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## How Equine-Facilitated Psychotherapy Addresses Military Sexual Trauma among Female Veterans: Systematic Review

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How Equine-Facilitated Psychotherapy Addresses  
Military Sexual Trauma among Female Veterans:  
Systematic Review

By

Claire Niessen-Derry, B.A.

MSW Clinical Research Paper

Presented to the Faculty of the  
School of Social Work  
St. Catherine University and the University of St. Thomas  
St. Paul, Minnesota  
In Partial Fulfillment of the Requirements for the Degree of  
Master of Social Work

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Patti Anderson

The Clinical Research Project is a graduation requirement for MSW students at St. Catherine University/University of St. Thomas School of Social Work in St. Paul, Minnesota and is conducted within a nine-month time frame to demonstrate facility with basic social research methods. Students must independently conceptualize a research problem, formulate a research design that is approved by a research committee and the university Institutional Review Board, implement the project, and publicly present the findings of the study. This project is neither a Master's thesis nor a dissertation.

## HOW EFP ADDRESSES MST AMONG FEMALE VETERANS

### **Abstract**

There were roughly 5,061 reports of MST since the Department of Defense's (DOD) fiscal year of 2012. The DOD believes that MST is vastly under reported and estimates that less than 20% of sexual assaults have been reported over the past seven years. The research question for this systematic literature review was: In what ways does equine-facilitated psychotherapy (EFP) address military sexual trauma (MST) among female veterans? Levels of publication utilized in this systematic review included peer-reviewed articles, gray literature, and dissertations. Types of studies included in this systematic review include empirically supported studies and qualitative and quantitative studies. The key search terms included: military, sexual trauma, sexual assault, rape, veterans, women, equine-facilitated therapy, equine-assisted therapy, equine, horse, holistic, therapy, animal, animal assisted therapy, equine-assisted learning, equine-facilitated learning, animal-assisted interventions, MST, mind-body, trauma-informed, complementary therapy, and integrative therapy. Primary findings included: EFP decreased PTSD symptomology through mindfulness, EFP improved relational functioning, EFP led to mind-body reintegration, EFP improved the therapeutic encounter, and EFP led to recovery and empowerment. The systematic review illuminated that equine-facilitated psychotherapy is a non-traditional form of therapy that may be appealing, and relevant, to female veteran survivors of MST who may otherwise not be amenable to traditional talk therapy. Equines are arguably more effective than other animals when it comes to therapeutic interventions with female survivors of MST. Mounted work could be considered one of the most powerful, movement-based therapies for sexual trauma due to the unique circumstances of riding.

**Acknowledgements**

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# HOW EFP ADDRESSES MST AMONG FEMALE VETERANS

How Equine-Facilitated Psychotherapy Addresses

Military Sexual Trauma among Female Veterans:

Systematic Review

## **Background**

Military sexual trauma (MST) is a phenomenon that has only recently, within the past decade, received national attention. It was not until 2004 that the Department of Defense (DOD) began to develop a military-wide definition for sexual assault (Hunter, 2007). Currently sexual assault is defined as “the alleged offenses of rape, nonconsensual sodomy, unwanted sexual contact, and attempts to commit these offenses” (Williams & Bernstein, 2011, p.138). In order to address the unique circumstances of sexual assault in the military, the Department of Veteran Affairs (DVA) created the nomenclature military sexual trauma (MST). MST is defined as “psychological trauma which...resulted from a physical assault of a sexual nature, battery of a sexual nature, or sexual harassment which occurred while the Veteran was serving [in the military]” (DVA, 2014, p.1). Experiences include, but are not limited to, “unwanted sexual touching or grabbing; threatening, offensive remarks about a person’s body or sexual activities; and/or threatening or unwelcome sexual advances” (DVA, 2014, p.1).

The experiences of female veteran survivors of military sexual assault is significantly different than the experiences of a civilian survivor of sexual assault within civilian life. Military sexual assault has been compared to incest due to the socialization of military members and its emphasis on fellow service members being akin to family members. Survivors live with, or near, their perpetrators, increasing their vulnerability for re-victimization. Hunter (2007) states:

A child in an abusive family lives with the abuser. Imagine someone who daily has to eat breakfast with the person who raped her. This is exactly the situation for children who

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live in incestuous families and for military personnel who have been assaulted by comrades. (p.146)

Sometimes the perpetrator is the survivor's commanding officer, leaving the survivor conflicted due to the militant socialization they receive regarding rank and order. Comparatively, a survivor of incest is assaulted by a family member, who is someone that lives with or near the survivor, and holds some form of rank over the survivor of childhood incest, creating conflictual feelings for the survivor. Hunter reports that "in both the military and abusive families, those who have power can wield it with few limits" (2007, p.145). The shame involved with being sexually assaulted is often exacerbated within the military. Betrayal within the ranks can shake a service member's foundational beliefs about themselves and the military as a whole.

There has been a significant increase in reports made between the fiscal year of 2012 and the fiscal year of 2013. For the fiscal year of 2012, there were 3,374 reports of alleged sexual assault (DOD FY, 2012). In the fiscal year of 2013, there was roughly a 50% increase in reported military sexual assault, with a total of 5,061 reports since the DOD's fiscal year of 2012. This significant increase in reports is considered to be related to an increased confidence in the DOD response system (DOD FY, 2013). The DOD believes that MST is vastly under reported and estimates that less than 20% of sexual assaults have been reported over the past seven years (DOD FY, 2013). According to the Department of Defense Annual Report on Sexual Assault in the Military, there currently is no data for the fiscal year of 2014 (DOD FY, 2013).

