

## Equine Assisted Therapy Through The Eyes of a Child

### Masters Thesis

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### **Abstract**

The focus of this study was to gain insight into the experiences of children who participate in equine assisted therapy (EAT). The study used a qualitative child-based approach focused on accessing the perspectives of children and their experience participating in EAT. A thematic analysis (Attride-Sterling, 2001), was used to identify basic, organizing, and global themes. The three global themes that were identified from analysis of the photographic and textual data indicate that participation in EAT can lead to: 1) the formation of meaningful relationships and connections; 2) positive experiences for the individual; and 3) opportunities for development.

The results of the study provide evidence that EAT programs can be a successful form of intervention for children with special needs. Future research should continue to use a child-based approach and aim to include a greater number of participants to increase the diversity of voices of children with special needs who participate in EAT.

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## **Chapter 1**

### **Introduction**

The use of horses in therapy is not a new idea; rather, horses have been used for healing and therapy for thousands of years. However, it is not until more recently that organizations were created to oversee the use of horses in equine assisted therapy for individuals with development delays. Today there are two widely practiced forms of equine assisted therapy (EAT), therapeutic horseback riding and hippotherapy; each have their own unique therapy goals (Scott, 2005). Both therapeutic horseback riding and hippotherapy have been used to support children with a variety of conditions including diagnoses of autism, cerebral palsy, Down syndrome, multiple sclerosis, muscular dystrophy, and developmental delays, amongst others (Granados & Agis, 2011). Existing research on the use of equine assisted therapy is sparse since it is still a newly emerging form of therapy. The majority of the literature focuses on the influence of EAT on children diagnosed with autism and cerebral palsy, however, there are also studies focused on children diagnosed with Down syndrome, intellectual disabilities, and language learning disabilities. This paper examines the ways in which EAT is used by children with these diagnoses, as well as reviews the typical developmental characteristics of children in order to recognize similarities and differences that characterize children during different stages of development. This purpose of this study was to gain an understanding of the stories and experiences of children with special needs who participate in equine assisted therapy using a qualitative child-focused method. Although quantitative research is important for understanding the benefits of EAT, it is also important to understand the experiences of the children.

Existing quantitative and qualitative studies provide insight into the uses and outcomes for children with special needs who participate in EAT. A review of the literature indicates that there were many similarities in regards to practice across studies. For example, engaging the children in grooming tasks before and after sessions was used to help develop fine motor skills by handling and maneuvering a brush, as well as social skills by interacting with the horse and volunteers (Scott, 2005). Intervention durations were also similar across studies, typically totaling 10 to 12 hours over the course of the study. Furthermore, all of the studies stated positive outcomes and benefits experienced by the participants. The study authors reported cognitive, physical, social, and psychological benefits for children with special needs who participated in EAT.

While the results of the literature are consistent, there are gaps and limitations that remain evident within the literature. The largest gap that remains within the literature is the lack of qualitative research available to provide insight into the experiences and stories from the perspective of children with special needs involved in equine assisted therapy. Instead, the majority of studies are quantitative in nature and aimed at measuring the physical benefits gained from participating in this type of therapy. It is important to fill this gap in the literature by allowing children to share their voices of how equine assisted therapy affects them. According to Lundy and McEvoy (2011), children's voices are often overlooked; therefore we may miss valuable insight into the ways in which equine assisted therapy affects them and their lives. Limitations include the lack of demographic information about the children that participated in the studies, reliance on self-report data, and variation in the ways that the interventions were administered.

A child-based approach was designed in order to focus the study on understanding the experiences from the perspectives of children who participate in EAT. The study was designed to provide a method for the children to share their stories by participating in photo-tour of the facility in which their equine assisted therapy sessions took place. The photo-tour was followed by an interview with the researcher about the photographs the children had taken. The entire interaction with each child took place at the riding facility and lasted about one hour. This design was chosen in an attempt to make the experience as fun as possible. The photo-tour directed by the children was meant to provide them with as much control as possible over what they wanted to share about their experiences of participating in equine assisted therapy.

### **Personal Reflection**

*Equine assisted therapy is a line of work that is near and dear to my heart. Ever since I was a little girl, horses have been my greatest passion. My love for horses and horseback riding began when I had the opportunity to go horseback riding for my friend's seventh birthday and that passion continued to grow in the years that followed. My parents bought me my first horse, Sheba, at the age of nine and over the years our barn has expanded to include four more horses. As I got older and neared high school graduation, I felt the pressure of deciding what career path I wanted to follow. The best advice I received from my parents was to think about what I was most passionate about, and turn that my career. While reading a story from the book Chicken Soup for the Horse Lover's Soul, I learned about equine assisted therapy. It was then that I realized exactly what I wanted to pursue after completing high school. Upon moving to Halifax after graduation, I started volunteering every week with the Halifax Area Leisure*



*Therapeutic Riding (HALTR) program. Despite the many early Sunday mornings, I loved every minute of getting to work with horses and children with special needs. Over the past eight years I have volunteered with HALTR off and on and have witnessed countless numbers of children benefit in more ways than one from participating in such a rewarding program. The time I have spent volunteering has been so gratifying to see these children get the opportunity to experience the fun of horseback riding, the joy of being in the presence of a horse, and the many other benefits that participating in this type of intervention can provide. My experiences volunteering with HALTR and my love for horses influenced my decision to pursue a thesis which would explore the experiences of children who participate in equine assisted activities. While it has been a long process to pull this all together, I thoroughly enjoyed meeting with the children and their families, and having the opportunity to bring their stories to light. I have learned so much in the process which has served to only deepen my belief in the benefits of equine assisted activities. My dream is to someday be able to start my own equine assisted therapy program to allow more children with special needs these same experiences and opportunities.*

## **Chapter 2**

### **Literature Review**

*"There is something about the outside of a horse that is good for the inside of a man."*

This famous quote from Sir Winston Churchill (Becker et al, 2003, p. 306) recognizes the therapeutic powers humans have discovered within horses, dating back to ancient Greece. The term hippotherapy is derived from the Greek word "hippos" meaning "horse." Hippocrates was the earliest that we know of who described the therapeutic qualities of horseback riding calling it, "a universal exercise with a healing rhythm" (Granados & Agis, 2011, p. 191). In the 1960s, therapeutic horseback riding facilities and programs emerged across Europe, Canada, and the United States using horses for physical therapy, and more recently for mental health, playing an increasingly important role in intervention.

The first equine assisted therapy organization to be formed in North American was the Professional Association of Therapeutic Horsemanship International [PATH Intl.], formerly known as the North American Riding for the Handicapped Association [NARHA]. It started in 1969 when a group of 23 passionate individuals recognized the need for an organization which would be the basis of information about therapeutic horseback riding for those facilities which had or wanted to implement programs for riding as a form of physical therapy (PATH International, 2012, Path Intl. History, para. 3). The Canadian Therapeutic Riding Association [CanTRA] was formed in 1980 by Dr. E. Butt who recognized the benefits of therapeutic horseback riding from articles he had read and programs he had witnessed in London, England. He created CanTRA to provide support to "individuals and groups through education, certification, insurance coverage, communication, and accreditation" (Scott, 2005, p. 23). Presently, CanTRA and PATH Intl. provide a basis for maintaining a safe environment, quality, and uniformity, assuring maximum benefit to participants in equine assisted activities or

therapy. As well, they provide certification for different levels of instructing and coaching, and registration as an equine assisted therapy program or center (CanTRA, 2012, CanTRA Certification and Education & Scott, 2005). The two most common forms of equine assisted therapy offered by centers in North America are therapeutic horseback riding and hippotherapy.

### **Current Approaches to Equine Assisted Therapy**

Both therapeutic horseback riding and hippotherapy have been used as interventions to aid children and youth with a wide variety of conditions including children with autism, cerebral palsy, Down syndrome, multiple sclerosis, muscular dystrophy, spinal cord injuries, brain injuries, communication disorders, amputations, developmental delays, and language delays, among others (Granados & Agis, 2011). However, while both forms of equine assisted therapy are used for therapeutic purposes, they differ in their overall goals. Since both therapeutic horseback riding and hippotherapy are included in the discussion of the literature to follow, it is important to illustrate or create a distinction between the approaches to understand the ways in which both are used to benefit children with developmental delays.

Therapeutic horseback riding [THR] can essentially be defined as recreational horseback riding lessons which are adapted for individuals with delays or disabilities. It is instructed by a professional riding coach along with volunteers who take on the roles of grooming, tacking, and leading the horse during the session, as well being side walkers for the participant to ensure their safety. Side walkers also assist with communication between the participant and instructor, and with the horse, to ensure the coach's instructions are followed. In THR the

participant is taught riding lessons, often in a group format or session. Riders are taught to balance in the saddle, equally distribute their weight in each stirrup in order to sit correctly through the horse's different gaits, and to use the reins and their legs to communicate with the horse (Scott, 2005). Physical benefits of THR include improved strength, endurance, agility, and improved balance and posture. There are social and psychological benefits as well. Participants interact with their side walkers and other children at the barn, not to mention with the horses and other animals. Riding a large animal builds confidence and morale, teaches emotional control, and coordination to maneuver the horse around the arena or obstacles (Scott, 2005). While there are these benefits to therapeutic horseback riding, the main focus is on riding skills and setting riding goals.

Hippotherapy is defined by The American Hippotherapy Association (2010) as a "physical, occupational, and speech therapy treatment strategy that utilizes equine movement" (Hippotherapy as a Treatment Strategy). Hippotherapy is lead by a professional therapist (occupational therapist, physical therapist, or speech language pathologist) in conjunction with a professional horse handler and a specially screened and trained therapy horse (Grandos & Agis, 2011, & Scott, 2005). Similar to therapeutic horseback riding, hippotherapy is adapted to the individual needs and therapy goals of the rider. Hippotherapy requires hands on participation from the therapist at all times where the treating therapist continually assesses and modifies the therapy based on the participant's responses. Goals in hippotherapy can include, but are not limited to, improving the following: neurological functioning, body movement, social functioning, and attention levels (Grandos & Agis, 2011). Although children and youth participating in hippotherapy may learn basic riding skills, hippotherapy is not

intended to teach horseback riding lessons. The focus is on the treatment of participant and setting specific therapeutic goals.

