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INTEGRATIVE BENEFITS OF HIPPO THERAPY

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ABSTRACT

With rising healthcare costs, professionals are searching for the most effective manner in which to provide services to clients. In the past, research has categorized services into three main areas, physical, occupational, and speech therapy, and delivered services separately.

Hippotherapy, or horse therapy, is a new unexplored form of therapy. Hippotherapy simultaneously places cognitive, physical, and emotional demands on participants. By doing so, hippotherapy has the potential to integrate demands from various therapies and address them through one service.

The existing literature and research is anecdotal and mainly from the perspective of the rider, often a child. This study interviewed ten parents of children with disabilities, whom are participating in hippotherapy. The goal of this paper is to combine and describe the commonalities in those existing anecdotes and compare them with the themes pulled from the ten interviews in order to accurately portray parents' perspectives on the potential integrative benefits of hippotherapy for children with disabilities.

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Chapter 1

Introduction

Many argue that there is a seemingly natural positive connection between animals and children. John Locke pointed out, in 1699, that giving children an animal of some sort to look after can foster the development of emotions and responsibility (Fine, 2006). One child psychologist, Boris Levinson, utilized pets, primarily dogs, as co-therapists during counseling. It was an uncommon practice at the time, but Levinson's revolutionary techniques would garner support years later (Levinson, 1997). Today, more than 70% of American children admit confiding their secrets and feelings in an animal (Beck & Katcher, 1996). Anatole France said, "Until one has loved an animal, part of one's soul remains unawakened (Halligan, 2007, p. 1)." From 2009 to 2010, an estimated seventy two million households included a pet, according to the American Pet Products Association (The Humane Society of the United States, 2014). In modern day society, pets are not simply companions but active contributors to society; they work alongside professionals in hospitals, schools, police stations, and more.

Existing Research

Hippotherapy, or horse therapy, is a rather unexplored area of therapy; little quantitative research has been conducted. The majority of existing research is anecdotal and from the perspective of a child. There are pages depicting children's drawings, quotes, and stories about their experiences with hippotherapy. However, little evidence is offered from other perspectives, such as parents or horse trainers. The existing evidence based research is sparse in comparison to many of the more traditional forms of therapy, such as occupational or physical therapy.

While the research supporting hippotherapy is limited in scope compared to other therapy fields, the roots of the practice run deep. The first mention of hippotherapy in history can be traced to Greek mythology. According to mythology, Aesculpius was a teacher of medicine at the time known for prescribing horseback riding to patients who had incurable diseases (Engel, 1997a). The first documented writing about hippotherapy comes from medical journalists. The first dates back to Oribasius of Sardis in 325 A.D. However, most formal credit for the first documentation of hippotherapy goes to a medical journalist from the late 1800s, Chassaigne. He was the first to do more than merely describe the interaction between person and animal; he documented the connection between riding and benefits in posture, balance, and muscle strength (Engel, 1997a). Hippotherapy was not officially recognized until 1951, in part due to Lis Hartel. Hartel was an Olympic equestrian whose career officially ended when she was diagnosed with polio. She went on to establish the “Pony Stable for Disabled Children.” It was not until this stable was created that doctors began to recognize and support the practice of hippotherapy. Soon after the stable was established, doctors began sending patients to her (Scott, 2005).

In 1986, detailed literature on hippotherapy began to be published. Some of the first came from Germany. In his book, *Physiotherapy on the Horse*, David Reide (1988) explained what he believed to be the benefits of hippotherapy: stimulation of the human gait, physical abilities such as balance, gross motor skills, and a special relationship between child and horse (Reide, 1988). Reide conducted some of the first formal experiments related to hippotherapy by attaching sensors to saddles and riders in order to electronically plot movements (Reide, 1988). He did this to examine the similarities between a horse’s gait and walking. His work established the baseline for future research that worked to support and elaborate upon his previous assertions.

In her text *Rehabilitation with the Aid of a Horse: A Collection of Studies*, Barbara Engel summarized a number of previously conducted research studies. Her text included both the original studies and her reflections. Three of the profiled studies included work by Carol Fleck,

the University of Texas, and Kathy Hansen (Engel, 1997b). Fleck (1992) from the University of Waterloo studied the extent to which the movement a rider experiences from atop a horse mimics normal walking movement. By filming subjects walking and riding, Fleck compared the mechanics of both movements using cinematographic motion analysis. She found that the movements were similar, especially in terms of lateral pelvic tilt and timing (Fleck, 1992). In this way, riding can help those with physical limitations adapt to and practice the mechanics of walking. A group of researchers from the University of Texas studied changes in balance after therapeutic riding. This study recorded balance measurements and gait analysis from subjects with disabilities due to brain injuries. All of the subjects in the study showed definite improvement in balance after participating in hippotherapy (Engel, 1997b). Kathy Hansen (1992) studied changes in gross motor skills and abilities using the Gross Motor Function Measurement (GMFM) after a sixteen-week hippotherapy session. The results showed unanimous improvement among the participants' scores on the GMFM after the hippotherapy session (Hansen, 1992). All of this research expands and improves upon Reide's assertions.