The population of female veterans continues to rise, however very few female veterans consistently utilize mental health services offered through the VA. Beginning on October 2001, 1,759,433 veterans from the Iraq (Operation Iraqi Freedom (OIF)) and Afghanistan (Operation Enduring Freedom (OEF)) wars became eligible for VA health care out of a total population of

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2.6 million veterans and service members (Department of Veterans Affairs, 2014a). As of 2009, female veterans represented 11% of the military population during Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) (National Center for Veterans Analysis and Statistics, 2011, p.4). During OEF/OIF, female veterans were regularly deployed for the first time and able to extensively engage in active combat (National Center for Veterans Analysis and Statistics, 2011). Roughly one in four female veterans have experienced MST (DVA, 2014b), with only 30% reporting symptoms of post-traumatic stress disorder nine months after the event (National Center for PTSD, 2014). In 2009, an estimated 480,000 (32%) female veterans were enrolled in the VHA health care system and while 120,000 likely experienced some kind of MST, only 0.01% (or about 4,800) have received on-going mental health services. The rare use of these services, juxtaposed to the prevalence of sexual trauma, illustrates the necessity for alternative mental health services, and perhaps ones that are independent of the VA.

### **AAT/EFP Interventions for MST**

**Trauma and battlemind.** Despite the alarming prevalence of military sexual assault, there are only two evidence-based therapies utilized by the VA that address post-traumatic stress disorder (PTSD) - Prolonged Exposure Therapy and Cognitive Processing Therapy. Currently, there are no interventions that cater to the unique needs of survivors of MST. Coleman (2012) suggests that:

...[T]rauma results in past experiences becoming embodied in present physiological states and action tendencies: The trauma is reenacted in breath, gestures, sensory perceptions, movement, emotion, and thought. The role of the therapist is to facilitate self-awareness and self-regulation, rather than to witness and interpret the trauma.

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Therapy involves working with sensations and action tendencies in order to discover new ways of orienting and moving through the world. (p.28)

One of the most pressing clinical issues is the management of the four basic components of trauma: hyperarousal, constriction (also known as hypervigilance), dissociation, and freezing – which is associated with the feeling of hopelessness (Levine, 1997, p.132). Hyperarousal can present itself in a variety of ways, some of which include rapid heart rate, physical agitation, jitteriness, sleeplessness, and racing thoughts. It is the nervous system's immediate reaction to perceived threats, a preparation for "fight or flight." Constriction, or hypervigilance, often accompanies hyperarousal. Levine (1997) states:

The nervous system acts to ensure that all our efforts can be focused on the threat in a maximally optimal way. Constriction alters a person's breathing, muscle tone, and posture. Blood vessels in the skin, extremities, and viscera constrict so that more blood is available to the muscles which are tensed and prepared to take defensive action.

Perceptual awareness of the environment also constricts so that our full attention is directed toward the threat. (p.135)

Dissociation can be described as a fundamental disconnection between one's body and mind; a "favorable means of enabling a person to endure experiences that are at the moment beyond endurance" (Levine, 1997, p.138). The last component, freezing, results in paralyzing immobility. Levine states "the sense of being completely immobilized and helpless is not a perception, belief, or a trick of the imagination. It is real. The body cannot move. This is abject helplessness – a sense of paralysis so profound that the person cannot scream, move, or feel" (1997, p.142). The four components described by Levine, when present in combat zones, are

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considered vital survival skills that, once combined with combat skills, develop into “battlemind” (Ellis & Camardese, 2011).

Battlemind is necessary for service members to sustain a constant state of hypervigilance and hyperarousal when in a war zone. In combat, battlemind helps the service member maintain tactical awareness, which is the act of continual scanning and awareness (Ellis & Camardese, 2011). When soldiers return home, the skills that previously kept them alive can become problematic and start to mirror symptoms of PTSD. Tactical awareness becomes hypervigilance. The hyperarousal that allowed the soldier to react to unexpected threats in a war zone translates into anxiety, thrill-seeking, and risky behaviors. Ellis and Camardese (2011) hypothesize that these symptoms may result in a high dropout rate among veteran clients. This hypothesis directly reflects the statistics gathered regarding retention rate of veterans seeking services through the VA (National Center for Veterans Analysis and Statistics, 2011). When working with veterans it is important that their experiences and symptoms be normalized and validated through support and psychoeducation in order to help them make sense of their experiences (Ellis & Camardese, 2011).

**AAT and EFP.** Animal-assisted therapy (AAT) and equine-facilitated psychotherapy (EFP) are gaining recognition as effective therapies when working with veterans and survivors of sexual trauma. Animal-assisted therapy provides a holistic and experiential approach to healing in which the relationship between the veteran and the registered therapy animal is the agent of change. While the therapist still provides traditional clinical interventions, they are also responsible for facilitating the relationship between the therapy animal and veteran, maintaining safety for all parties involved, as well as attending to the animal’s well-being throughout the session. As an animal-assisted therapist, the professional needs to be well-versed in the animal’s

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nonverbal communication style in order to detect any signs of stress or distress. It is important to acknowledge, and attend to, the needs of the therapy animal as a co-therapist so that the animal is not asked to perform beyond its capabilities on any given day.

According to Pet Partners, the nation's largest nonprofit leader in promoting positive human-animal therapy, AAT is a "goal-directed intervention in which an animal that meets specific criteria is an integral part of the treatment process. AAT is directed and/or delivered by a health/human service professional with specialized expertise, and within the scope of practice of his/her profession" (Pet Partners, 2015).

AAT is a broad umbrella term for various types of therapies involving various types of animals; this review intentionally addresses equine-facilitated psychotherapy due to the unique dynamics involved in mounted riding work for survivors of sexual trauma. EFP is defined as "an experiential psychotherapy that includes equine(s)...EFP denotes an ongoing therapeutic relationship with clearly established treatment goals and objectives developed by the therapist in conjunction with the client" (Krueger & Serpell, 2010, p.35).

