THE BENEFITS OF EQUINE-USE IN EQUINE-ASSISTED ACTIVITIES, EQUINE-FACILITATED PSYCHOTHERAPY AND EQUINE-FACILITATED ACTIVITIES FOR INDIVIDUALS WITH EMOTIONAL STRESSORS

A Report of a Senior Study

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ABSTRACT

Mental health issues and their treatment are becoming more prevalent among medical practices. The significantly large number of children faced with emotional stressors is surprising; in fact, it is estimated that up to one in five children and adolescents could face a mental health disorder and receive treatment. Utilization of equines in the treatment process is a growing trend throughout the medical world. Some benefits are still unknown and many are skeptical of this form of treatment because it is still fairly new. Despite its newness, however, there are many benefits proven through case studies and field research. One of the first questions asked when exploring this topic is almost always, why horses? Many equine practitioners believe that horses are unique and are able to touch humans in ways unknown by other animals. The purpose of this study was to examine the effects of Equine Assisted Activities (EAA) on controlling emotional stressors in a nine year-old boy and a 10 year-old girl who have shown previous behavior problems and low self-confidence. The students participated in a 27-week study, which included nine weeks of active participation through horseback riding lessons. The study included three parts, pre-activity, activity, and post-activity. Academic and behavior grades were recorded at 9, 18 and 27 weeks as well as the score from the Children’s Global Assessment of Functioning Scale (C-GAS). The academic
and behavior grades showed some minor changes between each activity session. The C-GAS scores increased dramatically from the pre-activity scores to the post-activity scores. There were also noticeable changes in self confidence and social skills. The EAA was a successful modality to increase the self-confidence and overall functioning of the subjects.
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I would like to thank my Mom and Dad for all of their hard work and dedication to my education and future.
CHAPTER I

INTRODUCTION

Mental health issues and their treatment are becoming more prevalent among medical practices. The significantly large number of children faced with emotional stressors is surprising; in fact, it is estimated that up to one in five children and adolescents could face a mental health disorder and receive treatment (National Mental Health Information Center, n.d.). According to the National Mental Health Information Center (n.d.), there are multiple causes for these disorders, such as living environment, genetics, chemical make-up and imbalances in the body, or nerve damage causing injury from occurrences such as head trauma. It is legitimate for young children to face real emotional, mental, and behavioral problems that could become painful and present difficulty in coping. Treatments necessary for these disorders can become quite expensive if needed for a longer period of time. Utilization of equines in the treatment process is a growing trend throughout the medical world. Some benefits are still unknown and many are skeptical of this form of treatment because it is still fairly new. Despite its newness, however, there are many benefits proven through case studies and field research. One of the first questions asked when exploring this topic is almost always, why horses? Many equine practitioners believe that horses are unique and are
able to touch humans in ways unknown by other animals (Pointon, 2005). There are many reasons for this great connection such as power, honesty, or the gentleness of a horse.

The relationship between humans and horses has always been one of mystery and magic. “The spiritual relationship that exists between horses and humans is ancient and well-documented and is no New Age fad” (Irwin, 1998, p.136). We are all aware of the ancient use of horses as equipment for working in the fields, transportation, going into battle and even as a symbol of prestige and status. Ancient Greeks and Romans understood the mystical power, if you will, of the horses they worked with each day. As western culture progressed this spiritual relationship between horses and humans has slowly faded away to be replaced by newer and faster technologies. Of course individuals worldwide still ride horses and bask in their beauty, but it seems that the deep relationship with horses that humans once had is no longer primarily evident or even important. In his book, Horses Don’t Lie, Irwin (1998) suggests that the human race no longer has any need for the physical strength of a horse but desperately needs their spiritual power. For centuries, horses have been known for their strength, power, and gentleness they hold simultaneously in one moment. Horses offer something “uniquely healing” to humans and their conditions (Pointon, 2005, p.5). It is suggested that horses are the most qualified animals for a therapy setting because of their profound connection, both physically and spiritually, to those individuals who let them create a bond (Irwin, 2005; Pointon, 2005). They have such a strong power and are so emotionally honest that they make great therapists. They are able to show patients what they feel when they may not realize it themselves. Therapists have found that horses generally tend to respond to
the inside of a human with an outward reaction (Pointon, 2005). Equine-assisted or equine facilitated therapy is a great form of treatment for many different needs that humans possess because of this amazing connection between equines and their caretakers.

Equine-facilitated therapy finds its roots in Germany from the 18\textsuperscript{th} century where horses were used to reduce hysteria and hypochondria attacks for patients with mental illness (Frewin & Gardiner, 2005). From there, Martin Buber from Austria came forward with his “I-Thou” theory springing forward from his relationship with a horse (Pointon, 2005). Europeans then joined the movement and used horses to treat physical ailments and to increase psychological well-being. They also began the exploration of utilizing horses for individuals with decreased motor control (Frewin & Gardiner, 2005, p.8). In the early stages horses were mostly used for physical therapeutic needs as in a hippotherapy setting. The in-depth exploration of the psychotherapeutic realm of the human-equine relationship only began about 20 years ago. The idea of organized therapeutic horseback riding is still a fairly new modality in the United States. The use of horses for rehabilitation and therapy is not a new practice; however, having structured sessions with a focus on the horse and rider in a therapeutic setting is new. Equine assisted activities made their way to the U.S. by way of Canada through articles written in medical periodicals. Doctors and horse enthusiasts in Canada read the articles and started to integrate their own therapeutic riding programs in their hometowns. Later, the North American Riding for the Handicapped Association (NARHA) formed in the United States. NARHA is one of the main associations in the United States and Canada that works to provide programs with equine assisted activities. Founded in 1969, their
mission is to “[change] lives by promoting excellence in equine assisted activities” (NARHA, 2009, par.1). NARHA offers accreditation programs for equine professionals striving to make use of equine assisted therapy. There are many associations around the world with a focus on therapeutic riding like NARHA in the United States. More recently, therapeutic programs are turning their focus to troubled youth and juvenile delinquents. Research shows that the use of horses in therapy works exceptionally well with those wanting a personal-growth experience (Clark, Glazer & Stein, 2004).