The last assertion that David Reide made about the benefits of hippotherapy was the development of a special bond between horse and rider (Engel, 1997b). This socio-emotional aspect of hippotherapy has not been explored as readily as the other physical benefits Reide discussed. This emotional and psychological part of therapy cannot be electronically tracked or easily measured. Qualitative data must be acquired to represent the relationship Reide described. Despite the apparent intangibility, recent research has highlighted the emotional and psychological aspects of hippotherapy. Barbara Teichmann Engel is an expert in the area of hippotherapy. She is a registered American Hippotherapy Association member and the first President of Therapeutic Equestrians Inc. of California (Engel, Bull, & Galloway, 1989). She explained that the current literature asserts that children experience growth in three main areas as a result of hippotherapy: autonomy, empowerment, and sensory integration (Engel, 1992).

According to Reddy and Sujathamalini (2006), autonomy is a component of psychosocial development that many children with disabilities feel as though they lack because of their limitations. It deals with making independent decisions and developing a sense of control. Children with disabilities may not always get the chance to make independent decisions and may feel like they are not in control of their decisions as a result (Reddy & Sujathamalini, 2006). Hippotherapy gives children the opportunity to feel as though they are in control. The child determines when the horse moves and in what direction they travel. By providing an elevated position, horses give riders a sense of physical autonomy and heightened awareness (Engel, 1992). Empowerment is a sense of pride and accomplishment in what one can do. As in physical, speech, or occupational therapy, goals are established in hippotherapy. It is through reaching those goals that a sense of empowerment is created. Hippotherapy allows riders to construct and strive for sensory, motor, physical, and psychological goals all at once. In order for those goals to be successful, a rider must communicate those goals to the horse (Engel, 1997a). For example, a child must physically pull on the correct rein, apply pressure with the correct leg, and use verbal commands in order to turn a horse in a specific direction. The last area of growth suggested by Engel was social integration. This is the ability for the brain to interpret and process information from the environment (Engel, 1992). Occupational therapist, John Brough, explained that children with disabilities struggle with sensory integration because they often cannot understand and control the effects of the sympathetic nervous system. This is responsible for our “fight or flight” response to new stimuli. The more effective reaction to new stimuli is to channel the parasympathetic nervous system, which allows the body to remain in a controlled state. There are three standards that must be met in order for the parasympathetic response to dominate the sympathetic response. These include warmth applied to muscles, rhythmical massage, and modulated sensory input. The physicality of riding creates warmth against the leg muscles. The gait of the horse provides massage by enhancing rhythmic vestibular and joint receptor

stimulation. Riders must also control what stimuli they chose to respond to when riding. If they modulate and attend primarily to the horse, they will be more successful. Hippotherapy allows children to practice reaching these three standards and thus, practice control of the parasympathetic nervous system (Engel, 1992).

It is clear that hippotherapy has the ability to integrate therapeutic goals from several disciplines. What has not been documented is whether or not parents perceive their children as receiving those integrated benefits. Do parents see their children reaping physical, social, behavioral, and psychological benefits from riding? The purpose of this study is to provide qualitative evidence as to whether or not parents believe their children are receiving those integrated benefits. This study focuses on a specific population segment, parents of children with disabilities. The goal is to further understand how hippotherapy functions as a therapy and what integrative benefits it provides from their perspective.

The North American Riding for the Handicapped Association

Because of the work of Chassaigne, Hartel, Reide and others, along with the abundance of anecdotal evidence supporting hippotherapy, the North American Riding for the Handicapped Association (NARHA) was established in 1969 (Engel, 1992). Accreditation and licensing programs were developed over the following years. The NARHA supports and sets the standard for therapeutic riding programs across the United States by establishing accreditation and certification requirements and making liability and insurance accessible and available to developing programs. In addition to supporting and developing programs, the NARHA promotes hippotherapy by conducting educational seminars and conferences as well as publishing current data and research. To ensure that comprehensive services are provided, the NARHA created three supporting organizations. The American Hippotherapy Association (AHA), the Competition Association of NARHA (CAN), and the Equine Facilitated Mental Health Organization all work

together with the overarching NARHA to promote hippotherapy and ensure quality services (Scott, 2005).