**EFP and trauma.** Utilizing equine-facilitated psychotherapy provides sexual trauma survivors with a safe environment to experience reenactments. Horses are intrinsically perceptive and tend to reflect clients' emotional states (Parelli, 2012, p.24). The immediate physical feedback provided from the horses "helps clients learn how to pay better attention to the connection between their body and mind so they can inhabit their body in a new way" (DePrekel & Neznik, 2012, p.41). Working with horses helps calm and soothe the mind which aids the clients in the development of distress tolerance. DePrekel (2012) states:

Working with a large animal that demonstrates fight, flight, freeze, and fidget, which many of our clients experience in hyperarousal and hypoarousal states, can provide

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metaphor, sensorimotor experiences, and narrative opportunities for healing. Helping clients expand their window of tolerance and stay grounded and present in the presence of a horse while always allowing challenge by choice gives clients mindful experiences that can lead to opportunities to build new neuropathways. (p.61)

Working with horses in a therapeutic setting can help sexual trauma survivors increase their confidence and ability to self-regulate as well as learning healthy boundaries and assertive communication. Mounted work with horses also provides a client with sexual trauma a unique opportunity to reconnect with the traumatized part of their body in a safe environment. DePrekel (2012) notes:

...[C]lients who have cut off parts of their body may begin to reconnect while on the back of a horse; the clinician can work with them to regain sensation while using calming techniques so they can have a sense of control. When clients have a powerful reaction while riding, the clinician can stop the movement and have them process what is occurring while sitting on the horse or getting off and reconnecting with their feet on the ground. (p.64)

Since EFP is only recently gaining recognition, there is limited research on its efficacy when working with adults that have experienced sexual trauma.

With this in mind, utilizing EFP for MST within the field of clinical social work allows the EFP professional to provide holistic interventions within an eclectic and novel therapeutic setting. The equine-facilitated psychotherapist, as a social work professional, is able to combine both cognitive and behavioral interventions, while providing the veteran with a sense of autonomy and mastery over his or her therapeutic process through the utilization of horses. The utilization of equines, as a part of the therapeutic process when working with veterans with MST,

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is a relatively new intervention with limited empirical data regarding the ways in which it addresses MST. The gap in data limits the practitioner's ability to use evidence-based practices with measurable results. In order to address these limitations, this study will explore the ways in which equine-facilitated psychotherapy addresses military sexual trauma among female veterans.

### **Project Plan/Protocol**

#### **Research Question**

The question addressed in this review is: In what ways does equine-facilitated psychotherapy address military sexual trauma among female veterans?

**Concepts operationalized.** Though it is not in the research question, animal-assisted therapy (AAT) will be addressed as it is an umbrella term for equine-facilitated psychotherapy (EFP). AAT is defined as

A goal-directed intervention in which an animal that meets specific criteria is an integral part of the treatment process. AAT is directed and/or delivered by a health/human service professional with specialized expertise, and within the scope of practice of his/her profession. Key features include: specified goals and objectives for each individual; and measured progress. (Kruger & Serpell, 2010, p.34)

Equine-facilitated psychotherapy (EFP) is defined as “an experiential psychotherapy that includes equine(s)...EFP denotes an ongoing therapeutic relationship with clearly established treatment goals and objectives developed by the therapist in conjunction with the client” (Krueger & Serpell, 2010, p.35). The term equine includes horses, mules, ponies, donkeys, and miniatures (McCullough, 2011). For the purpose of this research, only equines capable of mounted work with adults will be addressed, therefore excluding miniatures.

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Included in the search are terms related to animal-assisted activities (AAA) due to a lack of consistency in practice and terminology. Animal-assisted activities "provide opportunities for motivational, educational, recreational, and/or therapeutic benefits to enhance quality of life. AAA are delivered in a variety of environments by specially trained professionals, paraprofessionals, and/or volunteers, in association with animals that meet specific criteria" (Pet Partners, 2015). AAA is different from AAT due to an "absence of specific treatment goals; volunteers and treatment providers are not required to take detailed notes; [and] visit content is spontaneous" (Kruger & Serpell, 2010, p.34).

Military sexual trauma is defined as "psychological trauma which...resulted from a physical assault of a sexual nature, battery of a sexual nature, or sexual harassment which occurred while the Veteran was serving on active duty or active duty for training" (DVA, 2014). Experiences include, but are not limited to, "unwanted sexual touching or grabbing; threatening, offensive remarks about a person's body or sexual activities; and/or threatening or unwelcome sexual advances" (DVA, 2014). While post-traumatic stress disorder and combat trauma are often co-morbid disorders, and will likely be discussed in some of the articles used for this review, the main focus of this literature review will pertain to military sexual trauma.

In regards to the target population, "female veterans" refers to an individual's biological sex and not their gender identity. This review is limited by this categorization because it does not account for veterans that are transgender or gender fluid.

### **Types of Studies**

In order to retrieve the broadest range of articles, while still maintaining various levels of validity, only empirically-based, qualitative and quantitative studies were utilized in this review. Literature reviews of empirically-based studies were also included.

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### **Levels of Publication**

Peer-reviewed articles were included from the search engines SocINDEX with Full Text, PsycNET, and Expanded Academic ASAP in order to address validity. However, the topic of equine-facilitated psychotherapy as a therapeutic intervention for military sexual trauma has not been studied at length within peer-reviewed journals, so dissertations and gray literature were included. The gray literature included books, and “.gov” and “.org” websites (such as www.va.gov, www.petpartners.org, and www.pathintl.org), and were utilized to add to the body of available knowledge.