‘Equine assisted activities’ (EAA) is the umbrella term used to describe many different activities utilizing horses. Hippotherapy, or “treatment with the help of a horse” (Denton, 2005, p.5), is used when participants have a physical disability such as cerebral palsy or multiple sclerosis. This therapy focuses on the movement of the horse as stimulation for the body of patients with neuromusculoskeletal dysfunction. The horses’ movement mirrors the pelvic movement in humans while walking because it is rhythmic and repetitive. This is one of the primary reasons why hippotherapy is so effective for these individuals. Equine Facilitated Psychotherapy (EFP) is another equine assisted activity and is also known as equine-facilitated experiential learning (EFEL). EFP uses horses in a completely different way than hippotherapy as participants increase self-awareness, self-esteem, and personal growth. The human-equine relationship is the center focus of EFP and everything is based around the process of relationship building through grooming, lunging, riding, and general handling of the horses. This is an experienced based form of therapy and learning for the participants. Therapists who utilize EFP must also be licensed mental health professionals with the appropriate credentials. Many people involved both directly and indirectly with EFP understand its
benefits for those involved. These benefits will be discussed later in this paper. A third facet of equine assisted activities is recreational riding. Recreational riding focuses on “enhancing the quality of life through physical and emotional stimulation, while learning horsemanship skills” (Denton, 2005, p.8). Riders take lessons from certified therapeutic riding instructors and learn how to ride horses. Another form of riding that is popular among therapists is known as vaulting. This requires one person standing in the center of a circle holding a lunge line to control the horse’s speed and direction. While the individual in the center controls the horse, the rider is free to feel the horse’s movement and energy to work through various exercises. Although each type of therapy is specific and uses different procedures to reach the desired goals, they are all, in a way, related and interwoven. The idea behind equine assisted activities, in general, is to change something undesired by stimulating mind, body, and spirit.

The purpose of this paper is to examine the effects of equine-assisted activities, specifically EFP, on controlling emotional stressors. These stressors include daily emotional factors and issues that are not necessarily considered an emotional disability. ‘Emotional stressors’ such as eating disorders, low self-esteem, little or no self-control, relationship problems, and conduct problems will be addressed in this paper. Emotional disabilities, psychiatric disabilities, and mental health disorders treated with EFP will not be the focus of this paper even though EFP is a great way to treat such disorders with much success. Specifically this thesis will explore the benefits of EFP for individuals with emotional stressors through various studies already completed, and test the benefits of EAA through a case study with a nine year-old boy and a 10 year-old girl with previous behavior problems and low self-confidence.
Horses used in therapeutic riding programs are special and generally undergo strict evaluations before becoming completely involved in therapeutic riding. Even temper and passivity are two of the main characteristics that one may look for in a therapy horse. Confirmation and soundness is another issue that must be closely considered when evaluating a horse to be used to therapy. The riders who use therapeutic horses are generally not very balanced naturally so it is a significant disadvantage for the horse to also be unbalanced or limping while someone is riding. It is important that the horses are able to tolerate many different types of riders and some who may sit or mount differently than that of a customary rider. Safety always comes first with a therapeutic horseback riding program; safety for everyone, including volunteers and instructors on the ground as well. One of the last components to be taken into account is the size and build of the horse versus the size and build of the rider. It would not be beneficial to place a large person on a small horse or a small person on a large horse because they will not give the other what he or she needs (Bream & Spangler, 2009).

The trust and respect between the horse and human therapists are generally significant and create a close relationship to help the individuals with whom they are working. Horses stand apart from other animals used for therapy because they are prey animals not predators. Naturally they are vulnerable to humans and their care takers as many individuals seeking therapy may feel in their daily lives. It is easy for humans to
relate to horses as they want to escape when they are fearful and when they mirror nonverbal cues and emotions back to those with whom they are working. Horses have the ability to offer nonverbal, immediate and unbiased feedback to individuals in a therapeutic setting making them great therapists. However, like humans, horses are real creatures. They live life from day to day just as humans. They like to get dirty; they are hairy; they sometimes get sweaty and breathe hard. Similarities like these put individuals at ease to work with such large animals. When clients learn how vulnerable horses really are they seem a lot smaller and much more similar than previously believed (Vidrine, Owen-Smith & Faulkner, 2002).

There are many facets of horseback riding especially for physical fitness but also relating to psychological and social aspects of everyday life. According to the Capital Area Therapeutic Riding Association (CATRA) website there are many important parts that make horseback riding an exemplary form of physical therapy. Riding stimulates sensory systems including proprioceptive, tactile, auditory, visual and vestibular. The constant movement of the horse requires the rider to adjust and maintain posture throughout the entire riding session. Horses’ gaits have various patterns of rhythm some of which are four-beat some are two-beat and one is three-beat. This provides variety in rhythm while riding depending on the task one wishes to accomplish. Poles or jumps may be added to any exercise to increase the intensity of the steps and beat of the rhythm. With the exclusion of intensity, horseback riding satisfies all of the criteria for aerobic exercise. One could use riding for a low-level, low-impact form of cardiovascular work which is great for sedentary individuals. Changes in gait require adjustment in posture, balance, rhythm and control. Specific to the therapeutic setting, the disadvantage that all
humans have to the horse based on size could allow a physical disability to seem less significant. These are some of the physical components to riding that allow this activity to be so great for therapy and physical exercise (Anfenson, 2009).

The use of animals as teachers and therapists is a unique task because they open up so many lines of communication. Animals provide a safe place for children to confide. Children generally see pets in the same way they see their friends; therefore it is easy for children to befriend animals and empathize with them. Animals also provide a great way for children to build trust with others through the relationship that they form together. When horses (specifically) are used for therapy they “offer the recipient an unparalleled experience that is both physical and social” (Ewing, MacDonald, Taylor & Bowers, 2007, p. 61). Horses provide a great avenue for opening the channels of communication to teach life lessons and life skills as well. Some important life skills that could be taught through a horse include patience, honesty, respect, and how to use power and control in a healthy relationship. This approach is so unique because the participants must leave their familiar environment and go to the horse and learn in a new environment creating a completely new atmosphere for the participant to experience. There are also many dynamics of the relationship between humans and horses that solicit many aspects of healthy relationships between two people. For example, the height and size of the horse helps the children understand respect (which is a hard concept to grasp for individuals facing various emotional disorders).

While growing in popularity, therapeutic horseback riding is still in the preliminary stages. The remainder of this chapter will explore many studies involving the use of horses or horseback riding for the treatment of a particular condition. These
studies are quite diverse in topic ranging from grief due to a lost loved one to intra-family violence to children at summer camp. In each instance horses are utilized and the effects are reported.

