

RUNNING HEAD: Equine-Assisted Psychotherapy

Effects of Equine-Assisted Psychotherapy
on juveniles in a residential treatment facility

Rebekah Wilson

Kristine Schuster

Hanover College

Effects of Equine-Assisted Psychotherapy on juveniles in a residential treatment facility

The first documented use of Animal-Assisted Therapy (AAT) was “York Retreat in England in 1792 by a Quaker group where farm animals were used to teach the psychiatric patients self-control through positive reinforcement with the weaker and needy animals” (Furst 2006). Since then, AAT has been used with many different kinds of animals in a variety of situations with many different types of people. It has been used in hospitals, prisons, schools, and even in the therapy setting.

It has been shown that owning a pet or interacting with animals helps to foster attitudes of “empathy and humanness towards others” (Ewing, MacDonald, Taylor, & Bowers, 2007; Furst 2006). After observing this phenomenon, animals were then brought in to hospitals where it was found that patients who interacted with animals showed less symptoms of stress as measured physiologically through monitoring of the heart rate and blood pressure (Jalongo, Astorino, & Bomboy, 2004). Furthermore, Fontaine (2001) found that the presence of therapy dogs in hospitals produced “decreased feelings of loneliness, feelings of increased physical and psychological well-being, decreased need for medications, enhanced quality of life, improved physical function, decreased stress and anxiety, and increased motivation”.

Similar success was shown in other government institutions, particularly the school system. Academically, children that were below grade level in reading were assigned to read to a therapy dog once a week for an entire school year and it was found that at the end of the year, children had improved reading abilities by two grade levels or more (Jalongo, Astorino, & Bomboy 2004). Additionally, when a dog made regular visits to a school for children who had severe behavioral handicaps, there were shown to be improvements in conduct and attendance (Furst 2006). Furthermore, at MacLaren School of the Oregon Youth Authority, all of the

students who participated in their dog training program showed a decrease in their number of office referrals and showed an increase in self-esteem, patience, responsibility, and vocational skills (Furst 2006).

Later, similar experiments were implemented in prisons with remarkable results. In prison, the benefits stem from simply being with the animal, there is no therapeutic component; this means that the inmates are interacting with the animals without receiving any additional counseling (Furst 2006). In one study, it was found that “patients with pets required half as much medication, had drastically reduced incidences of violence, and had no suicide attempts during a year long comparison. The ward without pets had eight documented suicide attempts during the same period of time” (Furst 2006). Additionally, there were significant reductions in feelings of isolation and frustration and considerable change in inmate’s outlook towards others, their sense of self-worth, and their sense of achieving a better goal in life (Furst 2006). Another study at Colorado Cannon City Prison showed a reduction in illegal drug use and an increase in inmate’s self-confidence, patience, and respect for both people and animals (Furst 2006). It is hypothesized that this works because animals give inmates the opportunity to interact with a living being that has absolutely no interest in their past actions or mistakes (Furst 2006).

With all of these emotional benefits, it makes sense that animal presence has branched into the therapeutic realm. AAT is “designed to promote improvement in human physical, social, emotional, and/or cognitive function; including thinking and intellectual skills (Rothe et. al, 2005). One type of AAT is Equine-Assisted Psychotherapy (EAP), which is distinct in the fact that horses offer a “combination of fearfulness and power allied with their natural ability to mirror our behaviors” (Frewin & Gardiner 2005). Mirroring often gives an external display of the patient’s inner conflict. A tendency often exhibited is for the patient unintentionally to

choose a horse whose verbalized personality description matches closely the inner self and core characteristics of the patient (Rothe et. al, 2005). This then creates a protected environment through which their issues become unshackled by way of the horse's mirroring ability. This is further supported by Rothe who believes that horses act as guides to human growth and development within the therapy setting (2005). The ability of the horse to act as a mirror for the patient's deep inner experience facilitates "personal exploration of feelings, powers of intuition and understandings of self, nature, relationships, and communication" (Rothe et. al, 2005).

Equine-Assisted Psychotherapy (EAP) was founded by Greg Kersten in the late 1980's to the early 1990's (Kersten, 2008). At this time, Kersten was working for a maximum security youth prison in the Washington D.C. area and worked at a ranch on the side. Through a work-release program, he was able to bring some of the boys to the ranch where they worked in a way similar to the way EAP activities are designed today. Kersten noticed after a couple of months that there were substantial changes in the boys, thus leading to the creation of EAP.

