



# Overcoming Sexual Trauma with Equine Therapy

RESEARCH

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## ABSTRACT

Veterans endure a variety of mental health concerns due to the common adversities and traumatic events experienced while in the military. However, veterans who receive a mental health diagnosis often do not reach out to healthcare professionals due to the negative stigma associated with the diagnosis. A component of mental health that is not addressed in the military is military sexual trauma (MST). MST is a problem in which an individual experiences sexual assault or repeated sexual harassment while serving in the military. The symptoms experienced from MST are similar to the symptoms of post-traumatic stress disorder (PTSD), depression, and anxiety. An extensive search was conducted with specific criteria set, utilizing search engines like EBSCOhost, USDVA, PubMed, and *USA.gov* to bridge the research gap between MST and the modality of equine therapy, which is a therapeutic intervention that utilizes horses as treatment for trauma symptoms. Scientific articles have been collected that focus on the benefits that equine therapy has provided to individuals with PTSD, depression, and anxiety with a specific interest in how it could improve their quality of life moving forward. To conclude, a diverse set of scholarly articles provided ample evidence that equine therapy is a beneficial modality for all three disorders. With further research, equine therapy could potentially be an intervention for individuals with MST.

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## BACKGROUND VETERANS

The United States Department of Veterans Affairs (VA) serves approximately 23.4 million veterans. This number continues to grow, and the VA predicts that there will be over 14 million veterans in the United States (US) in 2036 (United States Department of Veterans Affairs [USDVA], 2019). Many veterans face a variety of mental health concerns due to the various difficulties experienced during their time in the military. In fact, 25–37% of veterans who receive care at the VA are diagnosed with a mental health issue (Seal et al., 2007). Poor mental health can further lead to negative declines in an individual's physical health. Some common mental health conditions include depression, anxiety, and PTSD. Veterans who experience poor mental health often have increased rates of substance use, suicide risk, homelessness, incarceration, hospitalization, family/relational difficulties, economic difficulties, and medical illnesses (Ramchand et al., 2015). Almost half of the veterans do not get the help they need after receiving a mental health diagnosis due to the negative stigma associated with mental health problems (Lanning & Krennek, 2013).

## SEXUAL HARASSMENT/ASSAULT

Sexual harassment and/or sexual assault can happen to anyone; however, there is a higher prevalence of female victims than male victims worldwide (US Department of Defense, 2019). The VA determined that the behaviors of leaders were more strongly associated with women's risk of sexual assault in the military (SAIM) than established individual risk factors such as prior victimization (Sadler et al., 2003). It is common for sexual assaults to occur toward women after the workday and away from their station (Department of Defense, 2019). Additionally, it is common for the perpetrator to be the female's direct superior (Morrall et al., 2015). Sexual assault towards military women is less likely to be reported due to the fear of repercussions such as being discharged or demoted (Eliezer et al., 2020). It is important to acknowledge the history of survivors of sexual assault. Usually, survivors of this kind of trauma have a history of sexual harassment, assault, or stalking prior to or after the incident (Eliezer et al., 2020).

Beckman and fellow researchers (2018) conducted an experiment that was the first to review the prevalence of military sexual assault among self-identified transgender veterans. Prior to their experiment, there were only two studies completed that encompassed transgender individuals. The rate of MST among veterans who identify as transgender was 15%, which was higher than non-transgender veterans experiencing MST, at 6% (Brown & Jones, 2016). Lindsay and accompanying researchers

(2016) completed similar studies that dove deeper into the men and women who experience MST, and they discovered similar outcomes to Beckman et al.'s research. Transgender veterans who were active in Iraq and Afghanistan reported that 20% of transgender men and 13% of transgender women experienced MST. Beckman and his peers discovered the prevalence of military sexual assault (MSA) among 221 participants was 17.2%. Schuyler et al. (2020) also concluded that transgender individuals are at a higher risk for sexual harassment.