Grieving the loss of a loved one is difficult for anyone, especially children. Clark, Glazer, and Stein (2004) conducted a 6-week study measuring the effects of hippotherapy on children grieving the loss of a loved one at Buckeye Ranch in Ohio. There were five children total ranging in ages from 4 to 14 years old. Overall, the horseback riding activities did have a positive effect on the children. The parents, children, and volunteers involved in the riding program participated in post-session responses after each weekly lesson. The overarching purpose was to decide whether those involved, children, parents, and volunteers, viewed hippotherapy as an encouraging aid to process grief and to grow personally. The study directly had a positive outcome in at least three areas: Confidence building, trust building, and communication. Many of the parents involved also noticed that the children were behaving differently at home as well due to the hippotherapy; they thought this was a positive change. Parents reported that children with communication difficulties began communicating more with siblings and parents in the home as a result of the program. Children could use the horse as a non-judgmental confidant and share secrets with their horse. They were encouraged to do this and it proved beneficial. The children became more confident because they were learning how to do something well and they could see their progress. Also, their trust in their horse, parents, and others grew throughout the course of the 6-week program. Horses became friends for the children in the program and there was substantial personal growth due to this process. The researchers concluded that the use of horses could have impacted the children in these
ways because of the relationship that the child formed with the horse throughout the 6-week program (Clark, Glazer & Stein, 2004).

Bizub, Joy, and Davidson (2003) found ample benefits to therapeutic horseback riding for people facing psychiatric disability. This 10-week study included a 40-minute commute to the riding facility and the total time of participation in the study was two hours per week. Five people participated in this program with ages ranging from 26 to 46 years old. There were three parts of the program: Bonding activities from the ground, riding activities while mounted on the horse, and processing activities after riding the horse. Each participant had a chance to respond about the program and many said that the program had a profound impact on their lives. Self-confidence and self-esteem were a common theme among all of the participants. Some other benefits from the program included feelings of accomplishment, increased positive thoughts and respect and empathy for animals. The success that each participant had in the program riding the horse translated easily to other areas of their lives motivating many of them to move forward. One participant responded that he had more positive thoughts about himself because of his accomplishments on horseback. Another component of the program was the 40-minute commute to and from the farm each week. This gave the participants time to bond with each other in the vehicle. It also gave them a chance to see life outside of their world at Fellowship Place. Overall every aspect of the program was a great success and proved beneficial for all participants. This program was a “steppingstone for individuals to learn more, to do more, and, eventually, to be more” (Bizub, Joy & Davidson, 2003, p. 381).
A one-day observational study by nursing students illustrated the success and benefits of nontraditional therapy for children with emotional and behavioral issues (Clark, Glazer & Stein, 2004). The students observed an ongoing program at Happy Horse Farm (HHF). Children participating in the program, ages 6 to 16 years old, attended the farm once a week in the same way they would attend a therapists’ office. While at HHF, the children learned how to ride and take care of horses. Deep breathing was encouraged throughout the program as a form of anger management and when children were facing difficulties completing tasks they learned how to take issues bothering them and ‘put them in their pocket’ to step back and complete their task at hand. The horses at HHF were willing participants in the bonding process and relationship with the children, and the children learned valuable skills through this process. Other parts of the program, such as grooming, were structured and systematic, and the children and horses seemed to thrive on the structure. The nurses were able to experience the benefits of EAP with children. Some of the staff members at HHF commented on the long-term changes of the children and reported significant behavior changes for children diagnosed with Attention Deficit Hyperactivity Disorder (ADHD). They reported almost watching the children’s behavior change as they walked up to the horse and felt their calming energy. The horses give off a healing, peaceful energy that instantaneously calms people after they have a chance to meet the horse. In addition, the children took away several beneficial coping skills. It is important to understand how structure is a critical part of a therapeutic setting and that therapy does not have to seem like work (Bradberry, Roberts & Williams, 2004).
The power of a human-horse connection is easily expressed through a camp setting as it is in a therapeutic setting. Research from a summer camp in Texas proves the benefits of equine relationships with children. Tracing its roots to an all boy’s camp, Cal Farley’s Boys and Girls Ranch in Texas targets six significant areas of need that children possess. These areas include: Safety, belonging, achievement, power, purpose, and adventure. Each of these needs are met through the relationship that each child forms with a horse. The ranch took a different sort of approach to bonding and fulfilling these needs than many other therapeutic riding programs. One example is overcoming fear and allowing the horse to feel comfortable around the child before they pursue the horse. The main purpose and final goal of the program was to gain a bond with the horse so they could work together as a team. Through the focus of these areas and the use of horses to meet their goals, the staff at this ranch teaches children important life lessons. The horses are used as metaphors and teachers for real-life scenarios. For example, children learn how to submit to authority by submitting to a horse. The hope is that children will wake each day longing for adventure in life and the joy of chasing life’s adventure. The bond formed between the child and horse was the amazing part of the program. Due to the partnership between horse and rider, the children were able to overcome many hardships and emotional issues. This amazing bond helped them overcome concerns such as low self-esteem and feelings of isolation. The children who became involved at the ranch were able to move from just getting by in life to thriving and really experiencing true joy. The effects of the human-horse relationship is proven each day at this ranch as children bond with horses and learn valuable lessons through that relationship (Cooper & Jobe, 2007).
Equine-assisted therapy is also valuable for individuals with eating disorders. One study examining the benefits shows that individuals seeking treatment for disorders such as anorexia nervosa gained more from an equine assisted session than regular talk therapy. It is a different type of therapeutic approach than one normally finds. This equine-assisted therapy focused more on problem solving rather than riding the horse. During this particular program, taking place at a treatment center for women, the participants were given multiple options for types of treatment, one being equine-assisted therapy sessions. The horses in this study were used more as metaphors rather than for riding. Basically, each person seeking treatment was given a hypothetical situation that they may face in every-day life such as relationship problems and struggles. The treatment teams set up a life size model for the situation and the client must work through the situation. Through this experience, clients are able to learn different techniques for problem solving and become more able to move forward beyond their disorder. Each scenario had a teachable moment at the end when the participants could apply the puzzle to their daily lives and learn from the session. To outsiders, the exercises appear to simply be problem-solving exercises but much greater meanings generally come from the experience. “Sometimes emotions that were carefully hidden emerge” (Christian, 2005 p. 65). At the beginning of each weekly session the participants established rules and what the consequence would be if these rules were broken; this was an important part of the program. Many of the women involved agreed that more benefits came from the program because of the use of horses during treatment (Christian, 2005).

A study conducted by Ewing, MacDonald, Taylor and Bowers (2007) focused mostly on younger children, ages 10 to 13 years old. Overall the study did not reveal any
significant changes in the children throughout the study period. There were many areas of focus including self-perception, empathy, locus of control, depression inventory, and loneliness. The study lasted nine weeks total and the participants had two two-hour sessions per week for a total of 36 hours of participation in the recorded study time. Researchers suggested that the length of the study and the questionnaires used to gather the data could have possibly contributed to the outcome of generally no changes. The questionnaires were hard for some of the children to understand making honest answers and genuine data difficult to collect. Also, perhaps nine weeks was not long enough for the children to participate. It is recommended that future studies last longer.