### **Levels of Sensitivity and Specificity**

In order to understand the scope of available literature, a search for sensitivity and specificity was conducted. Searching for sensitivity casts a wide net among the literature and results in identifying a high percentage of relevant studies; however it can also result in a high percentage of irrelevant studies as well. In order to search for sensitivity, the search terms *military, sexual trauma, sexual assault, rape, veterans, therapy, and animal* were utilized in any, and all, combinations to retrieve a high percentage of studies, both relevant and irrelevant, that pertain to animal therapy and military sexual trauma. There were roughly 281 articles found. Searching for specificity casts a more limited and refined net among the literature and while producing primarily relevant articles, may mean that some relevant articles will be missed due to the narrow focus of the search terms. In order to search for specificity, the search terms *military sexual trauma, equine-facilitated therapy, equine-assisted therapy, veterans, and women* were utilized in any, and all, combinations to retrieve articles most relevant to equine-facilitated psychotherapy and the treatment of military sexual trauma. There were roughly 30 articles found.

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It should be noted, while this paper focuses on *psychotherapy*, the search term *therapy* was used in its place in order to retrieve as much relevant literature possible during the search.

### **Review Protocol**

**Data sources.** The electronic databases used to locate sources for this literature review included SocIndex with Full Text, PsychNet, Expanded Academic ASAP, ProQuest Dissertations & Theses Full Text, Science Direct, Clinical Social Work Journal, Journal of Military Psychology, National Center for Veterans Analysis and Statistics (NCVAS), Department of Veterans Affairs (DVA), Department of Defense (DOD) and Pet Partners. All of the articles compiled in the *Handbook on Animal-Assisted Therapy*, edited by Aubrey H. Fine (2010), and *Harnessing the Power of Equine Assisted Counseling: Adding Animal Assisted Therapy to Your Practice*, edited by Kay Sudekum Trotter (2012), were included in the search. The key search terms included *military, sexual trauma, sexual assault, rape, veterans, women, equine-facilitated therapy, equine-assisted therapy, equine, horse, holistic, therapy, animal, animal assisted therapy, equine-assisted learning, equine-facilitated learning, animal-assisted interventions, MST, mind-body, trauma-informed, complementary therapy, and integrative therapy*. The search included articles written in English and covered all terms, and combinations of the terms, in the keywords and abstracts. Gray literature from the organizations Professional Association of Therapeutic Horsemanship (PATH) Intl. and Pet Partners was utilized in order to supplement Trotter and Fine as well as any articles found through a search of the previously stated online databases. The NCVAS, DVA and DOD websites were utilized to gather quantitative data regarding military sexual trauma, veterans, and service members.

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Table 1. Studies Included in Systematic Review

Author & Year	Title	Type of Study
Abrams, B. N. (2013)	Exploring therapists' conceptions of equine facilitated/assisted psychotherapy for combat veterans experiencing posttraumatic stress disorder.	Dissertation
Bachi, K. (2012)	Equine-facilitated psychotherapy: The gap between practice and knowledge	Literature Review
Born, A. R. (2008)	The relationship between humans and animals in animal-assisted therapy: A qualitative study	Dissertation
Burns, B., Grindlay, K., Holt, K., Manski, R., & Grossman, D. (2014)	Military sexual trauma among U.S. servicewomen during deployment: A qualitative study	Qualitative
Coleman, V. E. (2012)	Reclaiming boundaries through equine assisted counseling	Case study
DePrekel, M. (2012)	Equine facilitated psychotherapy for the treatment of trauma	Case study
DePrekel, M. & Neznik, K. (2012)	Animal assisted group interventions for the treatment of trauma	
Esbjorn, R. J. (2006)	When horses heal: A qualitative inquiry into equine facilitated psychotherapy	Dissertation
Fayazrad, A. D. (2013)	Females in the military and military sexual trauma	Dissertation
Garland, D. L. (2012)	Walking with horses: Partners for humans recovering from trauma	Dissertation
Katz, L. S., Bloor, L. E., Cojucar, G., & Draper, T. (2007)	Women who served in Iraq seeking mental health services: Relationships between military sexual trauma, symptoms, and readjustment	Qualitative
Kruger, K. A. & Serpell, J. A. (2010)	Animal-assisted interventions in mental health: definitions and theoretical foundations	
Looman, M. (2012)	Grounded strategies that improve self-efficacy	
Louhi-Lethio, M. (2012)	EASEL: Equine assisted social-emotional learning	
Mattocks, K. M., Haskell, S. G., Krebs, E. E., Justice, A. C., Yano, E. M., & Brandt, C. (2012)	Women at war: understanding how women veterans cope with combat and military sexual trauma	Qualitative
Maurer, K. J. (2014)	Under pressure: Understanding post-traumatic stress disorder and treatment methods for combat veterans	Dissertation
McCullough, L. M. (2011)	Effect of equine-facilitated psychotherapy on posttraumatic stress symptoms in youth with history of maltreatment and abuse	
Moore, A. (2013)	Animal-assisted therapy for United States veterans with posttraumatic stress disorder	Dissertation
Northcut, T. B. & Kienow, A. (2014)	The trauma trifecta of military sexual trauma: A case study illustrating the integration of mind and body in clinical work with survivors of MST	Case study
Nussen, J. (2012)	The magic room	
Selby, A. (2009)	A systematic review of the effects of psychotherapy involving equines	Dissertation
Turchik, J. A. & Wilson, S. M. (2012)	Sexual assault in the U.S. military: A review of the literature and recommendations for the future	
Valente, S. & Wight, C. (2007)	Military sexual trauma: Violence and sexual abuse	Case study
Van Pelt, J. (2011)	Military sexual trauma	
Welsch, T. (2012)	The tellington method: A technique for equine assisted counseling	
Westerman, P., Hargreaves, H. A., Westerman, D., & Verge, M. (2012)	Improvement of self-efficacy and social skills through participation in great and small, a therapeutic horseback riding program	
Weston-Thompson, J. (2012)	Therapeutic trail riding for children and adults with ADHD and anxiety disorders	
Williams, I., & Bernstein, K. (2011)	Military sexual trauma among U.S. female Veterans	Literature Review

