

THE EFFECTIVENESS OF EQUINE THERAPY ON MENTAL HEALTH DISORDERS: A
LITERATURE REVIEW

By

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Abstract

Equine therapy is a relatively newer form of therapy now used to treat a multitude of ailments, including PTSD, depression and anxiety. Using a horse as a therapeutic tool, whether it is by doing groundwork, grooming the horse, or riding, has been found to offer physical and psychological comfort that wouldn't normally be present in traditional therapies and allow the patient to focus on other tasks at hand while relating certain situations faced with the horse to their everyday life. Furthermore, equine therapy allows patients to step away from the current stigmas they would face surrounding traditional mental health services. While there are a myriad of new studies full of quantitative and qualitative data relating to the efficacy of equine therapy, the field is still underdeveloped. It lacks congruence and regulation that would allow it to be seen in a higher regard compared to other research in animal-assisted therapies and traditional therapies.

Introduction

The equine-human partnership is seen in the history of the horse as a companion (pet), a working animal (military, agriculture), a form of transportation (riding, carriages) and entertainment (wild west shows, horse racing, television appearances) (White-Lewis, 2020). Equine therapy is a relatively new phenomenon based on this partnership, consisting of a new form of treatment for those that suffer from mental health conditions. Generally, an equine therapy team consists of a therapist, horse trainer, and riding instructors, though this can vary. The original idea that horses can be used in therapy, also called hippotherapy, was first mentioned by Hippocrates during the fourth or fifth century (Peterson, 2022), but it has since become more of a well-known option. In the 1960s, it began to be incorporated into medical

literature in Germany, Austria and Sweden at that time, and then moved to the United States of America in the 1970s. It is now used for a multitude of ailments from cerebral palsy to autism to psychiatric diseases. (Koca & Ataseven, 2016).

Equine therapy has had favorable psychological, social, and educational effects on many organ systems, such as musculoskeletal, limbic, vestibular, ocular and sensory (Silkwood-Sherer et al., 2012; Silkwood-Sherer & Warmbier, 2007). The psychosocial effects of equine therapy include improved self-esteem, self-confidence, a sense of self-presence, and feelings of independence and competency (Tan & Simmonds, 2018)). It utilizes the natural gait of a horse to provide motor and sensory input. This stimulates the anterior and posterior swinging movements of the horse, which can be felt by the rider, and encourages the rider to achieve proper balance and posture. The variable, rhythmic and repetitive movements of the horse provide sensory stimulation for the rider. The ambulation of the horse mimics the normal movements of a human pelvis whilst walking. The mechanisms of equine therapy can be categorized as sensory connection, communication connection, and neuroconnection (Koca & Ataseven, 2016). Furthermore, riding a horse provides broad body-to-body contact (Lucena-Antón et al., 2018), and their body temperature is slightly hotter than a human's, causing decreased muscle spasticity and hypertonicity (Zadnikar & Kastrin, 2011).

The field of equine therapy is continuously growing and ever-changing. This leads to different approaches and a lack of uniformity in the field. Equine therapy can refer to physical or psychological therapies with the inclusion of an equine in a therapy setting to aid in treatment outcomes for the patient.

This paper, however, will only be focusing on the psychological therapies aspect of equine therapy (Burgon et al., 2018). There have been many reported positive outcomes

regarding the use of equine therapy as a treatment for disorders such as PTSD (Rosing et al., 2022; Signal et al., 2013), depression (Signal et al., 2013; Wilson et al., 2017) and anxiety (Acri et al., 2021; Hoagwood et al., 2022; Holmes et al., 2011; Signal et al., 2013; Wilson et al., 2017), and there is some data to support these claims. However, there is not nearly enough research out there. This paper will summarize many of the current claims made about equine therapy, outline some of the literature discussing philosophies and approaches used in equine therapy, and where available, review the empirical support for the effectiveness of equine therapy interventions.

Philosophies, Concepts and Theoretical Frameworks

Equine Therapy Model

It has been argued that horses offer additional qualities in regards to therapy than other animals (like cats and dogs) used in animal assisted interventions (Hallberg, 2008). Horses are prey animals, and therefore are naturally vulnerable, unlike dogs. Horses as a species have depended on cooperative group living and non-verbal communication skills in order to ensure their survival. As such, they are social beings by nature and are finely tuned to body language, as argued in Brandt, 2004. This innate responsiveness allows them to provide feedback, which is believed to facilitate the therapeutic process of equine therapy (Burgon et al., 2018).