The latest literature suggests that equine assisted therapy can be used to treat a variety of developmental delays and disabilities; however, most literature places a major focus on the effects of equine assisted therapy on children and youth with autism spectrum disorder [ASD] (Bass et al, 2009; Dingman, 2008; Gabriels et al, 2012; Kern et al, 2011; Taylor et al, 2009) or on children and youth with cerebral palsy [CP] (Debusse et al, 2009; O'Brien & Kreger, 2010; Zadnikar & Kastrin, 2011). In addition, there are studies focused on the use of EAT for children with Down syndrome [DS] (Champagne & Dugas, 2010), intellectual disabilities [ID] (Giagazoglou et al, 2012), and language learning disabilities [LLD] (Macauley & Gutierrez, 2004). Before examining the ways in which equine assisted therapy is used specifically for children with these diagnoses, it is important to review the typical developmental characteristics of children.

### **Typical Development Patterns**

Although every child follows their own unique course of development, most follow a predictable development sequence from infancy through to adulthood. Theorists such as Erik Erikson and Jean Piaget have created developmental theories with distinct stages to describe children's characteristics as they develop (Mooney, 2013). The work of both these theorists continues to be influential in defining the typical developmental patterns of individuals today (Mooney, 2013). The descriptions of children illustrated in the theories of Piaget and Erikson

are useful frameworks to apply when discussing children as they go about exploring their day-to-day experiences.

Erikson developed a psychosocial theory of development emphasizing that the early years of childhood are critical in children's development of trust, autonomy, initiative, and identity (Mooney, 2013). Erikson's first stage of development includes children from birth to twelve months of age and is called Trust versus Mistrust. He suggests that babies within their first year need to develop a sense of trust in themselves, in other people, and in the world around them. The second stage, Autonomy versus Shame and Doubt, includes children ages 1 to 3 years. During this stage individuals need to experience the developmental task of gaining a sense of autonomy or independence without suffering from extremes of shame and doubt. The third stage includes children 3 to 6 years of age and is called Initiative versus Guilt. It is during this stage that children can acquire a sense of purpose. The fourth stage in Erikson's theory is the final of childhood. It includes children ages 6 to 11 years and is called Identity versus Inferiority. It is during this stage that children can develop an identity associated with confidence and competency versus role confusion (Mooney, 2013). Erikson believed that successful or unsuccessful resolution of each stage would positively affect the following stages. For example, if trust was built with an adult and attachment needs were consistently met in infancy, an individual would develop a greater capacity for empathy (Mooney, 2013).

Piaget is known for his cognitive development theory, based on the argument that children's interactions with their environments create learning (Mooney, 2013). He believed that in order for children to develop and learn, they needed to do things for themselves. The

first stage in Piaget's theory includes children birth to 2 years of age and is called the sensorimotor stage. During this stage, children learn primarily through their senses, reflexes, and through manipulating materials. They rely on their senses and physical activity to learn about the world around them (Mooney, 2013). The second stage includes children ages 2 to 7 years and is called the preoperational stage. During this stage, children form ideas based on their perceptions of their experiences rather than from what they have been told. Children in this stage often only think about phenomenon as relate to themselves and can only focus on one aspect or feature at a time (Mooney, 2013). The third stage includes children 7 to 11 or 12 years old and is called the concrete operational stage. During this stage children are able to form ideas based on reasoning and limit their thinking to objects and familiar events (Mooney, 2013). Finally, the fourth stage in Piaget's theory, the formal operation stage, includes individuals 11 or 12 years and is characterized by the ability to think conceptually and hypothetically (Mooney, 2013).

Similarly, Erikson and Piaget both developed theories of play. It is important to briefly examine these theories because play is an important part of how children learn and develop (Christie, Johnson, & Wardle, 2005). According to Erikson, children's play progresses through stages which follow the same stages as their psychosocial development. During the first stage of development (birth to 12 months), children focus on their own body which leads to improvements in their sensory and motor skills. During the second stage (1 to 3 years), children expand their play to include toys and other objects. During the third stage (3 to 6 years) and beyond, children extend their play to include other individuals which enhances their social development. Erikson argued that during play children create made-up situations that allowed

them to deal with real-world situations and help them to progress through the stages of psychosocial development. Piaget related children's play to their cognitive development. He argued that during the sensorimotor stage (birth to 2 years) children are focused on making connections between actions and objects. During the preoperational stage (2 to 7 years), although their thinking is not completely logical, they are able to form mental images of things that are not present. They are also able to identify symbols which allow them to engage in symbolic or make-believe play. Finally, during the concrete operational stage (7 to 11 years), children develop the ability for logical thinking which allows them to participate in games with rules.

Play can be both serious and silly (Ford, Tesch, & Carter, 2011). Play is serious in that it can help children make sense of their world through hands on discovery and exploration. On the other hand, play is silly because it can be a source of humour, laughter, happiness, and fun. According to Lieberman, playfulness is a personality characteristic which can be made up of five traits. The first trait is physical spontaneity which is the coordination of body movements. The second trait is social spontaneity which means being able to get along and play with others. The third trait is cognitive spontaneity which means being imaginative and able to think flexibly. The fourth trait is manifest joy which can be demonstrated by laughter and expressions of happiness. The fifth trait is a sense of humour which is an appreciation of comedy and fun (Christie, Johnson, & Wardle, 2005).

Erikson's and Piaget's theories of play and development, along with Lieberman's notion of playfulness, provide us with a framework to discuss the typical developmental characteristics



of childhood. By understanding typical developmental characteristics of children we are able to recognize the similarities as well as the differences that characterize children at different stages of development. As well, professionals are able to observe children who are not demonstrating typical developmental patterns, determine a diagnosis and support plans for interventions to support with that child's development (Mooney, 2013).

### **Diagnoses Defined**

Autism spectrum disorder is a neurological condition characterized by deficits in social, communication, and motor skill functioning. Common features include lack of social awareness and communication, deficits in sensory integration, and inability to initiate directed attention (Kern et al, 2011). Many families and individuals with autism are turning to a variety of intervention options, including equine assisted therapy. EAT is used to aid social development and other deficits associated with autism. The stimulating environment and socially interactive nature of the sessions, which require the child to provide instructions to the horse, and interact with volunteers and instructors, promotes communication and focus on accomplishing specific goals (Bass, 2009; Gabriels et al, 2012; Taylor et al, 2009).

Cerebral Palsy (CP) refers to a range of conditions which affect posture and motor functioning in individuals that is caused by deficits in the developing nervous system. As a result of these deficits, individuals can exhibit chronic muscle imbalance and deformities which may hinder their ability as developmental expectations change. Secondary consequences may also be evident in individuals with CP, such as, cognitive and sensory impairments, speech and language disorders, orthopaedic complications, and epilepsy (Zadnikar & Kastrin, 2011). For

children and youth with CP, equine assisted therapy, particularly hippotherapy, is used to promote muscle strengthening and stretching and to improve posture and agility. Riders may be placed in various positions on top of the horse such as prone, side laying, side sitting, sitting, or backward sitting (to achieve specific postural responses). The movement of the horse is essential to assist with meeting physical therapy goals as it is used to promote the employment of specific muscles as the rider continually responds to the horse's movements, adapting postures to maintain body control. In addition, the gait of the horse has been shown to closely resemble that of human walking. When horses walk, their center of gravity is displaced three dimensionally, a pattern similar to the movement of the human pelvis during this gait, which stimulates the riders postural muscles for better posture and trunk control, promoting better balance, and improving sensory integration and organization (O'Brien & Kreger, 2010). As well, the body temperature of a horse generally measures four to five degrees warmer than that of the human's body, which can help to reduce spasticity and stretch muscles as the warmth promotes muscles relaxation and eases tension. A bareback pad, which is a thin cloth pad placed on the back of the horse in riding without a saddle, is often used to allow the rider a closer connection to the horse's body and heat (Scott, 2005).

Similar to those with CP, individuals with Down syndrome (DS) often experience motor deficits which result in slower movements and reaction times, as well as poor balance and posture which persist through adulthood (Champagne & Dugas, 2010). EAT has been successfully used as a form of intervention for children with DS to improve their gross motor functioning, particularly in areas of walking, running, and jumping, as well as to improve head and trunk control (Champagne & Dugas, 2010). Attempting to sit steadily on top of a moving

horse strengthens muscles, improves balance, and promotes better posture which in turn attribute to the improvements overall in gross motor function and control.

EAT has also been used to aid in improving balance and strength of individuals with intellectual disabilities (ID) (Giagazoglou et al, 2012). ID results from an under development of the brain which can affect both cognitive and motor functioning, and individuals with ID are commonly less active and less fit than the general population. As in the cases mentioned above, the movements of the horse promote an improvement in areas of balance and strengthen of muscles as riders are required to engage muscles they may not generally use to stay seated and balanced as the horses.