Sexual harassment is a persistent problem throughout the US military (Beckman et al., 2018; Harris et al., 2017; Schuyler et al., 2020). Factors of sexual harassment include "deliberate or repeated unsolicited verbal comments, gestures, or physical contact of a sexual nature which are unwelcome by the individual" (US Merit Systems Protection Board, 1981, p. 10). Sexual assault involves penetrative acts including rape, oral or anal sex, or any unwanted sexual contact that is abusive or wrongful (Department of Defense, 2019), not including sexual harassment or other types of physical assault (Skinner et al., 2000; Turchik et al., 2013; Wilson et al., 2015).

MST is when an individual experiences sexual assault or repeated sexual harassment while serving in the military (Street et al., 2019). Sexual trauma in general often falls through the cracks of discussion due to societal stigmas towards the matter, and MST is no exception. This can leave victims of MST feeling helpless amidst their struggle to recover. Medical professionals need to do their part in helping these victims access proper treatment. This may not always include traditional treatment methods such as counseling. Many cases of MST are discovered during the Veteran's Health Administration's (VHA) universal MST screening program. This is because many veterans are hesitant to discuss their experiences unprompted. Many studies have shown that MST victims—and sexual trauma victims in general—face unique difficulties when acquiring medical help, typically in the form of stressful, negative, or insensitive interactions with health-care providers (Cichowski et al., 2019). As a result, most veterans who have experienced MST do not report it unless directly asked (Street et al., 2019).

Specifically looking at MST and the correlation between the trauma and suicidal ideation, "Men who experienced military sexual assault (MSA) reported higher levels of suicidal ideation than those who did not experience MSA, even in analyses using a sample matched on demographic variables, child abuse, and premilitary adult sexual assault" (Schry et al., 2015, p. 391). All victims of MSA can develop PTSD, which can become detrimental to one's health (Luterek et al., 2011; Wolfe et al., 1998). Additionally, a correlation was discovered with the development of depression: an individual's ability to cope with difficult situations is

impaired due to the heightened neuroendocrine response that occurs in the body during trauma (Hankin et al., 1999; Kimerling et al., 2010; Maguen, et al., 2012; McEwen, 2007; Suris et al., 2007). Eating disorders, sexual dysfunction and dissatisfaction, suicidal ideation and attempts, adjustment to civilian life, and other trauma symptoms, interpersonal difficulties, dissociation, and emotional dysregulations can accompany this diagnosis (Bell & Reardon, 2011; Bryan et al., 2015; Forman-Hoffman et al., 2012; Katz et al., 2007; Luterek et al., 2011; McCall-Hosenfeld et al., 2009; Stahlman et al., 2015; Turchik et al., 2012). Ultimately, each of these biological, psychosocial, and social domains are impacted when an individual endures any type of trauma, which can result in a decline in their occupational skills and activities of daily living (McEwen, 2007).

### **MILITARY SEXUAL TRAUMA AND ANXIETY/DEPRESSION**

MST is often directly associated with both anxiety and depression (Signal et al., 2014). Additionally, anxiety disorder (AD) is very common among veterans. Veterans often remember the traumatic experiences they faced while serving. For example, an individual in the military that has been deployed to war may experience near-death situations and watch their colleagues get wounded or killed. These traumatic memories could put the individual at risk for AD (Ramchand et al., 2015). AD often occurs when an individual experiences continuous stress and anxiety that worsens over time. Symptoms often negatively affect everyday activities. Symptoms may include issues with concentration, panic attacks, uncontrollable and constant worry, and difficulty sleeping (USDVA, 2019). Along with anxiety disorders, another common diagnosis amongst veterans is depression. “Depression is the most prevalent psychiatric disorder, which affects more than 300 million individuals” (Gabriel et al., 2020, p. 2). The cause of depression could be abuse, genetics, illness, or a traumatic major life event. Wilson and his peers (2015) stated that depression has been linked to an increased risk of different psychiatric disorders. Additionally, depression has been connected to significant functional impairment and reduced quality of life (Frederick et al., 2015). Animal-assisted therapy (AAI) and adventure-based interventions have helped people cope with the symptoms of depression, which is essential in their recovery process (Ferruolo, 2016; Kyriakopoulous, 2011).