Another study focuses on the results of a study conducted concerning the use of equine-assisted psychotherapy as an alternative therapy for children who have experienced intra-family-violence. The study and its results are quite detailed and thorough. One of the main focuses was problems with behavior resulting from intra-family violence. The participants in this study were referred to the program from local therapists, pediatricians, and school counselors. The study lasted for 18 months during which each participant went through one to 116 sessions of equine-assisted therapy. Those who did not complete at least six sessions were not included in the final results. The main method of measurement used in this study is the C-GAS, the Children’s Global Assessment of Functioning Scale. This tool is a rating system based on 100 points that measures the psychological, social and school functioning for children 6 to 17 years of age with a score of 100 meaning a maximum level of functioning. It has been proven both valid and reliable (Remick-Barlow, Robbins & Schultz, 2007). Overall, this study revealed an increase in the GAF score for every child participating in the program while
some increased more than others. Although there could be many viable options for this increase, the researchers conducting this study contributed the increase to the horses used. The changes in the children are “rapid and [appear] to be more effective in some children than in others” (Remick-Barlow, Robbins & Schultz, 2007, p. 270). However, they do conclude that more research is necessary to quantify the effectiveness of equine-assisted psychotherapy for children.

In a letter to the editor, Resa Nilson shared her story of how she grew up loving horses and enjoyed riding and grooming them as much as simply spending time around the barn taking care of them. As she became older and married her time grew limited and the horses took the back seat to her husband, children and many adventures in the business world. The death of her mother after a long illness pushed her into depression. She did nothing with her life for three winter months. As spring grew nearer she decided to do something with herself and decided to return to her first love, horses, and volunteer at a therapeutic riding facility for children and adults with mental and physical disabilities. She discovered that through working with the horses and individuals there she was revived. The author recounts, “As I spent time with the horses, my spirits lifted. I found myself feeling lighter…I could breathe again. The difference in my life before and after horses was dramatic” (Nilson, 2004, p. 42). Horses’ healing power is unmatched by any other animal because they can sense what is happening on the inside of a person even when it is not being expressed on the outside of that person. She highly recommends the use of horses as alternative forms of psychotherapy and concludes, “The intimate, emotional relationship that is shared between horse and humans is a profound psychological experience” (Nilson, 2004, p. 42).
In New York City the Equestria Therapeutic Riding Center was created to provide therapeutic horseback riding for disabled individuals in New York City. It began as a one-month test program and now, due to continued success, Equestria is in its twelfth year of operation. Helen Keller was an inspiration for the implementation of this program in New York City. In a brochure Keller was quoted saying:

When I ride horseback…my whole being is thrown eagerly into [this sport]. [It] means complete mental relaxation as well as physical exercise… When I ride horseback, it is not merely as a sport, but also as a sort of communion with nature. (Brodie, 2002, p. 466)

Although the main focus of this riding facility are individuals with vision impairment, the founder of the program clearly understands the benefits of therapeutic horseback riding and was greatly inspired by Helen Keller’s love of horseback riding as more than just a sport. (Brodie, 2002).

Vidrine, Owen-Smith, and Faulkner (2002) highlight many components of improving self-identity that is possible through horseback riding in their article; vital components such as rhythm in child development that is also so prevalent in horseback riding. Space orientation and structuring are also important in developing children and are found in horseback riding as well. There are many important skills that are vital to the development of a child that are naturally found when on the back of a horse. Vidrine, Owen-Smith, and Faulkner (2002) reported a study by Krawetz and DePrekel in 1993 found significant statistical effects of horseback riding with 46 fifth and sixth grade girls. They had an increase in social acceptance, global self-worth (measured by Harter’s Self-Perception Profile) and close friendships because of their time spent with horses in a
therapeutic setting (Vidrine, Owen-Smith & Faulkner, 2002). Vidrine, Owen-Smith, and Faulkner (2002) also reported a study by Cawley, Cawley, and Retter in 1994 which found a decrease in behavioral problems with adolescents as a result of a therapeutic horseback riding program as reported by. These studies used various methods of measurement including the Piers Harris Children’s Self-Concept Scale, Achenbach Child Behavior Checklist and Teacher Report Form and the Harter’s Self-Perception Profile. Each method of measurement utilized by the researchers were completed by the participants instead of outside parties so the results were more directly related to the participants and not a third party’s perception of the results on the participants.

One of the great characteristics of horses as therapists is their companionship. Vidrine, Owen-Smith, and Faulkner (2002) reported a study by Caldwell (1996) which suggests that it is a vital part of the healing process for children to share experiences with others. In a therapeutic riding setting, the horses become those companions with whom children can share their experiences. The horses respond to the children riding them and they share together in the occasion. The horses become a “silent witness to the client’s sensory and somatic experience” (Vidrine, Owen-Smith & Faulkner, 2002, p. 592).

Horses are also separated from ego issues that so often entangle individuals in their daily lives. They provide “unconditional positive regard” (Vidrine, Owen-Smith & Faulkner, 2002, p. 595) without judgment attached. In their article Vidrine, Owen-Smith & Faulkner (2002), suggest that

Horses do not know or care if you are small for your age, have crooked teeth, have no friends, have messy hair or failed your spelling test. Additionally, working as a partner with the horse allows the human therapist a chance to role-
model safe, respectful, yet firm and consistent limit-setting as well as advocacy for the horse. (pp. 595-596)

This is one of the many reasons that utilizing horses as therapists and co-therapists has proven so successful and is growing exponentially in popularity.

According to Capital Area Therapeutic Riding Association (CATRA), there are many special benefits of horseback riding. Horseback riding …stimulates righting and equilibrium reactions…inhibits tonic neck and tonic labyrinthine reflexes…normalizes tone: Reduces spasticity and/or stabilizes athetosis, encourages good posture…improves sitting [or] standing balance [and] coordination…reduces (or prevents) contractures and tightness…[and] provides general strengthening… [and] motivation. (Anefenson, 2009, par. 1)

The benefits of horseback riding are not simply limited to physical benefits however; they are also psychological and social in nature. In most cases with therapeutic riding, the participants are unable to complete a certain task or tasks due to a condition or disorder. The majority of their lives, these individuals have spent time learning about all of the things in which they cannot participate due to their condition or disorder. Horseback riding then becomes the modality in which they can use to perform the task at hand physically. Beyond simply physically benefiting participants, there are psychological changes and benefits as well. Although these benefits are harder to quantify, there is a definite relationship between psyche and the riding experience according to Bream & Spangler from CATRA (2009). As one would conclude, any time someone is able to complete a task that others have stated is impossible there would be a psychological change in that person. Self esteem and self worth would both increase at
the accomplishment of a task and motivation to do more would also increase as a direct result of this ‘impossible’ achievement. At CATRA, the staff works with handicapped individuals to complete the seemingly impossible tasks in their lives and better their participants’ quality of life through horseback riding.

