

Equine Assisted Psychotherapy for Combat Veterans with PTSD

By

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Abstract

Post traumatic stress disorder (PTSD) is a serious problem for numerous post war combat veterans who have experienced violent and traumatic conflict scenarios. The importance of determining and making available effective treatment regimes for this disorder has become increasingly more acute due to the growing number of combat veterans being identified and diagnosed. The purpose of this article is to provide a brief review of equine assisted psychotherapy for the treatment of combat veterans with PTSD and to discuss practice considerations for practitioners working in an outpatient care setting.

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Introduction

Post traumatic stress disorder (PTSD) is a serious problem for many post war combat veterans. Veterans diagnosed with PTSD often find they re-experience trauma to a degree that leaves them unable to cope with daily life in a safe and healthy manner. The total number of combat veterans suffering from PTSD is not certain, but the number from the Iraqi and Afghani conflicts alone is estimated to be around 300,000. As of the last census in 2008, the number of all living veterans was placed at 23.8 million. The percentage of veterans with PTSD was averaged at around 30% placing the total close to 7 million (Friedman, 2004). U.S. Code Title 38 defines combat veteran as, “Any veteran who served on active duty...in a theater of combat operations...during a period of war...during the Vietnam era or after May 7, 1975” (Congress, 2010, p. 1156). For the purposes of this paper, a combat veteran is defined as any US male or female who served in a combat zone during any war or conflict involving the US. The Mayo Clinic briefly defines PTSD as a type of anxiety disorder that's triggered by a traumatic event. It is described more fully by the Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV) (American Psychiatric Association, 1991, p. 424). Veterans with PTSD often display behaviors that are dangerous for their own safety and the safety of others. Lack of effective treatment places them at increased risk for drug and alcohol dependency, suicide, and violence towards others (National Center for PTSD, 2010).

It has not been determined which treatment options are most appropriate for combat veterans. The most common treatments involve use of medication including anti-depressants, sedatives, and psychotropics. Group and individual therapy are also

options. To support veterans in receiving effective treatment for PTSD, it is important for providers to understand the nature of the trauma and provide treatments that are specific to those needs.

The purpose of this paper is to examine equine therapy as a relatively new treatment for post-war PTSD in combat veterans and to offer care guidelines for the use of equine therapy in an outpatient treatment setting. Equine Assisted Psychotherapy (EAP) is defined as a form of psychotherapy focused on helping people overcome emotional trauma by working with horses (<http://www.eagala.org/>). Few research studies have documented the generic benefits of EAP and fewer still the benefits to combat veterans suffering from PTSD.

Literature Search Strategies

Databases searched included CINAHL, PsychInfo, Cochrane, and PsycARTICLES. Search terms used were equine psychotherapy, equine psychotherapy and PTSD, equine psychotherapy and PTSD and combat veterans, PTSD, combat veterans, hippotherapy (movement of horses), animal therapy, and CAPS (Clinician Administered PTSD Scale). Fifteen articles were reviewed for this paper. No studies on equine psychotherapy and PTSD and combat veterans were found. The most successful searches included the terms equine and psychotherapy.

Review of Literature

The literature review is organized into the sections of Post-Traumatic Stress Disorder and Equine Assisted Psychotherapy. Each section is reviewed.

Post-Traumatic Stress Disorder and Combat Veterans

Post-traumatic stress disorder (PTSD) is a psychobiological reaction that can emerge due to unresolved somatic and psychological responses in the aftermath of life-threatening and other traumatic experiences (Sharev, Bonne, & Eth, 1996). Although the term PTSD became widely known and applied as an official diagnosis after the Vietnam War, the phenomena is not new to combat veterans. The symptoms have been present under various labels such as “irritable heart” (U.S. Civil War), “shell shock” (World War I), “battle fatigue” (World War II), and “operational exhaustion” (Korean War).

It is estimated; around 30% of combat veterans suffer from PTSD (Potterfield, 2008). Sufferers often display behaviors which are dangerous for their own safety and the safety of others. The lack of effective treatment for veterans with PTSD leads to an increased risk for anxiety, drug and alcohol dependency, depression, suicide, and violence towards others (Frueh, 2005). Symptoms of PTSD also include insomnia, irritability, isolation, nightmares, and hyper vigilance. Medication such as anti-anxiolytics has long been the primary treatment although there is not a consensus regarding best treatment practices (Dieperink, 2005). Data has shown that psychotherapy (such as cognitive behavioral therapy) was more effective than pharmacotherapy (Schnurr et. al., 2000), but Rosenhack (2007) claimed that these treatments are ineffective in combat veterans with chronic PTSD. These conflicting viewpoints highlight the necessity for new and effective modes of treatment.