### **EQUINE-ASSISTED THERAPY**

AAI is a “form of treatment with the inclusion of animals into human well-being, and educational interventions” (Jones et al., 2019, p. 2). Specifically, equine therapy utilizes horses as a therapeutic source, which is a

modality that has shown promise in treating depression and anxiety in individuals (Ferruolo, 2016). There is a wide range of equine-assisted activities that incorporate riding, life coaching, and psychotherapy. These activities have proven to create healthy change in individuals with mental health disorders, which can help veterans adjust more efficiently to civilian life after returning home from being isolated from the public. McKenna (2020) stated that a “growing body of research suggests that just spending time with horses calms out the autonomic nervous system, improves self-esteem, and self-efficacy” (p. 40). In general, this statement aids to better understand the overall benefits of equine-assisted psychotherapy (EAP) and in turn, “Therapists have agreed that EAP is a powerful mode of therapy and can provide benefits in a shorter period of time than other modes of therapy” (Wilson et al., 2015, p. 24).

Current research has proven the need for treatment for veterans facing sexual trauma; research has also confirmed the success of equine therapy for those with varieties of mental disorders. However, there is a gap in research directly relating to the benefits of equine therapy for veterans who have endured sexual trauma. Based on research, equine therapy could prove to be very beneficial for veterans who have experienced sexual trauma. The question at hand is whether equine therapy is an effective modality, especially concerning other modalities like human counselors, art therapy, or even aquatic therapy. Horseback riding is a common form of leisure, but it is the way facilitators use their philosophies, experiences, passions, and engagement processes to modify the program for each client and their individual traumas that allows the equine learning process to be therapeutic (Townsend et al., 2019). Equine-assisted therapy has proven to help clients facing many different disabilities and traumas, although there is little to no research regarding EAP for veterans who have faced MST. While there is plentiful evidence of research on equine therapy as it relates to PTSD, depression, and anxiety, there is a significant research gap for MST. How can equine therapy benefit victims of sexual trauma? Also, how does sexual trauma affect veterans? This research’s focus is the collection of information on how equine therapy could help veterans who are hesitant to share their sexual trauma and receive beneficial help, as well as how it could improve their quality of life moving forward.

### **METHODS**

A comprehensive search was completed with the criteria outlined below, using the search engines EBSCOhost, USDVA, PubMed, and [USA.gov](https://www.usa.gov).

## INCLUSION CRITERIA

Articles were chosen based on the relevance to two research questions: How can equine therapy benefit victims of sexual trauma? How does sexual trauma affect veterans? Scholarly articles sourced from peer-reviewed journals were used to ensure accurate and relevant results. Specific terms such as “depression,” “anxiety,” and “PTSD” were used initially, followed by “veterans,” “MST,” and “sexual trauma” to narrow the results. The terms “equine therapy” and “animal-assisted therapy” were then applied to focus on specific intervention. The criteria were set between the years 2010 and 2020, but an article from 2007 is included due to its mention of the prevalence of mental disorders among veterans. Articles focusing on MST did not appear in our research until 2013.

## EXCLUSION CRITERIA

Articles that did not address the research questions were excluded from the literature review. Research articles that did not include terminology on veterans, depression, anxiety, PTSD, and MST were not used. Additionally, articles that were published prior to 2007 were omitted. Studies that focused on other interventions except equine therapy were not used within the search either.