Burgon et al. (2018) discusses theoretical psychotherapeutic theories and models that have been found to give substance to the application of equine therapy at Sirona Therapeutic Horsemanship, a Therapeutic Horsemanship center in South Devon, United Kingdom. Here they draw on multiple different philosophies to ensure their clients as well as the horses are comfortable, to allow for healing to take place. They highlight non-violent communication, which is a practice whose main principle is that all humans share needs such as safety,

sustenance and relationship/connection. Horses share these needs as well. The therapy center makes sure to include a horse handler during sessions to focus on the horse's needs, which are seen as equally important as human needs. The state of the horse may affect the state of the client's own healing process (Burgon et al., 2018).

The center also follows a person-centered approach. This is the idea that every person has an innate tendency to grow to their full potential under the right conditions, such as empathy, stability, and unconditional positive regard. Generally, those seeking equine therapy have had their ability to reach their full potential blocked by life experiences. The equine therapy center endeavors to undo that (Burgon et al., 2018).

Another theory they follow is the object relations theory, which is the idea that each person's being has been shaped by their experiences and significant people (objects) in their life, especially in their earlier years. Within this idea is the theory of "splitting." This is one of our first defense mechanisms ever used. It helps us determine our friends from foes when faced with a threat. This allows us to see the ambiguity in a relationship, both the good and the bad. However, much like horses who see the world in stark "good" or "bad," people, especially children, who have experienced neglect and/or abuse, operate from a "fight-or-flight" standpoint. They are hyper alert for signs of danger because they have learned that the world is dangerous. These children generally have a hard time forming relationships because they have lacked early secure attachments with caregivers. Knowing this, and knowing horses may see the world in the same light depending on their upbringing, can allow a connection between the horse and the fearful child (Burgon et al., 2018).

This equine therapy center uses the language of play and dramatherapy. This type of approach allows us to metaphorically step into another's shoes and imagine what it may have felt

like for that person in certain situations. The therapist's sometimes have the client step into the horse's shoes. This approach reduces the intensity in the relationship and allows for a gentle reviewing of the client's views of the world and themselves. Horses meet and respond to us in the present, offering opportunities to explore feelings in immediate ways (Burgon et al., 2018).

Mindfulness is another practice they and many other therapists use, especially with children. It is the practice of being aware and attentive to one's thoughts, feelings and bodily sensations in the now. It engages multiple sensory systems and involves movement, which can be linked to exercises with horses. It can be a less daunting approach for those who find talk therapy too intense (Burgon et al., 2018).

The last idea they incorporate is attachment theory. This is based on the idea that humans have an innate need to securely attach to each throughout life. In fact, the success of relationships is heavily dependent on the first attachment formed between an infant and the primary caregiver, which is usually the mother. However, it is important to note that even if an individual experiences insecure attachment in infancy or childhood, it is still possible for them to develop more secure attachments later in life within a non-threatening and consistent environment. This can be challenged gently by providing an environment where the needs of the human and animal are respected (Burgon et al., 2018).

Relationships are crucial between all members present in this type of therapy, human and non-human animals. By modeling real and respectful relationships with the horses through setting boundaries and confronting difficult decisions, participants feel safe that their own needs will also be respected and they are able to step into that relationship and others following it (Burgon et al., 2018). This remainder of this review will examine some of the empirical research currently available on various aspects of equine therapy.

Empirical Support for Effectiveness

Equine Therapy and PTSD

Post-traumatic stress disorder (PTSD) is an existential threat that affects various layers of the sufferer's being and everyday life (Defrin, 2017). It is a widely known fact that PTSD not only affects the person afflicted, but also those around them in a ripple effect. Common symptoms of PTSD include hyperarousal, hypervigilance, intrusive thoughts and memories, and the avoidance of interactions, especially those that could bring up unwanted memories of trauma. This avoidance could be literal or emotional, which can lead to emotional numbness or dissociation. These feelings are often accompanied by substance abuse (Rosing et al., 2022).

PTSD can hinder a patient's ability to concentrate, affecting their academic life, work life and social life. This can in turn impact the patient's self-esteem and reinforce the negative social stigmas surrounding PTSD. The trauma can cause the patient to question their existence and worthiness, and can cause them to see the world as a dangerous place where they have no control over events, leading to a sense of hopelessness. This is a vicious spiral that many PTSD sufferers face (Rosing et al., 2022).

There are multiple approaches to treat PTSD, such as talk therapies and experiential therapies, but some patients do not find these approaches effective. Others do not seek help at all to alleviate their suffering. Equine therapy is an alternative form of treatment for PTSD. It falls under the umbrella of experiential therapies, as it is based on activity and experience in a clinical setting, allowing for self-development through the incorporation of metaphors for everyday activities. The main principle is that these experiences can help the patient learn cognitive, physical and emotional coping lessons and strategies (Rosing et al., 2022).