According to the literature, there has been great interest in developing an effective treatment for PTSD since 1967. Drug trials have been extensive. Virtually every form of

psychotherapy has been tried; results from both drug and psychotherapy studies have primarily reported treatment efficacy despite very few therapies having been tested by systematic, rigorous research designs (Solomon, Gerrity, & Muff, 1992). Several types of treatment have been shown to be at least mildly effective in treating PTSD, and the strongest evidence seems to point towards the use of behavioral techniques. There is much to learn about treating this disorder and multimodality treatments are gaining a great deal of attention. The components and combinations of treatment modalities that will be of greatest service in treating this population are as of yet unknown. EAP is one approach that has shown promise in helping combat veterans with PTSD, and although it deserves consideration it also calls for continued research.

Equine Assisted Psychotherapy

EAP has been applied to address a wide range of mental health and basic human development issues including mood disorders, attention deficit disorders, relationship and communication issues, behavioral disorders, substance abuse and chemical dependency, eating disorders, childhood abuse issues, and post-traumatic stress disorder (Tetreault, 2006; Shultz, 2005). The purpose of animal assisted therapy is to provide interventions that would not be possible with only a human provider. Animals interact with humans in a variety of therapeutic forms, but at the base of the interaction is a lessening of human stress and increase in mutual trust (Barker & Dawson, 1998).

Horses provide an additional aspect of the therapeutic process that many other animals cannot. They are prey animals and; therefore, they do not trust easily, demand respect to provide respect, and due to their size are not easily bullied or manipulated (Baugh,

2009). Horses also live by a set of rules that is based on the family system. They are herd animals and their survival depends upon communication and their relationship with the other herd members.

Horses read subtle changes in human body language, emotion, positive and negative energy, and basic intentions of others (Hallberg, 2008)). Equine assisted psychotherapy utilizes the horse's responsive nature as a therapy tool and part of the therapy team's options for treatment. They are naturally curious, have individual personalities, and mirror human behavior (Toms, 2006).

EAP Structure. The structure of EAP provides a unique atmosphere for the client to work through personal challenges. EAP provides clients with in-the-moment experiences to learn how to manage current situations and future challenges with a focus on personal strengths and resources (Knapp, 2007). Therapy sessions are generally on the ground as opposed to in the saddle. EAP supports the approach that "ground work" provides the client with opportunities to generate solutions as the horse is a component of the process rather than the primary focus (Kersten & Thomas, 2004). This approach also allows for greater transparency of issues related to communication and relationship between the horse and veteran. An EAP practitioner and a horse handler are part of the team, but the basis of therapy occurs between horse and veteran. Observing, debriefing, and processing are the main roles of the practitioner while the horse handler assures safety and assists the practitioner to interpret the body language of the horse (Klopp & Davis, 2006).

In this experiential based therapy it is by interacting with the horse that the veteran gains greater insight into themselves through experiencing natural consequences, successes, and mistakes. There is something to be learned at every step of the process even including the veteran's selection of the horse. A typical EAP session involves the veteran receiving a task to complete with a horse while they are in an enclosed space such as an arena and are free to move around. This facilitates safety and freer interaction as horses, being prey animals, have a basic instinct for flight rather than fight. The lack of restraint on the horse creates a challenge that requires most humans to approach the created situation from a new angle. The horse handler sees to the safety of horse and veteran, and the practitioner observes but does not intervene during this portion of the interaction which generally last about one hour. There are various rules that related to the equine activities which often include no touching or bribing the horse. Typical coping mechanisms such as bullying or manipulating are not effective and new solutions and forms of communication must be developed to create successful outcomes (Kennedy, 2008). Insight is often developed through feelings and emotions that are generated through working with the horses; these interactions often mirror experiences that clients have in society and can be useful during therapy.