"Sessions involving horses are designed around setting up activities that require clients to apply particular skills..." (Frewin & Gardiner 2005). The skills that can be developed are "verbal and nonverbal communication, assertiveness, creative thinking, problem solving, leadership, responsibility, teamwork, relationships, confidence and attitudes" (Rothe et. al, 2005). With EAP, it is important to note that 90% of the therapy takes place on the ground (Rothe et. al, 2005). Riding therapy is used for fine motor skills and core strength development (Tyler, 1994). The EAP that is done at Paddock View is specific to addressing behavioral issues, such as "attention deficit disorder (ADD), eating disorders, abuse issues, depression, anxiety, relationship problems, and communication needs," all of which takes place on the ground (Rothe et. al, 2005).

In order for the child to be able to lead the horse, the horse must first subordinate to the wishes of the child. This then allows the therapist to observe and instruct the child in developing verbal and nonverbal skills (Rothe et. al, 2005). Additionally, “leading a horse can demonstrate how a child feels about being lead around by another, either by letting the horse be free or by wanting the horse to be more restricted” (Rothe et. al, 2005). Furthermore, leading can also call attention to body placement relative to other beings, thus enabling the therapist to point out dangerous situations and providing opportunities for the participant to seek help from others. Once this is accomplished, other activities can then be utilized.

One such activity is called Life’s Little Obstacles. In this activity, the participant’s main goal is to persuade one or more horses to complete a jump. Prior to beginning the activity, each participant is asked to label the obstacle as a difficulty he/she faces within his/her own life. Next, they are instructed of the rules, which include: no touching the horses, no tempting the horses, no talking, and no using anything outside of the arena. Following this, they are to determine a group consequence for breaking any one of these rules. They are provided with up to a minute of planning time that can be used as desired, such as breaking it up into increments. The goal of this activity is to improve nonverbal communication, as well as problem solving and thinking of alternative solutions. An example of this would be placing the pole of the jump on the ground so the horse can step over it rather than jump (EAGALA, n.d.).

Another activity often used is Extended Appendages. At Paddock View, this activity is usually completed in groups of three but it can be adapted for pairs or larger groups. When completed in groups of three, the participants must link together in some way, usually by holding hands. The participant in the center becomes the brain and the participants on either side serve as the hands respective to their position. The hands are instructed that they are not allowed to talk

and must perform only the actions they are instructed to do by the brain, no more or less. The brain is instructed that he/she is not allowed to do anything physically. They are then presented with the task of saddling a horse. The goals of this activity are to work on verbal and leadership skills, as well as working cooperatively (EAGALA, n.d.).

Another technique in EAP is play therapy. In play therapy, a role-taking method is used by the child to tell a story about the emotions and experiences of the horse. Due to the reflective nature of horses, while the child tells the story, the horse is reflecting the emotions of the child. From this, the child in reality is telling a story about experiences in his/her own life utilizing the horse as a metaphor for his-/herself. This is commonly referred to as anthropomorphizing, which is “the projection of a child’s wants, needs, and behaviors through the horse” (Rothe et. al, 2005). Telling the story about the horse instead of about him or herself then allows the child to feel more secure.

This security that allows for a freeing of emotions additionally works for physical contact and proximity. “Horses, just by their large, gentle presence, put people therapeutically in touch with their own vitality. People who ordinarily shun physical and emotional closeness can often accept it from a horse and through therapy can transfer this to their daily lives” (Rothe et. al, 2005). This is particularly beneficial for males, who lack social support to engage non-sexual physical contact (Furst, 2006). Other mental health and developmental needs that are fostered through EAP can be broadly grouped into these categories: personal, social, and future-oriented.

Self-esteem

In one study, five adults that had long histories of psychiatric disabilities underwent a ten week therapeutic horse program that consisted of bonding activities, riding, and a processing group after the sessions. After completing this program, each of the participants reported feeling

more confident in his/ her skills and one participant reports that it lifted her self-esteem and self-efficacy to the point that she was then able to seek independence, both financially and in her living environment. The participants reported that it was the unconditional acceptance provided by the horse that allowed them to grow (Bizub, Joy, & Davidson, 2003).