Studies have shown that horses are a reactive and initiative object, and as such, present an opportunity for shaping beneficial attachment patterns. The animal generates opportunities for experiences and can contribute to developing a patient's awareness of behavior patterns, as well as reinforce a sense of control. Horses also provide immediate and non-judgemental feedback, allowing for a safe space to grow (Rosing et al., 2022).

Rosing et al., 2022 examined the effects of equine therapy on Israeli military and police veterans suffering from PTSD following traumatic events they may have witnessed or partaken in. They approached the study with a qualitative approach rather than a quantitative one. This allows for learning about social reality based on the definition that the participants gave to their experiences within that reality. The researchers had two groups attend a weekly session of equine therapy of 3 hours over a 6-month period. Each session of equine therapy consisted of four types of activity: grooming and saddling "their" horse; riding activities (riding lessons, vaulting, mounted basketball, etc.); groundwork (participants share their experiences and views through tasks with the horses); and group conversation with other participants. Interviews were then conducted with 12 patients who had completed the equine therapy intervention program. This study found that participants had to let go of the inclination to be on high alert in order to be in the present. The participants found that if they wanted to connect with their horse, they had to be present and keep calm. Furthermore, by focusing on the horses, the participants were able to drop their barriers and were able to form new relationships between the horses, the therapist, and the other participants. Lastly, they found that by taking care of the horse, the participants were able to realize that they had control over their own anxiety attacks. The participants were able to relax emotionally and physically, and stop past memories from intruding on their present day. This

treatment allowed the participants to experience self-regulation and find hope for their future (Rosing et al., 2022).

Guerino et al. (2015) investigated the effectiveness of equine therapy in two young women (ages 18 and 21) who were sexually assaulted during childhood. The two women were reported to have emotional dysregulation as a result of the trauma faced in childhood. The two subjects underwent 20 sessions of equine therapy, with each session lasting 30 minutes. The researchers found that, along with improving physical aspects of the subjects' trauma, equine therapy was also able to improve the subjects' ability to socialize with others. This suggests that equine therapy can generate a combination of stimuli outside of the physical aspects; it can integrate cognitive and affective development of socialization in those experiencing persistent emotional stress (Guerino et al., 2015).

Equine Therapy and Depression

Depression is one of the top leading contributors to the global disease burden, and is extremely prevalent in adolescent populations (Collins et al., 2011). It can destabilize a child's social and school functioning and can cause family stress (Patel et al., 2007) It can also increase the risk of other psychiatric disorders (Angola & Costello, 1993), along with drug use and suicide (Nock et al., 2013). There have been a slew of different treatments to help treat depression, especially within the field of cognitive-behavioral therapy (CBT). This is a short-term treatment that focuses on minimizing maladaptive thoughts and behaviors (Acri et al., 2021). While existing treatments can provide benefits, many clients decide not to continue or do not respond to treatment. Researchers believe that most children and adolescents do not get the mental health treatment they need or do not get the appropriate treatment due to a lack of

resources and the stigma surrounding mental health issues, as well as incorrect diagnoses or insufficiently trained healthcare workers (Wilson et al., 2017).

It has been found that animal-assisted therapies act as a buffer between the patient and the therapist, allowing the patient to feel safer to express their feelings (Levinson, 1969). Animals naturally have a tendency to create bonds with people. In equine therapy, the horse is used as a therapy medium that allows for processes of development, learning and growth to occur within the client. The presence of the horse offers both emotional and physical comfort, allowing for trust to form between the client and therapist. Furthermore, the client can use what they have learned through interactions with the horse and apply that to outside situations and human relationships (Wilson et al., 2017).

Wilson et al. (2017) interviewed eight therapists in Australia who had experience working in equine therapy. The researchers found three recurring themes. One was the experiential aspect of equine therapy. The therapists expressed that allowing the adolescent to engage in hands-on activities permitted them to redirect their focus away from any current health issues. The therapists stated that the experiential nature of this therapy allowed the patients to experiment with their behavior and learn for themselves, which is especially important as this time in their life is a critical period of development. The second theme found was that the therapists identified the horse as an important aspect of this therapy. They identified the horse as having a non-judgemental nature and thought this had a significant impact on the therapy sessions. The therapists also mentioned that despite horses being non-judgemental, they will still act negatively if the patient is demonstrating threatening behaviors. The reflection of the adolescent's behavior being visible in the horse allowed the patients to recognize the consequences of their behavior better than verbal feedback from the therapist directly. The

therapists also highlighted the significance of patients forming a relationship with the horse and how that can be reflected in their life outside of the therapy sessions. Lastly, the researchers noticed the theme of the benefits of equine therapy. The therapists mentioned noticeable increased self-esteem and confidence, resourcefulness, greater self-control, and improved emotional regulation. The therapists mentioned that equine therapy has the ability to provide benefits in a shorter period of time than other types of therapy, and that they noticed progress during each session (Wilson et al., 2017).