## RESULTS

Military sexual trauma (MST) is an umbrella term that covers the topics of military sexual harassment (MSH) and military sexual assault (MSA; Lofgreen et al., 2017). MSH refers to verbal and physical sexual contact that is repeated, unsolicited, and threatening in character. MSA is sexual contact characterized by using force, threats, or abuse. This also includes instances in which the victims are unable to consent. The majority of MST research focuses on MSA. However, the majority of MSA victims report experiencing MSH during the escalation to an assault. MST prevalence ranges from 22–45% depending on the assessment methods (Lofgreen et al., 2017). When these percentages are broken down, it becomes apparent that women are more likely than men to experience both MSA and MSH while serving in the military. More than 80% of MST survivors are victimized between the ages of 17 and 24. The highest rates of MST occur within the Marines and Navy, especially when there is a high usage of alcohol. Some of the personal issues that MST victims face often include a decreased sense of safety, decreased trust, difficulty readjusting romantic relationships, and decreased desire to have children. However, MST is most often associated with PTSD, depression, and anxiety (Lofgreen et al., 2017).

## BENEFITS OF EAT

In past studies, equine-assisted therapy (EAT) has been known to be beneficial for veterans. Several studies have shown that EAT programs help increase self-confidence, self-esteem, self-concept, social skills, and quality of life. Not only does it aid victims in all of these areas, but it also helps reintegrate them into the community and their everyday lives (Ferrulo, 2016). A study was conducted on several veterans who were reported as feeling depressed, anxious, hopeless, and isolated before the EAT intervention. After they underwent 12 sessions of the intervention, they were asked to report on their progress. Most reported an increase in sociability, reduced feelings of isolation, increased feelings of trust and hope, and an increased desire to serve others. The veterans also learned new self-meditation coping skills, and every one of them said they had a “very positive perceived benefit” from learning the new skills. Post surveys were taken from each of the veteran’s significant others, and 92% of them reported an improvement in the coping skills of their partners, which also significantly improved their relationships (Romaniuk et al., 2018). Another program that helps veterans through EAT further explained the improvements of this therapy regarding relationships. A lot of veterans reported not feeling as if they will ever be able to bond with someone again due to the psychological battle they often experience after the trauma of war. But after interacting with the horses, the veterans were able to feel a connection and a bond with them, which can help them in their future relationships with other people (Clarke, 2020). These studies are just some of the many that prove EAT can lead to many positive benefits in the psychological well-being of veterans. PTSD is a highly prevalent disability in the veteran population, as well as a disability that has been proved to show improvement with the use of EAT (Boss et al., 2019).

## POST-TRAUMATIC STRESS DISORDER

A 2019 study exploring the impacts of equine therapy for individuals with PTSD investigated the effects of EAT on their symptoms, as well as “work, family, and social” abilities for individuals with PTSD (Shelef et al., p. 694). The researchers recorded their findings over a 6-month period, with 13 of 23 veteran participants with PTSD completing 3 hours of EAT once a week. Measurements of results were shown through different forms of assessments, including a short PTSD rating interview (SPRINT) that rates level of PTSD and symptoms, and the Sheehan Disability Scale (SDS) that looks at the functional disability that comes from a psychiatric disorder. SDS was determined three times: before EAT, 1 month into EAT, and 6 months into EAT. SPRINT was given twice: before EAT and 6 months into EAT. During the sessions, participants engaged in grooming, tacking, riding,

groundwork, and group processing with a social worker and equine specialist present. Results at the end of the 6 months showed significant improvement within the participants' "ability to work and perform daily tasks" on the SPRINT and a "statistically significant reduction in the number of days of inefficiency (work/study/housework)" on the SDS (Shelef et al., 2019, pp. 397–398). Some participants reported that they were able to find trust and communication through their time working with the horses that they could apply to other parts of their life.