Another article by Glazer (2004) was conducted on bereaved children who engaged in a summer riding program consisting of six sessions. Following the sessions the children would report what they learned from the session and this was then coded. It was found that over time the statements reflected an increase in self-confidence, trust in others and self, and also an increase in self-esteem. Moreover, several meta-analyses have found that personal benefits include items such as: higher self-esteem, self-awareness, self-efficacy, self-control, a sense of well-being, confidence, assertiveness, the resolution of inner conflicts, and provides an opportunity to “re-pattern maladaptive behaviors, feelings, and attitudes” (Frewin & Gardiner, 2005; Rothe et. al, 2005; Lentini & Knox, 2008).

However, the most overtly obvious benefit of EAP is that the size difference between the participant and the horse can create an opportunity to overcome fear which then leads to an increase in confidence and self-esteem” (Frewin & Gardiner, 2005). This was also reflected in the interviews conducted in Bizub, Joy, & Davidson (2003) during which participants reported that it was their ability to overcome a fear and master something new that allowed this change. Based on this we hypothesize that the children who undergo EAP at Paddock View will have significantly higher ratings of self-esteem after completing EAP than they did pre-EAP. The personal benefits are internal changes in the participant which are then expressed in their outward presentation of self.

Expectations for the future

Higher self-esteem has not only positive effects in the present, but could also have positive effects for the child's perception for the future. If a child feels more confident now, the child is likely to also have a more positive outlook towards the future. This could be manifested in terms of improvement in expectations of personal success or a belief that they could achieve a better goal in life (Furst, 2006; Rothe et. al, 2005).

In a study 31 participants were asked to take part in an EAP program consisting of 28 hours of therapy done in groups. Prior to starting therapy participants were asked to complete the Brief Symptom Inventory and the Personal Orientation Inventory. Post-therapy participants were again asked to complete these forms and also again at a 6-month follow up. It was found that after completing EAP participants rated themselves as being less focused on fears related to the future and less burdened by guilt and regrets from the past than they prior to beginning EAP. Furthermore, these results proved to be stable at the 6-month follow up (Klontz, Bivens, Leinart, & Klontz 2007).

A part of why EAP helps to foster more positive expectations for the future is that it teaches safe mistake-making (Lentini & Knox, 2008) which gives the child the realization that mistakes are acceptable and merely an opportunity for change. This then provides the children with a better sense of being able to overcome the mistakes that the child has already made. Therefore, the hypothesis is that after the children at Paddock View complete EAP they will have a more positive outlook on the future than they did before starting EAP. However, there have been few studies completed that directly assess expectations for the future within the field of EAP.

Communication/ Cooperation

Communication skills, group participation, mutual trust, problem solving, affection, an understanding of personal boundaries, empathy and a sense of unconditional acceptance comprise the social benefits observed (Ewing, MacDonald, Taylor, & Bowers, 2007; Frewin & Gardiner, 2005; Rothe et. al, 2005). Communication skills encompass speech and language enhancement as well as nonverbal communication, such as accurately interpreting facial expressions and body language (Frewin & Gardiner, 2005; Rothe et. al, 2005). Social benefits are those aspects that effect interpersonal interaction. These improvements in effective social interaction are then reflected back to the participant through others increasing the participant's sense of self-worth and achievement.

EAP is exceptional in that it focuses on the development of relationships (Frewin & Gardiner, 2005). Additionally, it may aid patients in "uniting unconditionally with another living being and self disclose in a safe and respectful way" (Rothe et. al, 2005). One element to developing a strong relationship is effective communication. "With the horse this involves patience, understanding, attention, forgiveness, and consistency." Also present in the therapeutic setting is the preexisting relationship that the therapist and horse professional share, as well as the relationship each of them has with the horse. This is then a model of positive communication consisting of respect and cooperation, which then fosters development of a relationship between the patient and the horse. The availability of this preexisting relationship "can validate the normalcy and importance of the responses of fear, anger, anxiety, love, and compassion" as the patient relates to the horse. This then places the patient in the midst of both preexisting and emerging relationships, which consist of both verbal and nonverbal communication (Rothe et. al, 2005).