In his article, Horse Play, David (2007) discussed the many benefits of therapeutic horseback riding for individuals with disabilities. Therapeutic horseback riding has been used in Europe for over 50 years and is growing in popularity now in the United States. Many programs like Hearts & Hooves in Louisiana and T.R.A.I.L.S. in New Jersey, work to better individuals lives on a weekly basis. Hearts & Hooves strives to “promote the well-being for people with disabilities by enabling them to enjoy therapeutic riding activities and to promote the public’s awareness of the advantages presented to those who participate” (David, 2007, p. 35). The instructors and volunteers in the program focus on the fun parts of horseback riding rather than the work part of therapy, and they take the focus away from the individual’s disability to focus on their ability in riding horses. According to those working with the program, “therapeutic riding can boost self-esteem and levels of patience and trust” (David, 2007, p. 36).

T.R.A.I.L.S. is a program based in New Jersey that has seen tremendous growth in the past several years. The success and growth of the program is due to the high demand for such therapy and the gracious volunteers that work with the clients on a weekly basis. In his article, David (2007) explains about one autistic child who had little or no vocabulary when he started in the program. One day, a volunteer asked him to tell his horse to “walk on” and he said it to his horse. The child’s mother was completely amazed and in tears. She had never believed that her son would respond to anyone.
Another program, Tackfully Teamed Riding Academy, was founded by Susan Warren so she could give back to her community and help people with disabilities. She personally struggles with ADHD and understands the power of horses to calm her and help her focus. She has witnessed many benefits with her clients through the program she offers. “Focusing, coordination skills, sequencing, body awareness, trunk control, and speech” are some of the many benefits gained by her clients in addition to emotional benefits. Therapeutic horseback riding does help “improve the emotional and physical well-being [of] riders” (David, 2007, p. 38).

Although therapeutic horseback riding is still a fairly new form of physical therapy in the United States, researchers are finding many benefits from therapeutic horseback riding. Some of these benefits include physical aspects with handicapped individuals while others are emotional or social benefits for those with mental disorders or difficult life situations (Bizub, Joy & Davidson, 2002; Bream & Spangler, 2009). There are many different forms of therapeutic horseback riding and various activities that may be used in a therapeutic setting with horses to impact a large number of individuals. This variety also ranges from riding the horses to working with them on the ground to making a problem solving puzzle and using metaphors. Horses are quite versatile and uniquely sensitive to the human condition and because of their caring spirit and gentle nature they are great therapists (Vidrine, Owen-Smith & Faulkner, 2002).
CHAPTER III

METHODS AND PROCEDURES

The purpose of this case study is to examine the effects of Equine Assisted Activities (EAA) on controlling emotional stressors in a nine year-old boy and a 10 year-old girl who have shown previous behavior problems and low self-confidence. The students participated in a 27-week study, which included nine weeks of active participation through horseback riding lessons.

Subjects

Two children, a nine-year old boy and a ten year old girl, participated in the study. Both children exhibited a history of behavioral problems in school and low self-confidence, as reported by their parents. Neither child has been diagnosed with behavioral or emotional problems by a physician. The boy had a history of being “bullied” at school, as well. The girl specifically had difficulties with being “too bossy”. In addition, the parents of the children were asked to complete a survey on two different occasions. Before beginning the study the parents signed both an informed consent and liability release form. All information about the subjects remained confidential for the duration of the study.
Instrumentation and Methodology

Methodology in this study included the Children’s Global Assessment of Functioning Scale (C-GAS), academic grades, and behavioral grades from the children’s school. The C-GAS is a 100-point scale that assigns numerical values to various levels of functioning (Association, 1994; Appendix A). The parents completed the questionnaire as a pre- and post-test by selecting the numerical value that matched the description of their perception of the child’s level of functioning. The academic grades from school were reflected in every subject in school; these subjects include: reading, language/writing, mathematics, social studies, science, health & safety, art, music, and physical education. The children’s teachers scored each subject independently of the other. There were several areas of behavior grades as well; these areas include: classroom behavior, art behavior, music behavior, and physical education behavior. The teachers scored these areas separately as well.

Testing Protocol

The study included three parts, a pre-activity phase, activity phase, and post-activity phase. The study was approved by the board for IRB approval prior to the start of the study.

Part A, the pre-activity phase consisted of the first nine weeks of school starting in the fall. This period allowed the children an opportunity to become acquainted with the new school environment (teachers, classmates, rules). There was no extra activity or any changes to the regular schedule during this phase. At the end of Part A the grades, both academic and behavior, were recorded as a pre-activities grade. Also at this time the parents of the boy and girl completed the C-GAS for each child.
Part B was the activities period. Part B also lasted nine weeks and included weekly horse lessons for each of the children. Both of the children came to the barn one night a week for two hours. The first child spent the first 30 minutes grooming and tacking the horse before the ride and the second 30 minutes riding. The other child spent the next 30 minutes riding and the last 30 minutes untacking and grooming the horse after the ride. To ensure that each child received an equal experience, the children alternated riding first or second. This was important because by the second hour sometimes the horse was tired or bored and wanted to go back to the barn.

The schedule for horseback riding lessons was predetermined to allow guidelines to measure progress; however, it did remain flexible in consideration of the children’s needs and the weather. Week one started with learning how to groom and tack the horse during each session. The children did not physically ride, but they did work with the horse. They also learned how to safely lead the horse and learned safety around the animal. Every lesson thereafter the children were expected to groom and tack their horse without assistance. The instructor supervised to maintain a safe environment, but the children were expected to do the work themselves. The grooming and tacking process was a great way to form a strong bond with the horse that would be harder to form if they were only riding and did not have the time together on the ground.

During week two the children rode for the first time (on this animal). The girl had ridden minimally in the past but the boy had no past experience. They learned how to hold the reins correctly and the commands for walk and halt. They learned basic steering as well. After the riding portion of the lesson they learned the routine for taking care of the horse after every ride.
The children learned how to tack their horse and learned the cues for riding at the walk in week three. Week four presented an element of fun as well as learning with an obstacle course. The children navigated the obstacle course consisting of circles, poles, and cones to weave. The children learned new positions during week five utilized during trotting and eventually jumping. They also learned how to steer while holding various positions and learned how to effectively transition from one position to another.