### **Data Analysis**

Of the original 281 articles found, 28 were utilized within this systematic review. Initially, articles were included, or excluded, based on their title and/or abstract. Once the list was narrowed down to roughly 50 articles, each article was read to determine if it met the inclusion and exclusion criteria. The final number of articles was narrowed down to 28 articles. Ten articles focused specifically on military sexual trauma, female veterans and/or PTSD among veterans. Eighteen articles focused on EFP and/or AAT, with two articles focusing specifically on EFP with veterans and six articles focusing on EFP and trauma. Eight articles were dissertations, with four focusing on EFP, two focusing on AAT, and two focusing on military sexual trauma and PTSD. Articles excluded involved animal-assisted therapy interventions that did not include equines. There were a number of articles retrieved that focused on service dogs as therapeutic interventions for combat veterans. Often these same articles would focus on combat veterans and exclude non-combat veterans and veterans with MST. When searching for articles pertaining to MST, excluded searches involved PTSD as the main focus. While PTSD is a very prevalent aspect of MST, it is not the only side effect so those articles were rejected.

In order to synthesize the articles found, initial themes were pulled from the literature and loosely organized by a bio-psycho-social model. This created too many themes so the biological and psychological impact of MST, and the ways EFP addresses these issues, were combined to make the themes “EFP and decreased PTSD symptomology through mindfulness” and “mind-body reintegration”. The social impact of MST, and the ways EFP addresses these issues, were combined to make the themes “improved relational functioning” and “EFP and the therapeutic encounter”. Lastly, the theme “recovery and empowerment” was created in order to address the

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power of EFP for recovery from MST. These themes will be addressed in detail in the following literature review.

### **Literature Review**

Survivors of MST often exhibit symptoms of PTSD, however there are usually additional issues that complicate therapeutic interventions, such as relational dysfunction, distrust of mental health providers, and mind-body disconnect (Northcut & Kienow, 2014). Female veterans who have experienced MST “can work in partnership with a horse and employ mounted or unmounted activities in order to achieve specific goals directed by the therapist” (Abrams, 2013, p.68). Additionally, Abrams (2013) notes:

...[T]he physical engagement of working around horses can be a strong motivating factor for Veterans with PTSD...the motivation and challenge of interacting with a 1,200-pound animal during EFP/EAP activities can serve to build relatedness, mastery, autonomy, and trust and appeal to a soldier’s sense of adventure and achievement”. (p.86)

Though there is limited research on equine-facilitated psychotherapy (EFP) as a therapeutic intervention for survivors of MST, the literature suggests that equine-facilitated psychotherapy (EFP) addresses MST on a biological, emotional, and social/relational level. This systematic review of the ways in which EFP addresses the various symptoms of MST, included PTSD symptomology, relational functioning, mind-body reintegration, the therapeutic encounter, and recovery/empowerment.

### **EFP and Decreased PTSD Symptomology through Mindfulness**

In order to understand how EFP facilitates mindfulness among MST survivors, an understanding of PTSD is needed. Among MST survivors, PTSD can be one of the more disruptive, and distressing, side effects of MST due to its psychological, physiological and

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behavioral impacts. A RAND Corporation study indicated that “at least 26% of returning soldiers from Iraq and Afghanistan have been diagnosed with PTSD, an anxiety disorder, or major depression” (Abrams, 2013, p.73). According to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (2014), PTSD is a result of exposure to actual or threatened death, serious injury, or sexual violence. The characteristic features of PTSD include re-experiencing aspects of the trauma, avoidance and numbing of stimuli and negative alterations in cognitions and mood, and hyperarousal, or marked alterations in arousal and reactivity (Abrams, 2013).

**Re-experiencing, mindfulness, and EFP.** In extreme cases of re-experiencing, the MST survivor may no longer be cognizant of their current physical state and surroundings. For some survivors of MST, their defensive systems (e.g., fight or flight, etc.) are hyperactive and cause interference with the survivor’s day-to-day functioning (Northcut & Kienow, 2014).

Mindfulness, or the practice of living in the moment, creates a connection between affect and reason, which helps ground the survivor when they are experiencing dissociative symptoms. This connection “allows individuals to step back and contemplate on the level of significance an event or idea has rather than immediately reacting to any given stimuli” (Looman, 2012, p.254).

EFP, through mindfulness practices, can increase a survivor’s self-awareness and ability to regulate their emotions and affect “while developing new ways of being in the world” (Coleman, 2012, p.28). Equines inherently live in the moment and can act as co-therapists in teaching the survivor self-soothing techniques such as breathing, mindfulness, and sensory experiencing (DePrekel, 2012). Survivors are then able to utilize these techniques outside of therapy as a way to manage their dissociative symptoms. EFP “gives veterans the chance to experience ‘in the moment’ situations and the chance to problem solve based on their own

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strengths and resources” (Maurer, 2014, p.50). Mindfulness practices through EFP help clients expand their tolerance level for distressing internal, and/or external, stimuli while staying grounded and present in the presence of an equine (DePrekel, 2012).

**Decreased avoidance and numbing through EFP.** According to Coleman, sexual trauma survivors “often have difficulty ‘attending to their own inner sensations and perceptions’ and identifying their emotional reactions” (2012, p.28). Isolation and emotional numbness are common symptoms among sexual trauma survivors and can be addressed through EFP as animals have an inherent ability to draw out isolated personalities (Maurer, 2014). DePrekel (2012) notes:

Equine assisted psychotherapy sessions can provide clients with a safe environment to begin to deal with the traumatic events, or series of events, that have shaken their ability to function or feel emotions as a result of creating negative belief systems about their self, others, and the world. (p.59)

EFP allows the female veteran survivor to re-conceptualize their military sexual trauma from a more balanced view point without being reactive or avoidant; it provides the survivor with a sense of mastery over her everyday problems and validates her right to happiness and success (Looman, 2012).