Equine interventions. A common therapeutic activity is to have a horse move through an obstacle course to a desired endpoint. The objective does not have to be met to reach a successful outcome. The manner in which the individual or group functions is a significant piece of any EAP activity and focus for discussion with the practitioner. Debriefing a therapeutic activity provides structure for discussing feelings related to the

exercise and issues or concerns that may have arisen during the process, and is conducted immediately post equine intervention. Practitioners facilitate the therapeutic process by allowing and encouraging questions and by asking questions that are specifically related to the activity and the needs of the veteran involved. During this process is often when connections are made between interaction with the horses and daily life outside of the arena. Veterans are encouraged to examine their interactions with the horses and reflect upon their feelings related to the horses' responses and the effectiveness of the overall activity. Through this perspective they are then provided the opportunity to explore solutions and new approaches with the ultimate goal being the development of new skills that may be applied to everyday life. Issues and concerns are also commonly revealed during the equine intervention that may later be explored in greater depth during a session that is arranged between veteran and practitioner.

Metaphors in EAP. Metaphorical learning is a core concept of EAP; veterans are given simple tasks to complete with a horse which are later debriefed with the practitioner (Frewin & Gardiner, 2005). It is in relating these metaphors to personal situations that the practitioner may assist veterans in acknowledging and approaching their challenges and working toward positive change. As EAP is experiential in its nature, it is the process of interacting with the horses that aid the veterans in gaining insight into themselves. The actual activities and the completion or lack of completion of the stated goals are far less important than the process and the exploration of results.

A basic EAP activity is the seemingly simple act of placing a halter on a horse. The horses are free in an arena, and the first step in the process is to select a horse. Horses all

have unique personalities and therefore provide unique challenges to the veteran. The obstacles and challenges faced in the arena with the horse often mirror those that are presented in daily life for a veteran with PTSD. The metaphors reveal themselves in how the veteran perceives and approaches the challenge, and are later discussed during the debriefing process and in therapy. The practitioner and experienced horse handler observe each piece of the process including: how the veteran approaches the horse, how the veteran reacts if the horse does not cooperate, does the veteran choose a different horse if presented with resistance from an initially selected horse, if it is a group activity how does the team work together, does an individual take over in a team, does the veteran give up, is anger or another strong emotion involved, and more. It is also of note if the veteran did or did not accomplish the task and what their reaction was to this, but only for the purpose of therapy and insight and not in relation to deeming the task a success or failure.

A simple example of the metaphor can be seen in the placement of the halter. Perhaps the veteran did manage to apply the halter but it was not placed correctly. In debriefing, this could lead to a discussion about how a task could be approached and completed. Feelings may arise about performing efficiently which is often a military related concept, and can expose issues related to feelings such as expectations, exactness, or improvisation that may present as either negative or positive. If a veteran becomes agitated regarding not being able to control the horse's behavior, then this would likely lead to a therapeutic session related to control and frustration in daily life. These issues

might also be incorporated into future tasks to be worked on with the horse when back in the arena.

Veterans and EAP. As with equine therapy in general, its use in combat veterans was originally designed to address a variety of physical disabilities to improve gait, balance, and morale. The focus is often more on the actual activity of riding the horse, and the many benefits that this can provide for veterans who have suffered from physical war wounds, disabilities, and loss of motor function and less on psychotherapy (Meregillano, 2004). Leading the way in this form of hippotherapy is the North American Riding for the Handicapped Association (NARHA). Hippotherapy is an occupational, physical, or speech therapy treatment intervention that uses equine movement (NARHA, 2010) (Butt, 1981/1998; Bieber, 1998). NARHA joined the Veteran's Administration in 2005 to develop a program called Horses for Heroes and although it has evolved to address PTSD issues it does not have the psychotherapy aspect to it that is provided in EAP. Equine-assisted therapy has only recently drawn attention from the U.S. Department of Veterans Affairs, who has begun providing grants for practitioners to establish and run EAP groups for returning Afghanistan and Iraq combat veterans. Preliminary results are favorable, suggesting statistically significant rates of improvement among combat veterans with PTSD in developing self-understanding and increased emotional growth (Wassom, 2010).

PTSD and EAP Treatment Approach

It has been hypothesized that the basis for PTSD symptoms is chronic hyper-stimulation of the Autonomic Nervous System which leads to a classic fight or flight

response and subsequently many of the previously mentioned symptoms experienced by a veteran suffering from the condition (Rothschild, 1997). Being prey animals, horses experience this state most all of their existence and depend on it for survival, but as they are herd animals, they must also manage to learn effective communication and develop the means to cohabitate in their community or they will be isolated from the group which leaves them highly vulnerable to a variety of threats. This similarity between the combat veteran and the horse is a basic metaphor of the therapy. Horses are of great assistance in helping veterans with PTSD observe community structured interaction, and are considered by many practitioners to be more of a partner than a tool in this therapy with trust being a large component of the focus (Baugh, 2009). Additional areas of benefit are anxiety reduction, decreased isolation, communication, perspective, impulse modification, social skills, assertiveness, self-concept, boundaries, confidence, self-efficacy, creative freedom, and social skills (Vetenews, 2010). It is not only the veteran's responses and reactions that are of value in this form of therapy. The horse is an integral part of the process in that they provide valuable feedback not only in the response that the veteran perceives, but also in their responses to the veteran due to their innate ability to read emotion and intent of others. This feedback comes in the form of ear movements, allowed proximity to the client, and general body posturing that relays significant feedback to the horse professional who then passes this information onto the practitioner for integration into therapy (Sullivan-Sakeada, 2006).