Signal et al. (2013) delved into the effects of equine therapy on those who have suffered from childhood sexual abuse (CSA). While CSA itself is not a diagnosis or a mental disorder, the effects of the trauma faced have been linked to psychiatric conditions, including depression. CSA seems to correlate strongly with depression, especially in females (Buzi et al., 2007). This depressogenic impact of CSA can often lead to issues with coping mechanisms and relationships with others, including therapeutic relationships. Due to this, therapy styles such as CBT may not prove effective. Using equine therapy as a replacement can benefit those struggling with CSA as horses are extremely sensitive to their surroundings, including body language, breathing and vocalizations, and therefore if the client is feeling more agitated or upset, the horse will feel it too and respond appropriately. This means that the client must remain calm and confident in order to work effectively with the horse. This allows patients to recognize and understand their emotions and focus on them, rather than trying to push them away, which also gives the patient a sense of control (Signal et al., 2013).

The participants of the Signal et al. (2013) study included 15 children (9 females, 8 males), 15 female adolescents, and 14 adult women, all who had experience with CSA and/or neglect and/or physical abuse. Ten of these participants were also identified as Indigenous. All of

the participants were assessed upon intake, prior to participating in equine therapy, and after completing equine therapy. The equine therapy sessions were 90 minutes long, and occurred once per week for 9-10 weeks. All activities during the sessions were ground based and incorporated learning basic horsemanship skills (leading the horse, desensitizing the horse, etc.). The activities were designed to create a metaphor between the situations that happened in the arena and the participant's every-day life, and were designed to address issues participant's may struggle with like trust, communication, boundaries, body language, self-perception and more. The researchers found that EFT was effective for all participants, regardless of ethnicity. Using different depression measures, the Children's Depression Inventory (CDI) for the children and the Beck Depression Inventory (BDI) for the adolescents and adults, the researchers found that equine therapy resulted in significant and marked decrements in both scores. This shows that the equine therapy approach produced improvements in ameliorating depressive symptomatology (Signal et al., 2013).

Equine Therapy and Anxiety

Anxiety is common for those suffering with any sort of trauma or stress, especially childhood trauma (Merikangas et al., 2010). However, about half of all children suffering from anxiety do not receive treatment due to stigma, mistrust in mental health services, or provider shortages (Whitney & Peterson, 2019). Furthermore, some people are not responsive to the traditional treatments already available. Equine therapy has been found to improve children's mental health and developmental problems, including depression (Signal et al., 2013; Wilson et al., 2017), PTSD (Rosing et al., 2022; Signal et al., 2013) and anxiety (Acri et al., 2021; Hoagwood et al., 2022; Holmes et al., 2011; Signal et al., 2013; Wilson et al., 2017).

Additionally, human animal interaction therapies have been associated with increased engagement of children in services, and are viewed by families as less stigmatizing than traditional treatments (Acri et. al, 2021).

Childhood anxiety is characterized by intrusive thoughts, panic, fear, and excessive worry. Currently, CBT is a common treatment used for this type of mental health problem. In one study, the researchers (a collection of equine professionals and child mental health services researchers) developed a program that integrates CBT elements with equine therapy. The program consisted of 10 weekly hour-long group sessions, with up to 3 children per group. Each child was assigned a homework journal that was to be filled out during or before the sessions. The researchers structured the sessions to consist of six subsections: groom and connect, warm up, session activity, cool down, parent/caregiver psychoeducation, and homework instruction. The groom and connect section allowed the rider to connect to the horse; the warm up allowed both the rider and horse to physically and emotionally warm up for the session; the session activity allowed the rider and instructor to focus on a mental health element while using horse interaction; the cool down consisted of mindfulness practice or a relaxation exercise, and allowed the horse to cool down as well; the parent/caregiver psychoeducation section allowed the riding instructor and rider to debrief with the parent or caregiver and to advise them about how to apply newly learned skills of the child's life; and the homework instruction consisted of a weekly homework assignment being given to reinforce the skills learned during the session. The founders of this program, called Reining in Anxiety, found fidelity data that suggests that this type of treatment could serve as an avenue for increasing access to non-traditional mental health services to reduce anxiety, which is so common in youth. However, the program requires more empirical evidence behind it (Acri et. al, 2021).