**EFP decreases hyperarousal.** For many female veterans, their ability to regulate their physiological response systems deteriorates after experiencing MST and they are often stuck in heightened states of arousal. Abrams notes that one of the reasons that EFP is applicable to trauma is because “working with horses relaxes and regulates the nervous system and that is critical to working with PTSD” (2013, p.136). Human-equine interactions have been shown to lower cortisol levels, increase oxytocin levels, decrease blood pressure, decrease heart rate, and

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improve respiration for trauma survivors (Louhi-Lethio, 2012; Westerman, Hargreaves, Westerman, & Verge, 2012).

DePrekel notes that when working with an equine, clients are able to develop an ability to maintain connection to the equine during moments of uncomfortable, or heightened, arousal (2012). In order to manage states of heightened arousal, relaxation and breathing techniques can be taught to the survivor and “skills can be gained in monitoring cause and effect, reading social and environmental cues, and deciding what actions, if any, to take in response” (Welsch, 2012, p.105). Unmounted work, such as grooming, can help regulate affect by physically slowing down and calming a trauma survivor when they are experiencing states of hyperarousal (Weston-Thompson, 2012). Esbjorn (2006) notes that therapists found presence and a calming effect to be one of the most important benefits of EFP outside of emotional and behavioral effects. Equine therapy can teach survivors when they have successfully quieted themselves (Garland, 2012).

Equines also provide room for powerful metaphors regarding hyperarousal in survivors of sexual trauma. As an animal of prey, “the horse’s natural hypervigilance and impulse to escape when threatened provides the therapist with powerful metaphors to help affect therapeutic change” (Abrams, 2013, p.67). Abrams (2013) goes on to note:

A prey/predator dichotomy between human and horse are relevant to the person who has experienced abuse; therefore, the use of metaphors during an EFP/EAP session allows the client to address injuries through nonverbal communication with the horse that is guided by the clinician. (p.67)

Ideally, through the development of a therapeutic alliance, the therapist will recognize the veteran’s patterns of hyperarousal and be able to aid the veteran in quieting themselves physiologically through mindfulness techniques and metaphor.

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### **Improved Relational Functioning**

When working through sexual trauma, female veteran survivors are faced with the task of confronting their traumatic event instead of avoiding it. This “confrontation with despair brings with it an increased risk of suicide...what sustains the patient through the descent into despair is the smallest evidence of an ability to form loving connections” (Garland, 2012, p.35). PTSD disrupts the survivor’s ability to form intimate connections, making the descent into despair significantly more dangerous in regard to suicidal ideation.

Opportunities for an intimate, loving connection are available within the human-equine relationship. In a therapeutic setting, “horses are engaged as change agents to facilitate the process of enhanced psychosocial development, growth, and education” (Selby, 2009, p.45). Development of a relationship with a horse offers the opportunity for improved emotional well-being through acceptance, nurturance, intimacy, safe touch and physical affection, unconditional love, companionship and decreased loneliness, as well as feeling valued and needed (Moore, 2013; Nussen, 2012). It also provides increased self-awareness (Louhi-Lethio, 2012), decreased stress and anxiety (Moore, 2013), and improved emotional regulation (Louhi-Lethio, 2012). The human-horse relationship also offers opportunities for improved social functioning through collaboration, development of a sense of mastery and empowerment (Garland, 2012), increased present-moment focus, increased pro-social behaviors (Westerman, Hargreaves, Westerman, & Verge, 2012), honest communication, trust, healthy boundaries, assertiveness, and patience (Nussen, 2012). Additionally, the therapeutic intervention is provided in a natural setting that is safe and soothing (Garland, 2012).

Ultimately, “equines can provide relational attunement” (DePrekel, 2012, p.59) for the female veteran survivor of MST and provide corrective emotional experiences. The therapeutic

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effects of equines aid the development of motivation, socialization and normalization of behaviors in survivors of MST (Abrams, 2013). Equines teach female veterans “how they come across to other humans by the way the equine responds to them” (Esbjorn, 2006, p.116). In order to work effectively with an equine partner, female veterans must practice regulating their own affect so that they can successfully regulate the equine’s arousal state and subsequent behavior (DePrekel, 2012). According to DePrekel (2012):

This dynamic form of relational affect regulation teaches clients, in an interactive context, that affect can be modulated. Animal assisted therapy can reduce disruptive behaviors because it creates a culture and a community in which self-regulation and cooperative skills can be practiced again and again. (p.61)

By practicing affect, and emotional regulation sexual trauma survivors are able to experience being in their environment in a new way relationally, emotionally, and physically.

### **Mind-Body Reintegration**

Sexual trauma in the context of the military environment is an assault upon both a person’s body and mind. Northcut and Kienow (2014) note, “[H]ow the survivor’s mind, body, behavior, and identity are affected requires additional consideration when the trauma has been experienced in a military environment at the hands of a survivor’s colleagues or superiors or both” (p.249). It becomes necessary to understand the dynamic relationship between the body and the mind in order to integrate the disconnected aspects of the self (Northcut & Kienow, 2014). MST has a tendency to disrupt “prior patterns of functioning that contributed to the overall sense of self and identity of the survivor. Portions of the sense of self...are disconnected from other parts of one’s self” (Northcut & Kienow, 2014, p.249). In this vein, the connection between a female veteran’s mind and body has been ruptured and requires repair.