Week six was bareback week. The children rode the horse without a saddle. There were various reasons for having them complete this exercise with the greatest being the importance of building a strong bond with the horse. The weather had an effect on week seven and the lesson was inside due to rain. The children reviewed flash cards about the parts of the horse and parts of equipment. They learned how to assemble a bridle correctly. They also learned how to clean a stall and take care of their horse in the barn.

During week eight the children learned how to ride at the trot. They worked on various positions at the trot and learned how to steer at the trot as well. The last week of riding was a review week of putting everything together. The children had a second obstacle course that was much more difficult than the first one. It included trotting and much harder steering maneuvers. It was also longer in length. At the end of Part B, all of the grades were recorded again as the post-activities grade and the parents scored the children a second time on the Global Assessment of Functioning Scale. At this point, the effects of the EAA with the children were evaluated by a weekly check sheet including a list of the objectives to meet each week.
Part C, the post-activity phase, followed with nine more weeks beyond part B without lessons. During this phase, like Part A, there were no extra activities that the children participated in outside of their regular routine. At the end of part C, grades, both academic and behavior, were recorded again and the parents evaluated the children one last time with the C-GAS to determine if any long-term effects resulted from the EAA.
CHAPTER IV

RESULTS

The purpose of this case study was to examine the effects of Equine Assisted Activities (EAA) on controlling emotional stressors in a nine year-old body and a ten year-old girl. Parents and teachers completed the Children’s Global Assessment of Functioning Scale for children (C-GAS) and both academic and behavioral grades (respectively) at nine, 18, and 27 weeks. Children participated in EAA during the second nine weeks of the study. The nine year old boy will be referred to as child 1 and the ten year old girl will be child 2 from this point and throughout.

The grades assigned by each child’s teacher were separated into two categories, academic and behavior. The academic grades were based on the following grading scale:

- A 93-100
- B 85-92
- C 75-84
- D 70-74
- U Below 70

At the beginning of every nine week grading period the grade is reset therefore, the scores are not cumulative for the entire academic year. The academic grades for Child 1 and Child 2 are listed by subject in tables 4.1 and 4.2.
### Table 4.1 Academic grades at 9, 18 and 27 weeks for Child 1

<table>
<thead>
<tr>
<th>Child 1</th>
<th>9 weeks</th>
<th>18 weeks</th>
<th>27 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>A</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Language/ Writing</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Mathematics</td>
<td>C</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Social Studies</td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Science</td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Health &amp; Safety</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Art</td>
<td>B</td>
<td>C</td>
<td>B</td>
</tr>
<tr>
<td>Music</td>
<td>A</td>
<td>A</td>
<td>E</td>
</tr>
<tr>
<td>Physical Education</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
</tbody>
</table>

### Table 4.2 Academic Grades at 9, 18 and 27 weeks for Child 2

<table>
<thead>
<tr>
<th>Child 2</th>
<th>9 weeks</th>
<th>18 weeks</th>
<th>27 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>C</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Language/ Writing</td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Mathematics</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Social Studies</td>
<td>A</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Science</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Health &amp; Safety</td>
<td>S</td>
<td>S</td>
<td>A</td>
</tr>
<tr>
<td>Art</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Music</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Physical Education</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
</tbody>
</table>
The behavior grades were scored separately from the academic grades based on a different grading scale:

E  Excellent
S  Satisfactory
N  Needs Improvement

The Classroom Behavior grade is the average of all the behavior grades for reading, language/writing, mathematics, social studies, science and health & safety. The classroom work habits grade is based on how well the students stay on task while in the classroom. Art, music, and physical education have a separate behavior grade for only that class. The behavior grades for both children are listed in Table 4.3 and 4.4.

Table 4.3 Behavior grades at 9, 18 and 27 weeks for Child 1

<table>
<thead>
<tr>
<th>Child 1</th>
<th>9 weeks</th>
<th>18 weeks</th>
<th>27 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom Behavior</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Work Habits</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Art</td>
<td>E</td>
<td>C</td>
<td>B</td>
</tr>
<tr>
<td>Music</td>
<td>E</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td>Physical Education</td>
<td>B</td>
<td>B</td>
<td>A</td>
</tr>
</tbody>
</table>
Table 4.4 Behavior grades at 9, 18 and 27 weeks for Child 2

<table>
<thead>
<tr>
<th>Child 2</th>
<th>9 weeks</th>
<th>18 weeks</th>
<th>27 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom Behavior</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Work Habits</td>
<td>E</td>
<td>E</td>
<td>E</td>
</tr>
<tr>
<td>Art</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Music</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Physical Education</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
</tbody>
</table>

After the first nine weeks, some of the teachers switched from the behavioral grading scale to the academic grading scale for the behavior grades. The inconsistency in grading makes it difficult to make comparisons between the three periods of the study. However, one could conclude that A on the academic scale is equivalent to E on the behavioral scale, C is equivalent to S, and U is equivalent to N for the purpose of comparison.

The other form of measurement was the use of the C-GAS (see Appendix B). The C-GAS is a 100-point scale that assigns numerical values to various levels of functioning. This tool is a rating system that measures the psychological, social and school functioning for children 6 to 17 years of age with a score of 100 meaning a maximum level of functioning. The children’s scores are in table 4.5 for all parts of the study.

Table 4.5 Children’s Global Assessment of Functioning Scale scores at 9, 18 and 27 weeks for both children.

<table>
<thead>
<tr>
<th></th>
<th>9 Weeks</th>
<th>18 Weeks</th>
<th>27 Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child 1</td>
<td>41-50</td>
<td>61-70</td>
<td>61-70</td>
</tr>
<tr>
<td>Child 2</td>
<td>61-70</td>
<td>81-90</td>
<td>81-90</td>
</tr>
</tbody>
</table>
CHAPTER V

DISCUSSION

The purpose of this case study was to examine the effects of Equine Assisted Activities (EAA) on controlling emotional stressors in a nine year-old body and a ten year-old girl. Changes were measured using academic and behavior grades from the children’s school and the Children’s Global Assessment of Functioning Scale (C-GAS; see Appendix B) completed by the parents.