In addition to EAT, there is equine-assisted psychotherapy (EAP) that is used to focus primarily on social, emotional, and/or cognitive aspects of persons experiencing PTSD. A specific study in 2019 investigating evidence of the benefits of the concept of EAP for veterans with PTSD reported improvements in the participants' functioning. Over a 6-week course, 10 veteran participants with PTSD were in an EAP program along with other standard forms of therapy (Burton et al., 2019). The results of these 10 veterans were compared to a control group of veterans only engaged in their standard forms of therapy. In EAP, participants do not ride horses, but focus on the groundwork that allows for what is called "metaphor work." In metaphor work, "participants perform an individualized trans-derivational search, a psychological process that facilitates locating the area of meaning most resonant with their current psychological challenges and state of functioning," (Burton et al., 2019, p. 15). The horses are used to guide the choices of the participants and allow for the self-recognition of the needs of an individual to promote healing. In order to understand the outcomes in the control and experimental groups, the scores were used from two evidence-based questionnaires given at the beginning of the 6-week intervention and again at the conclusion of the intervention. The first outcome measure was the PTSD Check List-Military Version (PCL-M) to determine symptoms participants were experiencing related to their PTSD. The second outcome measure was the Connor-Davidson Resilience Scale (CD-RISC), which understands participants' psychological resilience. The final test used in this study was the salivary cortisol tests that determines if there was a difference in cortisol levels between the 2 groups. Results showed that there were significant improvements in both groups when looking at the symptoms of severity in the control and experimental group. CD-RISC increased in the control group and EAP experimental group, but there was a significant increase in the EAP group. There was no significant change in both groups for the salivary cortisol test. Burton's findings show that while EAP may not lead to a significant difference in comparison to the standard form of therapy that the participants were involved in, it still created an improvement in the participants with PTSD

as a form of therapy. EAP has proved to be successful in treating not only just individuals with PTSD, but also those who suffer from depression.

Nagrath (2020) completed an experimental study involving 50 participants with a diagnosis of PTSD to understand the use of EAT as an appropriate intervention. Veterans were assigned to either the intervention or control group. Within the intervention, the veterans took part in a 10-week EAT sessions that lasted 3 hours each time. There was significant representation due to the large sample size of 50 veterans, and there was a reduction of PTSD symptoms for those that were in the EAT intervention treatment group. This study was able to show the ability of EAT to treat the diagnosis of PTSD.

## DEPRESSION

An array of sources has created evidence-based research on the effectiveness of equine therapy for individuals who have depression. Frederick et al. (2015) conducted a study that investigated equine-assisted learning (EAL) and how it can impact depression and hope levels for at-risk adolescents. When comparing the pre and post-intervention scores of the control and treatment groups, "scores of participants in the treatment group showed a greater increase than the control group after experiencing the 5-week program of EAL" (Frederick et al., 2015, p. 813). Depression levels were not significantly impacted, but the treatment group scores consistently decreased over time. Roberts and Honzel (2020) conducted a study of 37 adolescents between the ages of 12 and 17 years old, each with a serious emotional disturbance (SED). Every participant engaged in both traditional therapy and equine therapy. The evidence of Roberts and Honzel's study revealed that clients had less external anxiety while engaging with equine-facilitated psychotherapy (EAP). A 2-month study was completed with nine individuals, but only six were analyzed. Four of the individuals stated they had experienced depression, and the other two stated they experienced both depression and anxiety (Kyriakopoulos, 2011). The results revealed that clients' positive self-perceptions, which were initially developed during the individual therapy sessions, were reinforced through the outdoor experience.

Young and Horton (2019) completed a study which consisted of 20 participants whose mean age was 55.5 years. The results of the study concluded that "no relevant evidence regarding the clinical effectiveness of equine therapy for patients with MDD [Major Depressive Disorder] was identified," (Young & Horton, 2019, p. 7). The small sample size affected the ability to identify a statistically significant difference between groups in the outcomes examined. Additionally, this study was subjected to bias because the participants were not randomly assigned

to the treatment groups. Lancia (2008) suggested that EAT is helping treat psychologically injured veterans. Some of the psychological injuries include post-traumatic stress disorder, depression, grief, panic attacks, and sleep disorders.

### **ANXIETY**

Several studies have shown that individuals with various anxiety disorders have benefited from animal-assisted therapy (AAT). One study was conducted on patients with psychotic disorders, mood disorders, anxiety disorders, and depression. Each of the patients with these disorders was separated into two groups; one group was given a therapeutic animal and the other was not. The brief psychiatric rating scale measures symptoms of anxiety, depression, and psychoses in relation to gauging where a patient is and what treatment course would be most beneficial. The scores of the group with the animal present significantly increased, meaning that treatment was found to be effective in assisting with the diagnoses found on the brief psychiatric rating scale. The group without the animal present did not show nearly as much improvement. In fact, the reduction in anxiety scores for patients with psychotic disorders was twice as great after animal-assisted therapy compared to the other group (Barker & Dawson, 1998).

