service members desperately need.

Barriers….

Other barriers include:

- Military culture is such that veterans are taught that asking for help makes them weak. There are many veterans who refuse to claim VA disability for PTSD on the basis of weakness.
- A low VA disability rating could affect the availability of a program or modality.
- Homelessness and/or limited access to a VAMC. Many veterans are not firmly embedded within their local VAMC, or do not access the available resources either due to lack of knowledge or firm use of cognitive distortions.
- VA overflow can severely limit what is available. IOP's, transitional housing programs, groups, residential services, and individual appointments fill up fast. It is only recently that the VA recognized they couldn't handle all the claims and started reaching out for help. Many VAMC's don't tell their veterans this, either due to ignorance or desire to keep the veteran in the program.
- VAMC location can affect what is available at the time. For example, the Houston VA is experiencing shortages in available groups due to how hard they've been hit during the COVID pandemic. Many in-person IOP programs have been shut down and are only available via telehealth services. If a veteran doesn't have a phone, computer, or internet access, they can't access the meeting.

What can you do?

The first step we can all take is to get trained in Trauma-Informed care. This is the bare minimum necessary to provide treatment to trauma victims. With military veterans, there are a number of free trainings available at https://www.ptsd.va.gov/professional/continuing_ed/find_a_course.asp

You can access training videos @ https://www.ptsd.va.gov/appvid/video/pro_videos.asp

These are short 15-minute videos of veteran survivors of PTSD and their stories. They discuss experiences and help walk the viewer through trauma-informed practices in a healthcare setting. You can also find a facilitators guide that will test your knowledge in the practice of trauma-informed care.

What more can you do?

New studies come into existence nearly every day. Existing knowledge is constantly being modified as we learn more about PTSD. What I covered today is just a small portion of what's out there. Do your research. Learn about these studies. Try to understand the nature of PTSD, and help uncover the bias that has stopped so many people from reaching out for help.

To treat PTSD, it is important to understand not only the underlying fight or flight mechanism responsible, but the co-occurring conditions that people experience with PTSD. These include depression, anxiety, insomnia, substance use disorder, Borderline Personality Disorder, and Bipolar Disorder.

Do not treat your service members, or anyone for that matter, as if they "should have known better" than to start using drugs or alcohol or that they have it within themselves to control their use. There is already an inherent degree of shame, and the barriers they constantly face just to get into services are almost insurmountable.

Questions?

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