The pre-activity scores were taken after the first nine weeks of school before the horseback riding lessons began. Child 1 exhibited average classroom behavior grades with satisfactory work habits; the Art and Music behavior grades were both excellent. After the horseback riding lessons, the behavior grades all remained the same with the exception of art which dropped to a C. The teachers switched the grading scale for the behavior grades from the behavioral scale to the academic scale after the first nine-weeks grading period for unknown reasons. For the purpose of comparison, one can match a score of E with A, S with C, and N with U. Using this form of comparison, the behavior of child 1 decreased in Art from the first to the second nine weeks of the study. Child 1 had many improvements in the behavior grades from the second nine weeks to the third
nine weeks. The behavior grades in Art, Music and Physical Education all improved by one letter grade while all other behavior grades remained the same.

Child 1 did have great changes in the academic grades from Part A to Part B. Specifically in Math, the grade raised from a C to an A. The others remained the same or dropped by one letter grade. However, during the third nine weeks the Math grade dropped slightly to a B although it is higher than the C received in the pre-activity grade. The Art grade increased to a B from a C, and all the other grades remained the same from the 18-week score to the 27-week score. The grading scale in Music changed for unknown reasons from the academic scale to the behavior scale, but again if one assumes the same method of comparison an A and an E are equal.

The largest improvement for Child 1 was the C-GAS score. Prior to EAA the parents rated Child 1 on the C-GAS with a score of 41-50 which is described as

Moderate degree of interference in functioning in most social areas or severe impairment of functioning in one area, such as might result from, for example, suicidal preoccupations and ruminations, school refusal and other forms of anxiety, obsessive rituals, major conversion symptoms, frequent anxiety attacks, frequent episodes of aggressive or other antisocial behavior with some preservation of meaningful social relationships. (Association, 1995)

Following the EAA, parents rated Child 1 as 61-70 which is described as

Some difficulty in a single area, but generally functioning pretty well, (e.g., sporadic or isolated antisocial acts, such as occasionally playing hooky or petty theft; consistent minor difficulties with school work, mood changes of brief
duration; fears and anxieties which do not lead to gross avoidance behavior; self doubts). Has some meaningful interpersonal relationships. Most people who do not know the child well would not consider him/her deviant but those who do know him/her well might express concern. (Association, 1995)

The parents did not know the pre-activity score when they selected the post-activity score; therefore, they had no bias in wanting the children to show improvement throughout the study. The maintenance of the higher score through the nine weeks following EAA shows some follow through effect with the EAA as well. The overall anxiety and social behavior of Child 1 improved tremendously throughout the study.

The act of conquering a fear such as riding a horse and the confidence that comes from navigating a large animal around an arena probably had a great impact on child 1. Vidrine, Owen-Smith and Faulkner (2002) suggest that the vulnerability of the horse increases the human-equine bond and sets horses apart as great therapists. Horses provide a great avenue for opening the channels of communication to teach life lessons and skills including social skills; therefore the social functioning of Child 1 improved throughout the study (Ewing, MacDonald, Taylor & Bowers, 2007). Child 1 also showed decreased bouts of antisocial acts and decreased anxiety and self doubts according to his C-GAS score. A study conducted by Cooper & Jobe (2007) showed that the bond created between a horse and its rider helps increase self-esteem and decrease feelings of isolation. The improvement in the C-GAS score and decrease in antisocial acts is evident of the feelings of belonging brought about by the relationship and bond formed with the horse throughout the study.
Throughout the lessons it was observed that child 1 gained confidence and raised self esteem. Clark, Glazer and Stein (2004) found their 6-week study to be successful in building confidence in children grieving the loss of a loved one through the use of hippotherapy. As suggested from their study, the children gained confidence because they were learning to do something new, and they were doing it well on their own which brought a great sense of accomplishment. Another study conducted by Bizub, Joy and Davidson (2003) also increased confidence in the subjects. The participants of this study commented on the transfer of learning from the horseback riding lessons into other areas of their lives as well. Child 1 showed an increase in confidence specifically between weeks two and three. During week two the child was fearful to ride at first but progressed nicely with help. The instructor led the horse around at first while the child held the front of the saddle. When the child was ready, the instructor simply held the nose band of the bridle while the child held the reins and began to steer. Later the instructor was able to let go of the horse but stayed close to the horse as the child was uncomfortable with the instructor moving away. By the end of the 30-minutes of riding time, the child showed much more confidence even though the child was not ready to ride without the help of the instructor. At the beginning of the riding time of week 3, child 1 was ready to ride and was confident to mount and ride without the close help of the instructor. The accompanying parent also mentioned that child 1 was ready and excited to come to the barn for the lesson during week three. A study conducted by Bradberry, Roberts and Williams (2004) suggested that although horses are large animals they have a calming energy which transcends fear among those working with the animal. The demeanor of Child 1 visibly changed throughout the course of the first mounted lesson
and on throughout week three in the similar fashion that the participants in this study
closed as they came into the calming energy of the horses in which they were working.

Another noticeable increase in confidence took place between weeks four and
five. Week four was obstacle course week and Child 1 was successful with the obstacle
course, but during week five, Child 1 learned quickly and excelled more than expected.
Week five was position week and the children learned various positions that are used
during riding. The children learned how to steer through various positions and Child 1
was especially strong and surpassed the expectations of the lesson.

By the end of the nine weeks of riding lessons, there was a noticeable difference
in the confidence of Child 1 both on the horse and on the ground. The life skills learned
throughout the nine weeks of riding and working with the horse such as, team work,
cooperation and compassion had an impact on the child. The grades at school did not
show much change due to the fact that the activity portion of the study only lasted for
nine weeks. Several studies mentioned the length as a great factor. If the lessons would
have lasted longer than nine weeks, it is possible the scores would have improved more
between Part A and Part B.

Child 2 showed minimal changes in grades between Part A and Part B. The
reading score increased from a C to a B while the others stayed consistent. However, the
social studies grade dropped from an A to a B. The academic grades all remained the
same from Part B to Part C. The grading scale for Health & Safety changed for unknown
reasons but remained the same as A and E are considered equal. The behavior grades all
remained the same as the scores were all A or Excellent during Part A through Part C.
Some of the teachers utilized the academic grading scale for the behavior grades with
Child 2 as well; however, the teachers remained consistent and did not switch between the scales from Part A to Part C.