According to the North American Riding for the Handicapped Association, the benefits of hippotherapy can be categorized into four main areas: social, recreational, educational, and sport (Engel, 1997a). The NARHA asserts that hippotherapy provides a social and emotional outlet for children, who bond with the horses and other individuals in the therapy session, as explained previously. It is an enjoyable activity, during which the physical and cognitive strains are not as apparent to the child as they may be during physical or occupational therapy, as explained above. The environment is educational, as children learn how to care for and ride the animals. Last, it is a sporting environment that forces children to put their skills and abilities to the test (Engel, 1997a).

The Therapy Horse

Hippotherapy farms typically select small to medium sized ponies for therapy. This fact often creates confusion because there is a distinct difference between the terms 'pony' and 'horse.' Equines are measured in hands; one hand is equal to four inches. A pony is any equine that measures less than 13.1 hands or 52.4 inches at the shoulders. A horse is any equine measuring above that standard. Ponies are preferred simply for their small stature; hippotherapy typically occurs with children (Spink, 1993).

Older or retired horses are used for hippotherapy because many of the exercises that are used in therapy are so well trained and ingrained in these horses and ponies. Programs often seek out hunt-seat horses and ponies. These mounts have been trained in a specific discipline of riding called hunter equitation, which focuses purely on perfect form. These horses and ponies are easy to ride because they have been trained to develop fluid and flowing movements. Their reputation includes a solid and comprehensive training background, ensuring that the child riding them

won't have to exert an extraordinary amount of guidance through their legs or the reins. The practical skills of these animals make it easy for children to learn control, body position and awareness while riding (Engel, 1998).

Excellent hippotherapy horses are known for their ability to demonstrate four main characteristics: bonding, submission, desensitization, and select sensitization (Spink, 1993). Bonding is the ability of the horse to trust and respect the child it is working with. Submission is the ability to cooperate with the child and obey their directions. Desensitization is the ability of a horse to suppress its instinctive 'fight or flight' nature when encountering new stimuli. Last, select sensitization describes how a horse learns to respond calmly to conditioned stimuli that are common in therapy, such as therapy balls and rings. Specific breeds, including Thoroughbreds, Connemaras, and Quarter Horses have developed reputations as hippotherapy horses because the NARHA has recognized their ability to connect with children and foster these four characteristics (Spink, 1993).

Although not required by the NARHA, most equine therapy programs have a veterinarian examination that all horses must pass. In addition, most require that prospective mounts go through a development and training period. It is a test period in which trainers work to ensure the horse is capable of fulfilling the specific requirements of hippotherapy. Once horses pass the test period and become full-time therapy horses, it is recommended that they no longer pursue tasks from their past, whether they were lesson horses, jumpers, or racehorses. Instead, they need to focus on their new task, constantly developing and maintaining the distinct skills it demands (Spink, 1993). In addition to their normal therapy schedule, it is recommended that therapy horses and ponies also work on upholding their fitness level by cross training, but not competing, in various equestrian disciplines including dressage, eventing, and cross-country jumping programs. This prevents burn out and ensures that horses maintain a calm and collected personality when in therapy sessions (Engel, 1998).

The Trainer

In equine therapy, it is not just the horse that has to meet stringent requirements. The riding instructors do as well. Unlike in traditional therapy, where a singular therapist (speech, physical, or occupational) is in charge of creating and implementing a therapy plan, hippotherapy requires a collaborative team. Riding instructors must communicate and work with therapy professionals from all fields in order to successfully construct goals and translate them to the therapy ring. A therapeutic riding instructor, with their knowledge of horses, is the overarching crucial component responsible for successfully translating those goals to this unique therapy realm. The North American Riding for the Handicapped created a three tier level of instructor certification: Registered, Advanced, and Master (Engel, 1992). The NARHA first began instructor certification programs in 1969 through a limited number of specific therapeutic riding center training courses offered nationwide. These early courses evolved into the establishment of instructor standards in 1976 when the NARHA employed a committee to re-evaluate the previous instructor certification program. The committee created three new certification classifications: orthopedic, non-orthopedic, and combined. Certification in any classification requires both an open-book exam and an on-site practical exam that focuses on teaching, horsemanship, and horse-mastership. The first of these new certification exams was offered at the Cheff Center in Michigan in 1979. By 1980, twelve new instructors were certified, and by 1987, there were twenty-eight. In 1989, the certification program was again reviewed. Under the review, instructors were required to submit videotape demonstrating teaching, riding, and evaluation skills. In 1994, an entry-level instructor certification was developed, which is known as the present day 'registered' level. Only a year later, the NARHA stated that all instructors in the NARHA must have at least the registered level of certification. Certifications must be renewed annually, and supported with current first aid and CPR certifications. Outside of the NARHA,

other programs and institutions have developed certifications programs, including the Certified Horsemanship Association and the Canadian Therapeutic Riding Association (Engel, 1998). Together, these organizations, their certification reviews, and standards have helped support professionalism in the growing field of hippotherapy.

Chapter 2

The Current Study

The goal of the current study is to understand what integrative benefits hippotherapy can provide to children with disabilities as seen through a parent's perspective. My research aims to understand those benefits and how they contrast with the benefits of a singular form of therapy.

Participants

Participant requirements included being over the age of 18 and the legal parent or guardian of a child with a disability participating in hippotherapy. There was no age requirement for the participant's child. Participants for this study were recruited via flyers posted on the Pennsylvania State University main campus and through downtown State College, Pennsylvania. The flyers provided a quick summary of the research and contact information for my thesis supervisor and myself. Word of mouth was also used to recruit participants. The study was made up of ten participants from across the state of Pennsylvania. The study was not limited to females, but the ten interviewees were all mothers. Six mothers had children with Down Syndrome. Two had children with Cerebral Palsy. One had a child with Autism Spectrum Disorder. The Institutional Review Board approved this study.

Measures

A survey was created asking each participant for a history of their child's disability and the role hippotherapy has played in it. It explored the effects of the disability and riding on social,

emotional, and physical aspects of life. Each survey consisted of twenty-two questions that went through review by the Institutional Review Board. Each interview was audio recorded.

Additionally, shorthand notes were taken during the interview to supplement the audio recording.

Method

All of the methods followed the guidelines for qualitative research as outlined by H. Russel Bernard (2013). Participants were recruited either via flyers or word of mouth. After participants initiated contact, a time was scheduled for a web interview utilizing Skype technology. During this time, a structured interview was administered (Bernard, 2013). The interview consisted of twenty-one open-ended questions. Some questions had multiple parts that needed to be addressed. The interview was cross-sectional. It was meant to measure attitudes towards hippotherapy at a specific time (Bernard, 2013).

Afterwards, the audio recording was reviewed and additional notes were taken to help summarize each participant's interview questions. Each interview and its audio recording was assigned a numeric code so that anonymity could be ensured throughout the research process. After ten interviews were complete, I went through each individual interview and pulled five main themes from the parent's answers to reflect the main points stressed by that participant. A research assistant did the same for each interview. Afterwards, our themes were compared to check for consistency. This was a means of checking for validity (Bernard, 2013). Four of the ten parents were contacted a second time via e-mail; the themes were presented to them and they were asked whether or not they thought the themes were an accurate reflection and summation of their thoughts and ideas. This is called a member check and is used to evaluate validity of the study (Bernard, 2013). All four agreed that the themes were an accurate representation. Finally, my research assistant and I repeated the steps described above and pulled five main themes from all ten interviews as a group. Again, we checked our results against each other for consistency.

Analysis is the method used to search for dominating themes and patterns from the information gathered during research. This study and the analysis methods used are an example of a qualitative study of qualitative data, according to Bernard (2013). The responses from the interviews were deconstructed and evaluated for themes. This was done in a grounded theory research approach, also referred to as open coding. Under this approach, the goal of the researchers is to immerse themselves in the qualitative data collected and to allow their understanding to come from evaluation of that information (Bernard, 2013). In this case, I was immersing myself in the interview responses and constructing my understanding to come from the dominating themes expressed.

Chapter 3

Thematic Analysis

The five main themes that collectively represented all ten interviews were:

- Theme One: A belief that hippotherapy is an *integrative* therapy technique that combines aspects of various therapy strategies (occupational, physical, etc.) as well as various aspects of human development (physical, social, and psychological wellbeing).
- Theme Two: Hippotherapy has the ability to reach above and beyond what is in the grasp of more traditional therapy approaches. It not only addresses functional and physical needs, but *psychological, emotional, and psychosocial* needs through the relationship that develops between horse and rider.
- Theme Three: Hippotherapy provides a *safe social environment* for children and allows them to test and develop social relationships with peers.
- Theme Four: Hippotherapy has noticeable *physical* benefits for the children included in the study.
- Theme Five: Hippotherapy has a noticeable impact on the *behavior* of the children included in the study.

Theme One

The belief that hippotherapy is an integrative approach to therapy was the most dominant theme across the interviews. As parents stressed in their reflections, riding involves all aspects of therapy. Physically, a child has to sit on the horse and steer with the reins. Linguistically, vocal commands are used to aid the horse and communicate with instructors. An occupational therapy

or functional aspect of riding deals with holding reins properly, knowing how to keep feet inside the stirrups, and how to get on and off the horse. Multi-disciplinary demands are being placed on the child all at once. What makes hippotherapy dynamic and different from a traditional branch of therapy, such as physical or occupational, is that trainers can control how many and which demands are placed on riders. For example, if a trainer holds a horse in place then the main demands are physical and occupational. A rider must hold themselves upright, keep their feet in the stirrups, and their hands around the reins. If trainers are on the side of the horse supporting the rider, then the demands shift from physical and occupational to linguistic and cognitive. Trainers will lead the horse while riders must process what commands are appropriate and them linguistically translate them to the horse.

One parent explained that her child had been participating in physical, occupational, and speech therapy for years. He recently began therapeutic riding. She attends all of his therapy sessions and can watch the occupational, physical, and speech therapy tasks overlap in riding. Gross motor skills are put to the ultimate test; unlike the isolated environment of physical or occupational therapy, riding provides the ultimate dynamic testing of skills. Personally, she does not believe her son would be where he is now without riding; the progress she has witnessed since the first week her son began riding is what she cited as evidence. As she said, “He wants to make that horse walk and in order to do that, he must combine every single skill he has been working on in physical and occupational therapy, and even speech therapy. And, it is not just riding. Just getting the horse ready, grooming, and saddling makes him work on all those skills at the same time.”

While all parents saw hippotherapy as an integrative approach, they did not all agree on whether that made it superior to traditional therapy approaches. One parent said that she believes equine therapy is “just as important as physical and occupational therapy.” However, she did note that she would not replace physical and occupational therapy with hippotherapy at any

point. She believed that those traditional therapy techniques have an important role in development, being able to isolate and focus on different tasks. Another parent explained that, although she has not stopped taking her son to his traditional therapy sessions, it seemed absurd to take a child to separate physical and occupational therapy sessions, when all of those needs could be addressed at once from atop a horse. She said, “He is doing it all at once. Why would I ever stop that?”

One parent went beyond categorizing hippotherapy as integrative in just a therapeutic respect. She explained that it integrates therapy and life lessons for her daughter. As she said “Learning to sit on a horse might be a physical therapeutic experience but learning to ride a horse is a life lesson.” She explained that horses do not obey the fast pace society we live in. Hippotherapy is dependent upon the formation and nurturing of a relationship between a child and a horse. A child has to stop and focus, and slow down society’s fast paced clock. The horse does not know the child on its back is disabled in any way. The child opens a part of their heart to trust the animal beneath them and in turn, the horse opens their heart to trust the human above it. These are all lessons that typically developing children learn through peer interactions, school, and extra-curricular activities.

Theme Two

The second dominant theme from the interviews was the belief that more traditional therapies are limited in their reach; hippotherapy offers psychological and psychosocial benefits that other therapies cannot seem to match. There is the opportunity for children to bond with their therapist in physical, speech, or occupational therapy, but hippotherapy provides the opportunity for children to bond with the horse they ride. That bond and the role it plays in development was a dominating theme from all of the interviews.

One parent explained that the bond between her child and the horse is what makes her daughter want to continue riding despite the strain it places on her muscles. She explained, “That horse is what keeps her going and gives her a positive outlook on life. She is so focused on getting to see that horse on the days she rides that it doesn’t matter what happens during the day. It couldn’t upset her.” She went on to say the bond between her daughter and the horse is a great thing, “Except for when she has to say good-bye to the horse and she throws a fit!”

The bond between horse and child is a benefit of hippotherapy. However, the bond has its own benefits. One parent explained the social and psychological benefits of the relationship between her son and the horse he rides. Her son is in a special education classroom at his school. All of the children in that classroom have disabilities similar to his. Despite being surrounded by a close-knit group of peers, he has trouble socializing at school. “He knows that he is different. But, the horse doesn’t know he has Down Syndrome. That horse is his best friend. He is able to overcome and cope with the difficulties he has at school because he is able to go to the stable every Tuesday and tell Rosie all about his week.” She later went on to emphasize, “He tells Rosie more than he tells me. I’m ok with that.”

Riders also benefit psychologically from the relationship they develop with their horse. As David Reide first suggested, horses are able to provide riders with the psychological benefits of empowerment, confidence, and self-esteem. Riders experience the horse beneath them respond to the cues they provide through their arms, legs, and voice. One parent explained the sense of pride that developed between her son and the horse he rode. Her son saw that horse as his. She explained, “That is his horse! Even though other children ride him, he sees it as completely his horse. He is so proud of what they can accomplish together.” She went on to describe the first time her son got the horse to turn successfully. “He threw his arms up and let out a scream. I have never seen him happier.”