Additionally, it “addresses a variety of mental health and human developmental needs” (Frewin & Gardiner 2005). The fact that horses provide a distinctive opportunity for learning about relationships satisfies one such need because the participant has to create a relationship based on mutual trust and respect (Frewin & Gardiner 2005). One example that clearly demonstrates both overcoming the size differential and creating a mutually beneficial relationship was given by McCormick and McCormick (1997) when they found that “the hostile and defiant street smarts of adolescent gang youth erode quickly in the presence of an assumed adversary (the horse) that the youth is unequipped to control or overthrow. Such adolescents are invariably shocked as they begin to understand that openness and vulnerability are more likely to elicit positive behavior from the horse than displays of defiance and aggression.” As a result, we also theorize that those children that complete EAP at Paddock View will have higher ratings of communication after undergoing EAP than they did before they experience therapy.

EAP has been gaining support because there have been impressive results in participant improvement (Frewin & Gardiner 2005). A significant reason for this growing support is due to greater improvements demonstrated in a shorter duration when compared conventional therapy. “An average of five sessions produced improvement in areas of conduct, mood, and psychotic disorders after years of conventional methods of therapy had failed to have an impact” (Frewin & Gardiner 2005). Additionally, in a juvenile court system located in Ohio, it was found that after implementing an EAP program, there was a significant reduction in recidivism rates (Thomas 2002).

Another benefit to EAP over conventional methods of therapy is that “the experiences of nurturing, frustration, illness, death, and birth of the animal raise topics for discussion which might not be present in another milieu” (Rothe et. al, 2005). Moreover, the child can translate

his/her care for the horse into caring for his-/herself (Rothe et. al, 2005). Along with that, the central benefit the horse provides is companionship. This is imminently important because “many children are stilted because of lack of parental love or parent’s ability to demonstrate love, but the horse will demonstrate love without restraint. A horse can provide opportunities for giving and receiving affection which the child needs for growth and personal development” (Rothe et. al, 2005).

Methods

Participants

All of the participants in this study ($n=15$) were adolescent males between the ages of 12 and 17 ($m=15.5$). They all resided at Paddock View Residential Center located in Marion, IN which provides living environment, schooling, and therapy. The therapy that is provided is completed in groups using EAP and is completed entirely on the ground, rather than on horseback. Furthermore, Paddock View attempts to incorporate EAP into all aspects of the boys’ lives. All of the boys were referred to Paddock View through the Juvenile Justice System, and had broken the law more than once. The average length of stay is between six and twelve months.

Materials

The three factors that are being assessed are self-esteem, expectations for the future, and communication. To assess self-esteem, researchers will be using the Rosenberg Self-Esteem Scale (Rosenberg 1965); Expectations for the future will be gauged using the Beck Hopelessness Scale (Beck, Weissman, Lester, & Trexler 1974); and the researchers created a Communication Assessment to measure the change in communication abilities. These measures are used to assess the participants pre- and post-EAP in order to provide a comparison.

The Rosenberg Self-Esteem Scale and the Communication Assessment are filled out on a 4-point scale: 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree. This is such that the higher the participants score, the better his/ her self-esteem or communication abilities. The Beck Hopelessness Scale is scored by adding up the total number of statements that indicate hopelessness. There is a scale (0 – 20) by which these numbers are assessed and then categorized: Absent (0 – 3), Mild (4 – 8), Moderate (9 – 14), and Severe(15+).

Additionally, a Comprehensive Assessment was created. This asked questions that mirrored those in the Rosenberg Self-Esteem Scale, Beck Hopelessness Scale, and Communication Assessment, except that the questions were asked from a third person point-of-view. This was created for the therapist to fill out about each of the participants both pre- and post-EAP to serve as a more objective viewpoint for comparison.

The Cronbach's alpha for all of the measures was above .7. For the Rosenberg Self-Esteem Scale reliability for the pre-EAP assessment was $\alpha=.874$ and the post-EAP assessment was $\alpha=.912$. The reliability of the Beck Hopelessness Scale pre-EAP was $\alpha=.702$ and post-EAP was $\alpha=.710$, and for the Communication Assessment, the reliability of the scale pre-EAP was $\alpha=.704$ and post-EAP the scale was $\alpha=.778$.

Additionally, a Comprehensive Assessment was created. This asked questions that mirrored those in the Rosenberg Self-Esteem Scale, Beck Hopelessness Scale, and Communication Assessment, except that the questions were asked from a third person point-of-view. This was created for the therapist to fill out about each of the participants both pre- and post-EAP to serve as a more objective viewpoint for comparison.

