

The Effect of Nontherapeutic Equine Interaction on
College Equestrian Students' Anxiety Levels

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Abstract

The purpose of this study was to determine if a nontherapeutic equine interaction would affect anxiety levels in college equestrian students. The measurement tool was the State-Trait Anxiety Inventory. The study involved seven college equestrian students taking an anxiety pretest, having an equine interaction, and taking an anxiety posttest. Mean anxiety levels were lower after students experienced an equine interaction. Research in this area should continue as there is very little research on the effect of nontherapeutic interaction on equestrian anxiety levels.

CHAPTER I

OVERVIEW

Equine Assisted Therapy (EAT) has proven itself to be a valuable tool and popular therapy for those suffering from psychological issues. It has been a proven aid in reducing stress and anxiety, and may diminish symptoms for individuals suffering from various psychological disorders (Earles, Vernon, & Yetz, 2015). Most studies revolving around EAT include counselors, equine specialists and the equine counselor-the horse. The mere presence of a horse and client does not constitute EAT (Selby & Smith-Osborne, 2013). The researcher aims to discover if the “nontherapeutic” presence of horses and “nontherapeutic” interaction with horses has an affect on a person’s well being. In Equine Assisted Therapy the horses are trained in their roles to act as change agents and to facilitate the therapeutic process (Selby & Smith-Osborne, 2013). Activities that do not qualify as EAT would be nontherapeutic interactions with horses, which could otherwise be described as recreational interactions with horses, and are not considered therapeutic by the scientific community. The researcher seeks to discover if nontherapeutic interactions have an affect on rider’s well being.

Statement of the Problem

The purpose of this study is to determine if the “nontherapeutic” interaction with, and the presence of, horses impacted the equestrian athlete’s anxiety levels.

Hypothesis (Stated in Null Form)

The interaction of and presence of nontherapeutic horses and the equestrian athlete will have no impact on the anxiety levels of the equestrian athlete, even if the interaction is not monitored in an Equine Assisted Therapy model.

Operational Definitions

The equestrian athlete's anxiety levels will be assessed by pre and post testing before and after the interaction with a horse. The equestrian athlete subjects will be individuals who have been involved with horses or riding horses for at least ten years. It is critical that only relatively seasoned athletes are included, as the study aims to evaluate the affect horses have on equestrian athletes. A certain level of comfort and safety with the animals is assumed when evaluating someone who has been involved with horses for ten or more years. The researcher seeks to discover the impact of horses on persons who have already chosen horses to be a part of their lives. The equine participant will remain constant through the study. One horse in the stables will be selected based on its ability to work comfortably in a learning environment. The researcher wishes to study ten equestrian athletes with a minimum of ten years of experience handling horses. The anxiety level of the ten equestrian athletes is the variable being studied.

CHAPTER II

REVIEW OF THE LITERATURE

This literature review discusses the affects of Equine Assisted Therapy on mental health. After an introduction to Equine Assisted Therapy (EAT), the current usage and types of EAT will be examined to better understand the affect of EAT on mental health. Secondly, a benefit analysis of EAT will be examined. And finally conclusions will be drawn about Equine Assisted Therapy's implementation and its affect on mental health.

Introduction to Equine Assisted Therapy

Equine Assisted therapy comes in many forms. To understand the benefits to EAT it is at times necessary to understand what the participants are doing in their therapy (Schultz, Remick-Barlow, & Robbins, 2007). Participants within EAT perform tasks with the therapy horse as the horse serves as a secondary therapist. Horses have many characteristics similar to humans and respond to nonverbal behavior astutely (Schultz et al., 2007). Participants are taught to groom a horse, which involves brushing, cleaning and safely moving about the horse. Participants are also taught how to lift a horse's leg for cleaning of the hoof or inspection. The participants are taught to lead the horse and to ask the horse to perform other basic tasks and commands. Because the participant is physically unable to force the horse to perform these commands they must rely on their ability to communicate with the horse, both sending and receiving messages (Schultz et al., 2007). This can be difficult for the participant at first but it is a teaching moment for the participant to learn to process their feelings of fear, inadequacy, or frustration and move forward with their equine partner (Schultz et al., 2007). The participant is also taught how to approach the horse, remaining within its line of vision and how to safely move about the horse. This instruction allows the participant to understand their place in the world and how to better survey

their environment (Schultz et al., 2007). Most aspects of EAT are ground activities, meaning that participants are unmounted as opposed to therapeutic riding or hippotherapy which would indicate work done on horseback (Symington, 2012).

Implementation of Equine Assisted Therapy

Equine Assisted Therapy is a specialized form of psychotherapy that has just begun to be implemented within the therapeutic community. Traditionally, horses have been used in hippotherapy or therapeutic riding for physical disabilities but it is a recent breakthrough to be using horses in other treatment methods (Lee, Dakin, & McLure, 2016). It is beginning to be a tool that is implemented in a wide variety of manners (Schultz et al., 2007). EAT is designed to address self-esteem, personal confidence, communication, interpersonal effectiveness, trust, boundaries, limit setting, and group cohesion (Schultz et al., 2007). Using these tools EAT reaches out to troubled youth who have been exposed to physical abuse or neglect (Schultz et al., 2007). It is used to treat those with developmental, emotional, behavioral, cognitive, and psychological disorders (McCullough, Risley-Curtis, & Rorke, 2015). Recently it has been actively implemented with those suffering from PTSD and more specifically, veterans with PTSD (Earles et al., 2015). Equine Assisted therapy has been implemented to treat all four categories of the DSM-5 eating disorders including Anorexia Nervosa, Bulimia Nervosa, Binge-Eating Disorder, and Unspecified Feeding and Eating disorders (Lac, Marble, & Boie 2013). EAT has also been used to treat those with terminal illnesses, behavioral and attention disorders, substance abuse, depression, anxiety, and relationship problems (Selby & Smith-Osborne, 2013). Finally EAT has been used to enhance grief counseling for those who have experienced a loss (Symington, 2012).

Benefit Analysis of Equine Assisted Therapy

The many benefits within Equine Assisted Therapy can be broken down into three main groupings: benefits stemming from treatments of disabilities or conditions, positive contributions to self-esteem, and benefits stemming from grief therapy.

Within grief therapy significant strides have been made in allowing individuals who have experienced a loss to freely express their emotions and make positive progress within their lives (Symington, 2012). Individuals are compilations of many pieces put together uniquely to form a picture. When a person experiences a loss the picture of who he or she is becomes less clear to them. EAT provides solutions to people with challenges through the use of an equine therapist (Symington, 2012). When a loss occurs a person may have lost a valued component of their support system, and EAT attempts to provide another means of support for the participant to cope. Ultimately, the participants have the solutions to their life's challenges within themselves but through EAT solutions are discovered (Symington, 2012). Horses are large dynamic prey animals that live life moment to moment. They are honest, perceptive, sensitive, and intelligent animals; this has allowed them to evolve and survive as prey mammals. When interacting with humans, horses reflect back to the participant what they are projecting in a tangible way for the participant to understand. When tense and agitated behavior is projected to the horse, the horse acts similarly. When calming energy is projected to the horse it reacts similarly as well. It is through this connection that EAT allows participants in a healthy manner to address emotions and grieve in a positive way (Symington, 2012).

Equine Assisted Therapy aids in making positive contributions to self-esteem and self-concept. Pets have a positive psychological effect on humans that help attenuate emotional responses to stress-provoking situations by decreasing sympathetic nervous system arousal and

anxiety (Miller et al., 2009). They also have a positive effect on depression and loneliness by providing companionship (Miller et al., 2009). Animals can provide both physiological benefits as well as psychological benefits (Chardonens, 2009). Animals can serve as crucial self-validation and emotional affirmation to the person it is interacting with (Siporin, 2012). EAT is designed to positively address self-esteem, personal confidence, communication, and interpersonal skills. EAT has been shown to boost Children's Global Assessment and Functioning scores after therapy (Schultz et al., 2007). EAT allows children to make connections with a horse that transforms vulnerability to such a large animal into a powerful sense of confidence and self (Schultz et al., 2007).

Equine Assisted Therapy has also been shown to be helpful when treating such disorders such as attention deficient disorder, attention deficient hyperactivity disorder, emotional disturbance disorder, depression, anxiety, and suicidality (Schultz et al., 2007). EAT has also been shown to positively impact eating disorders, and post traumatic stress disorder (Selby & Smith-Osborne, 2013). Bringing the horse into psychotherapeutic sessions aids those with ADD and ADHD in engagement, as well as allowing the horse to contribute its genuine, positive, and calming responses to the participant's often-anxious energy (McCullough et al., 2015). EAT has shown to decrease stress and anxiety for those suffering from PTSD. Using a Likert-type questionnaire, those exposed to EAT showed lowered stress scores after being exposed to the therapy (McCullough et al., 2015). When concluding Equine Assisted Therapy sessions, participants reported significant reductions in depression and anxiety (Earles et al., 2015). When treating eating disorders the relationship between participant and horse is critical to healing; positive relationships are a part of the environmental challenges and influences on the development and maintenance of a healthy body image (Lac et al., 2013).

Conclusions

There are many successful methods of therapy when maintaining mental health and treating disorders. Equine Assisted Therapy is a valid method of treatment and can offer support and benefits to not only those suffering from disorders but those who have suffered a loss or those interested in contributing positively to their self-esteem and self-concept.

CHAPTER III

METHODS

Design

The action research pretest, posttest design was selected to determine the difference, if any, in the anxiety levels of subjects following a nontherapeutic equine interaction. All participants received the same treatment, so as a result, there was no control group or contrast sample.

Participants

Ten college equestrian riders with a minimum of ten years experience with horses were selected for this study. To improve representativeness of the sample, college equestrian students with ten years of experience with horses were selected to demonstrate a base level of comfort working around large animals. All participants signed a written consent form, informing them that all the data collected would be treated confidentially and that they could withdraw from the study at any time.

Instruments

The State-Trait Anxiety Inventory (STAI) was selected as a pre and post test to establish levels of anxiety in college equestrian riders. This test evaluated the severity of anxiety symptoms in adults. The State-Trait Anxiety Inventory differentiated between the temporary condition of “state anxiety” and the more general and long-standing quality of “trait anxiety”. It helped professionals distinguish between a client’s feelings of anxiety and depression (Spielberger, 2010).

Procedures

The ten college equestrian riders were exposed to a single horse. In this nontherapeutic interaction the students were asked to groom the horse for a length of ten minutes and to hand graze the horse on grass for a length of five minutes. Grooming consisted of picking out the horse's feet to clean it of dirt and debris, currying the horse's coat with a rubber comb to loosen dirt, mud and debris, brushing the horse's coat from head to tail, hand brushing the tail and brushing its face with a soft brush. Hand grazing consisted of handling the haltered horse and allowing it to graze on pasture while the handler maintains control of the horse. The State-Trait Anxiety Inventory will be administered to each participant pre and post treatment (nontherapeutic equine interaction).

CHAPTER IV

RESULTS

The purpose of this study was to determine if a nontherapeutic intervention with a horse by an equestrian athlete (as an alternative to the full therapeutic treatment) would have a positive effect on anxiety levels. The initial null hypothesis tested whether students' mean pretest anxiety scores differed from their post interaction scores. Seven college equestrian students with a minimum of ten years experience handling horses participated in the study. The seven students were administered a pretest anxiety questionnaire, had an equine interaction, and were administered a posttest anxiety questionnaire.

Table 1

Pre and Post Anxiety Scores for Participants in Nontherapeutic Treatment

Students	State Pre	State Post	Trait Pre	Trait Post
Student A	36	30	36	36
Student B	38	39	52	46
Student C	34	26	39	35
Student D	32	22	38	34
Student E	31	28	38	37
Student F	57	47	60	57
Student G	43	29	36	36

Table 2

Pre and Post Anxiety Descriptive Statistics for Participants

Scores	Mean	N	Standard Deviation	Standard Error of the Mean
State				
Pre	38.714	7	9.013	3.407
Post	31.571	7	8.541	3.228
Trait				
Pre	42.714	7	9.429	3.564
Post	40.143	7	8.435	3.188

The average state and trait anxiety scores for college equestrian students declined from pre to post after equine interaction. Lower anxiety scores indicate less anxiety. The drop in anxiety scores from pre to post treatment was statistically significant for state anxiety ($t=3.79$, $p\text{-value}=0.0090$) and statistically significant for trait anxiety ($t=2.96$, $p\text{-value}=0.0253$). Therefore, the null hypotheses of no change in mean population anxiety between pre and post treatment were rejected in favor of the alternative. That is, the population mean anxiety is lower after treatment for state and trait anxiety, at the .05 level of significance.

CHAPTER V

DISCUSSION

This study examined the impact on state and trait anxiety of college students of using a nontherapeutic version of Equine Assisted Therapy. Data analysis indicated a statistically significant decrease in anxiety from before the treatment to afterwards for the participants. Therefore the null hypotheses were rejected. The use of a nontherapeutic version of EAT was associated with lower state and trait anxiety levels.

Implications

The rejection of the null hypothesis for this study implies that for Equestrian students, a nontherapeutic version of Equine Assisted Therapy is in fact beneficial in reducing anxiety. Not all colleges and equine programs can be well equipped with EAT professionals and EAT horses. college is however, equipped with nearly thirty nontherapeutic horses that have now been shown to offer a measurable decrease in anxiety for equestrian students. With this knowledge the school can begin to offer nontherapeutic exposures to equestrian students knowing a therapeutic benefit will arise in a reduction in anxiety. This can be useful in bouts of known stress for college student lives. In circumstances of grief, the stresses of exams, and other times of increased anxiety, the study school has yet another proven method of anxiety reduction to offer equestrian students.

Theoretical Consequences

This research supports similar research found and reviewed literature. In the area of grief counseling and anxiety reduction, this research supports previous findings that EAT can provide notable benefits for individuals receiving treatment in grief therapy as well as anxiety reduction. This study does not use EAT like previous studies but this new area of study, nontherapeutic

EAT, has provided similar results in the reduction of anxiety as that of pure equine assisted therapy.

Threats to Validity

Several issues threatened internal and external validity within this action research study. Only one group was used in the pre and post design group; thus the research had no control group. The research does not provide a control to show what impact of anxiety reduction no interaction with a horse might have provided. This action research did not compare the nontherapeutic interactions to EAT.

Additionally, the research indicates a decrease in anxiety but it cannot be stated with certainty that the equine interaction reduced the anxiety alone. The researcher cannot prove that a reduction of anxiety might not have occurred naturally over the same span of time with no treatment.

Seven students were used as a sample in this research rather than the planned ten. Since statistically significant results from pre/posttesting this is not the result of an inflated sample size, in fact the opposite is true. The treatment would have to be large to overcome the handicap of a very small sample.

Pretest sensitization is another possible threat to validity. Other typical design modifications were not feasible for this study but unfortunately taking a pretest can itself affect the post-test administration.

The sample selection, regardless of size, is another threat to validity. The effect of volunteer participants needs to be considered when assessing the outcome. It was not possible to have assigned students at random from a large pool due to the strict requirements of being a college equestrian student with more than ten years of horse experience.

Additionally, with noncognitive instruments, there is always a chance of insufficient construct validity and poor reliability. The state- trait anxiety inventory shows considerable evidence that attests to the construct and concurrent validity (Spielberger, 2010).

Connections to Existing Literature

The researcher's findings are related to those of Symington (2012) who showed that equine assisted therapy has the ability to aid those in grief therapy and in the reduction of anxiety. A calming horse was used in this nontherapeutic EAT study much as would have been used in a pure EAT study. The implication from Symington is that the horse projects his calming energy to the participant. The horse is able to sense the tension, anxiety and energy from the participant and assert their own calming influence onto the human and lower anxiety as a result.

McCullough et al.'s (2015) research implied the impact EAT had on those with ADD and ADHD. The equine intervention was able to lower anxious energy in those with ADD and ADHD. It was also shown to reduce anxiety in those suffering from Post- Traumatic Stress Disorder. Although this research did not examine individuals with ADD, ADHD or PTST it too showed a decrease in anxiety among participants.

Implications for Future Research

The researcher believes that a future study of the effect of nontherapeutic EAT on anxiety should be replicated with a larger sample size. Implementing a control group to show the impact of the treatment would be beneficial to further supporting the nontherapeutic EAT as a viable alternative to the traditional but more costly EAT. A control would also resolve the pretest sensitization issue, as well as obtain the expected change without the treatment of nontherapeutic EAT.

The researcher believes that additional research in this area could prove helpful as well. A study showing equestrians of all ages and backgrounds would be enlightening, as opposed to specifically limiting it to college aged equestrian students. To expand the study further, the researcher would like to see the effect that nontherapeutic EAT might have on the general population on non-equestrians. A larger sample population of all college students could be used, as opposed to specifically equestrian students. The researcher would also like to see a study comparing the implementation of nontherapeutic equine participants and trained official EAT trained equine participants on the same experiment group. This further research might open the door to a more affordable and available form of Equine Assisted Therapy for equestrians.

Conclusion

The purpose of this study was to determine if a nontherapeutic intervention with a horse by a college equestrian athlete would have a similar effect on anxiety levels as the already proven effect that EAT has on a person receiving therapy from a therapeutic horse in a therapeutic setting. A statistically significant decrease in state and trait anxiety was shown in the college equestrian athletes who participated in this study. Further research to compare EAT and nontherapeutic EAT effects side by side on participants is suggested as well as including a control group within the study. However, as it stands this research offers some benefit to the study college currently. Knowing that the horses currently present on campus offer a reduction in anxiety for equestrian students, the college could implement more opportunities for anxiety reduction during times of peak stress in students' lives.

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