## **DISCUSSION**

There has been a significant increase in the number of US veterans who are diagnosed with a mental health disorder. Some of these disorders include anxiety, depression, and PTSD. MST is also very common among the veteran population. Commonly, the individuals with MST also have one or more of the previous listed mental health disorders. The struggles of these individuals often go unnoticed because it is not a topic that is easy to address due to negative societal stigmas of MST. Because of this, healthcare workers need to be more aware of this form of trauma. Therapists, counselors, and other medical professionals can all support individuals with MST by asking the right questions and providing the most effective treatment. Equine therapy has many benefits for a variety of mental health diagnoses, but also specifically for individuals that have experienced MST.

### **ANIMAL-ASSISTED THERAPY**

Animal-assisted therapy has benefited a variety of populations with behavior issues and decreased emotional well-being. However, the question at hand is whether

equine therapy can be an effective therapy modality when compared to other options like human counselors, art therapy, or even aquatic therapy. The modality has been proven to increase positive behaviors while decreasing negative behaviors in individuals with mental health disorders. This is because horses play a crucial role in building rapport and promoting feelings of power. Individuals who have experienced MST typically have difficulties with forming therapeutic bonds, which is why it is so important to have animals present in their rehabilitation so that they can learn to bridge that gap. The main disorders that accompany MST include PTSD, depression, and anxiety. The research above has provided ample evidence that equine therapy is a beneficial modality for all three disorders. Based on that evidence, the conclusion is that equine therapy would be a beneficial form of therapy for MST victims in addition to the conventional therapy techniques, like human counseling.

### **LIMITATIONS**

MST is a relatively new topic in the healthcare profession. Therefore, it became a limitation throughout the research process. Articles that alluded to MST were not found in the research until 2013, which constrained the amount of information that could have been gathered to support the research questions. The majority of the population of veterans is not engaging in equine therapy, which required other populations to be included in the literature review. Most of the articles within the literature review address the positive aspects of equine therapy and how promising it could be towards individuals with PTSD, depression, and anxiety. Consequently, research bias is a condition of this research.

The evidence found within research suggests many positive benefits of equine therapy for individuals with anxiety, depression, and PTSD. While there is a significant lack of research tying the positive benefits of equine therapy directly to veterans with MST, there is a great variety of research looking into MST and equine therapy benefits for mental health. Some of this research even directly relates to equine therapy for veterans with mental health diagnoses. Evidence-based research can conclude that equine therapy could be a very beneficial form of therapy for veterans with MST, and with more experimental research in the future, there could be an increase in more sound, evidence-based practice.

### **FUTURE RESEARCH**

Based on the results stated above, further research should focus on making direct connections between the diagnosis of MST and equine therapy rather than the symptoms

associated with an MST diagnosis. By further exploring this therapeutic modality, a group of typically overlooked clients can receive proper treatment. A great way to expand this research would be to create sessions at an organization like the United States Department of Veteran Affairs, which already offers equine therapy programs for veterans. Since the equine therapy program is already in place, it would be much easier to adapt the program content to cater to a different diagnosis. Another recommendation is to create programs focusing on debunking the stigmas associated with MST diagnoses and training health providers to engage with MST survivors in a more understanding manner. Cost can be a factor that affects programming, and there are several programs and non-profits based by area and state in the US. One program is called Help Our Heroes, which provides treatment programs related to any mental health diagnoses or co-occurring disorders for veterans. Many equine therapy agencies also have grant programs that can assist with the cost of treatment.

## COMPETING INTERESTS

The authors have no competing interests to declare.

## AUTHOR CONTRIBUTIONS

All authors equally contributed to the product of the paper by researching, writing, and editing.

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