Holmes et al. (2012) aimed to explore the benefits of equine therapy in children who were diagnosed with subclinical emotional or behavioral difficulties. The authors also aimed to include an inanimate control object (life sized model horses) into the investigation to increase the validity of the research. They had 11 adolescents participate in the study. The adolescents attended four consecutive, 3-hour long sessions with either a live horse or a model horse. The participants were taught and practiced different skills with horses such as grooming, picking out feet, fitting bridles or halters, etc. The student's level of anxiety was measured before and after the sessions, and the researchers found that there was a significant reduction in reported anxiety. The researchers also found that there was no marked difference in self-esteem for the participants with the live horse treatment nor the control despite anecdotal evidence suggesting otherwise, as well as no noticeable corresponding change in the participants' behavioral measures in the presence of the control model versus the live horse model (Holmes et al., 2012).

Conclusion

Benefits

Equine therapy is an up-and-coming therapeutic approach for a multitude of different ailments, both physical and emotional/mental. It targets cognitive, physical, emotional, or the social well-being of the patient (Guerino et al., 2015). Each research study mentioned in this review had at least one improved score in relation to mental health from the time the participant began the therapy to the time they completed it; for example, Rosing et al. (2022) found that by focusing on forming relationships with the horses and allowing themselves to be in the present and keep calm, veterans afflicted with PTSD were able to take control of their own anxieties and stop past trauma from making its way into their everyday lives, and Signal et al (2013) reported

significant decreases in the scores of depression for both children and adults after participating in sessions of equine therapy.

Use of equine therapy is expanding rapidly and is considered an alternative approach for those who find it difficult to engage in traditional therapies (Burgon et al., 2018). There is currently a stigma that surrounds mental health services in traditional health settings like clinics or health centers, and this results in many people with mental health needs being unable to access the care necessary. Equine therapy is a non-traditional approach, and therefore does not suffer from the stigma surrounding mental health services (Guerino et al., 2015). In addition, practitioners of equine therapy are often very attentive to the welfare of the horses used in these treatments. Among the horses, there was no found change in stress or relaxation, meaning the programs did not add stress to the horses' daily life (Guerino et al., 2015).

Limitations and Future Research

While improvements in many mental health patient's overall well-being have been attributed to the participation in equine therapy, the research supporting the efficacy of these interventions is still underdeveloped. As the field of equine therapy is still developing, there are many different ways of approaching it and this lack of consistency can be confusing for not only researchers, but also patients (Burgon et al., 2018). The majority of studies performed in the field of equine therapy are based on cognitive-behavioral elements, which allows the possibility of bias to be introduced to the research (Acri et al., 2021). Additionally, there is difficulty in acquiring a sample size large enough and heterogeneous enough to produce noticeable results (Holmes et al., 2012).

To improve the strength of research in this field, more of the research designs would need adequate control conditions. The study performed by Holmes et al., 2012 did incorporate a control model into their research, but none of the other studies mentioned in this review included one. Additionally, while many of these studies employ in-vivo exposure for equine-related fears, there are some situations that cannot be replicated in equivalence with a horse, like taking a test. In cases like this, many therapists bring in imaginative exposure and drama therapy (Acri et al., 2021).

Another limitation mentioned was that while there was live observation (which was the case for all of the studies mentioned in this review, as there were therapists and/or riding instructors present), the sessions were not video or audio-recorded, and therefore were not independently studied for interrater reliability (Guerino et al., 2015). There has also been no mention of the researchers making connections with the participants later on after a longer period of time to determine whether the participants feel that their time engaging in equine therapy led to persistent long-term benefits in their mental health. Multiple studies mentioned in this review recommend this for future studies, but none of them implemented it themselves.

Lastly, research involving subjects such as PTSD, depression, and/or anxiety - as well as the multitude of other ailments potentially benefitted by equine therapy that were not mentioned in this review - need to be treated delicately. These are touchy subjects that many people do not want recorded or analyzed for research purposes, making it challenging to obtain the large sample sizes often required and expected in human clinical studies.

While the field is currently unregulated, there are hundreds of facilities offering equine therapy around the world (Burgon et al., 2018). Despite the limitations of equine therapy and equine therapy-related research, there is movement towards learning more about this therapeutic

approach, and understanding the efficacy of it that will hopefully be explored in further research (Acri et al., 2021).

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