There is no standard of practice on how to link EAP to formal psychotherapy sessions. Debriefing is a simple process of discussing the equine interaction with the veteran. It is

important that the veteran be allowed to express feelings and emotions that arise and ask questions that are pertinent to them about the sessions. It is also an opportunity for the practitioner to ask poignant questions of the veteran that may lead them to new approaches or manners of considering their situations. The manner in which each practitioner chooses to provide one to one psychotherapy with the veterans is a matter of professional choice as is the number of EAP sessions. Additionally, there is no standard for measuring outcomes of EAP at this time.

Considerations for Practice

Guidelines for using EAP with combat veterans have not been established and therefore require innovative approaches to determine who may most benefit. Access to a proper facility and appropriate horses would be a requirement for the equine related portion of therapy, and training through an organization such as the Equine Assisted Growth and Learning Association (EAGALA) (<http://www.eagala.org>) would be provide guidance for the practitioner in developing and maintaining a practice. A horse handler is required unless the practitioner also possesses superior horsemanship skills, and even so the additional person is considered to be beneficial for safety. An outpatient practice setting is optimal for EAP as access to the horses is required. Appropriate candidates for EAP would include veterans with a PTSD diagnosis, who are not in a crisis state, and are willing to participate.

An overview of other treatment options should be presented to the veteran. The manner in which the horse is involved should be explained and phobias ruled out or at least discussed. The veteran needs to be made aware of time involvement as practitioner

involved therapy related to adaptation and processing feelings will be required in addition to time in the arena. The use of the Clinician-Administered PTSD Scale (CAPS) would be appropriate pre and post therapy to determine effectiveness (Blake et. al., 1995) although currently there is no standard of practice for measuring outcomes. EAP is considered most effective when offered in combination with another form of therapy, such as talk psychotherapy or cognitive behavioral therapy, to assist with processing emotions and feelings that arise while working with the horses. It can also be used in combination with medications such as prazosin, propranolol, and anti-anxiolytics that are used to decrease symptoms of PTSD. Unfortunately, no studies have been completed regarding how these approaches are best used in combination with one another to be of most benefit to the veteran.

Road Blocks to Utilization of EAP for PTSD

The primary road blocks are the lack of insurance reimbursement for EAP therapy and the high cost of initiating and EAP practice setting. In addition to establishing their own practice, a practitioner must establish and organize the equine involved activities with a horse handler. This requires coordination with a horse expert who has an understanding of EAP, or the need to train a horse handler in EAP requirements. Compensation for the horse handler must also be established. Although there have been improvements and some funding through grants, significantly due to the Veteran's Administrations new focus on providing effective treatment for PTSD, there is still a significant deficit in the amount of resources available for EAP. Generally speaking, there are funds from insurance companies to compensate the practitioner, but not for the use of the horse or the

handler's time and expertise. This gap results in the veteran needing to pay out of pocket the additional monies for the therapy, or not being able to receive the therapy unless they are able to find a program to accept them free of charge for the horse and handler's time.

Another major road block is minimal knowledge in the VA system regarding this type of therapy. This presents an issue of limited EAP providers authorized by the VA system and a lack of referrals to outside providers. Without the knowledge and understanding of the benefits that can be provided by EAP, inpatient and non-EAP trained providers are unlikely or unable to make appropriate referrals for combat veterans who may benefit from the therapy. Even outside of the VA system there is a lack of trained EAP practitioners and facilities, and the need for an experienced horse professional adds an additional road block to service (Sullivan-Sakeada, 2006). Fear of horses could be considered to be a form of a road block, but can also be considered as a hurdle. It is believed by some practitioners that fear of the equine can be a strong part of the therapeutic process and provide additional metaphors for learning (Fink, 2010). The true obstacle may be convincing the horse phobic veteran to participate in this type of therapy.