There was also a Weekly Assessment created by the researchers to be completed by the therapist after each session for all of the participants individually. This is completed on a 6-point

Likert scale with 1 being Very Poorly/ Negative and 6 being Very Well/ Positive. This directly asked about the participants' communication skills, self-esteem, and perceived expectations of the future for that week. Additionally, there was a comments section so the therapist and horse professional(s) could note any significant behavior that occurred at that could have impacted that week's therapy, e.g. a home visit, or the participant refusing to participate in therapy that week.

Procedure

This study was completed in a pre-/ post- design to assess the change in participants after undergoing EAP. Before beginning therapy, each participant signed an informed consent and then filled out the Rosenberg Self-Esteem Scale, the Beck Hopelessness Scale and the Communication Assessment. These were then collected by the researchers.

Participants attended therapy once a week and the therapist was to fill out the Weekly Assessment directly after each session for all of the participants individually. This would allow the researchers to monitor change over time. Finally, after eight weeks of EAP, the participants were to again complete the Rosenberg Self-Esteem Scale, the Beck Hopelessness Scale, and the Communication Assessment. The therapist also filled out the Comprehensive Assessment for each of the participants post-EAP. The researchers then collected the data and analyzed it.

The horse professional(s) were also supposed to complete the Comprehensive Assessment and Weekly Assessments, but elected not to participate in the study. Furthermore, the Comprehensive Assessment was not filled out by the therapist prior to the beginning of EAP due to a communication error.

Results

The Beck Hopelessness Scale was scored and using a paired-samples *t*-test, it was found that the results were non-significant, $t(14)=1.20, p = .251$, see *Table X*. The mean score for the

Rosenberg Self-Esteem Scale and the Communication Assessment was then computed. These scores were then compared using a paired-samples *t*-test. The results were again non-significant for the Rosenberg Self-Esteem Scale, $t(14)=1.47, p=.163$, and the Communication Assessment, $t(14)=1.63, p=.125$, see *Table 1*.

Table 1. Errors of Pre- and Post- EAP by Assessment

Assessment	Pre-			Post-		
	M	SD	n	M	SD	n
Communication	2.5714	0.36422	15	2.7286	0.43716	15
Rosenberg Self-Esteem	3.0889	0.48286	15	3.3657	0.55306	15
Beck Hopelessness	3.6	2.746	15	2.47	2.532	15

However, a Binomial Test was run to determine if the number of participants that experienced a positive change from post-EAP to pre-EAP could have been obtained by chance. This was not significant for any of the measures. The Communication Assessment showed nine people experiencing positive change, $p=.153$, the Beck Hopelessness Scale showed seven people experienced positive change, $p=.196$, and the Rosenberg Self-Esteem Scale showed that eight people experiencing positive change, $p=.196$.

Within this study, there were some individuals that did experience marked change after undergoing EAP. Among others, one participant especially experienced positive change across all three of the self-report measures. For the Rosenberg Self-Esteem Scale, he went from a score of 2 pre-EAP to a score of 3.667 post-EAP, on the Communication Assessment his pre-EAP score was 2.426 and his post-EAP score was a 3.786. These scores indicate that the participant went from slightly disagreeing that statements reflecting positive self-esteem and communication described him to strongly agreeing that these positive statements described him. On the Beck Hopelessness Scale he began at an 11 which is a Moderate level of hopelessness, and after he underwent EAP he dropped to a 0 which is a complete absence of hopelessness.

For the Weekly Assessment, a correlation was run for each of the three questions asked. To do this, the correlation was between the week number and the Likert score for each of the participants and then took the median r -value to provide an accurate description. A positive correlation then shows that the higher week numbers are correlated with higher ratings for each of the three questions. Neither self-esteem, $r=.683, p=.062$, nor hopefulness for the future, $r=.252, p=.547$, were significant. However, there was a significant correlation between communication and the week number, $r = .819, p = .013$, see *Figure 1*.