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In the process of reintegrating the mind and body, the therapist must do so carefully and employ grounding techniques to help the survivor remain present and prevent them from becoming too overwhelmed. If the therapist is not mindful of this it may be easy for the survivor to decompensate, or lose the ability to maintain normal or appropriate psychological defenses (Northcut & Kienow, 2014). Accordingly, “[A] person can establish a degree of control over her own bodily and emotional responses that reaffirms a sense of power [and] by voluntary, direct exposure, the survivor relearns the gradations of fear. The goal is not to obliterate fear but to learn how to live with it” (Garland, 2012, p.39). Engaging mounted work, mindfulness practices, and breathing exercises, as well as understanding how the body carries trauma, is critical to resolving that trauma (DePrekel & Neznik, 2012). Through the utilization of movement and mounted work, one is able to reintegrate sensory, motor, cognitive, and psychological systems back into one’s sense of self (Welsch, 2012).

DePrekel (2012) suggests that mounted work may be a crucial aspect of EFP because it provides the survivor the chance to create new neuropathways that provide opportunities for responding to stimuli without being reactive. Additionally, mounted work provides a powerful dynamic for healing. DePrekel (2012) notes:

The mechanisms of moving the body, and the balance required in riding, creates increased blood flow in the body, assisting the cingulate [cortex], which helps regulate a distress response. Clients who have cut off parts of their body may begin to reconnect while on the back of a horse; the clinician can work with them to regain sensation while using calming techniques so they can have a sense of control. (p.64)

The activation of the cingulate cortex, which is involved with emotion formation and processing, allows movement activities with equines to help with self-regulation (DePrekel, 2012). It is

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necessary for the therapeutic work with equines to involve activities that calm and soothe the brain and body in order to help MST survivors stay physiologically and psychologically regulated (DePrekel, 2012). Equines also act as mirrors to humans, providing a form of biofeedback, which allows for inner reflection and increased self-awareness (Westerman, Hargreaves, Westerman, & Verge, 2012).

Coleman (2012) suggests that “trauma results in past experiences becoming embodied in present physiological states and action tendencies: The trauma is reenacted in breath, gestures, sensory perceptions, movement, emotion, and thought” (p.28). Mounted work provides both graded exposure to trauma-like stimuli, as well as an opportunity to reintegrate the survivor’s traumatized parts of her body into her whole self. In order for an MST survivor to fully heal from her trauma, it is important, if not necessary, to reintegrate body and mind into the survivor’s sense of self.

### **EFP and the Therapeutic Encounter**

Equine-facilitated psychotherapy is a non-traditional form of therapy that may be appealing and relevant to female veteran survivors of MST who may otherwise not be amenable to traditional talk therapy (Selby, 2009). Northcut and Kienow (2014) note that, “developing a supportive therapeutic alliance uniquely configured for the MST survivor must be addressed first and considered primary” in the therapeutic process (p.253) and “everything must be done to safeguard the important process of building the therapeutic alliance” (p.257). In EFP, it may be the equines that facilitate the development of the therapeutic alliance and relationship (Selby, 2009).

When working with a population that is already wary of traditional forms of therapy, equines are able to act as mediators in potentially awkward or uncomfortable therapeutic contexts as well as help initiate the development of the therapeutic rapport at a more rapid pace

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(Born, 2008; Westerman, Hargreaves, Westerman, & Verge, 2012). The human-equine relationship can act as a bridge between the veteran and the clinician; the process of transference allows trust to build, anxiety to decrease, and self-efficacy to increase within the therapeutic alliance (Abrams, 2013; Westerman, Hargreaves, Westerman, & Verge, 2012). Born (2008) asserts that “[t]he inclusion of the animal increases the client’s positive experience of the therapist. The relationship is developed faster, which allows the therapy to reach a deeper level than if an animal was not involved” (p.45). The veteran’s relationship with the equine fuels the therapeutic relationship with the therapist (Abrams, 2013). For survivors of sexual trauma, the equine-human bond is similar to the therapist-client relationship in psychotherapy (Abrams, 2013). By modeling safe, respectful, mindful interaction with equines, therapists “can help clients feel safe, connected, and able to build relationships with the clinician and another living being” (DePrekel, 2012, p.62). The relationship that is formed with an equine acts as the central factor in the change process (Bachi, 2012) and a catalyst for communication and insight through the equine’s immediate biofeedback (DePrekel, 2012).

Esbjorn (2006) sums up the equine-human bond by stating, “[N]o human-animal relationship is more intimate, both mentally and physically, than that between the mount and rider, for the two share an interspecies unity of understanding and kinetic communication that is unparalleled” (p.121). Female veterans historically struggle to maintain traditional forms of therapy, and by proxy may find it difficult to build a therapeutic relationship with the clinician. By introducing an equine into the therapeutic process, the veteran is able to create an intimate bond with a safe attachment figure that provides unconditional love and positive regard. Through the process of transference, the therapeutic rapport with the clinician is often built more rapidly and more efficiently.

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### **Recovery and Empowerment through EFP**

Military sexual trauma inherently disempowers and disconnects survivors from others. Recovery necessitates empowerment of the individual as part of the healing process, as well as help forming new attachments (Northcut & Kienow, 2014; Garland, 2012; DePrekel, 2012). Garland notes, “[H]elplessness and isolation are the core experiences of psychological trauma. Empowerment and reconnection are the core experiences of recovery” (2012, p.46). Empowerment through equine-facilitated psychotherapy becomes possible through the facilitation of increased attachment, attunement, competency, mastery, and challenge (DePrekel, 2012). In order to create an environment that supports the process of recovery, it is beneficial to teach self-soothing and self-regulation skills, promote the management of symptoms, teach social and emotional learning, develop problem-solving skills and learn how to assert one’s boundaries (DePrekel, 2012). Empowering the MST survivor allows them to take back power that was lost as a result of their trauma.