Another road block is the dearth of reviewed literature that provides evidence to link a specific diagnosis or diagnostic symptom with EAP. The literature is highly representative of populations that experience anger, deficient social skills, behavioral and emotional issues, and trauma which is highly representative of PTSD suffering combat veterans. The literature is also representative of diversity in the area of age, gender, race, and socioeconomic status. Although this provides some direction to reach vulnerable

populations, the lack of a standardized PTSD clinical assessment tool is of concern for practitioners considering EAP implementation or referral. Some contraindications for inclusion in EAP treatment have presented and include a diagnosis of Dissociative Identity Disorder, other significant Axis II symptoms, a history of arson, and a history of animal abuse (Selby, 2009).

Another road block to the use of EAP for the treatment of PTSD is a lack of rigorous quantitative research findings. Publications are most often case studies; they are generally anecdotal in nature, and do not report the findings of randomized controlled studies. The majority of available reports focus on equine therapy that is specific to physical therapy rather than psychotherapy. Of those publications that are specifically related to treatment facilitated by a therapist, none are specific only to the combat veteran with PTSD. Although EAP presents as being an effective treatment option for many combat veterans with PTSD, it is difficult to determine the appropriateness of providing this form of therapy without the proper supportive research.

Reimbursement for psychotherapeutic services rendered is a final road block. A limited number of government grants have historically been available to fund therapeutic equine programs; however, funding is not currently available for compensating practitioners for this specific treatment.

Discussion

PTSD is a growing concern among combat veterans. It is the responsibility of the practitioner to aid the veteran in managing PTSD in a manner that helps them adapt to

current living situations. It is not known which treatment approach is most effective, and likely there is not one generic approach that is right for all veterans. It is known that medications alone have not been consistently successful and even combined with classic psychotherapy results have been marginal. The U.S. government recognized the need for new and innovative approaches to the problem and has turned to new forms of intervention including EAP. Results are not yet conclusive as further research is needed that uses rigorous research designs, e.g., randomized controlled clinical trials. Reports from practitioners and veterans involved in EAP have been positive and suggest continued support for this approach to PTSD therapy. A structured referral process and way to measure therapeutic outcomes are needed for EAP program success. A funded, dedicated program of research to examine the effectiveness of EAP for the treatment of veterans with PTSD is needed to provide empirical evidence on which to make informed, evidence-based decisions.

Summary

EAP has been a treatment option for combat veterans with PTSD since approximately 2002. There has been a high rate of satisfaction reported by veterans, practitioners, and veterans' families. It is believed that EAP will help veterans safely re-integrate into society and live higher quality lives. Although EAP is a growing area of treatment, there is unfortunately a lack of trained professionals and facilities across the country to provide this therapy. There is also a gap in the literature that presents empirical evidence for the effectiveness of using EAP for combat veterans with PTSD. With the rapid increase in PTSD diagnoses due to the wartime status of the United States, it is recommended that

studies be conducted to examine the effectiveness of this treatment for combat veterans. And as the U.S. healthcare system is evolving with recent legislation, it is hoped that this therapy along with all mental health therapy becomes more attainable and supportive of allowing nurse practitioners and other providers to better serve all veterans.

References

Altschuler, E. L. (1999). Pet-facilitated therapy for posttraumatic stress disorder. *Annals of Clinical Psychiatry*, 29-30.

American Hippotherapy Association Inc. (2007). American Hippotherapy Association Inc. Retrieved August 3, 2010, from American Hippotherapy Association Inc. Web site: <http://www.americanhippotherapyassociation.org/>

American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 4th ed., text rev. Washington, DC: American Psychiatric Association; 2000.

Barker, S. B., & Dawson, K. S. (1998). The effects of animal-assisted therapy on anxiety ratings of hospitalized psychiatric patients. *Psychiatric Services*, 797-801.

Baugh, B. (2009). Therapists using horses in treating PTSD. Retrieved April 2, 2010, from <http://www.aikenstandard.com/local/0202maze>

Blake, D. D., Weathers, F. W., Nagy, L. M., Kaloupek, D. G., Gusman, F. D., Charney, D. S... Keane, T. M. (1995). The development of a clinician-administered PTSD scale. *Journal of Traumatic Stress*, 8, 75-90.

Butt, E. G; & Bieber, N (1981/1998). NARHA—Therapeutic riding in North America...Its first decade 1970 to 1980. In B. T. Engel (Ed.), *Therapeutic riding I: Strategies for instruction, Part 1*. Durango, CO: Barbara Engel Therapy Services.