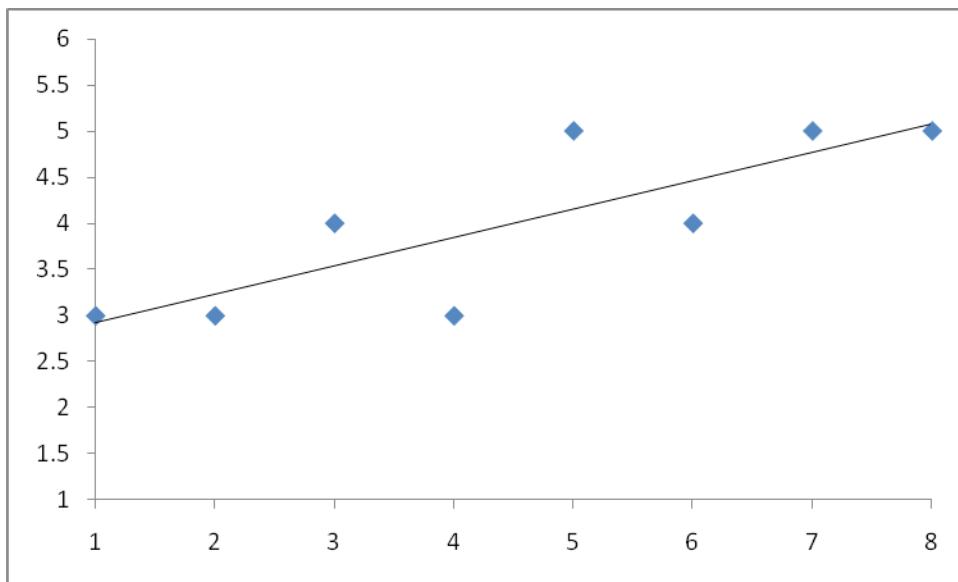


Figure 1. Median correlation for communication on the Weekly Assessments.

Discussion

To begin, even though our results from the t -test for the pre- and post- tests were not significant the patterns demonstrated that the data was moving in the direction hypothesized by the researchers. This is such that the data from the Beck's Hopelessness Scale trended lower to indicate lower levels of hopelessness towards the future. Furthermore, scores started low, which leaves little room for drastic improvement. It is important to note, that the pre-EAP mean for the Beck Hopelessness Scale puts the participants in the Mild Hopelessness condition, whereas the post-EAP mean has participants in the Absent condition. While these results are not significant,

they still agree with previous research that argues that there will be more positive expectations for the future after undergoing EAP (Furst 2006; Lentini & Knox, 2008; Rothe et. al, 2005).

For the Communication Assessment and Rosenberg Self-Esteem Scale, the data trended upwards to indicate improvement. This signifies that even though the results were not significant for any of the measures, participants were improving. This is also consistent with prior research that indicates that post-EAP participants have a higher self-esteem, higher self-efficiency, more confidence, and better verbal and non-verbal communication (Frewin & Gardiner 2005; Rothe et. al, 2005). Moreover, the scores were high after the pre-EAP assessment, which again leaves little room for improvement. It is possible that there was a ceiling effect and that the scores were unable to improve enough to make the results significant. Additionally, significance may have been obtained had there been a larger pool of participants. Furthermore, Cole (2005) reported that pre-/ post- designed studies often result in children not fully understanding how to rate themselves on the pre-test and thus giving themselves higher ratings.

The correlation for the Weekly Assessment indicated that communication was significant. This is such that as the weeks progressed, the Likert rating of the participant's communication abilities was also increasing. This indicates that overall, the observable communication was improving as the participants underwent EAP. An explanation for why the communication abilities would improve in the Weekly Assessments and not in the pre- and post-assessments is that communication abilities are more external. This is such that is more visible to those around the participant that verbal abilities have improved than it is to the participant himself.

There were some limitations to the study, the most obvious of which being that there was no control group. Unfortunately, the researchers were unable to find an adequate comparison to use as a control group. For ethical reasons it was not possible to deny some children access to therapy while providing it to others within the same environment. Furthermore, the researchers could not find another facility that was similar to Paddock View, and this was made more difficult by the fact that research was being done on children within the court system.

Another limitation of this study is that the participants had a difficult time comprehending the Beck Hopelessness Scale. According to the participating therapist, the syntax was too advanced for the children's understanding, thus the questions had to be read aloud to several of them and occasionally explained further. This is such that the person who read the question aloud may have had a different understanding of meaning of the questions than the child would have. Additionally, there may have been emphasis placed on questions that could have indicated how the reader believed the child should answer.

Furthermore, the horse professional(s) elected to not participate in the study. The inclusion of the horse professional(s) responses was meant to provide further reliability in the evaluation of the participants, thus improving the validity of the results by minimizing the potential for therapist bias. As a result of not having this, it is uncertain how much bias is present in the therapist's Weekly Assessments. Due to communication issues, the pre-Comprehensive Assessment was not completed. This prevented the use of the post-Comprehensive Assessment in the results due to the lack of comparative material. This prevented a more objective pre- and post- assessment of the participant's abilities.