In order to work through sexual trauma, female veterans must be provided with a safe space to process their experiences in order to integrate their pre-trauma identity and post-trauma identity (Northcut & Kienow, 2014). With sexual trauma comes a loss of self. Northcut and Kienow (2014) suggest:

The experience of MST forms an identity comprised of pieces of the pre-trauma identity, the experience of the trauma, and the post-trauma fragmented self, to form a misshapen and distorted tapestry that the individual finds almost unrecognizable. What becomes critical in terms of treatment is the “disentanglement of the strands of self, including those that have generated psychological distress and problematic behaviors”. (p.251)

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It becomes important for the MST survivor to create “a more functional and peaceful construction” of the self that allows the survivor to integrate their pre-trauma strengths into their post-trauma sense of self to foster the development of new strengths (Northcut & Kienow, 2014, p.256). The re-integration of the pre-trauma self and the post-trauma self, as well as mind-body re-integration, allows the female veteran survivor to process her trauma and move forth in her life in a new way.

### **Discussion**

Though there is limited research on equine-facilitated psychotherapy (EFP) as a therapeutic intervention for survivors of MST, the literature suggests that equine-facilitated psychotherapy (EFP) addresses MST on a biological, emotional, and social/relational level. This systematic review of the ways in which EFP addresses MST, found that EFP addressed well PTSD symptomology and mindfulness, relational functioning, mind-body reintegration, the therapeutic encounter, and recovery and empowerment.

Military sexual trauma (MST) is a particularly insidious form of trauma. Its likeness to incest is undeniable. Survivors live with, or near, their perpetrators much like children do in families of incest. Sometimes the perpetrator is the survivor’s commanding officer, leaving the survivor conflicted due to the militant socialization they receive regarding rank and order. MST undermines the survivor’s ability to trust others; they were betrayed, and intentionally violated, by the very person that they are supposed to trust with their life. Horses can neither betray nor violate; they are intrinsically trustworthy.

Equines allow the MST survivor to develop a loving, trustworthy connection with another being without threat of harm or betrayal. Simultaneously, the survivor is given the opportunity to work through their trauma without having to depend on another human to do so.

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They are provided with autonomy in their recovery which may work well with a population that already struggles to trust the therapeutic process.

Utilizing equine-facilitated psychotherapy (EFP) provides MST survivors with a safe environment to work through their trauma. Working with horses helps calm and soothe the mind which aids the clients in the development of distress tolerance. Mounted work allows the survivor to reintegrate the traumatized parts of her body into her whole self again. To ride one must be aware of their whole body, and its connection to the equine, in order to be fully successful. Mounted work could be considered one of the most powerful, movement-based therapies for sexual trauma due to the unique circumstances of riding. EFP decreases the survivor's likelihood of re-experiencing the trauma, improves their ability to manage triggering stimuli without becoming avoidant or numb, and improves the survivor's ability to manage their physiological arousal.

Equines are arguably more effective than other animals when it comes to therapeutic interventions with female survivors of MST. Equines are prey animals and act as mirrors to the traumatized veteran, reflecting back the affect and emotion that the survivor is experiencing. If the survivor is in a state of hyperarousal, the equine will respond instinctively, giving the survivor the opportunity to both recognize their affect and make appropriate changes. By practicing affect, and emotional regulation, sexual trauma survivors are able to experience being in their environment in a new way relationally, emotionally, and physically.

Equine-facilitated psychotherapy is a non-traditional form of therapy that may be appealing, and relevant, to female veteran survivors of MST who may otherwise not be amenable to traditional talk therapy. The action aspect of EFP lends well to the action-oriented veteran who has been socialized to be mission minded. While it may be difficult to introspect, it is far easier

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to act on the part of one's equine partner in calming and soothing the animal when they are mirroring the veteran's own affect. Through the process of calming and soothing their equine partner, the veteran subsequently calms and soothes her own body and mind.

Military sexual trauma inherently disempowers and disconnects survivors from others; recovery necessitates empowerment of the individual as part of the healing process.

Empowerment through equine-facilitated psychotherapy becomes possible through the facilitation of increased attachment, attunement, competency, mastery, and challenge.

Empowering the MST survivor allows them to take back power that was lost as a result of their trauma. Empowerment is an important aspect of the recovery process that should not be ignored.

### **Future Research**

It would be beneficial for future research to focus on finding theoretical orientations that support the practice of equine-facilitated psychotherapy. One theory that has been suggested is the biophilia theory created by E. O. Wilson which asserts that "humans possess a genetically based propensity to attend to, and be attracted by, other living organisms" (Kruger & Serpell, 2010, p.37). There currently is no theoretical orientation that empirically supports EFP. Another focus of research would be to study the efficacy of EFP when working with male survivors of MST. The prevalence of MST among men is as common as it is among women. However, men are less likely to report MST due to the stigma related to the event. Lastly, it would be beneficial if more helping professions offered learning opportunities for equine-facilitated psychotherapy. There are a limited number of training opportunities for those interested in this field of study; often times the learning takes place within the community from firsthand experience. In order to provide empirically based services more research is needed and more formal training needs to be available to interested professionals.

### **Limitations**

A large limitation to this study is its focus on female veterans. MST is as insidious and traumatic for male veterans as it is for female veterans, and therefore this population cannot be ignored. While this study focused solely on female veterans, it seems likely that male veteran survivors of MST would benefit equally from EFP. Another limitation is the study's specific focus on EFP instead of animal-assisted therapy (AAT) as a whole. Many of the benefits gained from working with equines can be gained from working with other animals as well, though there are particular benefits to EFP that might not be available in AAT alone. It has been suggested that dogs also cause significant increases in oxytocin levels as well as decreased cortisol levels. While mounted work is not possible with other types of animals, movement could still be incorporated within various forms of animal-assisted therapy. The limited research regarding equine-facilitated psychotherapy for survivors of military sexual trauma necessitates an increase in the body of knowledge in order to provide empirically-based services to one of our nation's more vulnerable populations.

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