Congress, U. S. (2010, February 1). United States Code (U.S.C.). United States Code (U.S.C.), 38, Part II CH17, sub CH II, section 1712a. Washington, DC, Washington, DC, USA: United States Government Printing Office.

Dieperink, M. (2005). Comparison of treatment for post-traumatic stress disorder among three department of veterans affairs medical centers. *Military Medication*, 305-308.

Eggiman, J. (2006, October 12). Cognitive behavioral therapy: A case report animal assisted therapy. Retrieved September 3, 2010, from Medscape:

http://www.medscape.com/viewarticle/545439_6

Equine Assisted Growth and Learning Association, Inc. (2010). Welcome. Retrieved August 2, 2010, from EAGALA: <http://www.eagala.org/>

Fine, A. H. (2006). *Handbook on animal assisted therapy: Theoretical foundations and guidelines for practice*. London: Academic Press.

Friedman, M. J. (2004). Acknowledging the psychiatric cost of war. *The New England Journal of Medicine*. 75-77.

Frewin, K., & Gardiner, B. (2005). New age or old sage? A review of equine assisted psychotherapy. *The Australian Journal of Counselling Psychology*, 13-17.

Frueh, C. (2005). Documented combat exposure of US veterans seeking treatment for combat-related post-traumatic stress disorder. *The British Journal of Psychiatry*. 467-472.

Hallberg, L. (2008). *Walking the way of the horse: Exploring the power of the horse-human relationship*. New York: iUniverse, Inc.

Kersten, G. & Thomas, L. (2004). Equine assisted psychotherapy and learning untraining manual. EAGALA Inc.

Klontz, B. T., Leinart, D., & Klontz, T. (2007). The effectiveness of equine-assisted experiential therapy: Results of an open clinical trial. *Society and Animals*, 257-267.

Klop, K; & Davis, B. (2006). Have you ever played checkers with a horse? What about billiards? *Paradigm*. 4-5.

MacPhee, R., & Olsen, S. (2009, January 4). The nature of horses. Retrieved August 16, 2010, from American Museum of Natural History:

<http://www.amnh.org/exhibitions/horse/?section=nature#>

Meregillano, G. (2004). Hippotherapy. *Physical Medicine and Rehabilitation Department*, 843-854.

NARHA. (2010). NARHA. Retrieved October 26, 2010, from EEAT Definitions:

<http://www.narha.org/component/content/article/27-general/193-eaat-definitions>

Pino, Rosario. (2004). The history and development of equine therapy. Retrieved August 3, 2010, from Asociación de Equinoterapia Ismael Pinto:

<http://www.asocequinoterapia.org/english/webmaster.htm>

Selby, Allison. (2009). A systematic review of the effects of psychotherapy involving equines. An unpublished master's thesis at the University of Texas at Arlington.

Sharev, A. I., Bonne, O., & Eth, S. (1996). Treatment of post-traumatic stress disorder: A review. *Psychosomatic Medicine*, 165-182.

Shultz, B. N. (2005). The effects of equine-assisted psychotherapy on the psychosocial. Denver: Unpublished Thesis at Denver Seminary.

Sullivan-Sakeada, L. (2006, July 29). Equine assisted psychotherapy. (J. Hegeman, Interviewer)

Taylor, S. M. (2005). Equine facilitated psychotherapy: An emerging field. (an unpublished master's thesis). Saint Michael's College, Colchester, VT.

Tetreault, A. (2006). Horses that heal: The effectiveness of Equine Assisted Growth and Learning on the behavior of students diagnosed with Emotional Disorder. (Unpublished master's thesis). Governors State University, University Park, IL.

Timeline of U.S. Wars and Conflicts. (2010). Retrieved August 16, 2010, from <http://americanveterans.homestead.com/links.html>

Toms, L. (2010). Equine assisted psychotherapy: A personal construct. *Equine Times*, 1-8.

Veteneews. (2010). More on equine assisted psychotherapy. Retrieved August 16, 2010, from <http://www.vetseneews.com/equine-assisted-psychotherapy.shtml>

Vidrine, M. O.-S. (2002). Equine facilitated group psychotherapy: Applications for therapeutic vaulting. *Issues in Mental Health Nursing*, 587-603.

Wassom, B. (2010). Equine therapy for post traumatic stress disorder(PTSD). Retrieved August 13, 2010, from Disaboom:<http://www.disaboom.com/disabled-veterans-general/equine-therapy-for-post-traumatic-stress-disorder-ptsd>