In the future, an adequate control group would give further insight into the actual benefits of EAP versus the benefits of simply being in the environment. Moreover, in order to account for

potential errors in methodology, it would be helpful if the researchers were able to have more active participation in the data gathering process. Some potential ways of accomplishing this include weekly progress notes from the therapist and horse professional(s) or the researchers attending the therapy sessions. Additionally, due to the different natures of verbal and non-verbal communication, it would be more effective to assess these variables separately instead of under the general heading of communication.

While the results are not significant for this study the implications are still positive. This shows that even though the researchers might not have obtained the desired results, what was obtained was still congruent with previous research. Thus, while this does not add to the growing body of evidence for EAP it does not detract from it either. Equine-Assisted Psychotherapy is still a growing and innovative field.

References

- Beck, A.T., Weissman, A., Lester, D., and Trexler, L. (1974). The measurement of pessimism: The hopelessness scale [Electronic version]. *Journal of Consulting and Clinical Psychology, 42*(6), 861-865.
- Bizub, A.L., Joy, A., and Davidson, L. (2003). 'It's like being in another world': Demonstrating the benefits of therapeutic horseback riding for individuals with psychiatric disability [Electronic version]. *Psychiatric Rehabilitation Journal, 26*(4), 377-384.
- Cole, D.L (2005). Horses and youth (H.A.Y.): A not-so typical approach to at-risk programming. *Journal of Extension, 43*(3).
- EAGALA (n.d.). EAGALA Level 1 Untraining Manual. 44-47.
- Ewing, C.A., MacDonald, P.M., Taylor, M., and Bowers, M.J. (2007). Equine-facilitated learning for youths with severe emotional disorders: A quantitative and qualitative study [Electronic version]. *Child and Youth Care Forum, 36*(1), 59-72.
- Frewin, K., and Gardiner, B. (2005). New age or old sage? A review of equine assisted psychotherapy [Electronic version]. *The Australian Journal of Counselling Psychology, 6*, 13-17.
- Furst, G. (2006). Prison-based animal programs: A national survey [Electronic version]. *The Prison Journal, 86*(4), 407-430.
- Glazer, H.R., Clark, M.D., and Stein, D.S (2004). The impact of hippotherapy on grieving children. *Journal of Hospice and Palliative Nursing, 6*(3), 171-175.
- Jalongo, M.R., Astorino, T., and Bomboy N (2004). Canine visitors: The influence of therapy dogs on young children's learning and well-being in classrooms and hospitals. *Early Childhood Education Journal, 32*(1), 9-16.
- Kaleidoscope Learning Circle (2005). Building effective relationships through equine assisted learning. 16 October 2008.
<<http://www.myklc.com/Documents/MISHRMStateConferencehandout.pdf>>.
- Kersten, G (2008, December). [Rebekah Wilson and Kristine Schuster].
- Klontz, B.T., Bivens, A., Leinart, D., and Klontz, T. (2007). The effectiveness of equine-assisted experiential therapy: Results of an open clinical trial [Electronic version]. *Society and Animals, 15*, 257-267.
- Lentini, J.A. and Knox M.S (2008). A qualitative and quantitative review of equine facilitated psychotherapy (EFP) with children and adolescents. *International Journal of Psychosocial Rehabilitation, 13*(1), 17-30.

McCann, J. (2001). Equine equilibrium. Tempe, AZ: Arizona State University, ASU Research Magazine.

Paddock View Residential Center, Inc [pamphlet]. September 2008.

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Rothe, E.Q., Vega, B.J., Torres, R.M., Soler, S.M.C., and Pazos, R.M.M. (2005). From kids and horses: Equine facilitated psychotherapy for children [Electronic version]. *International Journal of Clinical and Health Psychology*, 5, 373-383.

Thomas, L (2002). Horse-play can be therapeutic: Equine assisted psychotherapy. *Woodbury Reports*, 100.

Tyler, J.J (1994). Equine psychotherapy: Worth more than just a horse laugh. *Women and Therapy*, 15(3/4), 139-146.

Appendix A

Permission Form for Participation in a Research Study

Effects of Equine-Assisted Psychotherapy on juvenile's in a residential treatment facility

Description of the research and your participation

You have been invited to participate in a research study conducted by Hanover College students Kristine Schuster and Rebekah Wilson under the guidelines of Dr. Stephen Dine Young. The purpose of this research is to determine the benefits of Equine-Assisted Psychotherapy on youth.