The C-GAS score of child 2 also showed a sizable increase between the pre-activity and the post-activity phases. Prior to EAA Child 2 was rated with a score of 61-70 described as

Some difficulty in a single area, but generally functioning pretty well, (e.g., sporadic or isolated antisocial acts, such as occasionally playing hooky or petty theft; consistent minor difficulties with school work, mood changes of brief duration; fears and anxieties which do not lead to gross avoidance behavior; self doubts). Has some meaningful interpersonal relationships. Most people who do not know the child well would not consider him/her deviant but those who do know him/her well might express concern. (Association, 1995)

The post-activity score was 81-90 which is described as

Good functioning in all areas. Secure in family, school and with peers. There may be transient difficulties and “everyday” worries that occasionally get out of hand (e.g. mild anxiety associated with an important exam, occasional “blow ups” with siblings, parents or peers). (Association, 1995)

The maintenance of the higher score of 81-90 at the 27-week checkpoint shows a follow through effect from the EAA, similar to that of Child 1. The difference in C-GAS scores between Child 1(61-70 post-activity) and Child 2 (81-90 post-activity) could be gender related, however Child 1 is younger and the children are at vital stages in development where females are generally ahead of males. It is not uncommon that Child 2 would have
a higher C-GAS score simply because she is at a higher level of functioning and
development than Child 1.

Before beginning the study, Child 2 was reported by parents as being “too bossy”. Throughout the nine weeks of horseback riding lessons, she was able to channel her “bossy” feelings toward the horse she was riding when she needed to tell him how to move. The channel for this action took away the inclination of Child 2 to become too bossy with her peers and/ or siblings. The C-GAS score also reports that Child 2 was “secure in family, school and with peers” after the lessons, and the “bossy” attitude decreased (Association, 1995). A study conducted by Vidrine, Owen-Smith and Faulkner (2002) with 5th and 6th grade girls suggests that horseback riding in a therapeutic setting can contribute to greater feelings of social acceptance and global self-worth as well as facilitate more close friendships. These outcomes are evident in this study with Child 2 and the increase in the C-GAS score.

Child 2 gained confidence throughout the study as well. The child had some experience prior to the study so the confidence level was moderately high before the study; however, Child 2 showed a consistent increase in confidence throughout the study, specifically during week seven, and excelled beyond the lesson schedule every week. Week seven was a rainy week and the children were both inside studying flash cards that were used through the duration of the study to learn parts of the horse, kinds of equipment for the horse, parts of the tack, and kinds of equipment for the rider. They also learned how to disassemble and reassemble a bridle. Child 2 gained a great deal of confidence during this exercise and while cleaning the stalls and taking care of the horses in the barn at the end of the lesson time.
Again, the limited length of the activity phase had an effect on the study. With more lessons on a consistent basis there would be more changes in the children. However, the perfect behavior grades of all A and E left no room for improvement in behavior grades from Part A to Part B. The large increase in the C-GAS score was important to note. If this study was produced a second time it would be better to increase the length of time for the riding lessons, possibly double the time to 18 weeks of lessons. Also, having some time to work on homework in a structured setting would benefit the program. During week four, Child 1 and the accompanying parent were working on homework in the tack room before Child 1 rode (he was riding second that week). Child 1 was struggling to finish the homework (a characteristic he has shown in the past) because it included cursive writing and there was no desire to finish. Later, the child alternated between writing a line of the homework and working on five flash cards from the barn. The pace of the homework increased and Child 1 was finished quickly because the child wanted to continue to work on the flash cards. The study would have benefited greatly from a better outlined system of finishing homework while still having fun. This idea of integration is similar to the approach taken in a study by Bizub, Joy and Davidson (2002) which showed a tremendous transfer of learning from lessons taught through horses or horseback riding into other parts of daily life.

Overall this study was successful in measuring the affects of horseback riding on children with emotional issues through the use of EAA. The changes observed during this study are exciting in looking toward the future of EAA and therapies utilizing horses. Horses truly are amazing animals with more than enough love to give to the humans who
choose to love them and work with them. Their vulnerability and honesty surpasses all animals and shows humans their true greatness.
Children’s Global Assessment of Functioning Scale

100-91: Superior Functioning in all areas (at home, at school and with peers), involved in a range of activities and has many interests (e.g., has hobbies or participates in extra curricular activities or belongs to an organized group such as Scouts, etc.). Likable, confident, “everyday” worries never get out of hand. Doing well in school, no symptoms.

90-81: Good functioning in all areas. Secure in family, school and with peers. There may be transient difficulties and “everyday” worries that occasionally get out of hand (e.g. mild anxiety associated with an important exam, occasional “blow ups” with siblings, parents or peers).

80-71: No more than slight impairment in functioning at home, at school, or with peers. Some disturbance of behavior or emotional distress may be present in response to life stresses (e.g., parental separations, deaths, births of a sib) but these are brief and interference with functioning is transient. Such children are only minimally disturbing to others who are not considered deviant by those who know them.

70-61: Some difficulty in a single area, but generally functioning pretty well, (e.g., sporadic or isolated antisocial acts, such as occasionally playing hooky or petty theft; consistent minor difficulties with school work, mood changes of brief duration; fears and anxieties which do not lead to gross avoidance behavior; self doubts). Has some meaningful interpersonal relationships. Most people who do not know the child well would not consider him/her deviant but those who do know him/her well might express concern.
60-51: Variable functioning with sporadic difficulties or symptoms in several but not all social areas. Disturbance would be apparent to those who encounter the child in a dysfunctional setting or time but not those who see the child in other settings.

50-41: Moderate degree of interference in functioning in most social areas or severe impairment of functioning in one area, such as might result from, for example, suicidal preoccupations and ruminations, school refusal and other forms of anxiety, obsessive rituals, major conversion symptoms, frequent anxiety attacks, frequent episodes of aggressive or other antisocial behavior with some preservation of meaningful social relationships.

40-31: Major impairment in functioning in several areas and unable to function in one of these areas, i.e., disturbed at home, at school, with peers, or in the society at large, e.g., persistent aggression without clear instigation; markedly withdrawn and isolated behavior due to either mood or thought disturbance, suicidal attempts with clear lethal intent. Such children are likely to require special schooling and/or hospitalization or withdrawal from school (but this is not a sufficient criterion for inclusion in this category).

30-21: Unable to function in almost all areas, e.g., stays at home in ward or in bed all day without taking part in social activities OR severe impairment in reality testing OR serious impairment in communication (e.g., sometimes incoherent or inappropriate).

20-11: Needs considerable supervision to prevent hurting other or self, e.g., frequently violent, repeated suicide attempts OR to maintain personal hygiene OR gross impairment in all forms of communication, e.g., severe abnormalities in verbal and gestural communication, marked social aloofness, stupor, etc.
10-1: Needs constant supervision (24-hour care) due to severely aggressive or self-destructive behavior or gross impairment in reality testing, communication, cognition, affect, or personal hygiene.

REFERENCES