Theme Three

Similar to the previous theme, all of the parents interviewed also stressed the environment that hippotherapy creates. All of the children rode in small groups with other children with various disabilities. The stables at which these children rode created a comforting environment. As one parent put it, “All of the children had an issue, whether it was physical or whatever, and it created a safe environment in which my son was comfortable initiating conversation and trying to make that new best friend he couldn’t make in school.” With the confidence that hippotherapy gives children and the environment it provides, many parents agreed that it is an ideal testing ground for peer socialization. They commented that their children are able to test their social skills and establish relationships with their peers more easily than they normally would.

One parent explained that her son had never had a best friend. He was timid and afraid to reach out to peers in his school. Even at home, surrounded by his family, he was shy and timid. His lack of social skills was frightening to her as a parent. She knew that physical therapy would address his physical limitations, but she worried about him socially. As she said, “He is going to be around people his whole life and I won’t always be right there with him. He needs to understand and be comfortable interacting with them. Before riding, he wasn’t.” She explained that it was great to see her son bond with his horse, but “Seeing him converse with peers his own age almost made me cry. It is pulling teeth to get him to talk to his own siblings at home!”

Another parent explained that it is hard to answer questions about her daughter’s social skills because it is so dependent on the context. Her social skills at home and in school are minimal. They contrast sharply with her social skills when she is at the stable. “With her riding friends, she doesn’t stop talking.” As explained in the previous theme, hippotherapy can instill confidence and self-esteem.

Theme Four

The fourth theme prevalent among all of the interviews was the unique physical needs that hippotherapy addressed. Many of the children in the study faced physical limitations, from low body tone to limited strength and minimal muscle control. All ten parents claimed they saw physical improvements from their children, which they believe hippotherapy was at least partially responsible for. Moreover, the improvements transcended the stable. Four of the interviews noted that teachers and friends of the child recognized the physical improvements.

One parent acknowledged that her son had been receiving physical therapy for about two years before starting hippotherapy. When he began riding, he was not able to sit upright on his own. After one year of riding, along with normal physical therapy, her son was able to sit upright on his own. There were improvements in his core strength that even his teachers recognized. “After one month of hippotherapy, his teacher commented on how much stronger he had become. She said she really saw a difference.” A second parent went on to explain that she enjoys watching her son ride because she can see the benefits herself. “In the beginning, if he lost his balance at all, he began to fall right off and needed help from the trainers to sit up again. Now, he can recover himself when he loses his balance.” She also described how the physical benefits are helping her son in various environments. “Even his physical therapist has commented on how much stronger he has gotten.” The therapist believes it has contributed a great deal to his strength, balance, coordination, and flexibility. Now, her son is able to walk up the staircase at his school without any aid. When he is at home with his family, he has the endurance to keep up on walks and hikes. According to his mother, neither of those were realistic goals before he began riding.

A third parent agreed that hippotherapy improved her son’s physical capabilities. “He can stand up independently now. It helps his balance and strength so much. It is working!” However, she also acknowledged the hard work that her son puts in to reap those benefits. “Riding is really hard on him. It stretches him and makes his muscles work hard. He comes home sore!” However,

she also summarized the dominating theme when she went on to say that the hard work is worth the reward. "I won't stop anytime soon that's for sure."

Theme Five

The last prevalent theme from the interviews addressed the behavioral changes that resulted from hippotherapy. Similar to physical changes, all ten parents remarked that their children's behavior improved significantly after riding. The most obvious example from the interviews was an improvement in mood. For those children who had no speech limitations, parents described how they were suddenly more talkative and engaged immediately after riding. For children with speech limitations, body language, primarily smiles, conveyed their mood improvements. Three of the parents described the drastic behavioral changes by saying their child was a "new person" after riding.

When behavioral changes were discussed during the interview, one parent said "that is the most obvious change." Another parent commented, "He gets more out of it than I think he even knows. Everything about his behavior improves. He is smiling, listening, and paying attention. He is so bright and cheery after he rides." A third parent compared her set of fraternal twins. Her daughter is typically developing. Her son has a developmental delay and participates in hippotherapy. Her son doesn't like to converse and is typically "grumpy." After he rides, however he is "like a new child. He could talk your ear off and he is so upbeat."

Though not permanent changes, the behavioral changes that the parents discussed in their interviews lasted longer than the hippotherapy session. Four parents said that moods and behavior improved "for the rest of the day." The remaining six parents said that the changes in their children lasted "two to three days." The behavioral changes were not only unanimously positive but lasting as well.

Chapter 4

Conclusions

The current study examined what parents perceive to be the benefits of hippotherapy for children with disabilities. All ten parents interviewed unanimously agreed that physical, social, emotional, and psychological benefits are present. They see hippotherapy as having the capability to integrate various skills into one task, riding. Whether hippotherapy is a superior therapy medium compared to more traditional methods that focus on singular skills remains unknown. What the current study did prove is that parents perceive hippotherapy as having benefits. The study shined a light on the field of hippotherapy and the direction future research may take.

During an interview, one parent remarked, “The horse doesn’t know he has Down Syndrome.” Another parent described the experience by saying, “Learning to ride is a life lesson.” The horse doesn’t recognize the limitations many children who participate in hippotherapy face. For a small amount of time, children are granted the opportunity to forget about their disability. Readers gain an understanding of that ability and the importance it holds to parents from this study. Readers gain a new perspective from this study; they understand that the ability for their child to develop a sense of pride and self-esteem and gain friends is just as important as the physical and occupational exercises in the eyes of the child’s parent.

Nine out of ten parents could not list a negative drawback of hippotherapy. One parent responded, “In my mind, it is all positive.” The one parent that did elaborate on the negatives aspects of hippotherapy acknowledged the danger. She said she is always tense and nervous when her daughter rides. “That is my baby on a thousand pound animal!” However, the mother did note

that her own fear would not stop her from allowing her daughter to participate. She explained that the benefits her daughter experiences make it well worth it. “On the ride home, all she can say is ‘I love my life!’”

Other more traditional therapies are able to focus on a singular aspect of functioning. Parents perceive hippotherapy as addressing various aspects through one medium; they perceive it as having the ability to integrate various functional skills, address psychological, emotional, psychosocial, behavioral, and physical needs, and provide a safe social environment. The study helps readers understand why that is important to parents.

The limitations of the present study must be acknowledged. In several ways, the population was limited. The sample size was small. Only ten parents were interviewed. All of the ten interviews were from females. In addition, the entire sample came from the state of Pennsylvania.

From the sample, seven of the ten interviews involved parents of children with Down Syndrome. In total, only three disabilities were represented. The other two disabilities included in the study were Cerebral Palsy and Autism Spectrum Disorder.

Limitations

The limitations of this study highlight the areas for future research. Being able to represent more disabilities and increase the sample size would provide the opportunity to check the themes described in this study against a larger and more representative sample. Expanding the population to include multiple state and geographic regions would allow researchers to explore relationships between parent perspectives and demographics. Perspectives may change depending on geographic location, and accessibility to horse therapy and equine facilities. Perspectives also may change depending on the age of the parent interviewed. Interviewing parents and grouping them into different age cohorts is another avenue for future research. Yet, another area for future research is to gain the perspective of other therapists. Research could aim to understand whether

or not physical, speech, and occupational therapists see the integrative benefits of hippotherapy and whether they see it as superior to their services.

Future Directions for Research

As a researcher, the study allowed me to understand the parents' perspective. It also allowed me to understand the implications and potential of the discussed themes. It is clear that parents believe their children are receiving benefits from hippotherapy. This study was able to highlight five distinct areas of benefit. Each of those areas holds the potential for future research and understanding of hippotherapy and its role in development for children with disabilities. As an integrative approach, future research can examine what therapies hippotherapy is integrating. A checklist can be developed to understand what areas are being integrated and how many times each area of traditional therapy is represented in a session of hippotherapy. The four remaining themes can be potentially quantified in the future to provide more support and evidence for this developing area of research. For example, what is the difference in physical strength before and after hippotherapy? How many social interactions are children initiating before riding as compared to after? How many interactions take place between a child and their peers or a child and their horse? As a researcher, I was intrigued by the overwhelmingly positive data. Future research may also examine whether parent perspectives change over time by translating this type of study into a longitudinal format.

One parent from the study was quoted referring to hippotherapy as "a hidden gem." As discussed previously and reiterated by many others in the study, parents believe that hippotherapy is not only a mechanism for therapy but for life lessons for their children. It is clear that there is great potential in hippotherapy. The parents included in this study believe that hippotherapy is fulfilling a great deal of its potential and helping their children. The current study presents and explains that parent perspective. It then highlights the need for and encourages future research.

One parent concluded her interview by explaining that she could encourage those unfamiliar with hippotherapy to “Go for it. Just go for it.” This study aims to encourage others to do just that.

Appendix A

Parent Interview

1. What is your child's name? Age? Developmental Disorder?
2. Can you describe the developmental delay your child has in your own words?
3. How did you get into therapeutic horseback riding?
4. Did you go into this thinking of it as a form of therapy or were you more just thinking of it as another activity for your child?
5. Can you describe the experience that your child has had with horses?
 - a. Do they participate in equine therapy specifically? If not, what other activities do they do?
 - b. How long have they been participating?
 - c. Do they also get exposure to horse life? Are they exposed to activities such as caring for the horse and the farm?
 - d. How many times a week or month do they ride?
 - e. Does they ride with a group? If so, does the entire group have various developmental disorders?
6. What do you believe are the behavioral benefits of your child's participation?
 - a. Are they better behaved after riding?
 - i. Do their emotions change? Are they happier? Sad? Calmer? More talkative? Do they get very excited before going?
7. Does this interaction affect their social skills with others?
 - a. Are they more social? Less social?
8. Do you see any language changes after your child's interaction with the horses?
 - a. More or less vocal?
 - b. Initiate conversation?
 - c. If your child has a disability/delay specifically associated with specific language impairments, do you see improvements in those impairment areas?
 - d. How long do the improvements last?
 - e. What settings are the changes/improvements most evident in? (Home, school?)
9. Do you see any physical changes?
 - a. If the disability your child has carries physical effects, are those areas improved at all?

- b. In what setting are the changes/improvements most evident?
 - c. How long do these changes/improvements last?
10. Have other people picked up on the changes/improvements caused by these interactions with the horses?
- a. Husband/Wife?
 - b. Siblings?
 - c. Friends?
 - d. Teachers?
11. Does your child's mood change after their interactions with the horses?
- a. In a positive or negative way?
 - b. How long do the changes last?
 - c. Do these changes affect their social interactions?/ Make them easier?
12. Do you believe there are any negative side effects to riding?
13. What do you think your child would say when asked to describe their time with the horses?
- a. Would they describe it positively?
 - b. Negatively?
 - c. Is it something they would say they look forward to?
 - d. Do they see it as 'therapy'?
 - e. Do they express interest in continuing with it?
14. What deficit from your child's disorder was best addressed through equine therapy?
15. If your child has made progress over the years, do you attribute any of it exclusively to equine therapy?
16. Equine therapy has been called an alternative therapy (in contrast to the traditional therapies of physical, occupational, and speech). Others call it an integrative therapy (a way of combining all those traditional therapy fields. Which label would you attach to horse therapy? Why?
17. Do you believe that your feelings (positive or negative) and opinions towards equine therapy are widespread?
18. What would you say to another parent interested in pursuing therapeutic riding for their child? And advice or words of caution?
19. Research on horse therapy is lacking. Do you have any idea why? It seems to be a positive pursuit!

20. Do you see the concept of horse therapy growing over time? What needs to be done for it to grow, in your opinion?
21. Is there anything else you want to tell me that may contribute to this area of research or that you believe you would help us best understand your interview answers?
22. Do you feel like you have input in your child's therapeutic riding? Can you openly offer advice and insight? Do you stay for the session?

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ACADEMIC VITA

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- Education: The Pennsylvania State University, University Park, PA
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 - B.S. in Communication Sciences and Disorders
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- Employment: Research Assistant (October 2012-May 2013)
Penn State University, Communication Sciences and Disorders Department
- Conduct individual interviews and research on alternative speech therapy techniques
 - Collaborate with students and faculty to analyze and record results
 - Share and present research with fellow students and faculty
- White Building Desk Attendant (August 2010-Present)
White Building, Penn State University
- Communicate policies and procedures to patrons and assist them daily
 - Manage any financial transactions concerning patrons
 - Monitor the Division I and club sports teams that utilize the facility
- Fitness Center Attendant (August 2010-Present)
Penn State Student Fitness Facilities, Penn State University
- Regulate and maintain the influx of patrons in and out of the facility
 - Maintain contact with all campus fitness facilities and record data
 - Assist patrons with questions and fitness training sessions

Camp Counselor, (June 2010-August 2012)

Camp Lackawanna, Tunkhannock, PA

- Care for and nurture a cabin of six girls who resided with me weekly
- Create and lead creative, challenging daily activities
- Implement conflict resolution and problem solving daily
- Communicate and collaborate with other camp staff

Activities:

National Student Speech, Hearing, and Language Association

Penn State 46-Hour Panhellenic Dance Marathon for Pediatric Cancer (THON)

Penn State Club Cross Country

Penn State Club Tennis

Collegiate Horseman's Association of Penn State