Your participation will involve filling out questionnaires related to self-esteem, expectations for the future, and communication/cooperation.

Risks and discomforts

There are no known risks associated with this research.

Protection of confidentiality

We will do everything we can to protect your privacy. The researchers will not actually know the names or details of any of the participants or be able to connect the data collected with any individuals. Your identity will not be revealed in any publication that might result from this study.

Voluntary participation

Participation in this research study is voluntary. You may refuse to participate or withdraw from the study at any time. You will not be penalized in any way should you decide not to participate or withdraw from this study.

Contact information

If you have any questions or concerns about this study or if any problems arise, please contact Terrie .

Consent

I have read this permission form and have been given the opportunity to ask questions. I am willing to participate in this study.

Participant's signature: _____ Date: _____

Printed Name: _____

Appendix B

Rosenberg Self-Esteem Scale

SA= Strongly Agree

A= Agree

D= Disagree

SD= Strongly Disagree

1. On the whole, I am satisfied with myself.	SA	A	D	SD
2. At times, I think I am no good at all.	SA	A	D	SD
3. I feel that I have a number of good qualities.	SA	A	D	SD
4. I am able to do things as well as most other people.	SA	A	D	SD
5. I feel I do not have as much to be proud of.	SA	A	D	SD
6. I certainly feel useless at times.	SA	A	D	SD
7. I feel that I'm a person of worth, at least on an equal plane with others.	SA	A	D	SD
8. I wish I could have more respect for myself.	SA	A	D	SD
9. All in all, I am inclined to feel that I am a failure.	SA	A	D	SD
10. I take a positive attitude toward myself.	SA	A	D	SD

Appendix C

Communication Assessment

SA= Strongly Agree

A= Agree

D= Disagree

SD= Strongly Disagree

1. I can tell how people feel when I am talking to them.	SA	A	D	SD
2. I am better off hiding my weaknesses so that no one else will use them against me.	SA	A	D	SD
3. I find it easy to see how other people feel about things.	SA	A	D	SD
4. When talking to someone else, I keep eye contact.	SA	A	D	SD
5. I have a hard time saying what I am thinking.	SA	A	D	SD
6. When I am angry, I admit it.	SA	A	D	SD
7. I have a hard time telling others how I feel.	SA	A	D	SD
8. I do not always notice the reactions of others when I am talking to them.	SA	A	D	SD
9. Many times people do not understand what I say the first time and I have to say it differently.	SA	A	D	SD
10. I can fix problems without loosing control of my emotions.	SA	A	D	SD
11. When other people get upset around me, I do not know what to do.	SA	A	D	SD
12. When I talk to someone, I notice things like the faces that people make.	SA	A	D	SD
13. I try not to talk about things that upset me.	SA	A	D	SD
14. If I do not understand what someone said, I feel stupid asking questions.	SA	A	D	SD
15. I think about what someone says before I answer.	SA	A	D	SD

Appendix E

Comprehensive Assessment

Expectations for the future

1. He seems to look forward to the future with hope and enthusiasm.
2. He seems hopeless for the future and has a poor locus of control.
3. He seems to feel well prepared for the future.
4. He sees to feel as though he will not get any real satisfaction in the future.
5. He seems to think the future is vague and uncertain.

Participant #_____

Completed by_____

True	False

Communication Assessment

6. He has a sufficient theory of mind
7. When he is talking to someone else, he maintains eye contact.
8. When he is upset, he admits it.
9. He maintains control of his emotions.
10. He responds appropriately to other people getting upset.
11. He asks questions when he does not understand.
12. He can express himself clearly.

True	False

Self-esteem assessment

13. On the whole, he seems satisfied with himself.
14. He makes positive statements about himself.
15. He makes negative statements about himself.
16. He seems to have a positive attitude.
17. He seems to have a negative attitude.

True	False

Appendix F

Weekly Assessment

Participant #_____

Completed by_____

How well did (insert name) communicate today?

Very Poorly					Very Well
1	2	3	4	5	6

How did (insert name)'s self-esteem appear today.

Very Negative					Very Positive
1	2	3	4	5	6

How hopeful for the future did (insert name) seem today.

Very Negative					Very Positive
1	2	3	4	5	6

Other Comments: