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# Non-Traditional Therapeutic Interventions for At-Risk Youth & Students with Complex Support Needs: Equine Therapy

Erin J. Grimm

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NON-TRADITIONAL THERAPEUTIC INTERVENTIONS FOR AT-RISK YOUTH &  
STUDENTS WITH COMPLEX SUPPORT NEEDS: EQUINE THERAPY

A Dissertation

Submitted to the School of Education

Duquesne University

In partial fulfillment of the requirements for  
the degree of Doctor of Education

By

Erin J. Grimm

December 2015



**DUQUESNE UNIVERSITY**  
**SCHOOL OF EDUCATION**  
**INTERDISCIPLINARY DOCTORAL PROGRAM FOR**  
**EDUCATIONAL LEADERS**

*Dissertation*

Submitted in Partial Fulfillment of the Requirements  
For the Degree of Doctor of Education (Ed.D.)

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**September 22, 2015**

NON-TRADITIONAL THERAPEUTIC INTERVENTIONS FOR AT-RISK YOUTH &  
STUDENTS WITH COMPLEX SUPPORT NEEDS: EQUINE THERAPY

September 22, 2015

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## ABSTRACT

### NON-TRADITIONAL THERAPEUTIC INTERVENTIONS FOR AT-RISK YOUTH & STUDENTS WITH COMPLEX SUPPORT NEEDS: EQUINE THERAPY

By

Erin Jennifer Grimm

December 2015

Dissertation supervised by Dr. Launcelot Brown, Ph.D.

The increased need for effective interventions and the challenge of working with children and youth with complex support or at-risk needs such as emotional disorders, physical and mental health needs as well as autism; have resulted in the design of many non-traditional therapeutic interventions, such as various experiential therapies, animal-assisted therapy, expressive therapies, wilderness therapy, and adventure-based therapy (Suarez, 2005). For the purpose of this dissertation, the researcher will explore the non-traditional therapeutic intervention of equine therapy and its effect on the social and emotional development of three diverse families who reside in Western Pennsylvania. The researcher will also investigate the impact of this therapy at home, school, and how the skills learned are applied to everyday living.

## DEDICATION

To my family and all things bright and beautiful, all creatures great and small.

An excerpt from the poem "I Saw a Child," by John Anthony Davies:

I saw a child who could only crawl, mount a horse and sit up tall,  
put it through degrees of paces and laugh at the wonder in our faces

I saw a child born into strife, take up and hold the reins of life

and that same child was heard to say,

Thank God for showing me the way.

## ACKNOWLEDGMENTS

I would first like to thank my parents Earl and Joanne Grimm for their undying support, encouragement, and remaining by my side throughout this path in my life- my glowing candle lights in the darkness. I hope that I have made you proud.

Further, I would like to express my sincerest appreciation to my dissertation chair, Dr. Launcelot Brown for his valuable, constructive insight, expertise, and support during the development and composition of my dissertation. I am so grateful for his willingness to give his time so generously. Additionally, my deepest gratitude to my committee members Dr. Frannie Jo Serenka, Dr. Richael Barger-Anderson, and Dr. Yvonne Liddell; thank you so much for your friendship, guidance, enthusiastic encouragement and critiques of this dissertation. Finally, to Dr. Michele Dowell- words cannot express my emotion and undying gratitude. You were the first friend and professional colleague to recognize and nurture the seeds of leadership deep within me. I am so proud to have known each of you as successful, professional women throughout my career.

My passion for animals especially horses was deep-rooted from birth; riding with my mom before I was born, to my neighbors stopping by with a local critter for care, or waiting for the final school bell to ring so I could gather my riding equipment from my principal's office and walk (RUN!) to the stables.

I would have become a veterinarian had I not had such a strong passion for helping children.

As I come to that point, I want to acknowledge all of my students throughout my tenure as an educator and school administrator who inspired, brought laughter and tears, most importantly nourished the desire and drive within me to pursue working with children and youth with our equine friends.

Ah, YES! Our four legged friends; for without them they would not have turned impossible to the possible or find the best in us when we ourselves cannot. I love you unconditionally, Cutter, Jester, Gracie, Lily, and Lil Rodeo Joe, (Jeter, Hemingway, Cinder, n' Digger too!) for you were there to take away my tears, give me strength, courage, discipline, and patience to see the day through.

In closing to all, into my life you wandered, when least expected and most welcome. Little did I know it then, how much fuller and complete my life has been. Even though far in distance never doubt you are close in my heart; thank you for all your inspiration, my mentors, and valued family, and friends. My dearest wish is that I may inspire others as you have done me. We are all here to help and inspire, to love and be loved. Anything less is just surviving, not truly living. So once again, I thank you, for being the being that you are.

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## CHAPTER 1

### **Non-Traditional Therapeutic Interventions for At-risk Youth & Students with Complex Support Needs: Equine Therapy**

*“My horse’s feet are as swift as the rolling thunder; he carries me away from all of my fears. And when the world threatens to fall asunder, his mane is there to wipe away my tears.” ~B. Lewis*

Life has many difficulties, twists, and turns, but imagine you are going to spend some healing time with a very special teacher; someone highly recommended and very accomplished. When you meet, your heart recognizes someone you know from a long time ago in your evolutionary ancestry. The wise eyes hold your attention, seeing you within and without, the presence is unique and listens attentively in a way no one else ever has before. You bare your soul, and by acute observations of your thoughts and emotions, the teacher reflects back to you things of which you had not previously been aware. There is nothing covert or judgmental in the approach, only a benign desire to help. Without using words, this teacher can change your life. You reach out and touch a loving face, feel the warm breath in your hands, stroke the soft body. You are saved. This teacher is the horse.

Adolescence has been described as a phase of life beginning in biology and ending in society (Peterson, 1988). This period of time can be difficult and frustrating for youth. For some adolescents, the need to feel accepted by peers has a stronger influence during this life phase, and may be the primary cause for the concern in regard to behavioral choices. At-risk youth and children

identified with complex support needs present a variety of challenges to schools and educators (McLean-Ryan, 2002). Students categorized as severely disturbed or at-risk often include children with autism, learning disabilities, emotional or behavioral disturbances, attention deficit – hyperactivity disorders, and children with physical and/or mental disabilities. In addition, educators face the daily task of motivating their students to perform required work. Often, it can be even harder to find adequate motivators for students with emotional disabilities than for children who are physically disabled. Motivation and engagement are difficult because a great number of factors place a child at risk for not succeeding in education or in life. Most of these children have been impacted by adverse circumstances such as poverty, physical and emotional disabilities, low self-esteem, and disruption of parenting, inadequate opportunities for success in school, poor health and nutrition, loss of hope for the future, and lack of life goals (J. Dobizl, 2002).

One category of children who require extensive support is students with autism. Children with an autism spectrum disorder (ASD) (i.e., autism disorder, Asperger’s, pervasive developmental disorder, not otherwise specified) have qualitative impairments in three core diagnostic areas: social interactions, communication and repetitive, stereotyped behaviors and interests (American Psychiatric Association, 2000). These impairments interfere with their ability to develop adaptive as well as appropriate social-emotional skills in order to function in society (Shoffner, 2011).

Professionals, whether within education or the mental health system, continually search for effective, innovative interventions to better assist at-risk youth to find success on a daily basis. Over the past few decades, many therapies have been proposed to improve the lives of children and especially those with disabilities. One therapy that is gaining interest in the mental health field and as an alternative occupational therapy is animal assisted therapy. Animal Assisted Therapy (AAT) uses the human-animal bond in the accompaniment of psychosocial and occupational goals as an integral part of the treatment process (Gammonley et al., 1996, in: Bizub et al., 2003). Studies showed positive outcomes for AAT in children with autism. Martin and Farnum (2002) investigated the effects of interaction with dogs in children with ASDs. Participants were exposed to three different conditions: (a) a nonsocial toy (i.e. a ball), (b) a stuffed dog, (c) a live dog.

Research demonstrated that, compared to the other conditions, the participants who engaged with the live dog demonstrated more initiating behavior. Participants were more likely to talk to the dog and therapists had a happier, more playful mood, and were more focused and more aware of their social environments. Research conducted by Sams et al. (2006) found that children with autism exhibited significantly greater language use and social interaction when receiving occupational therapy that incorporated animals than when they received occupational therapy with standard techniques.

This finding may be explained by the fact that children who generally show physical and emotional closeness accept a close relationship with an

animal more often (Karol, 2007; Rothe et al., 2005). Furthermore, children may expand the relationship they develop with the animal to humans (Karol, 2007; Katcher, 2000, in: Martin & Farnum, 2002). In summary, animals are believed to enhance the relationship between children with ASDs and their social environments (Martin & Farnum, 2002; Sams et al., 2006), which may result in an improvement in their social functioning.

The increased need for effective interventions and the difficulty of working with this population have resulted in the design of many non-traditional approaches to therapy for children and youth with at-risk or complex support needs. These include various experiential therapies, animal-assisted therapy, expressive therapies, wilderness therapy, and adventure-based therapy (Suarez, 2005). For the purpose of this dissertation, I will explore the non-traditional therapeutic intervention of equine therapy and its effect on the social and emotional development of children and youth with at-risk or complex support needs, as well as the everyday applicability of the skills learned.

### **Historical Perspective**

The first-known account of the therapeutic use of animals happened in the 9th century in the city of Gheel, Belgium. In Gheel, animals were not the focus of the program, but were included in therapy so people with disabilities could learn to care for farm animals for their daily living (Serpell, 2000). In 1792, animals were used therapeutically at The Retreat in England. Founded by the Quakers, this was one of the initial places where the insane were

humanely treated. The Retreat used gardening, courtyard exercise, and caring for animals such as birds and rabbits as part of a therapy program. In 1867, animals were used in the treatment of epileptic patients in Germany. There patients were allowed to interact with and take care of animals such as birds, cats, dogs, and horses.

Historically, the use of animals as a therapeutic device or as part of a regimen of therapeutic approaches began over a century ago, when Florence Nightingale first noted the effects of animal companionship on long-term hospital patients (Nightingale, 1969). She wrote, "A pet is often an excellent companion for the sick, for long, chronic cases especially." As the owner of a cherished pet owl, she also stated, "A pet bird in a cage is sometimes the only pleasure for an invalid confined for many years to the same room."

Throughout history, specialists within the medical, educational, and mental health professions have continued to confirm that animal companionship produces tremendous physical and social benefits (Levinson, 1992). Animals have served humans as companions since prehistoric times. Cave drawings display people and wolves sitting around campfires. Egyptians were buried with cats or other pets so they might be together after death. Their tomb walls even depicted pictures of pet monkeys or cats. Our ancestors believed that animals helped healing and possessed special powers. In ancient Greece, dogs licked the wounds of the sick. Their tongues were thought to possess medicinal powers (Levinson, 1972). The table below highlights some of

the historical perspectives on human and animal relationships as well as the development of animal therapy (Morrison, 2007).

Table 1

*Historical Perspective of Human & Animal Relationships (Morrison, 2007)*

12,000 years ago	Human skeleton, holding a puppy, found in northern Israel
Ninth Century	Animals incorporated in treatment of handicapped in Gheel, Belgium
1790	Rabbits and chickens used in therapy with the mentally ill in York, England
1830	British charity commissioner recommended animals for mental institutions
1867	Farm animals and horses were used in treatment of epilepsy patients at Bethel in Bielefeld, West Germany
1942	Patients at U.S Army Air Corps Convalescent Hospital, Pawling, New York, worked with farm animals and considered treatment “restful”
1944	Sociologist James Bossad’s publication “the Mental Hygiene of Owning a Dog” discussed beneficial relationships between pets and their owners
1962	Psychologist Borris Levinson used his dog, Jingles, in treatment of an adolescent: he published his findings in “ The Dog as the Co-Therapist”
1970	A visiting therapy dog, Skeezer, became a permanent resident at Children’s Psychiatric Hospital, Ann Arbor Michigan
1972	Psychotherapist Boris Levinson conducted a survey and found that one third of New York psychotherapists used pets in treatment
1973	Humane Society’s “pet mobile” program brought animals to visit nursing homes in Pikes Peak region, Colorado
1977	Dr. Dean Katcher and Erika Friedmann conducted early research on effects of pets on blood pressure and mortality rates
1980	Delta Society, a non-profit organization focused on the human-animal bond, was founded

In the 1960s, mental health professional Boris Levinson first noted the therapeutic benefit of animal therapy on children when an uncommunicative patient began to speak when accidentally introduced to his dog, Jingles (O'Callaghan, 2008). It was documented that Levinson had not been able to provoke speech during the month he had worked with this patient. Arriving early, the child happened to come upon Levinson's dog (Levinson usually removed the dog before his patients came). The child began to interact with the dog and spoke to it. Levinson noticed that the dog softened children's defenses and provided a focus for communication. He was then able to develop a rapport with the child and initiate therapy. Levinson coined the term pet therapy in 1964, and his work is considered the birth of animal-assisted therapy. He wrote extensively on the subject, which has sparked much research into this phenomenon. Levinson (1972) stated that the climate of man's spiritual life has become much polluted by fear, insecurity, loneliness, frustration, and anxiety. He went on to state:

We are afraid to feel, to experience, to commit ourselves to a goal. We want to love but find that our love is misplaced, misunderstood or that a monetary value is placed upon it. Pets can help to re-humanize society because they meet many needs not fulfilled by the present social structures. Pets upgrade the quality of life, bring us closer to nature, provide companionship and emphasize the fact that animals must be accepted as desirable participants in society (Levinson, 1972, p.67).

From that point on, Levinson explored the relationship between his patients and animals. Since Levinson's time, therapy within this field continues to grow and evolve. In many cases, animals most beloved by man, especially dogs and horses, have played an integral role in physical,

occupational, emotional, and play therapy for many individuals. They have been used with good results in working with chronically ill, mentally and physically disabled, and emotionally disturbed children. The benefits gained from animal assisted therapy are not restricted to traditional therapeutic guidelines, but also contribute to the improvement in quality of life for patients with severe physical and mental limitations (Fine, 2010).

In 1977, a research team from the University of Pennsylvania looked at the impact of pets on patients' blood pressure. Morrison (2007) noted that the researchers found participants who interacted with pets had lower blood pressures when compared to those who only interacted with people. In addition, patients who suffered from severe myocardial infarctions showed improved one-year mortality rates if they had pets waiting at home compared to those patients with only family members waiting or going home to a solitary home environment (Salotto, 2001).

This brings us to 1980 when the first animal assisted therapy foundation was founded—The Delta Foundation, today known as Pet Partners. This international nonprofit organization focuses on the “human-animal bond.” The mission of Pet Partners is to promote the use of animals to help people improve their health, independence, and quality of life. The goals of Pet Partners are expanding the awareness of positive effects animals can have on human health, to remove barriers that prevent involvement of animals in everyday life; and ultimately to improve human health through service and therapy animals (Delta Society, 2005). Fine (2010) defines therapy animals as most if not all

animals engaged in human/animal interaction programs; whether the interaction consists of a volunteer implemented, spontaneous interaction with no participant-specific goals or consists of specified interactions, implemented by a trained human health, welfare or educational professional to meet explicit participant-specific goals.

Today, animal-assisted therapy is performed in a wide variety of settings. These settings include schools, nursing homes, and hospitals. Researchers and mental health professionals have been employing and studying the benefits of using animals to increase the emotional well-being as well as the quality of life of depressed and physically incapacitated individuals. Many have stated that the reason this non-traditional therapeutic intervention can lead to success for individuals of any age or ability is the physical capabilities obtained through touch and movement. This tactile, hands-on form of therapy provides a healthy neurological response that is soothing and relaxing.

A subtype of animal assisted therapy is equine therapy. Equine therapy is a collective term for all types of therapeutic activities using horses and aims to use riding as a tool in a therapeutic process (Hakanson et al., 2009; Rothe et al., 2005). Positive effects of equine therapy have been found on symptoms of cerebral palsy, blindness or visual impairment, multiple sclerosis, and spinal cord injury, to name a few. In children with cerebral palsy (Benda et al., 2003), improvements have been found. Furthermore, there is also documentation of significant decrease in postural instability in individuals with spinal cord injury (Lechner et al., 2003). The act of riding a horse provides continuous postural

challenges to the rider through movements induced by the horse (Hakanson et al., 2009) and requiring bilateral coordination.

### **Statement of the Problem**

As the topic of at-risk adolescents continues to garner greater attention as awareness and research grows in the United States, there is a real need for new and creative therapeutic techniques for working with challenging populations such as those who are faced with behavior disorders; autism; and physical, learning, and mental health disabilities.

When the above-mentioned risk factors are left unaddressed in the life of a child, there is a tendency toward negative outcomes, such as school failure, psychiatric illness, criminal involvement, vocational instability, and poor social relationships later in life. The damaging effects of multiple risk factors apply across gender, race, culture, and disability. Furthermore, verbal approaches to therapy may be ineffective with children who are already extensively verbal and who over-analyze or intellectualize as a result (Davis-Berman & Berman, 1995). Most importantly, the confines of an office may be intimidating or constraining for some children, thus not yielding the intended therapeutic outcomes.

Children with learning disabilities, conduct disorders, autism, or mental health diagnosis are at risk for the development of severe emotional and social disorders in adolescence. Severe emotional disorders not curtailed in adolescence often lead to serious psychopathology in adulthood (Ewing, 2007). Thus, the implementation of positive and effective therapeutic interventions is critical at the adolescent stage of a child's emotional/social development.

Animal assisted therapy, utilizing animals within a goal oriented setting to implement treatment, has been shown to significantly benefit the cognitive, psychological, and social domains (Fine, 2006). In addition, research has also suggested that animal assisted therapy influences physiological factors such as lowered blood pressure, heart rate, and decreased anxiety levels (Morrison, 2007). This study intends to investigate the impact of non-traditional therapeutic intervention, with a specific focus in equine therapy, on the growth and social development of children or youth identified as at-risk or with complex support needs.

### **Purpose**

Four million children and youth in the United States suffer from serious mental disabilities or at-risk impairments that affect home, school and with peers (U.S. Department of Health & Human Services, 1999). Approximately fifty percent of students who are living with a mental illness are at risk of failing school, resulting in the highest dropout rate of any disability category in the US (U. S. Department of Education, 2001). At-risk youth have a higher incidence of depression and high-risk behavior (Eaton, D. et, al., 2011). When children with untreated mental health or at-risk disorders become adults, they use more healthcare services and incur more costs than any other adult. Thus, left untreated, childhood disorders are likely to persist and lead to a downward spiral of school failure, limited or non-existent employment opportunities, poverty in adulthood, prison, and even death (NAMI, 2014). Research shows that early impactful interventions and identification can minimize the long-

term detrimental effects children and youth with disabilities face on a daily basis.

Making a positive difference in a student's educational experience can be accomplished by helping them feel as though they belong (Sanders and Sanders, 1998). Effective intervention programs require the collaborative efforts and talents of all stakeholders—students, educators, parents, community members, and business leaders—coming together to address and meet the needs of children and youth with disabilities. Therefore, this research will work with children and youth with disabilities to investigate whether equine therapy is an effective tool to assist students throughout life.

Equine therapy is an emerging therapeutic intervention used in a variety of mental health and rehabilitative settings, particularly in the treatment of adolescents and currently with soldiers returning from war. This non-traditional intervention is a type of recreational therapy loosely related to animal-assisted therapy. Gestalt Equine Therapy, experiential therapy, reality therapy, solution-oriented brief therapy, Equine-Assisted Psychotherapy, and rational-emotive theories form the psychological foundations of equine therapy (Suarez, 2005). Through aspects of these therapies and components unique to equine therapy, adolescents who require a non-traditional therapeutic intervention can address their problems constructively; altering coping strategies and behaviors in a challenging environment that provides emotional and social reward.

This non-traditional therapy combines traditional therapeutic interventions with a more innovative component involving relationships and activities with horses (Suarez, 2005). Equine therapy is noted as an effective therapeutic approach that has been shown to have a positive impact on individuals and families. It addresses a variety of mental health issues and human development needs including behavioral issues, attention deficit disorder, substance abuse, eating disorders, abuse issues, depression, anxiety, relationship problems, and communication deficits (Root, 2000). Individuals can benefit greatly by interacting with horses as these animals provide an avenue for self-growth, an increase in self-esteem, awareness of self-efficacy, conscientiousness, and a decrease in violent acts, among many other positive life changing skills (Kachelmeier, 2008). The ultimate goal of this intervention is to allow individuals to learn patterns of success from working with horses and to repeat those patterns outside of school and throughout life (Turner, 2010).

Individuals who have had some familiarity with horses and who have opportunities to engage with horses talk of the beneficial effects of positive interactions, the power to influence and heal people, the simple pleasure of being around them, and the bond that occurs between horse and human (Frewin & Gardner, 2005). In 2006, I had the opportunity to develop a volunteer program with a group of students while working as Director of Special Education at a charter school. The school was comprised of inner-city high school students ranging from grades 9-12. The participating organization

was a local therapeutic riding program. The volunteer program offered all students the opportunity to build confidence, determination to see a task through, positive social skills, and the ability to believe, “I CAN!” I often shared a quote my mom always said to me growing up, *“If you can handle a 1,200-pound horse, there’s not a problem in the world you can’t handle.”* Many of the students who volunteered for this opportunity were diverse in their academic and life experiences. Students ranged from the following social categories: gifted education programs, privileged families, blue-collar families, those living on food stamps, those with sustained academic or behavioral deficits, or those facing terminal illness. Of all the students with whom I recall participating each year, one stands out the most—Afrika.

Prior to becoming Director of Special Education, I served the students of this charter school as a 9<sup>th</sup>-grade special education teacher. Afrika happened to be a student of my mine, and I had developed a strong rapport with both him and his mom. During Afrika’s second year of high school he began failing miserably. Missing school and becoming a behavioral concern to several of his teachers, he failed the 10<sup>th</sup> grade and was repeating for the second time. In discussions with Afrika’s mom regarding my concerns now as an administrator for the school, I was informed that Afrika was diagnosed with a terminal illness with a life expectancy to age 21. Afrika, then 17, was continuing on a downward spiral academically and emotionally.

Recognizing a need to find some way to motivate Afrika, I spoke with him about an up-coming volunteer program I was developing with an organization

that works with horses and children with disabilities. Reluctant at first, Afrika agreed to meet on a Saturday morning with 25 other students and me for the first training. To 25 inner-city high school students, a smelly barn was not their idea of Saturday fun, but with their trust in me all students met that day and continued for the remainder of the year, changing their lives indefinitely.

Afrika quietly settled to the back of the group at first, taking it all in. However, as we spoke later, he realized that he wanted to give back to the children and young adults participating in the program. As he participated each week, he began to regain a strong sense of self-confidence and pride that inspired him to not only attend school each day, but to live each day to the fullest despite the outcome. Afrika was part of a group who cared, groomed, saddled, and prepared the horses and the riding course for the students each Thursday. Witnessing this young man's evolution was amazing. He began to smile, laugh, regain a sense of self-importance, and rise from the darkness that over-shadowed him. Afrika went on to become an inspired poet for the high school newspaper and wrote several articles about the benefit of volunteering and working with animals, influencing his peers and others; most importantly, he graduated from high school.

### **Justification for the Study**

Horses have been a part of the occupational and physical therapy fields since the early '70s, and more recently have begun to play a role in the field of mental health (Rothe, 2004). The stature of a horse alongside a child immediately elicits respect, which is often an attribute that at-risk youth

struggle with on a daily basis. For emotionally- or cognitively-disabled children, the philosophy of equine assisted therapy is “the challenge of controlling a 1,000-pound snorting animal which both concentrates the mind, when successfully met, strokes the dampened fires of pride” (Milson, 2001, p. 75). Horses are very much like humans in that they are social animals. They define roles in their herds and prefer to be with their peers. Like humans, horses have distinct personalities, attitudes, and moods. An approach that works with one, may not work with another. At times, they are stubborn and defiant. They love to play, have fun, and are curious by nature. Due to their highly evolved survival instincts, they have the ability to read and mirror human body language and emotions. Most importantly, horses are not judgmental nor do they have high expectations or prejudices. They respond to the immediacy of your intent and your behavior, doing so without assumption or criticism. They do not care about what you have to say, but care about what you feel (Kachelmeier, 2008). They are honest, thus making them powerful messengers.

The intense engagement with these animals can be powerful for many people. Horses provide a wonderful metaphor for human relationships. Children are often forced to change their behavior in order to change the behavior of the horse, taking responsibility for their own actions. Relationships with horses teach the fine line between aggression and assertion. At-risk students can learn the basics of respect, problem-ownership, and maintaining healthy relationships through their interaction with horses (Kersten & Thomas,

2004). This non-traditional therapy takes this one-step further in its philosophy, proposing that stress and adversity actually allow people to grow and change. In essence, challenging circumstances do not necessitate negative outcomes, but facilitate growth (Kersten & Thomas, 2004).

Scholars McCormick and McCormick (1997) researched hostile and defiant street smarts of gang youth. The hyper-masculine persona associated with gang youth, quickly eroded in the presence of an assumed adversary (the horse) that the youth were unequipped to control or overthrow. Frewin and Gardiner (2005) indicated that some children were shocked as they began to understand that openness and vulnerability are more likely to bring forth positive behavior from the horse than defiance and aggression. Confidence and self-esteem are greatly increased through the accomplishment of competently handling an animal of such size and presence.

Professionals are beginning to recognize the benefits that people receive from a personal connection with a horse; many professionals refer to the horse as a guide and a healer through life's many challenges. Programs focused on equine therapy are helping adults, children, families, and businesses with their mental, emotional, and social issues as well as the development of team building and leadership skills required to be successful (Kachelmeier, 2008).

Even though the close association of humans with animals is commonly believed to bring about positive and profound changes in human life, it is only now beginning to become clear, specifically, that the horse has a healing power and exactly what the extent of that power is.

No one would deny that...horses and riding are good for one's health and well-being. Many human-interest stories, case studies and research projects all clearly validate that riding is an effective form of treatment for many physical and cognitive disabilities (McDaniel, 1998, p. 1).

Any riding program using horse-related activities for clients with physical, mental, cognitive, social or behavioral problems to facilitate a change in one or more of their bodily systems is a therapeutic riding program (Heine, 1997). The therapeutic riding industry encompasses many branches of therapy with the horse, and within the industry many highly-educated equestrians work hand-in-hand with therapists, psychologists, teachers, doctors, and other professionals to provide this relatively new type of therapy. Through the therapeutic riding industry, lives are touched in special ways whether those involved are clients, instructors, outside professionals, volunteers, or parents. To be productive in today's world, children must learn not only problem-solving skills, but also how to interact positively with their peers and adults. Professionals in the mental health and educational fields have identified therapeutic horseback riding as one method in working with children to redirect negative behavior patterns, build self-esteem, and develop social skills (Fischbach, 1999).

### **Non-traditional Therapeutic Interventions—Why Use Other Types of Therapy At All?**

A number of non-traditional therapeutic interventions are utilized to assist in the identification of emotions and expression. Such therapies include art, dance, music, movement, and play. The Children's Hospital in Philadelphia utilizes art therapy for individuals who have experienced trauma, illness, and

life challenges, or by individuals who require self-development. Through this type of therapy, individuals of all ages apply creative art skills as a reflective process to help increase a deeper awareness of self and others; cope with symptoms, stress, and traumatic experiences; enhance cognitive abilities; or simply take part in an enjoyable experience while in recovery. The program also incorporates music therapy as well. This therapeutic intervention allows music therapists to assess the patients' emotional well-being, physical health, social functioning, communication abilities, and cognitive skills through musical responses. Through this program children and youth are encouraged to self-express their thoughts and feelings related to medical illnesses, process and work through trauma, facilitate positive self-esteem and self-image, promote independence and feelings of control, enhance peer interaction, and encourage healthy strategies for coping with hospitalization and more (www.chop.edu, 2012).

Morrison (2005) conducted a review of the benefits of animal assisted interventions. Through her review, she cited several studies that statistically noted the impact of animal therapy. Antonioli and Reveley (2005) researched the positive effects of dolphins on mildly and moderately clinically depressed patients who had been off their medication and psychotherapy for four weeks. Patients were randomly assigned to either animal assisted therapy with dolphins or an activity involving snorkeling around a coral reef. The post-evaluation revealed that the patients who received the dolphin intervention had significant improvement in the mean difference in change per the Hamilton and

Beck depression scores, respectively, compared to the snorkeling group. The results indicated that the dolphin intervention improved depression symptoms quicker than psychotherapy or medication (Morrison, 2005). Sams, Fortney, and Willenbring (2006) found positive effects on children with autism when animals such as dogs, horses, rabbits, or llamas were incorporated into occupational therapy. Each of the 22 participants received one standard session and one session that included an animal. Participants showed a significantly greater use of language and social interactions during the sessions involving the animal compared to the standard therapy session. Riding for people with disabilities has become a well-recognized and acclaimed method of improving the lives of those who refuse to let their disabilities limit them (Crawley & Cawley, 1994).

### **Anticipated Limitations of this Study & Therapeutic Approach**

There are some limitations that may affect this work. According to the University of Southern California Writing Guide (2014), limitations of a study are those characteristics of design or methodology that influenced the application or interpretation of the results of one's study. They are the constraints on generalizability and utility of findings that are the result of the ways in which the researcher chose to design a study and/or the method used to establish internal and external validity.

Qualitative case studies are limited too, by the sensitivity and integrity of the investigator. The researcher is the primary instrument of data collection and analysis. This has advantages. However, training in observation and

interviewing is not readily available for aspiring case study researchers. Nor are there guidelines in constructing the final report. The researcher is left to rely on her instincts and abilities throughout much of the research (Reis, 2014).

Investigating equine therapy has its limitations as well. Much of the research provided was designed as qualitative case-studies. Oftentimes individuals in educational administrative positions and the medical field require quantitative research-based evidence as well to support the findings of case-study research. Quantitative research is defined as explaining phenomena by collecting numerical data that are analyzed using mathematically based methods, statistics in particular.

As it pertains to equine therapy, Kirby (2010) indicated that as a new and unconventional therapy, people might have suspicions about the role and value of the horses in the therapeutic setting. In addition, individuals that are terrified of horses or those who have too many negative associations about horses may not be open to the work. There may be individuals who are disconnected from or indifferent to the natural world and the intelligence and value of animals and thus would not be interested or available for the work. Furthermore, individuals with physical limitations may feel this therapy would be inappropriate or too physically challenging, and thus may not access the therapy. However, equine therapy can be tailored to suit the needs of participating individuals, even severely physically-challenged persons.

## **Research Questions**

This dissertation research was designed as a qualitative *intrinsic*-case-study—conducting interviews, observations, as well as video and photographic illustrations to assist in the presentation of the study. This study intends to answer the following research questions:

1. To what extent does a student benefit from participating in equine therapy?
2. How does a student’s social, emotional, and physical development benefit by participating in equine therapy programs?
3. How do parents perceive the effects of their children’s participation in equine therapy vs. traditional therapy?
4. To what extent do the perceived benefits of students’ participation in non-traditional therapy such as equine therapy transfer to school, home, and daily life?

Interview questions were created for parents, students, the program director and program staff of Riding for the Handicapped of Western Pennsylvania. The questions were asked during semi-structured and informal conversational interviews as well as focus group discussions. A sample set of interview questions have been provided below. In addition, the questions have been included in Appendix B.

## **Interview Questions**

- a) How does this type of therapy differ from the traditional therapies individuals have previously participated in? Please explain.

b) What improvement in your child's motivation to attend school, related services, and therapy following equine therapy sessions can you attest to?

c) What improvements in your child's self-determination skills following their participation in equine therapy have you discovered? Please explain.

d) How do you see equine therapy benefiting all children?

e) Do you feel it would be beneficial to offer equine therapy as an option provided to all students with disabilities as part of the state curriculum? Why?

f) How is equine therapy less effective, more effective than or as effective as traditional clinic-based therapy? Please explain.

### **Definition of Terms**

1. *At-Risk Youth*; include elementary and secondary school age students who have a disability; run the risk of not acquiring the knowledge, skills, and attitudes needed to become successful adults; or behave in ways that put them at risk for not graduating from high school (Herr, 1989). Youth may have additional needs in one or more of the following functional areas: communication, medical care, maintaining independence, supervision, and transportation. Individuals who may need additional response assistance include those who have disabilities, live in institutionalized settings, are from diverse cultures, have limited English proficiency or are non-English speaking, are transportation

disadvantaged, have chronic medical disorders, and have pharmacological dependency (U.S. Department of Health and Human Services, 2012).

2. *Autism/Autism Spectrum Disorder*; a group of developmental disabilities that can cause significant social, communication, and behavioral challenges (Centers for Disease Control and Prevention, 2013).
3. *Developmental Disabilities*; include a group of conditions caused by mental and/or physical impairments that occur any time between birth and age 22, including autism spectrum disorders, cerebral palsy, intellectual disabilities, hearing loss, and visual impairments.
4. *Equine Therapy*; an intervention that incorporates equine activities and/or the equine environment. Rehabilitative goals are related to the client's needs, and the medical professional's standards of practice (Path International, 2013).
5. *Equine-Assisted Activities*; therapeutic riding, mounted or ground activities, grooming, stable management, shows, parades, demonstrations etc., in which the client, participants, volunteers, instructors, and equines are involved (Path International, 2013).
6. *Intervention*; a traditional or familiar term for school-based efforts to improve students' lives and change problems (Merriam-Webster Dictionary, 2013).
7. *Therapeutic Riding*; a type of equine-assisted therapy that requires the rider to learn the basics of guiding and controlling his or her mount, with

the long-term goal of independent riding, if possible. Exercises and activities performed target the physical, cognitive, social well-being of the rider, and are designed to meet the individual needs of the rider (Path International, 2013).

### **Theoretical and Conceptual Framework: Significance of the Study**

Professional Association of Therapeutic Horsemanship International, or PATH Intl. (2009), emphasizes the benefits of equine therapy especially for children with autism. Case reports (Brown, 1996; Johnson, 2007; Kohn, 1996) testify to the positive responses of individual children, specifically those with autism, to equine therapy in the areas of communication and social exchange. Burgon (2011) studied seven referred at-risk children who participated in individual equine therapy lessons. The lessons varied in length of time (range of 1-3 hours) and frequency of occurrence (weekly, biweekly, or intermittently). Although the content of the lessons emphasized the relationship with the horse, the specific activities in each lesson varied. The results of this qualitative research with ethnographic case study design yielded several themes, including participants' demonstrated confidence and self-esteem, self-efficacy, and empathy (Burgon, 2011).

This form of therapy provides an approach that has been shown to have a positive impact on individuals and groups. Equine therapy addresses mental health and human development needs including behavioral issues, attention deficit disorder, depression, anxiety, relationship difficulties, as well as social and communication needs. Participants are engaged intellectually,

emotionally, spiritually, physically, and holistically. Throughout this process, participants actively participate in posing and investigating questions, experimenting, problem-solving, taking responsibility, being creative, and discovering meaning in their life situations.

Experiences are structured to require participants to take initiative, make decisions, and become accountable for results. The results of each session are personal and form the basis for future experience and learning. Relationships and accountability are developed and nurtured— self to self, self to others and self to the world at large. Because the outcome cannot totally be predicted, the participants may experience success, failure, adventure, and uncertainty. These opportunities are nurtured to explore and examine a person's personal values and beliefs. By accomplishing a task involving the horse and overcoming fear, confidence is created, which can carry over into other challenges in life.

## CHAPTER 2

### **Literature Review**

The American Veterinary Medical Association's Committee on the Human-Animal Bond defines the human/animal bond as "a mutual beneficial and dynamic relationship between people and other animals that is influenced by behaviors essential to the health and well-being of both. This includes, but is not limited to, emotional, psychological, and physical interactions of people, other animals, and the environment" (Fine, 2010). The use of animals as living, interactive tools utilized to help people see them and the world in new ways, allows individuals to add new skills and responses to their behavioral repertoires.

Much of the research done on animal assisted therapy can be applied to equine therapy as the use of horses carries with it many therapeutic benefits that can be compared to therapy with pets such as dogs and cats. Most traditional therapies rely almost exclusively on language as a medium for change, which may not be the most effective way to facilitate change in all clients. Some clients' verbal skills may not be fully developed or a diagnosis such as attention hyperactivity disorder may make focusing on or responding to verbal interactions a less effective intervention.

Equine therapy as a type of recreational and adventure-based therapy is likely to produce therapeutic outcomes in work with adolescents. Clients can

learn the basics of respect, problem-ownership, and maintaining healthy relationships through their interaction with horses (Kersten & Thomas, 2004).

Equine therapy is still very new in its inception, development and research (Kirby, 2010). Kohanov and McElroy (2007) in *The Way of the Horse* suggest that we can explore the wisdom of the non-verbal, non-predatory, heightened sensory and extrasensory beings that horses embody. Authors suggest that learning about a horse's way of being speak to trauma survivors, individuals who feel powerless, as well as those who feel betrayed by our aggressive, disconnected and mechanized culture. Kohanov and McElroy (2007) further describe how horses model attributes of cooperation over competition, relationship over territory, responsiveness over strategy, emotion and intuition over logic, process over goal, and a creative approach to life. When we climb on their backs, walk beside them or sit in their presence, these animals interrupt the hypnotic effects of our own human conditioning giving people unusually efficient access to forms of healing, perceiving, and relating (Kohanov & McElroy, 2007).

Mounted equine activity gives riders a very different perspective, literally and figuratively, as they view themselves and their surroundings. Physically, the natural gait of the horse exactly duplicates the vestibular motion of the human walk, side to side, forward and up and down. The horse is a multi-sensory tool, which can assist an at-risk child to integrate their senses and better understand how their bodies relate to external forces and surfaces (Bass, Duchowny, Lkabre, 2010). As a result, the excitement of the experience may

encourage speech when communicating with the horse or instructor. The non-judgmental feature of the horse creates a bond between the horse and the child encouraging the child to form an attachment with another living being, which is especially difficult for children and youth with emotional disorders to achieve (Good Hope Equestrian Training Center, 2012). Horseback riding also encourages learning of new movements and adaptive strategies while maintaining control on a moving or dynamic surface (Ratliffe & Sanekane, 2009).

In addition, as a large animal, the horse evokes opportunities for effective changes in a person's experience and behavior. Verbal and nonverbal communication is essential between horses and humans in order to cooperate during riding and other activities. The relationships that evolve from this partnership have been found to have a profound effect and play a valuable role in improving self-confidence, social competence, and quality of life as well as enhanced development of empathy and coping skill abilities (Ratliff & Sanekane, 2009).

### **Human-Animal Bond**

The term human-animal bond was used prominently in 1979 in Scotland, but the concept was widely articulated by Boris Levinson and Konrad Lorenz in the early 60s (Hines, 2003). Lorenz, who had written of this about this relationship for decades, provided this perspective: "the wish to keep an animal usually arises from a general longing for a bond with nature; this bond is analogous with those human functions that go hand in hand with the

emotions of love and friendship in the purest and noblest forms.” Levinson noted people who suffer from even greater feelings of alienation than those already attacking our emotional health. Hines (2003) stated:

Future man will be compelled to turn to nature and the animal world to recapture some sense of unity with the world that otherwise will seem chaotic and meaningless; animals will become junior partners and friends, effecting a revolutionary transformation of man’s attitudes.

Animals of all kind have played an important role in helping to maintain the emotional stability of humans, at times remaining as the only link with reality (Levinson, 1969). Animals provide the bond in life individuals require to feel connected and obtain a sense of purpose. Levinson (1969) profoundly states that animals do not react to the color of a child’s skin, uncombed hair, dirty clothes, bad report card, or substandard speech. In fact, an animal’s approach to life is elemental. They care nothing at all for societal values, but respond primarily to love and kindness. Thus, there is generally an immediate affinity between a child and an animal; even an angry, hurting child learns quickly to be gentle with an animal that eagerly demonstrates a desire to be friends. To the observing child, animal behavior embodies what Piaget (1969) argues as the engine of all learning; cognitive incongruity, moderate discrepancy from established schema, and novel information. Moreover, for many children, companion animals especially are likely to be powerful motivators of learning, for at least two established reasons: (1) children learn and retain more about subjects in which they are emotionally invested and (2) a child’s learning is optimized when it occurs within meaningful relationships (Melson, 2003).

Nearly fifty years later, the statements from these men resonate as programs such as Horses for Heroes, Gentle Carousel Miniature Horses, PATH International, and the Wounded Warrior Organization work to rehabilitate young men, women and their families returning from war to begin to find a sense of normalcy, self, and peace from an otherwise chaotic time in their lives.

The Human-Animal Bond is a dynamic relationship between people and animals in that each influences the psychological and physiological state of the other. Dr. Leo Bustad was a pioneer in the field of Human-Animal Behavior and helped to establish its nomenclature and encouraged others around the world to build on his work to further the human-animal bond (Hines, 2003). He worked diligently to promote and thoroughly explain the human-animal bond to new and varied audiences outside academic and professional circles around the world. He writes:

I believe that an interesting area with great potential for benefiting and enriching the lives and conditions of people and animals is opening to us in research, service and teaching. By working with colleagues worldwide in a variety of disciplines, we can develop new and creative ways to realize the great potential inherent in people/animal/environment interactions properly studied and utilized and as Tennyson spoke we can heed his words; Come, my friends, it's not too late to make the world a better place (Bustad, 1990, p. 42).

Human-animal interaction has profound physiological consequences (AVMF, 2012). People in contact with animals experience a decrease in blood pressure, reduced anxiety, and a general feeling of well-being. By observing the behavior of animals, children learn to be more nurturing and perhaps better parents to their own children. The therapeutic value of animals for socially isolated individuals in nursing homes, hospitals, hospices, and prisons as well as

children at risk or lack of social development has been documented. People in the presence of animals are often perceived by close family and friends to be more happy and healthy. Animals may be a person's strongest link to life itself (Brown, 2004).

In 1980 Dr. Michael McCulloch, Dr. Dean Katcher, and Veterinarian Leo Bustad founded the Delta Society, an international nonprofit organization focused on the human-animal bond (Delta Society, 2005). This organization declared its mission to promote animals helping people improve their health, independence, and quality of life. The goals of the Delta Society help to expand awareness of the positive effects animals can have on human health; remove barriers that prevent involvement of animals in everyday life; and expand the therapeutic role of animals in human health, service and education. Today the mission has evolved to simply state, "Improving human health through service and therapy animals" (Delta Society, 2005).

Throughout history, animals have served as a best friend to man. More recently, humans have increased their understanding and treatment of animals. With this improvement, the bond between humans and their pets is becoming more significant than ever. Research that observed oxytocin and cortisol levels in both humans and animals has proved that there truly is reason for their connection; while some may still credit it to a higher power or simply fate, it is scientifically proven that there is a reason for this partnership. This human animal bond has created some of the most successful therapy techniques in the world. While some may just think of their dog or cat as a

four-legged creature running around outside, many show how strong the connection between man and pet can be, and these people are living evidence of the human animal bond.

### **Children & Animal Bond**

Working with developmentally or behaviorally challenged children requires imagination and the ability to incorporate methods other than the typical “talk therapy” (Ewing, MacDonald, Taylor & Bowers, 2007). Animals are so much a part of children’s lives and their literature that it is reasonable to assume that animals have some effect on their development (Beck, Katcher, 2003). They provide opportunities for doors to open to initiate discussion and help to establish the trust that is so desperately sought in therapeutic sessions. All therapeutic interventions involving animals rest on a powerful assumption: that there is something about animals that powerfully attracts and motivates humans (Melson, Fine, 2010). As Sir Winston Churchill once stated, “there’s something about the outside of a horse that’s good for the inside of a man.”

The animal world for children extends beyond direct contact with living animals to exposure through print, audio and visual media. Children’s picture books, stories, toys, games and media are saturated with animal symbols reflecting the cultural assumption that animals and children naturally go together (Fine, 2010). What do animals mean in a child’s life? According to Fine (2010), scholars have considered theory and research on the possible role of animals in children’s lives.

The following outcomes that have been considered: (a) nurturance and caring for others, including empathy; (b) coping with stress; (c) emotion regulation, self-control and positive adjustment; (d) reduction of maladaptive outcomes such as conduct disorder symptoms; (e) theory of mind; (f) social support; and (g) physical activity, among other outcomes. Parents cite increased responsibility, companionship, and fun as benefits that companion animals provide to their children (Melson, 2001). Additionally, animals provide the constant nurturing and acceptance needed to facilitate healthy coping skills, even in difficult times (Strand, 2004).

Fine and Eisen (2008) offer several case examples of how trained therapy animals help to cultivate a more accepting environment to better assist children and youth. The case narratives provided descriptions of how therapy animals acted as catalysts for comfort in difficult periods; for example when disclosing self-mutilation or abuse, or expressing feelings of loneliness and incompetence. Below is one example provided by Fine (2010):

Hart, a black Labrador retriever, acted as a social catalyst to a young patient of Dr. Fine's. On Sarah's first office visit with Dr. Fine, following her release from the hospital, she was more at ease but still reserved. As they sat and spoke, Hart sat close to her chair. At one point in their session, Sarah's reserve finally crumbled as she pushed up her left sleeve revealing the scars on her arm. As she lowers her arm, Sarah noticed that Hart's eyes were fixed on her arm. At one moment, Hart lifted her gaze from Sarah's arm and connects with Sarah's eyes. In an instant, Hart lowered her head and began to gently lick the healed scars. Dr. Fine indicated that Sarah was startled for a moment but then sat quietly as Hart continued to lick her wounds. Precipitously, Sarah bends over Hart and holds her close (Fine, 2010, p. 238).

Boris Levinson (1964), recognized as a pioneer in utilizing animals in therapeutic relationships, suggested that animals might represent a catalyst in

helping a child make more progress in a therapist's setting; the animals' presence made the initial resistance easier to overcome. Above all, the integration of animals to a therapy session supported the child's abilities to work on cognitive, social, and behavioral issues in a more constructive manner with their therapist/clinician.

Levinson (1965) specified that in the treatment of children with behavior disorders, bringing in an animal at the beginning of the therapy session assisted frequently in helping a reserved child to overcome his or her anxiety about therapy. Fine (2010) equally provided notation that children looked forward to seeing and interacting the horses, and attending their therapy sessions, especially with his therapy animals. The dogs eagerly greeted and walked over to the children, encouraging positive attention. Initial encounters such as these helped to ease tension at the inception of each session. Fine (2010) further stated that the animals were instrumental in regulating the emotional climate.

The mere presence of an animal in a therapeutic or non-therapeutic setting can stir emotions. The simple interaction with an animal can lighten a mood and gain a smile or laughter. Fine (2010), states that animals can provide emotion or actions that may not be professionally appropriate for therapists to display; for example, a dog might climb into a client's lap or sit calmly while the client pets him. He also indicates that holding, grooming, or petting an animal may soothe a client and help them to feel calm when

exploring difficult emotions that might be overwhelming without this valuable therapeutic touch (Fine, 2010).

Norman Cousins, in his premier work *Head First: The Biology of Hope* (1989), emphasized for decades that humor was beneficial not only in improving the mental state of an individual but their physical constraints as well. Laughter and joy are two ingredients which positively affect a person's quality of life; not only do animals promote warmth within a relationship, but they also bring joy and plenty of smiles (Fine, 2010).

Utilizing an animal such as the horse as a therapeutic partner allows children to find a sense of self-esteem, feelings, and attitudes often not discovered in traditional therapeutic settings. Horses interest, fascinate, and motivate children and as a result they can assist in successfully enhancing a child's life experiences and lead to better diagnosis and interventions to help a child receive mental health support in schools, hospitals, treatments centers and private practice.

In Washington, D.C., KIPP DC Charter School provides a different option for inner-city youth to escape the violence and instability of their neighborhoods. The junior high students utilize horseback riding as a way to "feel free" and relieve stress. Often on a warm spring morning, away from the hustle and bustle of the city, young students from KIPP DC are making a difference in their lives. Students have stated that they feel "stress free, liberated, as if they can do whatever they want" while riding. The program began seven years ago when an English teacher defied the odds and launched

an inner-city riding team. As stated by KIPP DC Charter School equestrian coach:

We don't have access to horses or transportation. We don't have tons of money; but we have the opportunity...to remove stereotypes about our students...They learn key principles such as helping each other out, building camaraderie, and self-respect.

Why do companion animals, indeed all animals, present such good learning opportunities? It is widely accepted that companion animals, pets, play an important role in the lives of children and adolescents. Companion animals are an integral part of life for many families across cultures and socioeconomic strata (Esposito, McCune, Griffin and Maholmes, 2011). In 1972, Dorothy L. Nolte wrote:

If a child lives with criticism, he learns to condemn. If a child lives with hostility, he learns to fight. If a child lives with ridicule, he learns to be shy. If a child lives with shame, he learns to feel guilty. If a child lives with tolerance, he learns confidence. If a child lives with praise, he learns to appreciate. If a child lives with fairness, he learns justice. If a child lives with security, he learns to have faith. If a child lives with approval, he learns to like himself. If a child lives with acceptance and friendship, he learns to find love in the world (Nolte & Harris, 1998, p. vi).

### **Horse & Human Connection**

Horse/human interactions, because of the physical as well as psychological unity that can be evoked by the sharing of the rhythm and motion of riding, have the potential for what may exemplify the closest fine-tuned intercommunication between two species (Lawrence, 1987). The main reason this type of bond can be achieved is that the horse as a species stands out for its ability and willingness to adjust its behavior to the level of experience and capacities of each individual rider.

The presence of horses in the therapeutic arsenal can contribute to serenity, confidence, and development of trust. Horses are excellent therapeutic facilitators for people, especially those who refuse to see a psychologist or collaborate in a traditional therapy session. Unlike humans, horses are non-judgmental and they project unconditional love and acceptance to whoever treats them positively and with respect. As a large and powerful animal, the horse represents a paradox, given that its strength can be controlled by human will. Working with horses enables aggression to be redirected in a sublimated, creative and positive manner. The gentle nature of the horse facilitates freedom and openness, which are especially significant for individuals with negative social stigmas, as are often found among at-risk adolescents. Moreover, the impressive presence of a horse tends to elicit emotions, which may provide the basis for beginning a therapeutic process (Bachi et al., 2011).

### **Equine Therapy**

The philosophy of using horses for people with disabilities is not new. The horse has contributed in no small measure to human development. This creature has allowed men and women to travel great distances, it has been a crucial contributor to the historical development of agriculture, the cornerstone in battles for centuries, and has frequently represented wealth and power among men.

It is not clear when utilizing horses as a form of therapy for the disabled became a specialized field, but history has recorded people with disabilities

riding horses as early as the days of the ancient Greeks. The Greeks used horses for rehabilitating wounded soldiers in the fifth century BC, and indeed throughout history riding has been prescribed as a means of improving the mental and physical well-being of people with disabilities. Orbasis of ancient Lydia documented the therapeutic value of riding in 600 B. C. Even then, it was acknowledged that riding was more than a means of transportation; it was also a way of improving the health and well-being of people with handicaps (North American Riding for the Handicapped Association, 2010). The first study of the value of riding as therapy was reported in 1875. French physician Cassaign used riding as a treatment for a variety of conditions and concluded that it was helpful in the treatment of certain kinds of neurological disorders by improving posture, balance and joint movement (Stable Life, 2010).

At the turn of the century, England recognized utilizing horses for the disabled as a beneficial form of therapy and offered riding therapy for wounded soldiers at the Oxford Hospital during World War I. By the 1950s, British physiotherapists were exploring the possibilities of riding as therapy for all types of handicaps. The British Riding for the Disabled Association was founded in 1969 with the enthusiastic support of the Royal Family (Miller; Alston, 2004).

Riding therapy was introduced in Scandinavia in 1946. Accomplished equestrian and Olympian Liz Hartel was stricken with two devastating outbreaks of polio. Although surgery and physiotherapy helped Liz to walk again with the aid of crutches, she was determined to ride independently again

and began daily supervised riding sessions to improve her muscle strength and coordination. Leaving her wheelchair and crutches for her horse's back, Liz Hartel brought attention to riding for the disabled when she won the silver medal for Dressage at the 1952 Olympic Games. This achievement naturally received worldwide attention, focusing on the fact that "it is ability that counts, not disability." Her courage and achievement gave encouragement to many people. She and Ulla Harpoth, a physical therapist from Copenhagen, went on to use horses as therapy for their patients (Miller; Alston, 2004).

Therapeutic Horseback Riding came to both the United States and Canada in the 1960s, with the formation of the Community Association of Riding for the Disabled, (NARHA, 2010). Furthermore, in the 1960s the American Medical Association accepted equine therapy as an invaluable therapeutic tool in the medical community. In the United States, equine therapy for the disabled developed as a form of recreation and as a means of motivation for education, and for its therapeutic benefits as well. In 1969, the Cheff Center for the Handicapped was established in Michigan and remains the oldest center specifically for people with disabilities in the United States. The North American Riding for the Handicapped Association (NARHA), now PATH (Professional Association of Therapeutic Horsemanship International), was founded in 1969 to serve as an advisory body to the various riding for the disabled groups across the United States and neighboring countries. PATH provides safety guidelines and training, certifies therapeutic riding instructors, accredits therapeutic riding centers according to its own high standards,

disseminates information, and offers low-cost insurance to its member organizations.

Equine Facilitated Psychotherapy, Equine Experiential Learning, Therapeutic Riding and other forms of therapy involving horses are gaining in popularity. Equine therapy is quickly becoming a well-recognized and acclaimed method of improving the lives of those who refuse to let their disabilities limit them.

The use of animal-assisted therapy (AAT) has been utilized in a wide range of therapeutic settings with children and adults for centuries (Prothman & Fine, 2011). Therapeutic horseback riding/Equine Therapy is a form of AAT that increased dramatically over the past forty years (PATH, 2009). This form of non-traditional therapy is provided by specially trained individuals who teach their patrons with a disability to control the horse using basic riding skills.

This form of therapy emphasizes control, attention and focus, sensory management, and communication in order to teach riding skills. In addition, this therapy provides a multi-sensory experience that is difficult to replicate. Contact with animals has been documented and researched demonstrating the stimulating psychological and physiological benefits throughout history. PATH (2009) also asserts that equine therapy benefits at-risk children, especially those with Autism. Burgon (2011) studied seven referred at-risk children who participated in individual therapeutic riding sessions. The sessions varied in

length ranging from 1-3 hours and occurred weekly, biweekly, or intermittently.

In 2011 Dr. Sandra Ward and colleagues from The College of William and Mary, Williamsburg, Virginia, completed an exploratory qualitative study regarding the impact of therapeutic riding on children with Autism ranging in ages from 7-10 years old. The initial content of the student's lessons focused on riding skills; however, specific activities were integrated throughout the lesson depending on the student's needs and abilities. The researchers transcribed audio-recordings of each lesson and coded the data for rider/instructor behavior and utilized field notes for non-verbal students (Ward, S.C., Whalon, K., Rusnak, K., Wendell, K., and Paschall, N., 2011). Additionally, parents and instructors were interviewed at the conclusion of each session. The findings of Dr. Ward and her team indicated improved social communication (verbal and/or non-verbal), greater confidence, increased tolerance of change, and enjoyment of the activity over a series of eight consecutive sessions (Ward, S.C., Whalon, K., Rusnak, K., Wendell, K., and Paschall, N., 2011).

Ward emphasizes the emerging evidence base investigating the impact of therapeutic riding on at-risk youth, especially those with Autism Spectrum Disorders, suggesting that this non-traditional intervention may be effective in improving a number of skills at-risk youth have difficulty acquiring on an ordinary basis such as: social communication, expressive language/vocabulary, self-monitoring skills, and sensory regulation.

A study conducted by Gabriels and colleagues (Gabriels et al., 2012; Shoffner & Gabriels, 2011) investigated the self-regulation, adaptive living skills and motor skills of 42 children with ASD who ranged in age from 6-16 years old. After ten consecutive weekly TR lessons, the experimental group displayed significant decreases in lethargy, irritability, stereotyped behavior, and hyperactivity, along with increased motor skills, based on assessments by an occupational therapist as well as caregivers. Increases were also noted in parent rating scales of expressive language abilities.

Previous research has claimed that animals provide comfort when a child or adult is ill or scared, self-esteem when they are embarrassed or a steady confidant when a secret or problem exists (Fine, 2000). The intent of this study was to obtain perspective and insight from the instructors and staff concerning the impact of equine therapy and their thoughts regarding the benefits for both program participants and school districts. Having been involved with horses all my life, the benefit of working with these animals is amazing. Individuals who have had some familiarity with horses and who have opportunities to engage with these majestic animals will talk of the beneficial effects of positive interactions. The power of horses to influence and heal people, the simple pleasure of being around them, and the bond that occurs between horse and human has been documented for centuries (Frewin & Gardner, 2005).

Individuals can benefit greatly by interacting with horses as they provide an avenue for self-growth, an increase in self-esteem, an awareness of self-efficacy, conscientiousness, and a decrease in violent acts among many other

positive life changing skills (Kachelmeier, 2008). This form of therapy provides an approach that has shown to have a positive impact on individuals and groups. These opportunities are nurtured to explore and examine their personal values and beliefs. By accomplishing a task involving the horse and overcoming fear, confidence is created, which can carry over into other challenges in life.

Experiential studies contribute to the growing body of evidence that supports the effectiveness of equine therapy on the social, physical, communicative, and emotional behaviors of at-risk children and adults. The power of horses to influence and heal people, the simple pleasure of being around them, and the bond that occurs between horse and human has been documented for centuries (Frewin & Gardner, 2005). Individuals can benefit greatly by interacting with horses as horses provide an avenue for self-growth, an increase in self-esteem, an awareness of self-efficacy, consciousness, and a decrease in violent acts among many other positive life changing skills (Kachelmeier, 2008). Offering an opportunity to ride on horseback, re-educate and rehabilitate people with disabilities, is not only providing therapy, it is giving people a chance to live a different life and help bring out the joy and love of life that we all should experience.

## CHAPTER 3

### **Methodology**

The purpose of this study is to investigate the impact of equine therapy, a non-traditional therapeutic intervention, on children and youth with at-risk or complex support needs. At-risk youth are defined as students who, by virtue of their circumstances, are statistically more likely than others to fail academically. Those determining the criteria of at-risk status often focus on ethnic minorities, those who are academically disadvantaged, or disabled. By definition from the Pennsylvania Training and Technical Network (PaTTAN), students with complex support needs are those students with disabilities who comprise about 1 – 2 % of all students. These students most often are assessed via the PASA (Pennsylvania Alternate System of Assessment), rather than the PSSA (Pennsylvania System of School Assessment), and may include students who have intellectual disabilities and/or may need life skill support, multiple disabilities support, autistic support or physical support; they also may require augmentative communication systems and assistive technology in order to access, participate and progress in learning (PaTTAN, 2012.)

The proper identification of these students and the development of programs to prevent their failure are necessary components to educational reform. Due to an increased awareness of effective research methods and the high demands outlined in educational standards nationwide, children are

identified as at-risk or with complex support needs more than ever before (Druian, 1986).

This study is constructed as a qualitative intrinsic case study that will investigate the non-traditional therapeutic intervention of equine therapy. The purpose is to determine whether this intervention would help in changing for the better the lives of the recipients. Merriam (2002) states that researchers strive to understand the meanings people have constructed about their world and their experiences. Therefore, this study seeks to investigate the perceived benefits of equine therapy from the perspective of three diverse families residing in Western Pennsylvania.

Merriam (2002) writes that qualitative research is richly descriptive. Words and pictures rather than numbers are used to convey what the researcher has learned about a phenomenon. As educators, it is important that we seek new avenues for students to become more independent in their daily lives, a task to which equine therapy could serve as a solution (Miller & Alston, 2004).

In April 2012, I conducted a pilot study that helped to build a foundation and provide additional insight into the field of equine therapy. The results of the pilot study (approved by the Instructional Review Board) helped to refine the present dissertation, the instruments used in the conduct of the study, and sharpen the research questions. In addition, the results of the pilot study and analysis of the interviews suggested that those who participated in the program seemed to improve their socialization skills. As a result, the participants were

better able to interact with family members and their peers. These initial observations raised the possibility that including such programs in the school curriculum could be beneficial to the students and as a result drive the purpose of this study. As stated by a certified Professional Association of Therapeutic Horsemanship Intl. instructor:

Kids love animals in general...though a horse is unique because of its stature. When our riders come out each day, who knows what they are battling in their daily lives...when they see and feel themselves atop a horse, with the ability to control a 1200 pound animal independently or with minimal support, their disability goes away for that moment and their ability shines through...they have accomplished a great feat...they realize that they can control and build a bond with a horse...they can do just about anything.

This study was completed at Riding for the Handicapped of Western Pennsylvania (RHWP) located in Wexford, Pennsylvania. The sample for the study comprised three families whose children were registered for equine therapy at RHWP. The family narrations were audio recorded and coded for common themes to establish rich descriptive detail within the same study utilizing equine therapy as a non-traditional therapeutic intervention.

Yin (1993) states that a phenomenon is best understood when research is conducted utilizing a case study method. Case studies are a qualitative strategy in which the researcher explores in depth a program, event(s), an activity, a process, or one or more individuals. The case is bounded by time and activity; the researcher collects detailed information using a variety of data collection procedures over a sustained period of time (Creswell, 2009). Yin (2003), further states that a case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the

boundaries between phenomenon and context are not evident. Yin (2003) goes on to state that case study inquiry copes with a technically distinctive real-life situation.

A qualitative intrinsic case study holds fundamental or unusual interest in a situation or phenomenon (e.g., evaluating a program, studying a student having difficulty) resembling the focus of narrative research (Stake, 1995). An intrinsic case study is the study of a case (e.g., person, specific group, occupation, department, organization) where the case itself is of primary interest in the exploration. The exploration is driven by a desire to know more about the uniqueness of the case rather than to build theory or how the case represents other cases. Robert Stake classifies cases into three categories: (1) intrinsic, (2) instrumental, and (3) collective (Mills, et al., 2010). The intrinsic case is often exploratory in nature, and the researcher is guided by his or her interest in the case itself rather than in extending theory or generalizing across cases. The process will provide an in-depth study of this type of therapy based on a diverse array of data collection materials (Creswell, 2007). Qualitative methods allow for the collection of data from multiple sources, which provide varied perspectives and as a result are more likely to provide a complete, detailed description of the program and its impact.

As Stake (1995) explains, the purpose of utilizing interviews for qualitative research is to discover multiple views and multiple realities of the case. Therefore, two main types of interviews will be used: informal conversational questions that occur during observations, and semi-structured

interviews (Delamont, 2002). This type of study will involve collecting and analyzing data from a single intrinsic case study that may have subunits or subcases embedded within, such as one student in a school (Merriam, 2009).

Importantly, qualitative research is an effort to understand situations in their uniqueness as part of a particular context and the interactions there. Patton (1985) helps further define qualitative research to understand the nature of a particular setting-what it means for participants to be in that setting, what their lives are like, what's going on for them, what their meanings are, what the world looks like in that particular setting. The analysis of qualitative research strives for depth of understanding (Patton, 1985).

The dissertation consists of studying one therapeutic riding facility and the impact equine therapy has had on three randomly selected families of diverse backgrounds. The analysis of data supports a deeper understanding about what constitutes the integration of equine therapy as a supportive beneficial alternative for at-risk youth in schools, ultimately providing a more compelling, rich interpretation and justification for equine therapy. It assists in examining the perceptions of the participants and the meanings attached to those perceptions pertaining to equine therapy as a significant intervention to support the well-being and overall developmental success of children.

Probing questions were utilized depending on the progression of the interviews. Anecdotal notes were transcribed by the researcher in correlation with the recorded interviews to highlight and identify emerging themes.

## **Research Questions**

Data for the study are derived from the conduct of interviews, focus groups, observations, as well as video and photographic illustrations. This study intends to answer the following research questions:

1. To what extent does a student benefit from participating in equine therapy?
2. How does a student's social, emotional, and physical development benefit by participating in the equine therapy programs?
3. How do parents perceive the effects of their children's participation in equine therapy vs. traditional therapy?
4. To what extent do the perceived benefits of students' participation in non-traditional therapy such as equine therapy transfer to school, home, and daily life?

Interview questions were created for parents, the program director and program staff of Riding for the Handicapped of Western Pennsylvania. The questions were utilized in the semi-structured and informal conversational interviews as well as the focus group discussions. The questions have been included in Appendix B. A sample set of interview questions have been provided below.

### **Sample Interview Questions**

- a) How does this type of therapy differ from the traditional therapies individuals have previously participated in? Please explain.

b) What improvement in your child's motivation to attend school, related services, and therapy following equine therapy sessions can you attest to?

c) What improvements in your child's self-determination skills following their participation in equine therapy have you discovered? Please explain.

d) How do you see equine therapy benefiting all children?

e) Do you feel it would be beneficial to offer equine therapy as an option provided to all students with disabilities as part of the state curriculum? Why?

Table 2

*Dissertation Timeline*

<b>5/2014-9/2014</b>	<b>9/2014-10/2014</b>	<b>11/2014-12/2014</b>
<b>Pre-Study Procedures</b>	<b>Research Procedures</b>	<b>Analysis</b>
<ul style="list-style-type: none"> <li>• Compose letters of consent and IRB proposal</li> <li>• Complete Duquesne class requirements for the IRB process on the Citi Program.</li> <li>• Submit IRB application and all supplemental documents through Mentor, 9/2014.</li> <li>• Following IRB approval, schedule dates for 2 large group interview sessions (one with program staff; second with families)</li> </ul>	<ul style="list-style-type: none"> <li>• 2 focus group interviews to occur; one program staff, second participating families and students</li> <li>• Develop trustworthy relationship with program and participants</li> <li>• Implement procedures for data collection               <ol style="list-style-type: none"> <li>1. Interview data</li> <li>2. Observational data</li> <li>3. Transcribed data</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>• Data Analysis</li> <li>• Reporting the results</li> <li>• Discussion of the results and implication for future research</li> </ul>

**Participant/Sampling**

In order to recruit participants for this study, the researcher first sent a letter requesting consent to the participating therapeutic riding center addressed to the attention of the program director, parent/guardian of participating patrons, and program staff following IRB approval. The letter allowed the participants to consider participation in the study and schedule a specific date and time to seek further information and clarification from the researcher. The program director provided access to the setting to allow for the implementation of the study via verbal and written consent.

The sample population consisted of a therapeutic riding facility located in Southwestern Pennsylvania and three families selected from the location. The program, Riding for the Handicapped (RHWPA) began over thirty years ago in Allison Park, Pennsylvania, at Ford Stables. Beginning with a handful of volunteers, today RHWPA continues to grow, with a client waiting list of two to three years. This program allows children with special needs to ride a horse. Not pony rides or people walking kids around on a horse, RHWPA teaches young folks to ride a horse while improving on the limitations imposed on them, building empowerment, and allowing a sense of governance in their lives by controlling a 1,200-pound animal.

RHWPA is a nationally accredited program and one of only seven of its kind in the United States that provides free programming. RHWPA is the only free program in Western Pennsylvania. RHWPA is an entirely volunteer-based program. This program depends exclusively on grant funding, fundraising, and donations; donations may consist of equines, equipment and supplies, and funding for student lessons. RHWPA turns no child away— a board commitment since its inception.

Now located in Wexford, Pennsylvania, with a facility to call their own, RHWPA has celebrated thirty-three years of service to families of children with disabilities. Their program consists of seven PATH International Certified Instructors, more than sixty trained volunteers, and a diverse board of thirteen community members. The mission of RHWPA is to enhance the progress of disabled children through therapeutic horseback riding, while supplementing

traditional physical therapy and educational development. The therapeutic horseback riding services at RHWPA are supposed to improve muscle tone, balance, posture, coordination, motor skills, self-esteem and general well-being of their participants. RHWPA continues to provide a service at no cost to families with handicapped children. An instructor and board member of over seventeen years, Shelley Bates states that the program has worked for many of these children. She further states that this type of therapy has been proven scientifically to reduce blood pressure, depression, heart rate, and build strong physical and emotional reactions. As she says, “the horse does not judge or say what to do allowing the rider to have control of a large animal and for a child with special needs...is a huge gift.”

### **Confidentiality**

Throughout the research, study participants were assured of confidentiality. The qualitative case study analysis was reviewed with the participants and the procedure for reporting the rich descriptive stories was described during the introduction phase of the group interviews. The results were shared with all of the participants at a culminating event at the facility. It is essential to the success of this dissertation that the researcher developed trust and be sincere with the participants.

The proposal for this research study was submitted to the Duquesne University Instructional Review Board (IRB) for full board approval in July 2014. This dissertation required full board approval because some of the research participants may not have reached 18 years of age.

According to IRB guidelines, informed consent is required of the participants' parent or guardian, and approval is required from the participants who are below the age of 18. IRB forms, participant forms and the information packet given to each participant can be found in the Appendix.

The data collection methods include interviews, audiotaping and observations expanded into transcriptions and resulting in descriptive data analysis. Participant information was secure at all times with no real names attached to any of the materials. Because the number of participants is small, care was taken to remove all descriptors and names of all persons mentioned. All materials were kept in a confidential and secure location in a locked cabinet in the researcher's home.

### **Data Collection**

Upon IRB approval, the researcher commenced the interviews and observations at Riding for the Handicapped of Western Pennsylvania. Interviews were audio recorded to ensure correctness when transcribing the raw data. The data collection process in case study research is typically extensive, drawing on multiple sources of information, such as observations, interviews, documents and audiovisual materials (Creswell, 2007). As a result, six different types of collection methods occurred in order to structure the case study successfully. The following collection methods occurred: field/journal recordings, audio recordings, videotaping, interviews (formal & informal), director and participant observations, and physical artifacts (Yin, 2003). Through the data collection approaches outlined above; a detail-rich portrayal

of the three cases emerged through which the researcher was able to illustrate such aspects as historical, day-to-day, and individual developments (Stake, 1995).

Interactive Qualitative Analysis utilizes an interview process that feels natural and conversational to the participant, a characteristic that results primarily from the flexibility allowed by the protocol in sequencing the questions and topics to be covered (Northcutt & McCoy, 2004). This characteristic ultimately helps to develop trust and consistency between the researcher and participants.

All participants were provided an informed consent document prior to the session, which lasted approximately 90 minutes, occurring within a quiet, non-intrusive location at the facility. Following the compilation of data from the two focus group sessions, semi-structured personal interviews were conducted. To begin with the researcher held semi-structured interviews with the program director, staff members, and families. Supplemental questions were asked to get a clearer picture of what was occurring during a specific setting or session following the observations. The family participants provided in-depth descriptions of their children's experiences and the perceived benefits derived from participation in equine therapy.

The researcher completed data collection when saturation was reached and no new themes or relevant information emerged from the information provided by parents or other family members of the participating children and youth.

## **Instrumentation**

Several efforts were made in this study to ensure the accuracy of the interview data including both video and audio recording, interviews, and transcribed data with the study's participants. Most importantly, the researcher is the primary instrument for data collection and data analysis. However, data in the form of quotes from documents, field notes, participant interviews, and excerpts from video recordings, or a combination thereof, were included in support of the findings of the study. As stated by Patton (2002), the quotes and excerpts will build on common themes that contribute to the rich, descriptive nature that is qualitative research. Rich descriptions provide the foundation for qualitative analysis and reporting, taking the reader into the setting being described (Patton, 2002).

### **Informal Conversational Interviews**

Informal conversational interview questions did not exceed 15-30 minutes within the observation of the program and facility. The informal conversational interview approach offered maximum flexibility to pursue information in whatever direction appears to be appropriate, depending on what emerges from observing a particular setting (Patton, 2002). The interviews served to provide a perspective of the child/youth before starting the program and how they progressed during the participation at RHWPA. This process allowed for elaboration and elucidation. The largest part of the interview was guided by a selection of questions to be explored, and neither exact wording nor the order of the questions was determined ahead of time.

This format gave the researcher opportunity to respond to the situation at hand, to emerging views of the respondent, and to new ideas (Merriam, 2009).

Informal conversational interviews offer flexibility, spontaneity, and responsiveness to differences and situational changes. Questions were personalized to deepen communication with the individual being interviewed. In addition, this format allowed the researcher to make certain of the immediate surroundings and situation to increase the concreteness and immediacy of the interview questions. The purpose of interviewing is to find out what is on someone else's mind. The task of the interviewer is to make it possible for the respondent to "bring the interviewer into his or her world" (Patton, 2001, p.280). Patton (2002) further explains that the Interview Protocol for the semi-structured interviews will offer maximum flexibility to pursue information in whatever direction appears to be appropriate, depending on what emerges from observing a particular setting (Patton, 2002).

### **Mini Focus Group Discussions**

The researcher also conducted two mini focus group interviews, one with program staff and volunteers, and a second with family members to introduce the research project, enhance the development of rich descriptions and support emerging themes. Mini group one consisted of five RHWPA staff members and the second group consisted of six parents or guardians of student riders. Each of these sessions lasted between 30-60 minutes. The two mini focus groups took place on separate dates at a location convenient for the interviewees. Each group was provided a list of the example questions prepared by the researcher and approved by the IRB. A list of guiding questions is included in this chapter as well as in the Appendix. The example questions directly relate to the research questions and were utilized by the researcher to moderate the discussion.

The mini focus group discussions were facilitated by the researcher to be very interactive in order to provide both an initial overview of equine therapy and serve to gather a sampling of the opinions from both the personnel and family members on the perceived physical, psychological, and social benefits provided to their students. Rich discussions helped to further identify the multiple factors involved in making this process successful. Onsite anecdotal interviews occurred during sessions ranging in length from 5-15 minutes.

### **Semi-Structured Interviews**

Semi-structured interviews did not exceed 30-60 minutes. The semi-structured interviews occurred with the program director, program staff, and

families utilizing the questions provided in Appendix B, which revolve around the impact of equine therapy on at-risk youth. The interviews were transcribed and at no time was the identity of participants or individual cases discussed to gather specific information regarding the program.

This form of interviewing allowed the researcher and the participants to engage in a dialogue whereby initial questions were modified in light of the participant's responses. The researcher was able to probe interesting and important areas that arose. In this process, the respondents can be perceived as the experiential experts and were allowed the maximum opportunity to tell their own story. As a result, the advantages of the semi-structured interview process facilitate rapport/empathy, and provide greater conversational flexibility to produce richer data.

The semi-structured interview consisted of six interview questions such as the following:

- What age and gender is your child who is participating in equine therapy?
- What type of lessons do they participate in- private, small group, or group?
- How does your child feel about this type of therapy?
- Please describe what your child does during a typical lesson.
- What changes have you witnessed to your child's physical, emotional and developmental condition?

The questions were phrased and arranged with the intention of taking each respondent through the same sequence. The questions were structured to elicit unique experiences and stories from the individual rather than simple yes and no answers (Stake, 1993). In addition, the researcher gained perspective from program facilitators, instructors, school personnel, parents, adolescents, and staff regarding the impact of the program. Although guiding questions were utilized, interviewees were encouraged to discuss what was most meaningful to them in their child's experience, which led to additional topics not specified in the sample questions. All interviews were audiotaped with the permission of the participants.

### **Transcription & Coding of Interviews**

The interviews were recorded, transcribed, and coded for common themes. Creswell (2009) emphasizes that this combination sets the basis for qualitative research. The researcher personally transcribed each of the interviews. Through this process, I not only listened closely to the participants' answers but reflected on their tone, mood, paraphrasing and the like. Quotations within transcribed text were color coded to denote a relationship to major categories outlined in the research questions.

Narratives provided by students, parents, instructors and staff of the specific phenomena were collected through interviews. A narrative analysis also was utilized to examine how equine therapy has influenced their lives.

## **Visual Documentation**

Video has obvious strengths and limitations; however, this form of data collection is priceless as it captures progress, activities, and events as they happen in real time. Photography can tell the story that the researcher thinks is important to capture and provide a means of remembering and studying detail that might be overlooked if the images were not available for reflection (Merriam, 2009). The sole purpose of videotaping the facility program was to capture the context and details to assist the researcher in transcribing and better creating an accurate portrayal of the program.

## **Program Observations**

General observations at RHWPA were conducted at least two days a week, for four weeks, totaling approximately 12-15 hours. These observations served to create a picture of what goes into the development of an equine therapy program. The observations also helped decipher whether the implementation of non-traditional therapeutic programs could be a successful option for school districts to utilize in better assisting at-risk youth. Observations were captured with a video recorder or through field notes in order to aid in a more accurate record and depiction of the effect of equine therapy.

## **Analysis**

The intent of interpretative phenomenological analysis (IPA) is to explore in detail how participants are making sense of their personal and social world, and the main currency for an IPA study is the meanings particular experiences,

events, and states hold for participants. The approach is phenomenological in that it involves a detailed examination of the participant's life-world; it attempts to explore personal experiences and is concerned with an individual's personal perception or account of an object or event (Smith & Osborn, 2007).

This analytic procedure allows for the uncovering of the same information from more than one vantage point and allows the researcher to describe in more detail how the findings and common themes occurred under different circumstances. Case study analysis generally involves an iterative, spiraling, or cyclical process that proceeds from more general to more specific observations (Creswell, 1998). Multiple perspectives, methods, and sources of information such as interviews, observations, field notes, and pictorials add texture, depth, and multiple insights to the case study analysis and can enhance the validity or credibility of the results. Data were analyzed and interpreted through a descriptive/interpretive approach.

The analysis for this study identified the components of equine therapy as a non-traditional intervention for at-risk youth. Furthermore, the emerging themes helped to define what constitutes success for each participating family. First, the descriptive level of analysis gave each family a unique story. In this phase, similarities and differences among the participating families were discussed in a narrative format.

Secondly, attention was focused on the analysis of data for constant themes that evolved as a result of the instrumentation methods implemented by the researcher. In short, the data analysis was a process of identifying,

defining, and redefining themes and linking them back to the participants accounts. The personal accounts of the participants were represented in the results section or Chapter 4 as well.

Third, analysis of the collected data for identification of the personal meaning and intended themes, experiences, and relevant correlates were investigated by the researcher. Finally, the fourth and final step of the interpretive phenomenological analysis was examining information by connecting the correlates to help identify the essences of the phenomenon (Saunders, 1982). The correlates were documented in the field journal. The phenomenon being investigated by the researcher is the impact of equine therapy as a non-traditional therapeutic intervention for children and youth. Each level of IPA assisted in identifying the impact of equine therapy on the participants and justified whether the intervention could be considered a success.

Table 3

*Key Concepts of Qualitative Research & Analysis*

Generates understanding from patterns	Conducts analysis along with data collection
Applies ideas across contexts	Favors fieldwork
Focuses on interpreting and understanding a social construction of meaning in a natural setting	Relies on researchers who have become skilled at observing, recording, and coding (researcher as instrument)
Attends to accurate description of process via words, texts, etc., and observations	Generates a report that includes expressive language and a personal voice
Appreciates complexity and multiple realities	Allows designs to emerge during study and uses text as data
Conducts analysis that seeks insight and metaphor	Offers multiple sources of evidence (triangulation)
Faces conceptual complexity	Often studies that build arguments for the study's conformability

**Member Checking**

To ensure internal validity or credibility, member checking will occur. This is one of the most important ways of ruling out the possibility of misinterpreting the meaning of what participants say or do, and the perspective they have on what is occurring (Merriam, 2009). Member checking occurred providing an opportunity to understand and assess what participant(s) intended to communicate through their interview dialogue with the researcher. This procedure afforded an opportunity for participants to volunteer any additional information, provided the chance to assess adequacy of the data gathered throughout the study, and ensured that the researcher truly captured the meaning throughout the process. The questions provided respondents an opportunity to inform the researcher of the benefits they

witnessed firsthand utilizing this non-traditional therapeutic approach with children and youth identified with at-risk or complex support needs.

### **Triangulation**

To support this measure, triangulation was utilized as a method to gauge the validity of this dissertation research. Specifically, triangulation is used in multiple sources of data, comparing and crosschecking data collected through observations at different times or different places, or interview data collected from people with different perspectives (Merriam, 2009).

Basically, this method “shores up” the validity of the study. Perhaps the best-known discussion of triangulation is Denzin’s (1978), in which four types of triangulation are proposed: the use of multiple methods, multiple sources of data, multiple investigators, or multiple theories to confirm emerging findings. For this dissertation research, multiple methods of data collection were utilized for example, what someone says in an interview can be checked against what is observed on site or what is read about in documents relevant to the phenomenon of interest (Merriam, 2009); thus the application of triangulation using three methods of data collection—interviews, observations and documentation—was applied by the researcher, therefore ensuring a level of credibility to the findings of the study.

As Bustad (1990), who has taught thousands of people in lecture halls and public meetings over the span of 30 years, stated:

I believe, as I conclude, that an interesting area with great potential for benefitting and enriching the lives and conditions of people and animals is opening to us in research, service, and teaching. By working with colleagues worldwide in a variety of disciplines, we can develop new and creative ways to realize the great potential inherent in people/animal environmental interactions properly studied and utilized. My plea is that we heed to the words of Alfred Tennyson: come, my friends, it is not too late to make a better world (Hines, 2003, p14).

When he died in 1998, Bustad passed this quest to all of us.

This concludes Chapter 3. In Chapter 4, I will present the results of this dissertation in rich descriptive detail presenting the results in a comprehensive form. The culminating Chapter 5 will discuss and draw conclusions offering a look at the implications for future research.

## CHAPTER 4

### **Findings**

The purpose of this dissertation was to explore the perceptions of three participants from three families who reside in Western Pennsylvania and utilize equine therapy as an alternative therapeutic intervention. The researcher also investigated the impact of this therapy on how the skills learned from participating in the riding program can be applied to everyday living. Within this chapter, the results of the study are shared in relation to the research questions indicated below. In addition, as a result of the transcribed interviews, emerging themes are identified and supported with documented evidence such as direct quotes or narration.

The study intended to answer the following research questions:

1. To what extent does a student benefit from participating in equine therapy?
2. What effect does participation in the equine therapy program have on the student's social, emotional, and physical development?
3. How do parents perceive the effects of their children's participation in equine therapy vs. traditional therapy?
4. To what extent is participation in an equine therapy program beneficial to the students, and if so, to what extent do the perceived benefits transfer to school, home and daily life?

Table 4 shows the research questions and the emerging themes from the responses to the questions.

Table 4

*Research Questions and Emerging Themes*

<i>Research Questions</i>	<i>Emerging Themes</i>
1. To what extent does a student benefit from participating in equine therapy?	Emotional, physical, and social abilities; friendships; greater sense of self-confidence; inner and outer strength; milestones are met at a greater speed due to the multiple levels of therapy that are provided during each session; greater attention span; accomplish multiple therapies in a session <ul style="list-style-type: none"> <li>• physical</li> <li>• social/emotional</li> <li>• familial</li> </ul>
2. What effect does participation in the equine therapy program have on the student's social, emotional, and physical development?	Speech and language milestones, motor skill development (fine and gross), greater range of motion, increased core strength, muscle tone, mental development, increased attention span, ability to follow directions
3. How do parents perceive the effects of their children's participation in equine therapy vs. traditional therapy?	Equality, normalcy, extension of family
4. To what extent is participation in an equine therapy program beneficial to the students, and if so, to what extent do the perceived benefits transfer to school, home and daily life?	Increased self-awareness, confidence, leadership skills, ability to work individually or in a small group with increased focus, essential skills to be successful in society, acceptance

The research questions were addressed individually. Two mini focus group interviews were also held. Guiding questions allowed for responses that provided data to answer the research questions and enhance the composition of each participant's story. The questions assisted in the investigation of family and staff perceptions of equine therapy as a non-traditional therapeutic intervention for youth with complex or at-risk support needs. The research is phenomenological in that it involves a detailed examination of the participant's life-world, identifying key components that demonstrate how equine therapy can be a positive influence in the physical, psychological, and social development of these youth.

### **Participants & Recruitment of Subjects**

Riding for the Handicapped of Western Pennsylvania (RHWPA) located in Wexford, provided the location for this study. RHWPA was selected as the site of the study because the program has been successfully run for over thirty years, offering free service to children and young adults in Western Pennsylvania. In addition, this program serves a diverse group of families in the Western Pennsylvania region. This group includes students with autism, multiple disabilities, emotional disorders, and those with learning support needs. RHWPA is one of only seven locations in the United States that is a fully accredited facility approved by the Professional Association of Therapeutic Horsemanship International (PATH International) and provides this service free to its clients and families.

First, the researcher met with the program director of RHWPA, staff, and each of the selected families individually to provide an explanation and intention of the study. Each participant was given a packet, which included a discussion of the proposed research. Specifically, packets included a form letter with an explanation of the study, the informed consent forms, assent forms, and confidentiality information. The information packet can be found in Appendix C. Once the signed letters of consent and assent had been received by the researcher, the study participants comprised of three riders ranging in ages from 13-27 who were registered for equine therapy. In addition, interviews were conducted with the director as well as parents, guardians, or other family members, and two mini focus group sessions were held with volunteers and other parents.

The selected participants were asked to review, sign, and return the informed consent and assent forms either by U.S. mail or hand deliver them to the researcher. A positive rapport quickly developed between the researcher, parents, and staff of the RHWPA program. In addition, the researcher reassured students that there was no penalty for not participating in the study and that their participation was appreciated. Students and their families were gracious, often asking questions about the study and stating how excited they were to participate.

The four semi-structured interviews were held individually at the facility with the program director and selected families. These interviews lasted no more than an hour. Of those participants who were under the age of 18, their parents or guardians completed individual interviews with the researcher. Two mini focus group interview sessions also occurred within the 5 weeks. Mini group one consisted of five RHWPA staff members and the second group consisted of six parents or guardians of other student riders. Each of these sessions lasted 30-45 minutes.

Importantly, in order to protect the confidentiality of the participants, the real names and identifiers have been changed and replaced with a pseudonym. All identifiers, including the participants' names or the names of others, were removed during the transcription process and composition of this document. In addition, direct quotes of the participants are referenced for emphasis of specific points and to strengthen the participant's narrative. With the permission of the Program Director, the name of the therapeutic riding program is published within this dissertation. Their stories follow.

## **The Participants' Stories**

*Toots Abbot- RHWPA Program Director & RHWPA PATH International Certified Instructor*

I first met Toots Abbot over ten years ago when I served as Director of Special Education for an inner-city charter school. Knowing the benefits of volunteering and seeing a need for intervention, to try something “different” in an attempt to make a difference for a number of at-risk high school youth, I decided to contact RHWPA to participate in their annual volunteer training session. On a cool spring morning, twenty-five students met me at their high school on a Saturday and off we went. Little did I know that the journey my students were about to embark on would change their lives.

Toots is a woman of integrity, compassion, and determination; an ambassador for those who may be considered incapable of doing for themselves. She began her journey over thirty-six years ago. Her children were older and only required the typical support of a mom from time to time. She wanted to give back, volunteer, and do something that could make a difference for others. An avid equestrian, Toots was approached by the founder of a therapeutic riding program at their local riding club. The woman informed Toots that she was recruiting volunteers for her program. Toots stated, “If it involves horses and kids, I’m in!” She started volunteering during two sessions a week and has remained with the program ever since. Toots found a true calling that eventually led her to become the Program Director of Riding for the Handicapped of Western Pennsylvania. The program first began in Mars,

Pennsylvania, and has now made its forever home in Wexford, Pennsylvania. Toots went on to share that four of the very first volunteers are still with the program. “We continued to learn from each other, the students and families, making progress and here we are today.”

Toots shared that her program (RHWPA) is one of only seven accredited PATH International Certified Therapeutic Riding Programs in the United States that is solely operated by volunteers and does not charge their families. RHWPA continues a mission that began nearly forty years ago—to not charge their families—providing a continuum of therapeutic services with their equine partners. A very difficult task to maintain for any organization, but money is collected through fundraising, donations, grants, and the kindness of others wanting to give back and make a difference in their community. Toots stated that most of the funding comes from the equine community. Stables and equestrian organizations and private donors repeatedly give back each year and stepped up when the program first began.

Toots continued that the families have followed their program wherever the road has taken them. Most of the families reside in Allegheny County; however, some are from Beaver and Washington Counties as well.

Toots stated:

It amazes me the trip they make to get here each week, some traveling over an hour. In addition, for the kids, the horse is a “friend” who does not judge them, accepts them for who they are. It does not see a child with a disability, it responds to them with unconditional kindness and support. Children can hug them, talk to them, or simply just be near them. The horse helps them recover from a tough day, continually changing their lives for the better.

During my daily observation of the program, I have to concur with Toots. The facility is very welcoming right from the start, the gentle hum of children’s laughter and friendly conversation fills the air. Folks are friendly no matter what day of the week. It is so refreshing to witness. There are many life lessons to be learned from all involved, both human and animal alike.

In discussing the intervention of equine therapy, Toots went on to share that the kids do not even realize they are actually receiving therapy and never want to miss a session. For example, she spoke about a child who started the program several years ago. This child began his first day completely in the supine position. He was unable to sit upright or walk, and had absolutely no muscular core development. He had attended the typical therapy sessions that a child with his condition would; however, equine therapy was something his family had not considered until now. At first, this child had to be lifted up onto the horse and supported by side walkers while in the supine position. He met milestones during every session, becoming stronger and stronger. After

several months, the staff members at RHWPA were able to sit him upright while sitting astride the horse. Today, he can ride the horse as staff provides him with minimal support. “He is not an Olympic rider by far,” she states with a smile, “but, he is my success story, continuing to grow and succeed with every session he attends.”

Toots and I discussed the intervention of equine therapy. She explained that the horse’s movement is unique as a therapy tool. Its three dimensional movement transfers just like our body does, mimicking the human walk. There is not one piece of therapy equipment that can do that. Aside from the obvious physical interaction the child receives when riding, riders also have the ability to pet and groom the horse. Further, the simple task of tacking the horse up, utilizing different muscles and limbs to fasten a girth, contributes significantly to the development of fine motor skills.

Toots shared:

There are so many functional skills that can be overlapped with the implementation of equine therapy. Studies have shown that there can be well over 3,000 repetitions of movement that are achieved in a 30-minute riding session. To date there is no other type of therapeutic tool that can even come close to providing that sort of intervention for riders. Because the horse is continually moving, a rider’s posture muscles must constantly engage. As a result, balance and postural muscle strength and tone are improved; most importantly, simply being around a 1200-pound animal increases one’s self-confidence especially being able to ask them to walk-on.

A huge amount of self-confidence is developed especially for children, youth and their parents when they are faced with so many things that they cannot do, but here at RHWPA they CAN DO things like others. They CAN ride a horse, and they CAN participate like their typical peers and they CAN learn new skills especially as a rider. The confidence that they develop transcends into other areas of their lives. Kids don’t see the magic. In fact, it’s a very rare occasion that a child misses a session.

Kids are always excited to attend and never want to miss a session. They just go to their lessons each week. However, it's the parents that witness the magic first hand and regain the hope that may have once been lost. There is an energy that resonates and permeates the air here at RHWPA-expect miracles! It's a place of hope, a place of peace, encouragement, comfort, comradery, and renewal. The kids are truly the stars.

*Participant 1: Parent(Charlotte) and daughter(Christina)*

Christina has been riding since the very young age of three, fairly typical for the average equestrian. Over sixteen years later, this young woman sits astride her horse, attentive to her instructor's direction and of course to her mom, Charlotte, watching with elation in the wings. Christina continues this endeavor not only as a passion, but as a part of her life, her therapy.

At three months old, doctors discovered that Christina had suffered from an in-utero stroke. The stroke had affected all of Christina's motor skills both fine and gross, especially to her right side, affecting her vision as well. Since her stroke occurred prior to birth, Christina did not have to receive the typical rehabilitation that one may participate had the stroke occurred after birth. To her benefit, Christina had to learn how to move on her own just as a typical child would at birth. Throughout her growth and development, it was discovered that Christina was stronger on her left side than her right, most likely due in part to the stroke that occurred in-utero. Additionally, she was diagnosed with Dystonia.

According to the Bachmann-Strauss Dystonia & Parkinson Foundation (2015), Dystonia is a disorder characterized by involuntary muscle contractions that cause slow repetitive movements or abnormal postures. The movements

may be painful and some individuals with the disorder may have a tremor or other neurologic impairments. This neurologic movement disorder can involuntarily inhibit Christina's body if she loses her balance when walking or standing. The body becomes extremely rigid from head to toe preventing the muscles from contracting and relaxing to regain her balance. This can be potentially harmful, leaving her body with less protective responses especially if she feels like she is going to fall or lose her balance. It was observed during her sessions, though, that she walks with support when transitioning from her wheelchair; she is very strong and has grown to be an amazing young woman.

Christina's mom strongly emphasizes that equine therapy has been a tremendous intervention for her daughter emotionally, physically, and socially. Her mother stressed that no other therapeutic intervention has provided her daughter with as much flexibility throughout her hips, leg muscles and arms as equine therapy. Christina's posture was more of a "rolled back"; she appeared more concave in her posture. She now sits, stands and rides a horse upright with a strong core musculature. In my observation of Christina, one would never guess that she ever had a muscular disorder preventing her from standing as tall and as straight as she does.

Christina's mom also shared that:

The act of riding the horse has helped my daughter to stand taller and sit (especially on a horse) very well balanced with an independent seat. When riding Christina is very secure and strong in the saddle. She requires minimal support from her side walkers during her therapy sessions. She typically only requires support when mounting and dismounting a horse and walking back to meet me.

To provide further explanation, a rider with an independent seat has body parts that can function independently of one another. For example, the legs can apply the aids (rider signals) without causing any loss of balance, tipping the upper body either backwards or forwards and without any inadvertent movement of the hands. Furthermore, the rider does not rely on the reins for balance and does not grip with the legs to stay on the horse; can stay with the movements of the horse through changes of speed, changes of incline and through any adverse movements such as shying. As a thirty-year veteran equestrian and riding instructor, I have identified the following skills in which a rider with an independent seat and balance should perform when riding a horse:

- The rider's body absorbs the (mainly upward) movement of the horse correctly (through the lower half of their body) and therefore does not bounce.
- The rider displays correct hip-to-ankle alignment and can therefore easily go from sitting to standing (or vice versa) in the stirrups in all paces.
- The rider can quietly and effectively influence the movements of the horse and stay in balance with the horse.
- The rider has "good hands" (another "horsey" term). It is impossible to have good hands without first developing an independent seat.
- The rider is able to ride without causing pain to their horse or themselves. Riders with old injuries may experience pain but this can

often be reduced or even eliminated by working with a specialized instructor (combined with a body worker) who understands and can correct such rider problems.

A rider who does not have an independent seat tends to do one or all of the following:

- Cannot apply the aids clearly and correctly. The horse reacts in one of two ways: by becoming agitated or by “switching off” as a coping mechanism. This is actually “learned helplessness,” where the horse gives up trying out responses and becomes dull and lifeless
- Hangs on to the reins and/or grips with the legs in an attempt to stay on the horse. This gives the horse mixed messages and leads to the responses described above—the horse either tries to evade the rider or becomes desensitized to the aids.
- Loses their stirrups either completely or partially (i.e. the stirrups move around on the foot). This causes further instability, more gripping, grabbing, etc.
- The rider bounces and moves around in the saddle rather than moving with the horse. This results in discomfort and even pain for the rider and the horse. The rider is also likely to fall off more easily which can result in confidence issues.

Christina’s mom continued to share:

My daughter’s stature has greatly improved. As this is a natural therapy provided from the horse, the rocking movement, rolling her hips and core

muscles side to side, forward and back as the horse walks, comes to a halt and walks on again has improved her muscle strength and tone.

In my observations of Christina as she rides, she does not balance herself off the horse's face, bracing against the bit and reins. She uses her core strength to balance properly when riding in the saddle. Importantly, in my observations of Christina when riding, it did not appear that she needed to correct her balance; her body did not become rigid like when she may walk or stumble on the uneven ground, thus demonstrating an independent seat. As stated by Christina's mom:

It takes my daughter a long period of time to achieve milestones with typical therapies, however equine therapy provides Christina with a consistent form of therapeutic exercise for 45 minutes that no other piece of therapy equipment can replicate. She has worked so hard to perform basic physical transitions throughout her life that you and I take for granted.

Socially, this experience has been huge for her daughter as well. Many typical kids do not have the opportunity to ride a horse whether for exercise or recreation. When Christina talks about her participation at RHWPA with friends and family, she expresses great confidence as evident by her facial expressions, body language, and voice. Her mother states that Christina's confidence and social connections have improved immensely as a result of equine therapy. Christina's mom also shared that Christina's language interaction throughout the instruction of the lessons has helped her as well. It was also observed that as the kids grow throughout this process, they develop a greater sense of responsibility and ownership. This builds their confidence and gives them a sense of pride.

Christina's mom stated:

This is not a pony ride...the kids are not just riding horses for an hour...there are true skill developments occurring throughout the entire session minute by minute, physically, socially, emotionally, communicative and more that Christina can also apply in school and throughout life. I feel especially as a parent that the experiential opportunities that occur with families and the animal as a therapeutic partner is tremendous as it provides something beyond what the typical child may experience in their lifetime.

My daughter maybe unable to run with ease and feel the wind against her face but, the feeling of trotting and feeling the breeze against her face and the motion of moving fast is something that she may not be able to do physically on the ground, but she can accomplish on the back of a horse; that's pretty incredible.

*Participant 2: Joe, Grandfather of Sara*

To say that Joe and Sara are special would be an understatement. In getting to know Joe and his granddaughter Sara, witnessing their relationship first hand was extraordinary. Like many typical teenagers, Sara is extremely social, friendly, and happy. However, Sara's journey throughout her adolescence has not been short of miracles. At birth, Sara's family and her doctors knew that something was not quite right with her, but they could not identify it. According to Sara's grandfather, Joe, it took doctors a while to understand what was wrong with her; recalling that it took approximately four months to get into a premier medical center.

Sara was born with a rare chromosomal condition that results when a piece of the chromosome is missing. The condition left her with an intellectual and cognitive impairment, delayed development, distinctive facial features such

as small head size (microcephaly), widely spaced eyes (hypertelorism), low birth weight, and weak muscle tone.

Most individuals who have this syndrome have difficulty with language. Half of all children identified with the syndrome learn sufficient verbal skills to communicate. Some individuals learn to use short sentences, while others express themselves with a few basic words, gestures, or sign language. Other characteristics may include feeding difficulties, delays in walking, hyperactivity, scoliosis, and significant intellectual disability. Nevertheless, most individuals with the syndrome have a normal life expectancy (National Human Genome Research Institute, 2015).

Joe shared that following Sara's diagnosis, experts stated to Sara's family that there was nothing they could do for Sara; they were essentially "on their own." Sara's mom was a successful businesswoman. However, with the lack of resources and support available to Sara's family, her mom, on the advice of her father, Joe, made a life changing decision to sell her business and move to Pennsylvania. This decision made all the difference for Sara.

As stated by Sara's grandfather:

We have so much going for us here in Pennsylvania, and we have to be thankful every day for what this Commonwealth has provided to its residents and especially for my granddaughter...she may not be who she is today without the expertise of the great physicians, hospitals, therapy staff, school system, and more.

Joe had encouraged his daughter to move to Pennsylvania to be closer to family and benefit from the opportunities provided in the state, especially regarding the education and health benefits for children with disabilities.

According to her grandfather, Sara could not even stand up in her playpen and doctors believed she would never walk. She had a variety of supports, from special shoes to braces, in order to help her to become more ambulatory. Sara's grandfather went on to state that she was enrolled in several great programs Western Pennsylvania had to offer children with cases like hers. She was involved heavily with support organizations and was enrolled at a local school receiving intensive therapies ranging from physical, to occupational, to speech and language. The therapists worked extremely hard with Sara, achieving milestones every day. He stated:

Through a local organization, we had found out about Riding for the Handicapped of Western Pennsylvania. We were willing to try whatever we could to help Sara live a productive, fulfilling life.

Now an early adolescent, Sara has been a part of the program at RHWPA for several years. As I waited in the barn for Sara and her grandfather to arrive, a young girl nearly as tall as my 5'8" frame walked up beside me, nose to nose with one of the ponies and sharing its breath. I giggled, as that was something I also did as a young girl with my horses. "Erin, this is Sara," Toots (RHWPA Director) stated. As I observed Sara, she no longer required the support of special shoes or braces to stand tall and walk; she does that with the independence physicians never thought possible.

However, Sara is considered non-verbal and utilizes the assistance of an iPad to communicate at home, during school and while participating in different activities, she has a repertoire of language and common words that she uses to communicate with friends and family. The vocabulary she has

developed may only be a handful of words; however, she utilizes them with meaning and understanding. When her therapy horse is not trotting when requested, Sara will shout “TROT” using her leg muscles to get the horse to go and excitedly looking out to her grandfather for approval. Joe further remarked that:

Sara has been exposed to a variety of therapy interventions in one session. These range from physical, speech and language, occupational, emotional as well as skills instrumental to growing up as a successful young adult such as kindness, leadership, and self-determination. We have been watching Sara for over 11 years. We have seen her come so far. She comprehends what you are saying to her and communicates back in her own special way; she has made such great progress. The folks here at RHWPA and those who work in these programs are dedicated people. They do so much for these kids and they are not paid. It’s amazing. Sara loves it here.

A longtime member of a community organization, Sara’s grandfather was able to campaign to raise several hundred dollars in donations for the program. Though it may seem minimal to some, this will go a long way in supporting the program or providing tuition for a family in need of services. Sara’ grandfather continued to share his support for equine therapy:

It’s an extremely interactive therapy as it is not just about riding a horse. People often say that they feel bad that our granddaughter has a disability, but we say don’t feel bad as she has brought so many blessings to our lives and the lives of others. We would never change the courage, love, joy, continued hope, and unity that we have as a family because of her.

### *Participant 3: David*

David was born with a genetic disorder that causes premature fusion of skull bones. He was in the hospital for most of his infancy having surgery after surgery. David went on to share that he started equine therapy with RHWPA

when he was 4 years of age. At first, David only completed the program for one year but this type of therapy had improved his motor skill development so greatly that he continued for years to come. Participation in the program also allowed David to develop a passion for horses. He stated that as a school-age student, equine therapy helped him more than his traditional therapy sessions, especially in helping him to further develop his motor skills and self-determination skills.

As stated by David:

Equine therapy has benefited me very well in that it has helped to improve my motor skill development through promoting consistent physical exercise, which has allowed me to become stronger. Growing up I did not have full range of motion, now due to equine therapy and the increased ability to exercise without supports; I have gained full range of motion that I did not have when I was younger. This therapy was a good second step to my traditional physical therapy sessions that I was receiving. I could maneuver a 1,000-pound horse, which in return helped me to also build my self-confidence—something that I couldn't do during my formal therapy sessions.

I have had the privilege of going through various therapies. I have had speech therapy, physical therapy, occupational therapy and more that have helped me physically, emotionally, and spiritually. With equine therapy several different forms of therapy are combined (physical therapy, occupational, speech and language, behavioral and more) to create a unique experience with the horse.

I am now an active volunteer for RHWPA. I had found out about 4 years ago that RHWPA was moving to North Park. I decided that I wanted to try to give back as they (RHWPA staff) helped me so much growing up. I don't see myself leaving as long as they need me. People often formulate judgment when they see me however, if they just get to know me their judgment disappears and they will see that there is nothing wrong with this person. I may look different but I am just the same as everyone else.

## **Analysis**

Analysis of the interview transcripts allowed for a deeper understanding about what constitutes the integration of equine therapy as a supportive alternative for students with at-risk or complex support needs; ultimately providing a more compelling, rich interpretation and justification for whether or not this therapeutic approach should be adopted by schools. Furthermore, the analysis examined the perceptions made by the participants that pertain to equine therapy as an alternative intervention that possibly supports the well-being and overall developmental success of children and youth.

### **Emerging & Predominant Themes**

The tables below help to illustrate each research question and the correlation to the emerging themes that arose based on the transcription of the interviews as well as the field notes documenting observations throughout the five-week period. In addition, the tables also notate the predominant themes that were constructed. Overall, physical, social/emotional, cognitive, familial, and self-concept/self-determination were the predominant themes that arose.

Table 5

*Research Question 1 and Emerging Themes*

Research Question	Emerging Themes
To what extent does a student benefit from participating in equine therapy?	Emotional, physical and social abilities, friendships, greater sense of self-confidence, inner (spiritual) and outer (physical) strength, milestones met at a greater capacity, greater attention span, accomplish multiple therapies in a session
	Predominant (Global) Themes: <ul style="list-style-type: none"> <li>• Physical</li> <li>• Social/emotional</li> <li>• familial</li> </ul>

The environment in which equine therapy takes place provided a unique classroom setting that allowed all types of learners to benefit. Informal environments are critical for creating connections between children and youth and their communities and are better suited to children who typically do not thrive in formal settings. Children, by nature, learn more effectively when they are interested in a subject. By incorporating equine therapy into their daily routine, the researcher observed that the participating riders became more active in their education.

Children and youth with at-risk or complex support needs oftentimes have difficulty finding social acceptance in a fast-paced, judgmental society. It is perceived by educators and families that the life skills enhanced through the

implementation of equine therapy such as those identified through the common sub-themes—like self-confidence, physical and inner strength, friendship and relationship building, and leadership—will transcend through childhood and into adulthood. Riding for people with disabilities has become a well-recognized and acclaimed method of improving the lives of those who refuse to let their disabilities limit them (Crawley & Cawley, 1994).

As expressed throughout the interviews with the consenting participants, the impact of equine therapy on their families—physically, socially and emotionally—were very apparent through the inflection of their voices, body language and emotions. The following statements from those interviews share their perspectives.

Sara's grandfather shared:

To be productive in today's world, children must learn not only how to problem solve and the capacity of how to apply those skills effectively, but also how to positively interact and communicate with their peers and adults. Through these sessions (equine therapy) children learn how to communicate in different ways to express themselves...they learn life skills such as leadership, camaraderie and how to establish positive relationships, compassion, and how to interact with all types of personalities both young and old.

Christina's mom shared:

Physically, within the past few years my daughter's stature has greatly improved. As this is a natural therapy provided from the horse, the rocking movement, rolling of her hips and core muscles side to side, forward and back as the horse walks, comes to a halt and walks on again has improved her muscle strength and tone. The predominant themes identified above in table 5 that support research question one, are also reinforced by remarks made

throughout the two mini focus groups. Parents from group one shared the following about their experience at RHWPA:

People usually tell them they can't ride horses because of their disability. Just imagine the impact of lifting someone up out of their wheelchair or someone with braces on their legs, has to walk with the support of a walker onto the back of a horse and the freedom they receive from that experience. It builds their self-confidence like no other experience.

Witnessing the impact of equine therapy has helped to prove to folks that just because somebody might look different or act different does not mean that they are not going to be able to find success or achievement.

RHWPA staff members from focus group 2 also shared the following statements about their experiences and observations first hand:

Equine therapy is a method that helps children to learn how to redirect negative behavior patterns, build self-esteem, and enhance their social skill development.

Benefits of the program are phenomenal in all aspects. From physical and social aspects, to the bonding between the horse and rider, and interaction with the side-walkers and riders...we get to know our riders and their families, which boost self-confidence and esteem with everyone, especially for our riders who do not have the opportunity to do the traditional things typical kids do. They may not be able to play basketball or go on to play football, but one thing that they may have that others do not is that they ride a horse. That is a BIG morale booster for these kids because they don't have all of the avenues or options that others may have. Therefore, we provide them options. They're happy, mom and dad are happy and there are smiles all around! It's a good thing.

It's as though we are an extended family that is supportive throughout triumphs and struggles. This is an experience that many of these kids and their families may not normally have, they are not going to go to the pep rallies, and ball game typically, but they have the experience that many do not.

...students learn key principles such as helping each other out, building camaraderie, and self-respect.

In my tenure as a former director of special education, I also witnessed firsthand the dynamic transformation of a former student. As shared in the literature review of chapter two:

...witnessing this young man's evolution was an amazing sight to see. He began to smile, laugh, regain a sense of pride, and rise from the darkness that over shadowed him. This student went on to become an inspired poet for the high school newspaper and wrote several articles about the benefit of volunteering and working with animals, inspiring his peers and others; most importantly he found a renewed sense of self and graduated from high school.

The relationships that evolve from this partnership have been found to have a profound effect and play a valuable tool in improving self-confidence, social competence, and quality of life as well as enhanced development of empathy and coping skill abilities.

...participation in equine therapy provides all students an opportunity to build confidence, determination to see a task through, develop positive social skills, and the ability to believe 'I CAN!' I often shared a quote my mom always said to me growing up, "*If you can handle a 1200 pound horse, there's not a problem in the world you can't handle.*"

To be productive in today's world, children must not only learn problem-solving skills, but also how to positively interact with their peers and adults. Professionals in mental health and educational fields have identified therapeutic equine therapy as one intervention in working with children and youth to redirect negative behavioral patterns, build self-esteem, and develop social skills.

Table 6

*Research Question 2 and Emerging Themes*

Research Question	Emerging Themes
How does a student’s social, emotional, and physical development benefit by participating in equine therapy program?	Speech and language milestones, motor skill development(fine and gross), greater range of motion, core strength, muscle tone, mental development, increase attention span, ability to follow directions
	Predominant (Global) Themes: <ul style="list-style-type: none"> <li>• physical</li> <li>• cognitive</li> </ul>

Improved balance, flexibility, and posture are a few ways that the implementation of equine therapy has been observed to benefit children and youth, especially those with complex support needs. As a horse moves, it mimics nearly the exact movement of a human walk. A rider is continually shifted off balance, which requires the rider’s muscles to contract and relax in an attempt to rebalance. Equine therapy exercises and stimulates muscles deep within the human musculature that may not be accessible to conventional physical therapy or interventions.

Parents of children with complex support needs such as cerebral palsy or musculoskeletal disorders have expressed that equine therapy has greatly assisted in the stretching of tight or spastic muscles. Simply allowing a rider to sit on a horse requires stretching of the adductor muscles of the thighs, decreasing muscle spasticity. As has been made clear through the interviews with the parents, instructors, and volunteers, those riders who have spastic muscles reduce that spasticity through the flexion and extension created by

the rhythmic motion of the horse. The warmth provided by the horse's body also aids in the relaxation of the rider's legs, hips, and pelvis. As supported in the literature review in Chapter 2:

...the natural gait of the horse exactly duplicates the vestibular motion of the human walk, side to side, forward and up and down. The horse is a multi-sensory tool that can assist an at-risk child or a child with complex support needs to integrate their senses and better understand how their bodies relate to external forces and surfaces...the excitement of the experience may encourage speech when communicating with the horse or instructor.

As evidenced by the statements made by the interviews, equine therapy also has a profound impact on the physical development of the riders. The Program Director and participating families shared such milestones as motor skill development, greater range of motion, and core strength. Toots, the Program Director, stated:

...there can be well over a thousand repetitions of movement that are achieved in a 30-minute riding session. To date there is no other type of therapeutic tool that can even come close to providing that sort of intervention for riders. Because the horse is continually moving, a rider's posture muscles must constantly engage. As a result, balance and postural muscle strength and tone are improved.

Participant 1 Christina's Mom:

This type of therapy (equine therapy) allows for all kinds of sensory integration such as tactile, vestibular, visual, olfactory, and proprioceptive stimulation, as well as developing a stronger fine and gross motor system. Each minute riding a horse stimulates a child's brain with hundreds of nerve impulses, which cannot be duplicated in a clinical setting. Physically, the sitting positions and exercises are designed for each child depending on their capabilities and/or disabilities. Different positions and activities on the horse encourage different sensory input. Nevertheless, the key element that separates equine therapy from others is the rhythmic factor. While riding a horse, the rhythmic, swaying gait mimics the human walk. Riding exercises the muscles used in gross motor functions, such as walking, without posing

a struggle for Christina, as it may in a medical setting. This is just one of the miracles of equine therapy.

Participant 3 David:

Equine therapy has benefited me very well in that it has helped my motor skills throughout, promoting physical exercise and has assisted me to become stronger and able to achieve and a better range of motion. Most importantly, I can walk and drive a car.

Parents and volunteers in the focus groups, as well as the researcher, who witness changes first-hand, further emphasized the physical impact of equine therapy.

Mini focus group 1 statement:

My son has cerebral palsy. He has been riding for five years. The horse mimics the human walk and develops balance and core muscles. The horse also acts as an extension of my son's body. Physically the riding has helped with his leg strength of improve the scissoring action of his legs. Riding has allowed him to become more flexible and have a wide range of motion with his hips.

Along with the physical benefits that have been highlighted, participants shared the cognitive impact equine therapy has had on the children and youth of the program.

Toots Abbott- RHWPA Program Director:

...cognitive impacts of equine therapy are as rewarding as the physical benefits. This environment presents children with a range of stimuli for their brain to process. Instructors engage the child through various activities using games, equestrian activities, or anything that requires attentiveness and focus. By creating tasks to focus on, it almost forces the riders to concentrate and process the information asked of them. A task as simple as giving the horse direction such as "walk-on" or "whoa" is an effective way of achieving communication skills. Our riders feel a sense of pride, strength, and confidence being able to communicate and control such a large, powerful animal.

David- participant 3

This type of experience allows children a chance to connect emotionally and form a strong relationship. Many children with special needs seek those emotional ties, but have trouble forming them. These animals accept people for who they are, without judgment, which special needs children long for, and many times humans can't provide that. Children feel comfortable enough with the horse to share their deepest feelings. However, the bond between horse and human isn't the only strong relationship that forms. Life-long friendships are made.

In addition, the cognitive benefits were also noted within supportive statements as made by mini focus group 2:

Equine therapy session requires a minimum of three to four people (an instructor and or therapist, one or two side-walkers, and a horse handler). This allows the kids to develop a strong emotional and social connection to the people around them. Each person present during an equine therapy session acts as a resource to increase communication skills of the rider. They engage the riders in conversation, getting them to interact with others, which develop communication, social and behavior skills that many need improvement. The presence of social interaction then links to their cognitive development as well.

Table 7

*Research Question 3 and Emerging Themes*

Research Question	Emerging Themes
How do parents perceive the effects of their children’s participation in equine therapy vs. traditional therapy?	Equality, normalcy, encouraging, impactful, extension of family
	Predominant (Global) Themes: <ul style="list-style-type: none"> <li>• Familial</li> <li>• Social</li> </ul>

The therapeutic riding program is often chosen by parents because it offers an environment with a variety of sensory opportunities that may prove useful. This is especially so for riders with autism, as they may be subject to more sensory issues than their typical peers.

*Mini focus group two staff member statement:*

For a student with autism this type of therapy helps tremendously as they are more willing to touch, focus and enjoy the experience while a variety of stimuli are occurring...in the beginning when first starting to attend lessons there is a resistance as it is something new and overwhelming however, before long they are putting the helmet on their head, running to mount up and anxiously wait for their horse to meet them...the reaction on their faces is priceless....it’s as though they are waiting for a dear friend or a star athlete.

*Mini focus group one parent statement:*

He still requires a lot of sensory input and that’s why this program is so good for him... It is definitely helping him ...giving him tremendous sensory benefits which can’t be duplicated in any other form...I think the sensory opportunities the riders receive from this environment, the horse, instructors and staff to fellow riders in a lesson...provides the whole nine yards to help him grow and succeed throughout life.

*Mini focus group one parent statement:*

I was excited as a parent when he began equine therapy. I grew up in the south and have been around horses most of my life and getting him to do something like this was different and I always wanted him to do something that other kids may also have the opportunity to do. While most kids don't jump on a horse, we are able to do it with him. My son loves it. It was tough in the beginning but he has grown to love it from riding, grooming, and feeding them.

He enjoys this and that is extremely positive. (Laughing) My son will not muck a stall but he is involved in a local community organization and one of the leaders was in charge of the horsemanship merit badge. Therefore, RHWPA worked with him on all of the requirements to obtain the badge. He was able to accomplish it. The social skills learned from this program has transcended to everyday activities that he participates in. This form of therapy has him comfortable around large animals as well, he works well with the volunteers and as parents, and we try to help raise funds to keep the program going. We have not had a bad experience here at all.

Table 8

*Research Question 4 and Emerging Themes*

Research Question	Emerging Themes
To what extent do the perceived benefits of students' participation in non-traditional therapy such as equine therapy transfer to school, home, and daily life?	Increased self-awareness, confidence, leadership skills, ability to work individually or a small group with increased focus, essential skills to be successful in society acceptance
	Predominant (Global) Themes: <ul style="list-style-type: none"> <li>• Self-Determination, self-concept</li> </ul>

In the field of phenomenology, perceptions are regarded as a primary source for information (Mostakas, 1994). Perceptions allow a person to scan the horizon on which experiential themes or entities appear. Phenomenological analysis of perception allows the process of data analysis to recognize the newness of each perception and celebrate it as a fresh perspective. Each perception brings new knowledge. As perceptions join one with another, knowledge deepens until real meaning can be drawn. Perception is regarded by Kockelmans (1994) as the most original act of consciousness. What a person knows is important, but what one perceives creates reality. Perceptions join together to create the knowledge gained from the experience.

Regarding the transfer of skills learned during equine therapy to school, home, and daily life, the participants shared personal achievements such as increased self-awareness, self-confidence, camaraderie, leadership skills, and an ability to work individually or in a small group with increased focus despite

multiple stimuli. Many parents and staff members of RHWPA echoed David's poignant insistence above, that "I may look different but I am just the same as everyone else and I could maneuver a 1,000 pound horse

Similar sentiments were also expressed by other parents and staff members of RHWPA. Though many of them may not have a family member who requires this type of intervention, several expressed their increase in self-esteem and everyday value of life.

Mini focus group one staff member statement:

This environment offers a much more fun and less threatening learning atmosphere than a traditional setting such as a doctor's office or school setting, so children become more willing to learn. One possibility for this is the contact with an animal, especially a very large, majestic one...this would be a great alternative to the typical PE courses offered in schools.

Mini focus group two-parent statement:

Our students have been participating in equine therapy for several years. Students with autism, emotional or physical disorders have benefited greatly from this intervention as a part of their school year. Teachers have reported significant improvements in their students behaviorally, socially and physically as well as their ability to focus throughout the school day. Everyone from our aides, teachers, students and families have a great sense of pride and accomplishment each year. Our kids continue to ride even throughout the summer as parents register them for summer sessions. The students' motivation to ride offers incentive in the classroom as well.

I as well share the same feelings expressed by many I interviewed and observed throughout the research period. As an accomplished equestrian, former special education administrator, and teacher, I believe that utilizing an animal such as the horse as a therapeutic partner allows children, as well as adults, to

find a sense of self-esteem, empathy, and necessary self-determination skills often not discovered in traditional settings.

Table 9

*Predominant Themes of Equine Therapy in Relation to Themes Identified with the Theory of Motivation or Self-Determination*

Theory of Motivation or Self-Determination	Predominant Themes of Equine Therapy
<i>Competence</i> - feeling satisfaction and basic psychological need; ability to perform well; desire to feel effective in interacting with the environment adapt to the complex and changing environments	Physical
<i>Connection/Relatedness</i> - shared experience, individuals propensity to feel connected to others, be a member of a group, love and care and to be loved; sense of communion	Familial
<i>Autonomous</i> - grasping meaning and worth, freedom of choice; desire to feel volitional and experience a sense of choice, independence, willingness to please provided a rational reason for doing so	Emotional

Self-Determination Theory (SDT) is a theory of motivation. As developed and defined by Deci and Ryan (2000), this theory represents a broad framework for the study of human motivation and personality. SDT is focused on supporting the natural or intrinsic tendencies to behave in effective and healthy ways. The theory is applied in education, healthcare, relationships, psychotherapy, psychopathology, corporations, athletics, development of goals, health and well-being and the environment.

Originally developed by Edward Deci and Richard Ryan of the University of Rochester in the mid-1980s, self-determination theory is an attempt to determine why people choose to pursue certain goals. Self-determination theory has two fundamental assumptions: 1) people are active organisms that initiate engagement with their surroundings and 2) people tend to internalize information (knowledge, values) and integrate this information with their own personal drives and emotions (Deci & Ryan, 2012). The goal of self-determination theory is to distinguish “those forces that cultivate human potential, development, integration, and welfare (Bryan & Solmon, 2007, p. 262).”

Self-determination theory can be applied to many different life contexts, including work, education, medicine, sport, and entertainment (Ryan, 2012). Equine-assisted therapy has shown to help children with a range of disabilities in social, psychological, and cognitive contexts. As Deci and Ryan suggest, children were observed to demonstrate more autonomy during equine therapy sessions and were perceived to be more socially engaged with the instructors, volunteers and the horse as a therapeutic partner across the duration of the riding session. Parents also shared that these attributes also transcended riding sessions to daily tasks completed at home and school. Greater social engagement may lead to better retention of therapy goals developed for riding sessions as well as speech and language, occupational and physical therapy. This research shared specific ways equine therapy benefited riders with a range of disabilities in reaching therapeutic goals. Ryan and Deci’s (2000) self-

determination theory of motivation suggests next steps in research, which can help therapists, capitalize on the most effective methods in alternative therapies to best benefit the child.

### **Conclusion**

Equine therapy offers children and youth a unique experience to develop skills that may not always readily occur within an academic or traditional therapeutic setting. Equine therapy can provide a distinct opportunity that if integrated into a school setting would require special education teachers to reflect on their teaching practices. The collaboration that occurs within an equine therapy program such as RHWPA allows educators, parents, children and youth, families, and the community to work together to build an effective educational and therapeutic environment.

Of the common themes that emerged from the transcription of the interviews, observations, and photographs, the following table helps to portray the link among those themes and the theory of self-determination. The table shows the predominant themes that emerged from the transcribed interviews. The connection of equine therapy to the theory of self-determination and the predominant themes identified within the study shall be further discussed throughout Chapter 5.

## CHAPTER 5

### **Discussion**

As stated by Rothe (2005), horses by their mere presence therapeutically put people in touch with their own inner strength. This qualitative intrinsic case study was designed to explore the stories of three individuals who participate in equine therapy as an alternative therapeutic intervention. Of the three selected participants, two parents and one student were interviewed along with the program director. In addition, two mini focus group interviews were held with RHWPA staff and other parents of riders at RHWPA. The interviews were supplemented with guiding questions, which supported answers to the four research questions:

- To what extent does a student benefit from participating in equine therapy?
- What effect does participation in the equine therapy program have on the student's social, emotional, and physical development?
- How do parents perceive the effects of their children's participation in equine therapy vs. traditional therapy?
- To what extent is participation in an equine therapy program beneficial to the students, and if so, to what extent do the perceived benefits transfer to school, home and daily life?

The above research questions meant to explore the perceived impact of equine therapy for children and youth who are identified as at-risk or with

complex support needs. This chapter discusses the findings as they relate to the predominant themes identified as a result of the research methods applied throughout the study, and links those predominant themes to the theory of motivation and self-determination.

The findings of this dissertation provide considerable insight into the experiences of families, RHWPA staff, and students who participate in equine therapy. This research emphasize the unique experiences of equine therapy that can lead to enhanced life opportunities, self-determination, and skill development, and which transcend home, school, and life beyond young adulthood. Through the methodological lenses of phenomenology and qualitative intrinsic case study composition, this research identified three predominant themes and various subthemes that depict equine therapy as a positive intervention for children and youth with disabilities. This chapter shares these themes in relation to existing research regarding the theory of self-determination and motivation. This link directly correlates with today's educational focus academic and societal functioning, particularly in special education, and the increased need for children and youth to develop self-determination skills prior to graduation from high school. The chapter ends with a discussion of the implications of the findings and suggestions for future research.

The positive impact of equine therapy as a non-traditional therapeutic intervention was evident throughout the participants' answers to the interview questions, observations by the researcher, and the experiences shared within

their stories. Through this research it was clear that much of what the participants were gaining not only led to positive physical outcomes, but also to the fundamental development of self-determination skills, skills essential to a child's life-long growth and success.

As revealed in Table 9 in Chapter 4, Deci and Ryan identified three themes of self-determination that directly correlate to the predominant themes identified as a result of this research. They are as follows.

### **Physical Benefit as Related to Self-Determination Theory of Competence**

The physical benefit of equine therapy was highly regarded and expressed by several participants, thus allowing the researcher to identify the first predominant theme of the study. Participants described the physical benefit of equine therapy as a phenomenon that cannot be replicated by any mechanical therapeutic device or intervention offered by a physical or occupational therapist. For example, this point was emphasized by the RHWPA Program Director when she spoke about the similarity of movement of the horse's gait to the human walk and the tremendous number of functional skills required when riding. This, she emphasizes, exceeds any existing therapeutic tool. The Program Director stressed that:

The horse's movement is completely unique as a therapy tool...its three dimensional movement transfers just like our body does, mimicking the walk... not one piece of therapy equipment that can do that.

Many of the participants in this study shared that equine therapy is much more than allowing people the opportunity to ride a horse. It is more than the healing benefits brought by simply being outside in nature. The

rhythmic motion and balance required by the body to ride a horse provides individuals the ability to meet physical and emotional needs.

Participants expressed—and the researcher observed—that there are numerous physical advantages to equine therapy, such as the following:

- Coordination of the body often advances as a rider lifts his or her head to see where the horse is going and to glance at friends and family members cheering him or her on.
- Handling the horse reins encourages upper arm strength as well as fine and gross motor control.
- Maneuvering the horse throughout obstacles and over various terrains improves balance and upper body strength.
- The horse's warmth and motion reduce muscle spasms and stiffness common to people who face physical limitations
- Overall spatial awareness increases.

Christina's mother validated the above finding, stating that the act of riding a horse "has helped her daughter to stand taller and sit with a stronger core to keep herself upright when seated in a wheelchair or on a horse." When observed by the researcher, Christina was very secure and appeared to be very strong in the saddle. She required minimal support from the side-walkers during each of her sessions.

Furthermore, it was observed by the researcher that a horse's movement forces the rider's muscle groups to work together in ways wheelchairs and crutches do not require or even allow. The horse functions similarly to an

exercise machine, working muscles the person does not typically use. It has been said by changing the rider's physical and emotional view, horses "even the playing field" for the rider (Edelweiss, 2013). While we are used to looking up to view our day, a rider's visual perspective changes, allowing one to look down and across a setting. This change in perspective allows the rider to view themselves as much more capable. Assumed restrictions begin to fall away.

Additionally, through observations and the interviews conducted with the participants, it is apparent that equine therapy affects multiple bodily systems including sensorimotor (balance, touch, awareness of body position, eye movements, body movements), cognition, respiration, speech production, as well as behavioral, social and psychological domains (Casady & Nichols-Larsen, 2004). The interactions that occur between these systems cause improvements including: balance, strength, endurance, perception, and other functional skills (Shumway-Cook & Woollacott, 1995). These changes can result directly from the responses to the movements on horseback and from experiences of relating to and interacting with a horse.

Equine therapy literally boosts those who are involved to a level where they have an expanded view of the world. This environment appeals to the psychological desire of feeling equal. Participants who may have been limited are now free to move across large spaces without assistive devices. Equine therapy delivers the physical and mental independence, the competence one requires in life to feel valued and capable. Christina's mother expressed this perfectly by stating that:

my daughter may be unable to run with ease and feel the wind against her face but, the feeling of trotting and feeling the breeze against her face and the motion of moving fast is something that she may not be able to do physically on the ground, but she can accomplish on the back of a horse; that's pretty incredible.

The consistent, repetitive movement of the horse stimulates the sensory-motor system of the client, giving the nervous system a template from which to build its physical and cognitive responses (Macauley, 2003). Sensory integration occurs when riding stimulates the tactile senses both through touch and environmental stimuli. The movement of the horse, which changes in direction and speed, also stimulates the vestibular system. The olfactory system responds to the many smells involved in a stable or ranch environment. Vision is used in the control of the horse. All of these senses work together and are integrated in the act of riding. In addition, proprioceptors (receptors that give information from our muscles, tendons, ligaments and joints) are activated, resulting in improved proprioception of the riders.

### **Competence**

Competence is defined as the feeling of satisfaction and the fulfillment of basic psychological needs. It is the ability to perform well, a desire to feel effective when interacting with the environment, and the ability to adapt to complex situations and changes that occur on a daily basis. This feeling of competence was widely observed and voiced by the parents of the participants, especially through their physical milestones. Sara's grandfather shared that:

Doctors and specialist never believed that Sara could be who she is today. (With his eyes welling up with tears) She can speak and comprehend intelligibly, interact with adults and her peers; most importantly, she is in school making strides every day; something the

experts never thought possible. Much of her success socially, cognitively, and physically is attributed this program (RHWPA).

Almost all of the staff members and contributing parents and participants noted that therapeutic riding provides great opportunity for cognitive development. One parent participant noted that:

This program has given her child the opportunity to accomplish something that they may have never been able to. She went on to state that her child has been able to apply the skills they have learned in OT, PT or speech and language in a practical forum, putting all of the skills together.

RHWPA volunteers and staff members commented readily and consistently on the improvements they have seen over days, weeks, months, or years of working with riders. Specifically, they noted that riders' abilities to follow directions and complete sequential tasks improved greatly. This was also observed first-hand by the researcher: riders would be given the multi-step tasks for guiding their horse, coming to a halt at a barrel, reaching for a ring, cuing their horse to walk-on, weaving them through four colored cones, asking their horse to "whoa," and placing the ring on the end barrel. Typically when in school or at home, some students with disabilities often require two or more prompts to complete a task. During observations, many riders performed this task with as little as one reminder or cue.

Building a good educational base for students with disabilities is very important and therapeutic riding may aid the student's ability to learn. The researcher noticed through many observations that riders with cognitive disabilities soaked up the rich sensory stimuli associated with the riding

experience and learned to focus and follow directions. What normally may have taken a child 3-5 prompts or directions from an adult now requires less than 2 prompts, a great milestone for many riders. Reading is one area that therapeutic riding can also aid. Remedial reading is a basic skill everyone needs. Before one can read, it is necessary to recognize the difference in shapes, sizes and colors. These can be taught more easily on horseback, as part of games and activities (Fischbach, 1999).

Remedial math is also a base skill that can be enhanced. Counting was demonstrated throughout the sessions by counting the horse's footsteps, objects around the arena, or even the horse's legs and ears. Number concepts were gained as the rider compared the number of legs on a horse to their own legs. Addition and subtraction concepts were also demonstrated through games involving throwing numbered foam dice and adding or subtracting the numbers. With the concepts being taught through games, resistance to learning is decreased. In discussions with parent participants, they shared that their child's teachers reported significant improvement in student's behavior, following school/classroom rules, taking turns, confidence, cognition of concepts especially in mathematics, and self-determination skills during the school day. Parents went on to share that their child's sense of pride and accomplishment is very obvious especially during their riding sessions but also in school and peer related activities or events. A student's motivation to ride provides incentive for positive behavior in the classroom as well.

## **Social & Emotional Growth as Related to Connectedness & Relatedness**

The second predominant theme encompassed social and emotional growth and development as a result of equine therapy. Participants within this study revealed the enhanced development of social and emotional skills necessary for success in the community. The emotional distress accrued by environmental barriers that hinder a child's ability to participate fully in life can contribute to a decline in reaching social, emotional, and mental health milestones. As indicated by the findings of this study, there is a continuous need for innovative therapeutic programs to better support children and youth who are at risk or identified with complex support needs.

Deficits in social interaction skills greatly hinder the ability of children and youth to establish meaningful personal relationships outside of the family.

As reported by the RHWPA Program Director:

For some of the participants, in the beginning, it was reported that they displayed little interest in playing with peers and making friends. However, over time it is not uncommon for the riders to develop attachments with instructors or volunteers. Instructor and volunteer teams, as well as the horse, are carefully matched to clients based on individual needs and personality, and every effort is made to maintain the continuity of the group to foster familiarity.

Developing relationships with instructors and volunteers as well as establishing bonds with the horses can greatly affect the riders' abilities to create relationships more readily with classmates, neighbors, etc. Several of the parents of the participant riders shared that strong attachments developed between their child, staff members at RHWPA, and most importantly the horse. Many thought this milestone would never occur with their child.

Although the riders do not have as much direct contact with their classmates as their team members and instructors, several parents noted some degree of interaction with their riding peers, such as two girls who greeted one another with a hug before a lesson. One client was excited to recognize a former schoolmate in his riding class and regularly made a point of greeting both the peer and his father. Another child made some friends when she was placed in a class with riders closer to her age. There were instances where children who shared a common bond through their riding classes spent time together outside of class as well.

Observations of participation from riders and families yielded that the horse as a therapeutic partner has an innate ability to help people grow physically, emotionally, and spiritually. RHWPA Program Director shared:

Horses demonstrate unconditional qualities such as acceptance and compassion that is not often shared without first passing judgment by our human counterparts.

Through these attributes, horses have the distinctive ability to help people to heal physically, emotionally, and psychologically. Bonding with horses is a tremendous benefit to children and youth as well. In addition to benefits to human relationships, a unique aspect of equine therapy is the opportunity to form a partnership with the horse. On several occasions, riders waited at the end of the barn for *their horse*, greeting them by name and offering up gentle kisses on their muzzles, a pet, or a hug around their necks! Through relationships developed with another living being, the riders have an opportunity to develop or begin the process of developing lifelong friendships

and the skills needed to maintain those relationships. As the researcher, I was able to witness first-hand the dynamic transformation of the participants and families in this study, as well as those who volunteer from the surrounding communities. Participants shared that they have a heightened sense of faith and belief in their children's abilities as well as their own. Many shared that "no obstacle is too great; they are just bumps in the road that make us stronger." Thus, the establishment of non-traditional therapeutic intervention programs such as equine therapy within communities can help to maximize the overall physical, social, and emotional health of the children within our neighborhoods.

### **Social Milestones**

Throughout a child's education, opportunities to develop meaningful social skills that allow them to successfully interact with others have a major impact on their social success in the present and in the future. Children who experience supportive, nurturing relationships with family members and peers are more likely to develop the ability to empathize with others and properly interpret social cues as they learn to play and work together effectively.

Deficits in social interaction are one of the classic features of autism spectrum disorders. From a young age, children with ASD may avoid direct eye contact, lack interest in imaginative or interactive play, and fail to develop the ability to take the perspective of others, which prohibits the development of empathy (Stickney, 2010). Difficulties in the use or interpretation of both verbal and nonverbal language further restrict the individual's social facility. A resulting

lack of friendships with peers and general social isolation can negatively affect the attainment of optimal emotional health and success throughout adulthood.

Family members frequently commented on the value of the unique opportunity equine therapy provides that other more traditional therapies do not. One parent participant in the mini focus group commented:

This experience is so great for kids, young adults, and even adults, parents like us. It is different than the activities my other children participate ... kids are interacting with an animal, a very big one too. The relationship the kids develop with these horses develops empathy and confidence that can carry over into their relationships with other kids and people in general.

A parent of mini focus group one shared that her child with autism is aware that “he can’t always keep up with his siblings or other kids at school playing sports.” However, when their child is on the back of that horse, “he knows it is something very cool, something that other kids do not have the chance, or may ever have the chance to do.” The parent went on to share that it is so satisfying to see her child happy and feeling a sense of fulfillment in life. As stated by Dr. Temple Grandin (2009), “it’s the rhythm and balance of equine therapy that is really good for the autistic brain. People with autism express exactly what they are thinking and feeling and so do horses.”

Participants in this study expressed without doubt that the integration of equine therapy into their child’s weekly routine greatly influenced their social and emotional development. Many of the participants who shared their stories stated that self-confidence and having a stronger sense of “I CAN” greatly influenced their lives for the better. As stated by the RHWPA Program Director, “the confidence that riders develop transcends into other areas of their lives.”

Regarding the social benefit, one parent shared:

Equine therapy has been a beacon of light that has allowed my child to redirect negative behavior patterns, build self-esteem, and enhance their social skill development.

Parents and staff members of RHWPA commonly stated:

The horses do not see a child with autism, cerebral palsy, physical or mental disabilities. They do not pass judgement on the riders or people here. The horses make them feel good about who they are, enabling them to be more confident, trusting others and their own abilities. Whether verbal or nonverbal, language is also a key component of

successful social development. Age-appropriate language skills naturally affect the ability to communicate and develop positive social cues with greater ease. Participants described language skill development both verbal and non-verbal, an attribute that can highly affect a child's social development. This development is a phenomenon commonly linked with equine therapy and has greatly helped children and youth previously thought to be nonverbal to express their very first words.

Through its natural evolution, the horse has developed a keen awareness of body language and non-verbal expression. This innate ability to silently communicate has allowed the horse to survive and evolve throughout history. They can be observed living in harmony and getting along with each other due to continuous practice of social skills such as acceptance, tolerance, kindness, honesty, patience, understanding, forgiveness, and compassion (Hayes, 2015). As a result of this innate ability, the equine therapist transmits this to its human riders as well. As Ralph Waldo Emerson once stated, "who you are speaks so loudly I cannot hear what you say." Emerson's quote relates to this

partnership as non-verbal communication can be just as powerful as spoken word. Horses connect in ways that words often cannot and shoot straight to our hearts and soul. They have the ability to make humans feel more confident, competent, trusting, and caring toward themselves and others.

In addition, two of the mini group one participants shared the milestones riders achieve in independence. As a former director of special education and in my current professional position, this is something I advocate to teachers and school administrators every day. Independence is so imperative to the success and achievement of any child. RHWPA staff and family members considered equine therapy to be a very favorable therapy and activity compared to team sports as it provides a greater opportunity for autonomy. One parent stated:

My son will have his riding helmet and tell everyone he meets on his way to RHWPA that he rides horses. He is so proud. It brings tears to my eyes!

Positive self-concept is also bolstered by the sense of capability and competency gained through daily personal achievement. The researcher observed that one rider was able to earn his horsemanship badge in boy scouts as a result of his achievement in equine therapy and as a young horseman. RHWPA Program Director shared that:

We have had two of our riders participate in the Allegheny County 4-H program. Both of these riders qualified for the Pennsylvania State competition in Harrisburg, one in fact successfully won her class and was elated with a trophy.

## **Familial**

Throughout the data collection process, participants shared that equine therapy offers benefits to the families of riders as well. Parents shared that much comradery, friendship and partnership is exuded during riding sessions at the stables. Potluck dinners are held each evening to provide dinner for parents or volunteers who are coming straight from work. One father shared that, “we are partners here, a great support system when the going sometimes gets tough.”

The ongoing communication that occurs at RHWPA is also key. This has helped to maintain rapport and relationships with families and the community. Families who may be resistant to formal therapy may be more amenable to the experiential nature of equine therapy as it allows for a more metaphorical presentation and less threatening, interactive setting. As it pertains to at-risk students, equine therapy provides a profound intervention to help them overcome the challenges and barriers they face on a daily basis. Our emotions can often get the best of us, becoming difficult to identify in words or expressions. As shared by Sara’s grandfather:

Children and youth today seem to be in the news more than ever before. Kids need to learn how to be a good citizen to their community, embrace leadership skills and discover the talents they were born with. For a child like Sara, being able to express how she is feeling and share what she is good at can be extremely challenging. Coming to this program (RHWPA) has helped her to expand her communication skills both verbally and nonverbally, helping her to be more successful at home and school.

When arriving to RHWPA for the first time, everyone expressed such an extraordinary feeling . Welcoming smiles greeted me as I approached the facility. The positive buzz was infectious. The RHWPA program director shared:

This program not only benefits the kids but the extended families as well. Parents have the opportunity to have some “free time” to socialize with other parents, network and simply breathe. They need a break too and coming here to watch their son or daughter achieve milestones while on the back of a horse is priceless. It keeps families together and builds an extension thereof.

This program normalizes something in lives of the families who participate each week. When they are on the back of their horse and their parents look out into the arena, they are like every other child on horseback. They are just taking a riding lesson. One instructor views equine therapy as a chance for children to participate in an experience that many children may not have the opportunity to do, making the program that much more special. As one father explained:

Other kids play may play basketball or baseball, this experience gives my son the opportunity to do what a typical child may not have the chance to do. Most importantly, they fit in.

Equine therapy offers a chance for the children and youth participants to experience achievement and, just as important, families to witness that achievement firsthand. The researcher for this dissertation was able to witness the elation and overwhelming pride and comradery during sessions and during interviews with parents or guardians. Sara’s grandfather stated, “Sara has achieved far more than it has ever been expected.” RHWPA elicits joy and

happiness not only from the riders but from staff, family members, and the community. Program volunteers noted that, “you can see parents smiling from ear to ear...laughing and talking to one another.” One volunteer stated, “I would highly recommend volunteering or participating in a program like this. It is wonderful to see how much the kids enjoy it and receive therapy as well!”

### **Limitations of the Study**

There are limitations to any study. However, for this study as well as others, the absence of quantitative data affects the support of this intervention within schools, communities, and medical fields. A plethora of qualitative studies document the case reports of children, youth, parents, and professionals who benefit from equine therapy throughout the world. However, many of these studies lack sufficient quantitative data to substantially support integration within schools and health care systems. There is a tremendous lack of research conducted by the scientific community with regard to the impact of equine therapy. With that being said, more research must be conducted that couples qualitative and quantitative results to support this intervention more significantly.

Researcher bias is another possible issue. The researcher was the instrument in the design of this dissertation, thus the researcher’s interest in unique interventions to better assist at-risk youth and those with complex support needs, extensive professional background and more than thirty years as an avid equestrian, may have unintentionally or directly affected this dissertation. Careful consideration was taken throughout the interviews and

member checking process to clarify with the individual and focus group participants the meanings that they intended to share as they answered interview and anecdotal questions.

Furthermore, the horse is a critical component to the success of this therapeutic intervention. Not only can it be costly for independent program developers and organizations, but the mental and physical health of the horse must also be seriously considered and evaluated to ensure this therapeutic partner is successful as well.

### **Implications for Future Research**

Many consider horseback riding merely a recreational or sporting activity, but increasing numbers of riding centers devoted to the therapeutic value of this activity speak to the long-held belief that greater benefits may be reaped from the almost mystical attraction horses have always held for man. Though there is a lack of scientific research providing tangible support for the program, I know from my own 35 years of working with horses personally and professionally that horses allow a person to reach to the heart of the painful places that a human therapist may be unable to reach without personal bias or assumption.

Children and youth with emotional disorders, at risk for academic failure or school dropout, as well as those with complex support needs, face social, achievement, and behavioral difficulties that interfere with their progress and growth throughout the country. The implementation of a non-traditional intervention such as equine therapy has been successful for students identified

as at-risk or with complex support needs. This study further supported that claim.

Improvements were expressed and noted in the study that encompassed increased physical flexibility and extension of limbs, core muscle strength and postural improvements. Socially, the participants' social and familial connections and communication skills advanced as well as the participants' ability to make and maintain friendships. In addition, due to the consistency and structure associated with equine therapy sessions, participants demonstrated attributes such as increased patience, focus, and ability to follow directions within at least two prompts.

Continued quality research is necessary in the area of non-traditional interventions such as equine therapy to better assist children and youth to grow socially, physically, and emotionally and to be successful as they enter adulthood. Much of the current research consists of qualitative studies; thus, additional research that encompasses quantitative data is needed as well to clearly demonstrate the impact of such interventions.

This dissertation is extremely important especially in society today as we are faced with more and more children and youth with mental health needs. Thus, a non-traditional therapeutic intervention like equine therapy must be seriously considered and partnered with traditional interventions. Having the opportunity in any setting to be within nature is extremely powerful. Being outside or in an arena to interact with horses is one of the most profound ways to prevent and extinguish social and emotional deficits that affect our self-

determination. I am hopeful that this dissertation may add to the necessary scientific research needed to propel this intervention forward and help pave the way toward health-care approval.

### **Conclusion**

Horses are nature at its best. They help to inspire children, youth, and adults to learn, grow, and become healthy productive citizens in a challenging society. They educate us to become better humans, better parents, better partners, and better citizens. They have supported the human race more than any other animal on the planet.

While the horse contributes significantly to this intervention, their mere presence alone assures results. They serve as a catalyst encouraging momentous changes in children, youth, and adults who are identified as at-risk or with complex support needs. Today, as we are faced with challenges more explosive than ever before, when war, racism, addiction, technology, and broken families continue to conspire against who one can truly live to become, the horse comes to our rescue once again.

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## Appendix A

### ***Focus Group & Semi-structured Interview Questions: Family Members***

#### NON-TRADITIONAL THERAPEUTIC INTERVENTIONS FOR AT-RISK YOUTH & STUDENTS WITH COMPLEX SUPPORT NEEDS: EQUINE THERAPY

1. What age and gender is the child who is participating in equine therapy?
2. How long has your child participated in this type of program?
3. What type of lesson does your child participate- private, small group, large group?
4. Does your child receive any other type of therapeutic interventions? If so, what do you see as the perceived benefits and differences in the programs?
5. What was your initial thought when beginning a program such as this?
6. What were your child's initial thoughts and concerns? Have they changed? If so, in what way have they changed?
7. Are there any therapy programs that you have discontinued for your child as a result of equine therapy? Please explain.
8. Please describe your child's typical lesson.
9. How does your child react and respond to:
  - a) Class instructor
  - b) Program volunteers
  - c) Other program participants
  - d) The horse
  - e) Peers
10. What changes have you witnessed in your child's physical, emotional, and social condition? Please explain.
11. What improvements in your child's motivation to attend school, related services and therapy following equine therapy sessions can you attest to?
12. What does your child like the most about equine therapy?
13. What does your child like the least about equine therapy?
14. Has your child's self-esteem and social/emotional behavior improved as a result of equine therapy? Why or why not? Please explain.

15. What improvements in your child's self-determination skills following their participation in equine therapy have you observed? Please explain.
16. What factors make this therapeutic intervention a positive experience for your child?
17. What opportunities have you witnessed arise in your child through their participation in equine therapy?
18. Do you feel it would be beneficial to offer equine therapy as an option provided to all students with disabilities as part of the state curriculum. Why? Please explain.

## Appendix B

### **Focus Discussion & Interview Questions: Program Director**

#### NON-TRADITIONAL THERAPEUTIC INTERVENTIONS FOR AT-RISK YOUTH & STUDENTS WITH COMPLEX SUPPORT NEEDS: EQUINE THERAPY

1. Before we begin, please share the top 10 ways in which you feel the clients benefit from equine therapy?
2. How long have you served as Program Director for the RHWPA program?
3. How does equine therapy differ from the traditional therapies individuals have previously participated in? Please explain.
4. What types of benefits do you think children gain from the program?
5. Please share you stories of changes you have personally witnessed when working with your clients.
6. What types of interactions take place from the horse's presence?
7. What types of interactions occur with the children between the following:
  - a) Instructors?
  - b) Volunteers?
  - c) Families and friends?
  - d) Equine partners?
8. How is equine therapy less effective, more effective than or as effective as traditional clinic-based therapy? Please explain.
9. What physical improvements have you observed? Please explain.
10. What social/emotional improvements have you witnessed? Please explain.
11. What improvements have you observed regarding a child's self-concept/self-esteem? Please explain.
12. Which components of equine therapy to you perceive as most beneficial to the improvements in your clients lives?
13. What opportunities have you witnessed arise for these children through their participation in equine therapy?

## Appendix C

### **Focus Group Questions: Program Instructors & Volunteers**

#### NON-TRADITIONAL THERAPEUTIC INTERVENTIONS FOR AT-RISK YOUTH & STUDENTS WITH COMPLEX SUPPORT NEEDS: EQUINE THERAPY

1. Please explain your role at RHWPA.
2. What benefits do you think children gain from this type of therapy?
3. Please provide examples of changes you witnessed in the clients during the course of their program.
4. How do you feel children benefit from the instructors, volunteers and working with such a large therapy partner like the horse?
5. What physical, social/emotional changes have you observed? Please explain.
6. How do the children's attitudes and participation in lessons change from their initial experiences? Please explain.
7. What methods and procedures in the lessons do you feel are the most beneficial or effective to the clients? Please describe and explain.
8. In your experiences, do you feel it would be beneficial to offer equine therapy as an option provided to all students with disabilities as part of the state curriculum? Please explain.
9. How do you see equine therapy benefitting all children?