Finally, EAT can be used to aid individuals with language learning disabilities (LLD). LLD is defined by the Language Learning Disabilities Association of Canada (2002) as an intellectual deficiency and can refer to multiple disorders which affect the, “acquisition, organization, retention, understanding or use of verbal or nonverbal information” (Official Definition of Learning Disabilities, para. 1). EAT sessions for children with LLD often mimic the types of activities and use of the same materials as in traditional clinical based therapy settings, the main difference is that these activities are completed on top of a horse. Materials such as: picture, word, and letter cards; lap desks with pencil and paper; and small dry erase boards are used by the child when seated on the horse while the horse is stationary or walking around. Compared to traditional clinical based therapy sessions, EAT can be more motivating for the child’s attendance and active participation in the therapy because the environment in which it takes place may be exciting and nontraditional. In addition, the chance to be around animals

and the ability to ride a horse provides a positive stimulus to participate in this type of therapy (Macauley & Gutierrez, 2004). Therapy undertaken atop a horse can also increase learning potential as the constant and repetitive movements of the horse walking can stimulate the sensory motor system, allowing the nervous system to build physical and cognitive responses (Macauley & Gutierrez, 2004).

### **Existing Research**

Equine assisted therapy is still an emerging form of intervention for children with various developmental delays. Despite this fact, existing quantitative and qualitative research studies provide insight into the uses and outcomes of EAT as a form of intervention. Although the goals of EAT vary to suit the individual needs of participants, the literature shows that there are many similarities amongst studies in regards to practice, which includes the activities and formatting of the EAT sessions, and in the overall duration of sessions. In addition, all of the studies examined reported positive outcomes in the results and reported gained benefits for the individuals participating in the studies. For example, Bass, Duchowny, and Llabre (2009) examined the affects of therapeutic horseback riding on social functioning in children with Autism Spectrum Disorder. Based on the results of their study and the reported benefits gained by the participants, they determined that equine assisted therapy was an effective form of intervention for aiding in sensory integration, directed attention, social motivation, and sensory sensitivity, as well as a decrease in inattention and distractibility. Similarly, Gabriels et al (2012) identified that therapeutic horseback riding as a form of intervention can have significant results for children with ASD, specifically in areas of self-regulation, and adaptive expressive

language skills, along with motor skills and verbal praxis/motor planning skills. These similarities in practice and duration, along with the potential benefits of participating in EAT will be explored to gain an understanding of how this type of therapy can be used as an effective form of intervention for children and youth with developmental delays.

Similarities in intervention practice were demonstrated throughout a majority of the studies examined, such as playing games on horseback. Simon Says, Red Light/Green Light, and Follow the Leader were commonly used to promote development of both motor and social skills. Helping to tack up the horse, as well as grooming before or after, was widely practiced to enhance fine motor skills, language and speech development, ability to follow directions, social interaction, and sensory integration. Allowing interactions with the horse before or after the ride was used to promote social development.

The intervention durations were also similar amongst many quantitative studies. While the overall duration of the interventions lasted anywhere from 6 to 24 weeks, the total number of hours spent participating in sessions for individual interventions typically ranged from 10 to 12 hours. However, there were a few studies which did not fall into this average range. Kern et al (2011) conducted their sessions over a 24 week period, making it the longest study duration. The research by O'Brien and Kreger (2010) fell below the average range, totaling only five hours of sessions for their study. Similarly, the study by Champagne and Dugas (2010) totaled five and a half hours. Reasons for session length and overall duration of the interventions were not discussed in any of the studies except O'Brien and Kreger (2010). They specifically set out to determine the effects of a shorter than average intervention on the gross motor function of a

child with cerebral palsy, thus O'Brien & Kreger chose an interval below the standard range of 6 to 18 week interventions. The results of their study suggested that five weeks of therapeutic horseback riding was enough to positively benefit the gross motor function of a child with cerebral palsy. Despite the range of intervention sessions, research results suggest that equine assisted therapy can be a successful form of intervention, at least in the short duration, for aiding with educational, physical, psychological, and social development in children and youth with developmental delays.

While educational benefits may not be a primary focus in many of the studies, there are educational opportunities apparent throughout some of the research examined. Playing games and learning horsemanship skills allows individuals the opportunity to exercise math and reading skills, along with practicing certain shapes, size, and color recognition (Granados & Agis, 2011). For example, children might be asked to count the horse's steps or identify objects on the ground (Granados & Agis, 2011). Granados and Agis (2011) use a theory of neuronal group selection to explain how hippotherapy can aid learning. They argued that hippotherapy provides a multisensory environment which promotes the formation of new connections within the brain by stimulating multiple systems, such as the muscular, limbic, ocular, sensory, skeletal, and vestibular. These new connections allow for increased learning of new skills and knowledge to be applied in other environments.

Particularly for children and youth with physical disabilities, the environment and treatment style of therapy astride a horse can have an array of positive physical benefits. Strengthening and stretching muscles, increasing agility, and improving posture were reported

for children and youth with cerebral palsy and Down syndrome, as well as those with intellectual disabilities (Champagne & Dugas, 2010; Debuse et al, 2010; Giagazoglou et al, 2012; O'Brien & Kreger, 2010; Zadnikar & Kastrin, 2011). Specifically for children with CP, EAT might be effective because the process of riding replicates pelvic movement similar to the movement patterns produced of the human gait during walking. The trunk control required for the development of walking is gained through varied experiences. Riding atop a horse can provide a similar experience necessary to develop the trunk control associated with walking (Debuse, Gibb, & Chandler, 2009). Improvements in standing, walking, running, and jumping were also reported in multiple studies focused on CP, as well as, improved posture (Champagne & Dugas, 2010; Debuse, Gibb, & Chandler, 2009; O'Brien et al, 2010). In addition, interaction with horses can provide an intense sensory experience through touch, smell, vision, and hearing which can aid in a child's overall development (Debuse, Gibb, & Chandler, 2009).

For individuals with ID who have deficits in motor functioning, the results of the research show that hippotherapy was successful in significantly increasing balance, particularly when standing on one leg, and strengthening lower limb muscles in this regard (Giagazoglou et al, 2012). The authors argue one reason for the success of hippotherapy is due to the alternative form of exercise provided by a horse's movements that create a complex sensory motor stimulation which is difficult to replicate in a traditional therapy setting. In addition, they argue that the unique nature of the therapy (i.e. being able to form a relationship with the horse; engaging in a recreational activity) and the enjoyment from participating might provide encouragement for adolescents with ID to continue on with this type of therapy longer and more consistently than with traditional therapies.

Similarly, Macauley and Gutierrez (2004) argue that hippotherapy is one form of intervention that has the potential to provide a full body system experience for children with LLD, as the consistent and repetitive movements of the horse can often stimulate the sensory-motor system to allow the nervous system to construct physical and cognitive responses. The primary focuses of Macauley and Gutierrez (2004) was to determine if using hippotherapy as a form of intervention for children with LLD would result in an improvement in speech and language abilities, children's motivation to attend speech-language therapy, and improved self-concept following hippotherapy. In addition, they sought to determine if hippotherapy would be less effective, more effective, or as effective as traditional clinical therapies.

Although psychological benefits were not measured using formalized tools, many authors reported gains from participating in equine assisted activities. For example, Dingman (2008) reported the participants enhanced feelings of empowerment from gaining a sense of control over their body, as well as control over the environment as they maneuvered a horse around. In addition, EAT provided the opportunity for children to participate in a recreational activity that does not seem like a traditional therapy session. EAT can also be therapeutic as it has been shown to promote the release of endorphins which produce feelings of happiness (Granados & Agis, 2011). Additional psychological benefits reported include: reduction of stress and the need for pain-relieving medication; positive effects on speech and language abilities; improvement of motivation and attention (Granados & Agis, 2011).

Dingman (2008) discussed the increase in self-esteem and confidence that can result from equine assisted activities. She reported such effects for a six year old child with autism



who had low self-confidence and social anxiety. For her, “developing a bond with a horse was all she needed to open up to other riders at the barn” (Dingman, 2008, p. 13). In a society where children with disabilities are often not given the opportunity to take the lead or make decisions on their own, therapeutic horseback riding gives them opportunities to be in control, “It is empowering to be handed a horse that looks to you for direction and guidance” (Dingman, 2008, p. 13).

Social benefits were the main goals of the majority of studies focusing on children and youth with autism (Bass et al, 2009; Dingman, 2008; Kern et al, 2011). However, many of the studies focusing on other conditions similarly reported the social improvements made during the course of the intervention. One way in which participants socially benefited was through the formation of friendships with the horses used in the riding programs. This type of relationship can allow individuals to express their thoughts, feelings, and emotions with a non-judgmental being, without fear of criticism, and can promote mutual trust, respect, love, affection, security, and self-control. Horses by nature are patient, loyal, and quiet animals that have a unique way of listening that can aid in drawing a child out of their shell as they engage with the animal. The special relationships often formed between the horses and children can in turn aid a child in feeling more comfortable with people as they learn, through interactions with horses, how to trust and communicate with another living being (Dingman, 2008). Relationships were also built with the volunteers and helpers involved in the equine assisted therapy sessions, as human communication with the participant was essential to ensure their successful communication with the horses (Bass et al, 2009).

Significant improvements in sensory integration, directed attention, social motivation, and sensory sensitivity, as well as a decrease in inattention and distractibility were recorded for many of the participants across studies (Bass et al, 2009; Gabriels et al., 2012; Kern et al, 2011). Significant results were also identified in the areas of self-regulation, adaptive expressive language skills, motor skills, and verbal praxis/motor planning skills. One parent's report from an exit interview sums the noted improvements in self regulation, "He has been very happy, calm, and has had less school anxiety. He has been in a great mood" (Gabriels et al, 2012, p. 586). Improvements in adaptive communication were also reported, "She seems to be asking more instead of just doing" (Gabriels et al, 2012, p. 586). Lastly, an increase in volition to engage in everyday activities from beginning point to the end of the sessions was reported amongst the case studies (Taylor et al, 2009).

### **Limitations and Gaps in the Literature**

While the results reported in the literature are consistent, there are several limitations in the literature. These include a lack of demographic information for the children included in the studies, the reliance on self-report data, and variation in the ways in which interventions were administered. One primary gap in the literature is a lack of qualitative studies that describe the experiences of the children participating in EAT from the children's perspectives. These limitations and gaps will be explored to gain an understanding of what is missing in the literature and to identify what is needed for future research.

First, a common limitation seen throughout the majority of the research is the lack of demographic information provided. Very few studies included information on parental

education, economic status, ethnicity, or even horse experience. For example, Champagne and Dugas (2010) provide include details that the participants were from Quebec; however, they neglect to include any other demographic information. These are all important factors to understanding how the results of a study can be generalized, potentially meaning the results might not be a good representation of the greater population. Similarly, small sample size was common in many of the studies and is an additional factor which can affect the generalizability of the results. For example, a study by O'Brien and Kreger (2010) is a single case study which focuses on one participant, while Champagne and Dugas (2010) focus their study on two participants.

Second, self-reported data was common in many of the studies as parent rated measures were often used to assess participant affects. The study by Macauley and Gutierrez (2004) used two versions of a client satisfaction survey; one completed by the children and the other by the parents. Similarly, parents completed pre and post-test measures in the study by Bass et al (2009). This is a limitation because self-reported data may include bias that could be verifiable only if additional methods of inquiry were also used, such as observation, interviews or standard measures.

A final limitation to the research is the way in which the interventions were administered. Although many of the practices were similar across studies, there remains variation in the training of the interventionists conducting the sessions. Most studies used the certified equine assisted therapy instructor of the facility they were utilizing to administer the sessions, however, the level of training of these individuals and their experience varied. Other

studies did not use a certified instructor at all, but rather a speech language or occupational therapist, as in the case of the study by Champagne and Dugas (2010). In addition, the level of expertise of the leaders and side walkers varied. Some studies used the trained staff and volunteers of the center (Bass et al, 2009; Gabriels et al, 2012; Taylor et al, 2009; Macauley and Gutierrez, 2004), while another used the inexperienced parents of the participant (O'Brien et al, 2010). It is clear that there is vast variation in the training and certification of the individuals administering the sessions which means that there is lack of standardization across studies and differences in approach, thus creating the potential for variation and limits the generalizability of the results.

Additionally, there is limited number of published research studies in the area of equine assisted therapy. Perhaps this is because EAT is still emerging as a form of intervention for children with special needs. The most recent literature is generally comprised of quantitative studies which used surveys and pre-existing tools to measure the developmental differences in children and youth with developmental delays, pre and post intervention or compare results of a treatment group to a control group. For example, O'Brien and Kreger (2010) used the Gross Motor Function Measure both pre-and post intervention to measure the affects of therapeutic riding on gross motor function of children with cerebral palsy. Similarly, Gabriels et al (2012) used pre-existing measures to assess the affect of therapeutic horseback riding on children and youth with ASD. The researchers used the Aberrant Behavior Checklist-Community to measure for self-regulation, the Vineland Adaptive Behavioral Scales – Interview Edition Survey Form to measure for adaptive skills, and the Bruininks-Oseretsky Test of Motor Proficiency and the

Sensory Integration and Praxis Test to measure motor skills, which were administered to both a treatment and control group so the results could be compared.

There are very few qualitative studies accessing the perspectives of children that provide insight into the experiences of the users who engage in equine assisted therapy. As a result there is a lot of quantitative data available; however, inclusion of the voices being heard has been overlooked. Although it is important to have access to and understand quantitative research, it is similarly important to understand the stories and experiences of the individuals involved. This type of research is needed to help build the foundation for continued research, both qualitative and quantitative, to provide further and reliable evidence as to whether EAT is consistently a successful form of intervention for children and youth with disabilities. Such evidence might be necessary to gain government funding for more families to be able to access this type of intervention, and to create more public awareness of this alternative form of intervention.

Along with limited use of qualitative methods is the lack of child-based approaches, meaning that valuable insight may be overlooked in the research. Based on the Convention of the Rights of the Child (United Nations, 1989), children have the right to express their views on any matter concerning them; therefore it is important to ensure that future research be conducted using a rights based approach since the use of equine assisted therapy is utilized by children and youth. Awareness of the limitations and gaps that exist for the current literature on equine assisted therapy is necessary so that future researchers can close the gaps that

currently exist in the research by allowing individual experiences to be shared and voices to be heard, particularly from the perspective of the child.

### **Child-Based Approach**

Although equine assisted therapy can be utilized by individuals of all ages, children and youth with special needs account for the majority of the population utilizing EAT as a form of intervention (Scott, 2005). Child's rights based research is focused on encouraging children to participate in all aspects of a study in order to allow them to share their perspectives (Smith, Duncan, & Marshall, 2005). This approach also focuses on children's rights as outlined in the Convention on the Rights of the Child (Lundy & McEvoy, 2011). Since the current study focuses on children's perspectives and experiences, a child focused research framework has been developed which utilizes photography and dialogue as an avenue for children to share their stories. Research conducted on children often does not sufficiently embrace or represent their perspectives, which mean that the research may be missing an element of accuracy (Lundy & McEvoy, 2011). The majority of the research studies examined in this review used an adult based approach which required parents or researchers to respond to questions and administer measures on behalf of the child. Only one study used both an adult and child-based approach as the researchers designed a satisfaction survey that was given to both parents and children participating in the study (Macauley & Gutierrez, 2004). This lack of studies that provide a child-based approach demonstrates that there is a gap which needs to be filled to allow insight into the experiences and perspectives of children using EAT. According to Lundy and McEvoy (2011) researchers often choose to exclude children from their research because they feel that the

scope of the research is beyond their comprehension level, or decide not to aid the children in an informed understanding about the research in an attempt to avoid the development of a superficial or biased view. Despite the tendency to exclude children from research for these and other reasons, it is essential that a rights based approach be considered for all matters of research affecting children.

The Convention on the Rights of the Child (United Nations, 1989) is an internationally recognized legal document outlining the rights and freedoms of children around the world, which can be used as a guide when conducting research with children. Article 12 under the convention advocates children the right to not only have the opportunity to express their views, but to have their views taken seriously on all matters that affect them (Lundy & McEvoy, 2011). In addition, Article 5 posits that children have the right to be supported and guided by adults while Article 17 states a child's right to access of information (Lundy & McEvoy, 2011). Collectively, these three articles indicate that children have the right to not only share their perspectives and views, but that they have the right to be aided by an adult in the formation of those views through information which will grant them a better understanding and the ability to construct a view on matters concerning them. For example, this study was designed to allow children to share their perspectives by leading the researcher on a photo-tour of the facility where they attended EAT sessions, and then participating in dialogue about their photographs. This allowed each child to share their stories and perspectives as they wished to share them. However, each child was accompanied by a parent who was there to support and guide them should they need clarification or help understanding what was being asked of them.

One way to allow children to contribute their voice in research is through the use of photography. A study by Clark (2001) used photography as a way to explore children's perspectives allowing children to take pictures of things they deemed as important. Stephenson (2013) used a camera to allow children to take her on a photo-tour in which they directed her to take pictures of their favorite places, often times with them in the photographs. A review of the use of photography in research with children revealed that this approach was popular and appealing them, resulting in perhaps greater interest and participation in the research (Clark, 2001; Paige-Smith & Rix, 2011; Stephenson 2013). According to Stephenson (2013), it was the use of photography that allowed the children to engage in and direct the research, and to open up conversations about the content of the photographs, allowing for insight into their experiences and perspectives which may not have otherwise been expressed through alternate forms of research, as communication for children and youth with special needs may potentially be a challenge.

Based on an understanding of the importance of conducting research from the perspective of the children involved in the EAT, as well as to address the gaps in the literature, this study has used a child-based approach that is qualitative in nature and focused on allowing children voices to be heard regarding their experience participating in equine assisted therapy.

The study will address the following questions:

1. What are the experiences of children with special needs who participate in equine assisted therapy as a form of intervention?
2. How does participating in this type of intervention make them feel?



3. What is their favorite thing about participating in EAT? What is their least favorite aspect?
4. Are there any benefits gained from using EAT as a form of intervention? Are there any negative effects from using EAT as a form of intervention?

## **Chapter 3**

### **Method**

This research study was conducted using a qualitative approach designed to allow the voices of children with disabilities to be heard. Participants shared their stories and experiences with equine assisted therapy by completing a photo-tour of the riding facility of their equine assisted therapy program. Photographs included for example, a child's favorite space, equipment, animals, and/or activities, with or without him/her present in the photographs. Following the photo-tour, the children chose their favorite pictures and told their unique stories during the interview.

### **Participants**

The researcher aimed to include between four to eight participants in the study, eighteen years of age or younger. Five children were included in the study: a 13 year old girl diagnosed with epilepsy; a 10 year old girl diagnosed with Autism Spectrum Disorder; an 8 year old boy being tested for Autism Spectrum Disorder; and two 5 year old boys twins born pre-mature with hydrocephalus, are blind, and have mobility, speech, and cognitive delays. One of the boys has also been diagnosed with Autism Spectrum Disorder. The participants were children with developmental delays who were enrolled and participating in the equine assisted therapy programs in Nova Scotia at the time of the study. Three out of five children were able to participate in all components of the study, while two of the children (5 year old boys) were unable to participate in the photo-tour and interview due to physical and cognitive delays. Instead, their mother participated in an interview on their behalf with the researcher. The

participants were between the ages of five and thirteen years old. Families participating at three out of the existing nine EAT programs located in Nova Scotia, volunteered to participate in the study.

## **Procedure**

**Recruitment.** Approval to conduct the study was obtained from the University Research Ethics Board (UREB) at Mount Saint Vincent University (MSVU). To gain entry into programs and access to the participants, contact was made with the program director of each center to recruit interested parties. Upon receiving third party consent, the directors were asked to determine those families who were interested in participating in the study. The program directors then provided interested families with the introductory letter along with researcher contact information should they consider participation. In addition, posters were displayed around the participating centers requesting interested parties to contact the researcher. As compensation for participating in the study and to potentially increase the number of interested participants, a video was offered utilizing the child's photographs to portray their story digitally and provide a memory keepsake of their time involved with equine assisted therapy. Completed videos were sent to participants via email or on a DVD.

Upon contact from interested families, questions were answered and a session was scheduled to meet at the riding facility at a mutually agreed upon day and time. Upon meeting at the facility, any additional questions were answered followed by an explanation of the focus and procedures of the study to the child. Consent was then gained from the caregiver(s) and assent was gained from the child. The meeting also allowed the child to get comfortable with

the researcher and for the researcher to familiarize the child to the camera. Families had the option to reschedule or schedule a continuation or follow up meeting to finish the photo-tour and interview if needed, however, none of the families required an additional meeting. The photo-tour and interview were completed with all participants during the first meeting.

**Ethical considerations.** First, informed consent was obtained from a parent or legal guardian before commencing in the research study; as well, assent was obtained from the child to support the child based research method focusing on their views and experiences (Miller, Drotar, and Kodish, 2004). Assent from the child was ongoing throughout the process and children were assured that they did not have to answer any question they did not wish to answer. Second, since the participants were minors, a family member or members were present during the entire process. Third, for confidentiality purposes, names of the children are kept anonymous in any publications of the study. In addition, names of all the children, programs, staff, and animals were replaced with pseudonyms. Fourth, invasion of privacy was minimized by informing the participants and their family members that the objective of the study was for them to tell their story, so they were not obligated to share anything they did not wish to tell.

### **Data collection**

Rapport was first established with the child. This was achieved by the researcher introducing herself to the child and engaging the child in conversation about themselves. The researcher worked as an early childhood educator in an inclusive child care setting and had eight years of experience volunteering with an equine assisted therapy program at the time of

the study. Therefore, she had experience engaging with many children. The researcher watched for signs of rapport being established such as the child responding positively to questions, and visibly relaxing (Paige-Smith and Rix, 2011). The researcher also watched for signs that the child did not want to participate such as being upset, tired, and uncomfortable, and allowed families the option to quit or reschedule for a later date. Receiving informed assent from the child to participate in the photo-tour and interview was viewed as one sign that rapport had been established. After rapport was established with the child, a photo-tour was the first step in data collection. A caregiver was present with each child during the photo-tour; however, it was made clear to them upon initial meeting that the study was child-based research which meant it was very important for the child to be in control with as little adult interference as possible. The researcher explained that she wanted to gain an unbiased perspective of the child's experiences and to allow his/her voice to be heard. The child had the choice to either use the camera to take pictures them self, or to direct the researcher of what to take pictures of for them. Three of five the children chose to take the photographs themselves. They also had the choice to be in any of the photographs should they wish. To commence the tour, the child chose where to begin. Children were asked to start the photo-tour in simple terms so they would comprehend what is being asked of them, for example the researcher asked, "Can you take me on a tour of the center and take pictures of what you do when you come here?"

After the pictures were taken and the tour was completed, digital photos were uploaded to a laptop for the child to review with the researcher. The child then picked out 10 or so of their favorite photos to help explain their experiences of participating in equine assisted therapy. The researcher used language such as, "Using these pictures, tell me a story about

your experiences horseback riding.” While the aim was to allow the story to be their own and for them to choose what experiences to share, several open ended questions were prepared as probes in an attempt to stimulate dialogue should it be necessary. Examples of probe questions were: Can you tell me what is your favorite thing about coming to the barn? Which of the animals are your favorites? What is your favorite thing about horseback riding? How do you feel on days you get to go horseback riding? How do you feel before horseback riding? How do you feel after you go horseback riding? It was also necessary to ask questions to the parents or have the parent interpret what their child meant or was saying depending on the child’s ability to communicate. Although it would be the ideal to have all the questions directed to and answered by the children, there were scenarios when parents were required to assist.

The dialogue was conducted at the riding facility so that it was in the natural setting of where the program takes place, and in an attempt to make the participants as comfortable as possible by being in a setting that was familiar to them and relevant to the research topic. The child was given the choice of where the discussion would take place in the facility. For example, in the farm house, the tack room, sitting on bales of hay, or in outdoors by the riding ring. Participants decided where they would like to conduct the interviews so it was most comfortable to them. The interviews were audio recorded and later transcribed.

**Materials.** This study required the use of technological materials to collect the data. A digital camera with a memory card was used so that the pictures could be saved to the card and transferred for immediate viewing. A laptop was used to view the pictures saved to the memory card, and 10 or so favorite pictures were selected and copied over to a folder on the laptop where they could be enlarged and flipped through to tell their story. The pictures were

numbered and referred to by their assigned number, for example, “Can you tell me about picture number 1?” for audio recording and review purposes. The iPhone application Voice Memos was used on an iPhone to digitally record the audio from the dialogue of the storytelling/picture review.

## **Analysis**

A thematic analysis was conducted by the researcher using a web-like thematic network (see Figure 1) to summarize the main themes of the interviews/dialogue into basic, organizing, and global themes (Attride-Stirling, 2001). Basic themes are the lowest-order that are found in a thematic network. They are derived from coding the textual data and represent the concepts that are recurring within the text. When examined on their own, basic themes do not provide much insight about the text as a whole. Instead, they need to be read and grouped together in the context of other basic themes to make sense. As they are combined, these basic themes form organizing themes (Attride-Stirling, 2001). Organizing themes are the middle-order of the thematic network, which serves to group the basic themes into sets of similar issues. Like basic themes, organizing themes are grouped together to represent an argument or position about the text. When organizing themes are grouped, they form global themes (Attride-Stirling, 2001). Global themes refine the main points of the text into a single statement. They summarize the lower order of themes identified from the data and provide deeper meaning of the text as a whole (Attride-Stirling, 2001).



*Figure 1: Structure of a thematic network.* From Attride-Stirling, J. (2001). Thematic networks: an analytic tool for qualitative research. *Qualitative Research*, 1, 385-405.

The researcher completed a thematic analysis in several steps. First, transcriptions of the recorded dialogue were completed verbatim by the researcher to allow the chance for early recognition of themes. Once transcriptions were completed, the researcher coded the material by devising a coding framework and then dissected the text into segments using the established coding framework. Second, themes were identified, refined, and arranged into basic themes which were then rearranged into organizing themes. Third, global themes were deduced by arranging the organizing themes. Forth, thematic networks (Attride-Stirling, 2001) were constructed and summarized by the researcher to illustrate the benefits experienced by children participating in equine assisted therapy: 1) meaningful relationships and connections;



2) positive experiences for the individual; and 3) opportunities for development. Finally, the researcher interpreted the patterns that were identified in each of the thematic networks.

After the completion of the thematic analysis of the dialogue, the researcher compiled and analyzed the photographs that were chosen by the children. First, the researcher coded the photographs that had been selected by the participants. Second, five themes were identified from the coded photographs: 1) horses; 2) other animals; 3) nature; 4) play; and 5) facility. Third, each of the photographs was sorted into one of the above categories. Fourth, the researcher created a table (see Table 1) to display how many photographs each participant took from each category. Fifth, two photographs from each category were selected and displayed in a collage (see Figure 2) to provide examples of each category. Sixth, the results of the photographs were explored and interpreted by the researcher.

Finally, case studies were prepared on each of the participants which were divided into several sections. First, each case study provided a brief introduction to the child and an account of the contact between the researcher and the parent when agreeing to meet for the study. Second, the researcher described meeting the child at the facility and the interactions that took place. Third, a detailed account was provided of the conversation surrounding the photographs the child took. The photographs that the child selected were included in this section along with the transcribed dialogue that pertained to each photograph. Fourth, a brief overview was provided of why the child participated in equine assisted therapy from information provided by the parent(s). The case studies were then revised to provide a

condensed version of each of the participant's experiences of participating in equine assisted therapy. The condensed version of each case study is included in the results section.

## **Chapter 4**

### **Results**

The purpose of this research study was to gain insight into the stories and experiences of children with special needs who participate in equine assisted therapy as a form of intervention. The results are organized into several sections. First, a case study has been composed for each child that participated in the study to provide insight into the experiences of each participant. Second, five themes representing the content of the photographs taken by the children is presented. Third, the results of the thematic analysis of the dialogue are arranged by each global theme: 1) meaningful relationships and connections; 2) positive experiences for the individual; and 3) opportunities for development. Pseudonyms have been used for all the participant, animal, and program names.

#### **Case Studies**

The following case studies provide a glimpse into the experiences of five children who participated in equine assisted activities. The first three case studies summarize the interaction that took place between the researcher and the child beginning from the arrival at the facility through the photo-tour and interview. Next, a brief summary is included in each of the first three case studies, of the types of photographs that the child took. Finally, each case study ends with an account from the parent of why their child participates in equine assisted activities. Two case studies, Evan and Carter, have been combined and are presented in a different format because the participants were twin boys with cognitive and physical delays that limited their participation in aspects of the study. Instead, their mother participated in an interview with the

researcher. The twin boy's case studies provide a summary of their experiences as told by their mother.

**Case study 1.** Jessica, a 13 year old girl, was already at the farm with her mother and older sister when I arrived. She had a therapeutic riding session earlier that morning and was inside the farm house getting warmed up. As soon as I was in the door to the farm house, Jessica and her sister jumped up from the table to greet me and introduce themselves. At first I thought that the girls were twins, but I was quickly corrected and informed that Jessica's sister was five years older than her and that she often volunteered at the farm. I met her mother in person at that time as well and they all started getting dressed in their outerwear to head outdoors to start the photo-tour. Our interaction took a little over an hour starting with introductions when I arrived at the farm, a description of the study protocol, the photo-tour, interview, and some fun after everything was completed.

After I showed Jessica how to use the camera, we all set off while Jessica led us through her photo-tour. She knew right away where she wanted to head to take her first photo and the rest followed quickly afterwards. She did not take many photos, but rather snapped the ones she knew that she wanted to use. Since that day there was another rider at the barn participating in a therapeutic horseback riding session with Sarah, I informed Jessica that we had to ensure that the other rider was not in any of the photos she took for confidentiality reasons. She understood and I gave her a chance at the end of our interview to tell me about anything she did not have the chance to photograph.

When Jessica was satisfied with the photos she had taken, she chose to go back in the farm house where it was nice and warm to review the photographs. Jessica, her mother, her sister and I sat down at the dining room table and set up the laptop to load her pictures onto the computer. While she had a good range of photographs to discuss, she had taken more photographs of the facility than of any other category (4 out of 12). For example, she took photographs around the facility of the places she liked to spend time, like riding to the old school where her friend used to attend, and the fire pit where she likes to have camp fires to roast marshmallows. She also took a photo of the carriage that she uses with the miniature horse Biscuit; Jessica rides in the carriage during times when she has had seizure activity. Finally, she took a photo of the room in the farm house that she stays in when she is at the farm for respite care. She said it was her favorite room in the house because it was painted her favorite color purple and also the official color of epilepsy awareness.

Jessica documented her favorite reasons for coming to the farm in her photographs. It was clear when she was talking about her photographs that being at the farm makes her happy and is a place she enjoys visiting as often and for as long as she can. Several times throughout our discussion over the photographs Jessica expressed that she wished she could stay at the farm and never had to leave. She talked about her favorite places, favorite activities, and favorite animals on the farm. Jessica repeated that she felt lucky that the therapeutic riding farm was close enough to her father's work to allow her to ride over to visit him.

According to her mother, Jessica has been diagnosed with Epilepsy (SCN1A-like variant) with Generalized Tonic-Clonic Seizures. Jessica has participated in therapeutic horseback riding

sessions in the same program for six years. On the demographic survey, Jessica's mother explained that there are many reasons why Jessica participates in therapeutic horseback riding. Examples include: 1) physical benefits to increase balance, mobility, and coordination; 2) social interaction with volunteers, instructors, and other participants to aid with communication skills; 3) the games and activities help with her cognitive thinking; 4) increased self-esteem and decreased stress; and 5) simply because of her love for horses. During casual conversation, her mother shared that the seizures that Jessica experiences have interfered with her reading abilities. Her mother appreciated the opportunities that Jessica has to use the therapeutic riding sessions to just relax on the horse and read. Her mother believed that these sessions have helped improved Jessica's reading skills and cognitive thinking.

**Case study 2.** Upon meeting Alison, a 10 year old girl, on the day we had scheduled to do the photo-tour and interview, she was excited to be at the farm. Our interaction took place over a one hour period. Upon arrival at the barn, we started with a brief introduction and review of the research study protocol followed by our interaction as Alison went through a typical day at the barn. While she was not there to ride that day, she wore a new pair of cowboy boots that her father had purchased for her at a thrift store on the way to the farm. She was very excited to show me her boots and informed me that although she enjoys riding western, she prefers to ride English. She was comfortable to talk to me on her own without her father directly by her side. During the photo-tour, Alison's father stayed within eyesight of us.

She was aware that she would be taking me on a photo-tour of the farm and came prepared with her own camera. We set off to take some photos. She was excited to take

photographs and had me running to keep up with her. Although she knew that in the end she would pick 10 or so photos to talk about, she ran around taking pictures of everything she could, including me. However, when I asked her if she wanted to be in any of the photos, she informed me that she did not.

After the photo-tour was complete, Alison chose to go to the tack room in the barn to review the photos. Although she had taken close to 100 photos, she knew quickly which ones she wanted to talk about. The majority of the photos she selected were of the horses (8 out of 12). At first, she was brief in her descriptions; however, she opened up more as the interview proceeded.

Alison talked a lot about the horses. She told me about riding through the different trails in the woods and how each trail is marked with a different color so you know what trail you are on and where it leads. Although she enjoys riding on the trails, she said her favorite place to ride is in the ring. She gets to practice and improve her riding skills there. She said she loves to trot around the ring and to use the cavaletti poles. Alison explained that the poles were used as a jumping exercise. She seemed to be knowledgeable about the equipment that they used for riding. She told me about the *Equine Connection Program* saddle they use for two people to ride together, the valtese bareback saddle, the cavaletti poles, the cart that they had for the large horses to pull, and a small cart they had for the miniature horse to pull.

According to her mother, Alison is diagnosed with Autism Spectrum Disorder, functioning on the high end of the scale. Alison has attended *Equine Connection Program* regularly over the past year. Her initial participation in the program started because of her

interest in horses. Alison's time at the farm has been used as an opportunity for Alison to practice her math skills. She does so by working on math problems while on top of the horse which is a motivation factor for Alison because she gets the reward of being around horses. Specific benefits of the therapeutic riding experience reported by her mother include: 1) self-esteem building; 2) mood enhancement; 3) positive social interactions; and 4) provides routine. Her mother reflected that the consistency of Alison's schedule grounds her and provides a positive event that she can share with her family.

**Case study 3.** From the first moment that I met 8 year old Liam, he was all smiles. Our interaction took place at the farm and lasted a little over an hour. Our visit included an introduction and a review of the study protocol, followed by the photo-tour and interview with Liam. While he seemed a little shy at first and stayed close to his mother's side, he opened up to me quickly. His mother stayed with us through the photo-tour and interview. After showing Liam how the camera worked, we set off to take some photographs.

Liam seemed to know right away where he wanted to go to take his photographs as if he had planned them prior to the tour. Towards the end, his mother suggested one or two places in general that he may want to photograph. For example, she asked him if he wanted to take any photos inside of the barn and he agreed, leading us into the barn and selecting the places and items in there that he wished to photograph. Although I had informed Liam that he was free to take as many photographs as he wished, he only took around 15 or so, and selected 9 photographs to include in our discussion.



When Liam was satisfied with the pictures he had taken and did not feel he needed to take any more, I asked him where he would like to go to review his photos. Since it was starting to drizzle a little, he chose to sit on the couch under the roof covered porch. However, before we actually sat down to do the interview, he wanted to spend a little time playing on the trampoline. It was not long before he was asking me to play with him. We played for about 10 minutes. He directed me to throw the ball back and forth with him in and out of the trampoline. Although he seemed to be having a lot of fun, laughing and smiling, I suggested that we go put the photos on the laptop to have a look and decide which ones he wanted to use to talk about. He agreed and he headed over to the porch. Beginning with this first photograph, Liam responded openly to my questions.

Most of the photographs Liam took were of the facility (5 out of 9), however, when looking at the photographs, the conversation often shifted or provided opportunity to talk about something other than what was in the actual photograph. For example, the first photograph was of the riding ring, but the conversation quickly changed to other places he enjoyed riding like to the store to get fudge sticks and to the waterfall where he joked about jumping in the water during the winter wearing only his swimming trunks. Often the conversation shifted in one way or another to talk about his favorite horse at the farm, Biscuit.

According to his mother, Liam was being tested for Autism Spectrum Disorder. He had been participating in the *Equine Connection Program* for five months. On the demographic survey, Liam's mother reported that one of the main reasons that Liam participated in *Equine Connection Program* is because, "he enjoys being in control of the horses and the flexibility at

the farm.” Based on what I witnessed in the hour that I spent with Liam, I saw evidence that he liked being in control in many different situations, such as choosing what to photograph, directing his mother, and directing our playtime.

**Case studies 4 and 5.** I met Evan and Carter, 5 year old boys, on a day when I was visiting the farm where they ride. I was there to meet with Charlotte, the instructor of the program, about my study. I later received an email from Evan and Carter’s mother expressing an interest in participating in an interview for the study. Due to the physical and cognitive limitations of the boys, the interview took place with their mother and did not involve a photo-tour. This meeting lasted about half an hour; as we went through the study protocol and had a conversation about the boys’ experiences participating in therapeutic horseback riding. She did not bring Evan or Carter with her that day.

Based on the information I had been provided by Charlotte about Evan and Carter in conversation and on the demographic survey, I assumed that the twins would have very similar experiences participating in equine assisted therapy. However, I quickly learned during the interview with their mother, Evan and Carter each had unique experiences.

**Evan.** Evan’s mother explained that when he first started attending the sessions he really did not like the horse. At first he would not touch the horse, but slowly he began to explore and reach out to touch. His mother observed that he would make a game out of the interaction. Evan would pretend that he did not like the horse even though his mother could tell that he really did enjoy exploring the horse through touch. By the end of the summer sessions, his mother explained that he eventually did get on the horse and would ride around

the ring as long as they had a toy for him to listen to as a form of comfort while interacting with the horse and the instructor.

During Evan's sessions, Charlotte facilitated his communication skills by asking him to give the horse verbal commands. An example of a verbal command would be to ask the horse to walk forward in the ring. His mother explained that Charlotte would have him repeat phrases that directed the horse to move forward while he was holding his toy.

I asked Evan's mother if there had been any negative effects resulting from his participation in therapeutic horseback riding. I was curious to know if he had potentially experienced any stiffness or soreness. The only example that she mentioned was that Evan would occasionally give Charlotte a hard time. For example, when she asked him to do something he might throw a little tantrum because he did not want to do what was being asked of him. However, his mother reported many improvements in Evan's behavior. For example, he allowed them to place him on the horse and has learned what Charlotte has expected from him. Despite some resistance by Evan towards the therapeutic riding sessions, his mother stated that she is impressed with the improvements that he made. She told me that they have been attending the therapeutic riding sessions for only a year and in that time Evan had shown progress. She plans to have him continue attending the program with Charlotte in the future.

**Carter.** Carter's mother reported that she noticed changes in his behavior when he first started attending therapeutic riding sessions. She described how he would get on the horse and lay his head back towards the hind of the horse and want to go to sleep. She stated this was unusual behavior for him because he was not much of a sleeper throughout the day. His

mother found the horse had an effect on him, one that lasted after the ride because he would remain very tired even on the drive home. Carter's mother told me that Charlotte had been working with Carter to stay awake. She would have Carter repeat commands to the horse to actively engage him throughout the session so that he would not simply lay back and go to sleep.

The second change in behavior noted by Carter's mother was in his vocalizations. She noticed that he mumbled and spoke in a low voice when around Charlotte and the horse (Sandy). The behavior was not something that she had witnessed when he was with anyone else. She said that he normally speaks loudly and did not quite understand why his voice changes when speaking to Charlotte or giving commands to the horse. She did not think this was due to a dislike for Charlotte or the horse because both Carter and his brother really enjoy cuddling with Charlotte.

I asked Carter's mother if going to the barn and riding the horse was something that he enjoyed. She informed me that neither Carter nor Evan got excited over going to the barn. However, they tend to not really get excited over many things. When actually at the barn with the horse and Charlotte, Carter really enjoys it and unlike Evan, has enjoyed it from the beginning, despite how tired he would become. For Carter, being at the barn and around the horse was a great sensory experience. He liked reaching out and touching the horse all over. Carter's mother seemed happy with his response to the horse. She told me about a dog that Carter would hit and grab and that she wanted to expand his interest base and expose him to more animals because of the way he treated the dog. His mother was impressed with his positive response to the horse.

Another reason Carter attends therapeutic horseback riding sessions is to work on stretching and strengthening his legs. As a result of his mobility delays, he is unable to walk, but therapeutic riding can aid in building and stretching the muscles normally used in walking. In addition, the horseback riding aids with his spatial awareness and an understanding of how one's movements and actions affect the way the horse reacts.

Although Carter has only been attending therapeutic horseback riding sessions for about a year, his mother has noticed positive changes in how he responds during them. While in the beginning he would simply lay back and go to sleep on the horse, he now actively engages with Charlotte and the horse, giving commands to maneuver the horse around the riding ring. For Carter, the sessions are enjoyable and his mother plans to have him continue with them because she is happy with the improvements and benefits they have provided to him.

According to their mother, Evan and Carter were born pre-mature with hydrocephalus and are blind. Each has mobility, speech, and cognitive delays, and Evan has been diagnosed with Autism Spectrum Disorder. Both participated in the therapeutic horseback riding program over the past year and have shown improvements.

### **Types of Photographs**

Three of five participants took part in the photography component of the study. Each photograph was coded and from the coding the following categories were identified: 1) horses; 2) other animals; 3) nature; 4) play; and 5) the facility. A summary of the photographs by case

are presented in table 1. The majority of photographs chosen by the children were of the horses (13 out of 32). Examples of photographs under each category are presented in figure 2.

	<b>Horses</b>	<b>Other Animals</b>	<b>Nature</b>	<b>Play</b>	<b>The Facility</b>
<b>Case Study 1</b>	8	1	1	1	1
<b>Case Study 2</b>	2	1	0	1	4
<b>Case Study 3</b>	3	1	3	1	4

*Table 1. Tally of the types of photographs taken by three participants.*



Figure 2. Samples of photographs taken by participants.

## **Thematic Analysis**

A thematic analysis was used to summarize the textual and photographic data and the main themes of the research through identifying basic, organizing, and global themes. The researcher completed the thematic analysis by first coding the textual data and identifying thirty-two basic themes. These basic themes were then arranged into seven groups of similar issues or points to make organizing themes. Finally, the organizing themes were categorized into three global themes which represented the main points of the text. The three global themes related to the benefits to children who participated in equine assisted therapy include: 1) meaningful relationships and connections; 2) positive experiences for the individual; and 3) opportunities for development.

### **Meaningful Relationships and Connections**

The first global theme identified from the interviews and photographs is that meaningful relationships and connections are formed through participating in equine assisted therapy. The organizing themes that contributed to the development of this global theme are: relationships and connections; and, care and empathy (see Figure 3: Thematic Network #1).

**Relationships and connections.** When reviewing the pictures they had taken, two of the three children talked about the animals that were present at the farm. Most of those comments expressed a fondness for the animal or animals in general. Liam simply commented on a photo he had taken, “That’s my favorite horse and his name’s Biscuit.” Although equine assisted therapy and activities are focused on interactions with horses, there are often other animals that live at the farm or at the facility with which the participants can interact. Jessica



explained, “there is Sunny, the bunny, and lots of people like to hold him. And I even love bunnies, a lot. Cus I love all kinds of animals.”

Connections between animals were also identified. Two of the participants recognized and explained that Dancer was the offspring of Summer. For example, Jessica pointed to a framed photograph that was displayed on the mantel behind where the researcher sat and exclaimed, “And that, there’s a picture of Dancer born, right after, right out of Summer.” Alison similarly commented that Dancer was Summer’s son.

Relationships and connections to family members were evident in all the case studies. Each participant was accompanied to the facility by at least one member of their family who stayed for the duration of the session, and in some cases, the entire family attended and participated in the session. Jessica’s father worked close to the farm and although he may not be able to make it to a session, if the weather was nice and they planned for it, she was able to ride over to his place of work to visit him there, “sometimes if my, like dad’s working like during the week and I go riding during the week, then that’s lucky.” It is clear that she enjoys those opportunities.

Relationships were often formed with program volunteers. The *Equine Connection Program* generally paired one volunteer with each participant to ensure their safety, which allowed for positive relationships to be created. Jessica commented, “Like I love playing with Julia. We go on the trampoline; we do all kinds of fun stuff together. Like go in the woods.” Similarly, positive relationships were often formed with the instructor of the programs. Evan

and Carter's mother explained, "They both really love her. When we get there they both want to cuddle with her and hug."

Finally, connections to the program and to the community were identified for one individual. One way is that the instructor of one of the programs also provides respite care for Jessica so that the farm, animals, and instructor all have a deeper connection in that she spends more time there. Jessica expressed how comfortable and happy being there makes her feel. In addition, she has been attending sessions at the farm for six years which started when she first attended a session with a local early intervention program. Now, the farm regularly hosts a picnic for the early intervention program and community to attend to allow them access to use the facility and participate in equine assisted activities.

**Care and empathy.** Care and empathy was evident in a couple of the interviews and is related to the relationships and connections that the participants formed, particularly with the horses. Evan and Carter's mother explained that one of the reasons she enrolled them in therapeutic horseback riding was to expand their interests in animals. Carter had a negative connection to one of their dogs and would often hit the dog, but she hoped to help him understand that the horse is another living being and that his actions would affect the actions of the horse, Sandy. Since enrolling her children in the sessions, she has been impressed with the improved reaction her children have had to the horse. Another participant showed a lot of care and empathy toward his favorite horse. Liam seemed to understand how the horse was feeling explaining to the researcher that the other horses often bullied and teased him. When asked how he thought the horse felt about being teased, he said that he felt bad. Alternatively,

Liam seemed to understand when his favorite horse was feeling good. When his mother asked him if he had a chance to try out the new harness for the horse, he replied, “Yeah. It felt good for him....he even went fast. He trotted, he went even faster than last time.”

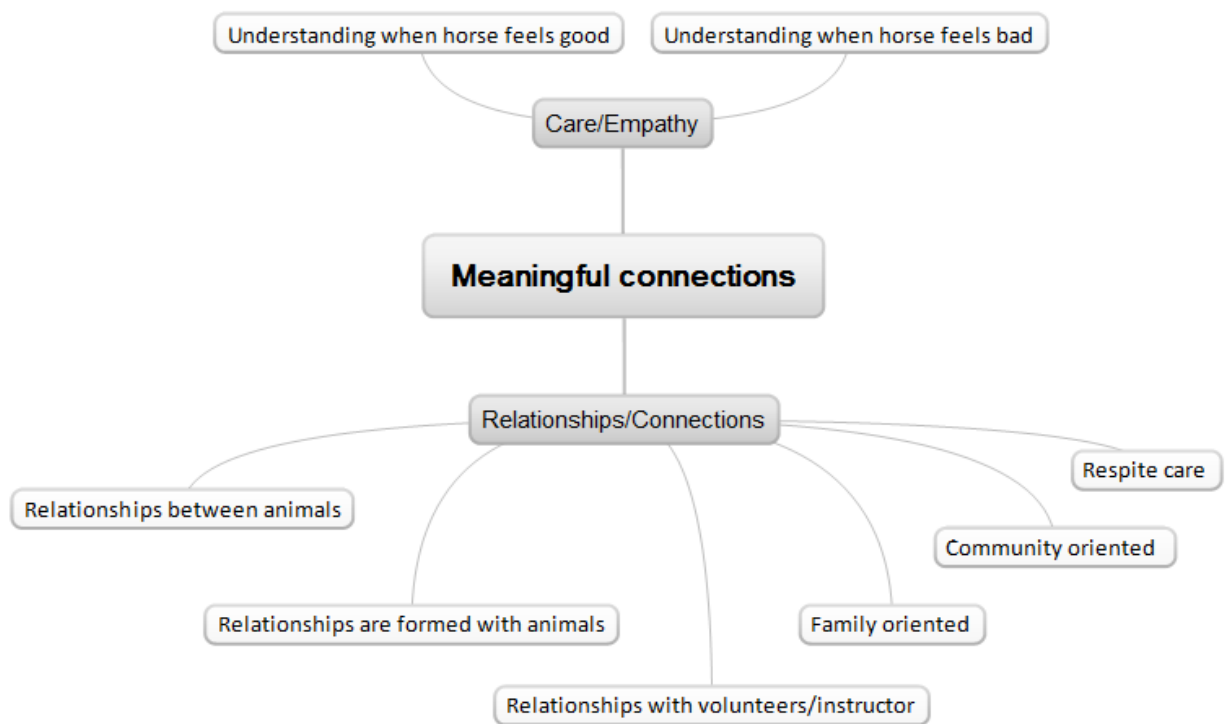


Figure 3. *Thematic Network #1*. Adapted from Attride-Stirling, J. (2001). Thematic networks: an analytic tool for qualitative research. *Qualitative Research*, 1, 385-405.

## Positive Experiences

The second global theme that was identified from the interviews is that equine assisted therapy is often a positive experience. The organizing themes that supported the development of this global theme are: moods and feelings; and, humour (see Figure 4: Thematic Network #2).

**Moods and feelings.** For Jessica, Alison, Liam, and Carter, participating in equine assisted therapy and activities was a positive experience. The most commonly expressed feelings or moods were happiness and excitement to be at the facility and to be with the animals. Alison said that when she first started attending sessions, she counted down the time until she was able to begin because she was so excited, “I was super excited, I jumped up to here! My feet were up to here I was so excited!” Jessica expressed that she never wants to leave because she loves being at the facility so much. Similarly, the term fun was used by Jessica, Alison, and Liam to describe being at the farm. As mentioned earlier, Jessica commented that she feels really lucky on days that she gets to ride over to her father’s work to visit him on days that she has a session and he is working.

Several of the participants experienced a calming effect from the horse(s). Carter’s mother explained:

Carter would get very tired when he was there and he would fall asleep on Sandy so I would find that he was pretty tired. What she’s had to work on is him not going on and laying down and falling sleep because he would just lay down with his head near his...rump and he would just fall asleep and he’s not a sleeper in the day time, and honestly when you picked him up he was drooling and he...was just like slumping all over and um, yeah I’d put him in the car and like ten minutes in the car and he was still bobbing his head around.

Others similarly felt the calming effect of sitting or laying on the horse’s back and sometimes spent time relaxing on the horse while they practiced reading or math skills.

Only one participant had a negative experience with therapeutic horseback riding.

Evan's mother explained that at first he did not like being put on the horse and would throw tantrums, but after working with him and allowing him to explore the horse more, he began to calm down and is now able to ride the horse with the reward of a toy. He, along with his brother Carter, both tend to be unresponsive, according to their mother, when she tells them that they are going to attend a session that day, but she explained, "They are never excited about going, but they're typically not excited about many things that we go to do...I'm not sure if that's the...delays that they have, but if I tell them that we're going to riding, all I'm doing is I'm telling them...I'm giving them advanced notice."

**Humour.** There was humour evident in most of the interviews that appeared in several forms. First, made-up names were given to some of the animals as well as places on the farm. For example, Jessica explained how they added the word 'sweetie' to the end of one of the horse's name depending on how she was acting, suggesting she was only a sweetie some of the time. Liam described how he liked to make up names for the rabbit that lived on the farm:

Interviewer: What's the bunny's name?

Liam: Pickle! Just joking. I just like calling it that.

Interviewer: Do ya?

Liam: I call it, hey Pickle! It's really called....what's it called again?

Mother: Suuuuu...

Liam: Suuu...Sunny!

Interviewer: Sunny!

Liam: I call it...sometimes I call it Suu, sometimes I call it Pipple.

Interviewer: Okay.

Liam: Pickle, Pipple or Pip.

Interviewer: You make up names for him?

Liam: Yeah!

Made-up scenarios were also frequent among the interviews. Alison often looked at the photographs she had taken and described what it looked like to her that the horses were doing. When looking at a photograph of two horses standing close to each other with their bodies facing opposite directions, she commented, "That's Summer and Dancer pretending they have each other's head." Liam was recalling the time that he fell into the water at the waterfall on the farm and exclaimed that next time he was going to wear his swimming shorts so he could do it again, even in the winter. There were often exaggerated comments such as, "I rided him sixty times!" which added to the humour of the interviews.

Humour was also evident in the games that were often played while attending a session. For example, Evan made a game out of pretending that he was not interested in the horse. Although he is blind, this mother explained that he is very aware of his sense of space and would go over to the horse, touch him, and then throw his hands up in the air and make a sound like he did not know the horse was there. According to his mother, it was a game he was playing in an attempt to not show that he was interested and that he really wanted to explore the horse. Other more structured games were often played such as a game of soccer with the horse balls or a game of spying as photographs were being taken. In most cases, the participant was in charge of the games, instructing others how to play the game with them. For example, during Alison's photo-tour with the researcher, she made up a game where they pretended that they were spies sneaking around taking photographs. This included hiding behind bushes and buildings to snap pictures around the farm. She seemed to enjoy directing the play and engaging the researcher in her game. When they came upon the area of the facility where a cocoon type swing hung from a tree, she assured the researcher that the swing was very fun and

insisted the researcher try it out, despite the little bit of water and leaves that were inside. The researcher willingly climbed in and started laughing because she was surprised by the way the swing took off. Alison laughed at the researcher's reaction and took a picture of her swinging in the swing.

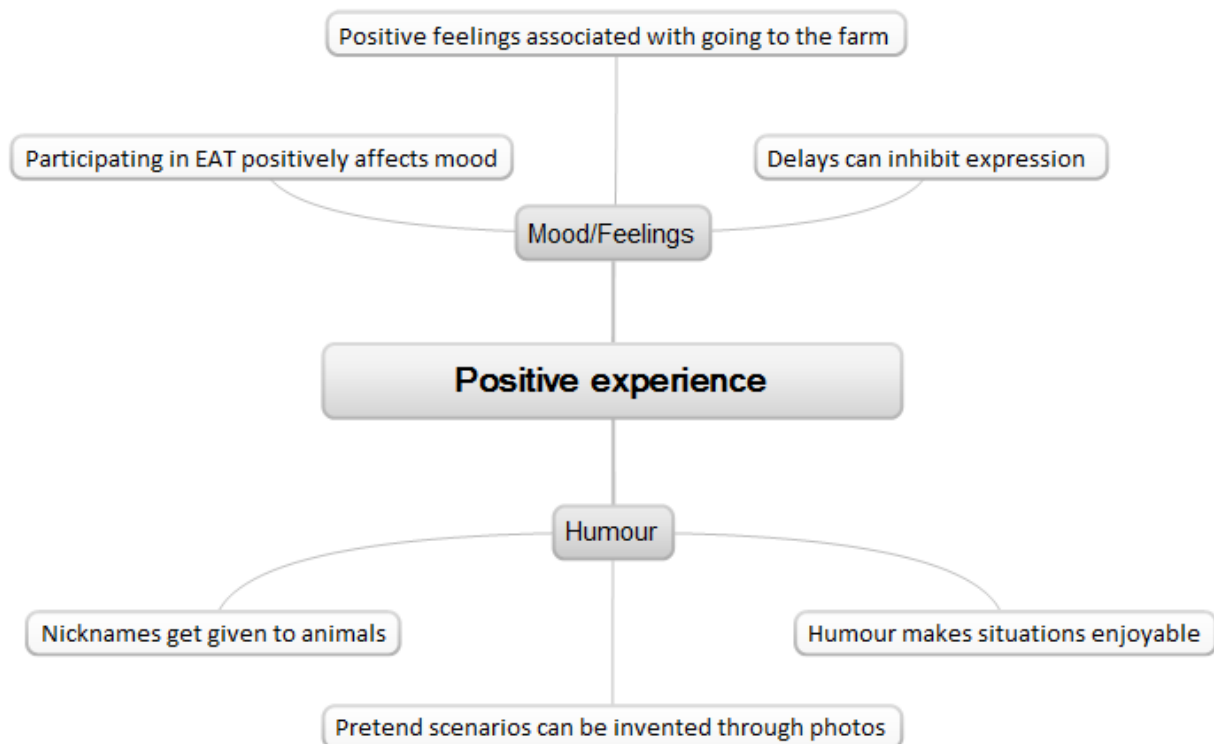


Figure 4. *Thematic Network #2*. Adapted from Attride-Stirling, J. (2001). Thematic networks: an analytic tool for qualitative research. *Qualitative Research*, 1, 385-405.

### Opportunities for Development

The third global theme extracted from the interviews is that equine assisted therapy provides opportunities for development. The organizing themes that aided in developing this

global theme are: choice and control; safety/rules; and, knowledge (see Figure 5: Thematic Network #3).

**Choice and control.** In the majority of interviews, choice and control was evident. Mostly, it appeared when participants talked about the freedom to choose which activities to engage in or where to engage in those activities. For example, participants had the option to choose where they wanted to ride whether it was in the riding ring, on the trails, or somewhere off of the property as long as they had an adult accompany them. There were also options for alternative types of activities to suit the situation of the day. For example, the mother of one participant described that if it was raining and her daughter could not ride outside for her therapeutic riding sessions, then she would just sit or lay bare back on the horse in the barn and have the chance to read.

Choice and control was also evident when participants talked about the opportunities they had to share in training the horses. For example, Alison commented, “well I help lunge her sometimes and I train her some.” Not only was it a choice to participate in the training, but there is a lot of self-control and other control necessary to request a horse to do tasks while it is being trained. Similarly, control is necessary when riding a horse to ask it when and where to go, stop and turn. Control over other people was apparent in a couple of the interviews. For example, one participant started planning a soccer game that he was going to play with his mother after the interview and began telling her how the rules were going to work, “Mom! I’m going to choose our team, but you’re going to get a chair one cus it makes it difficult. You get the easy one cus that’s the easy net...but if it goes over those then that means it’s a goal too,



but if it just goes around, that's not a goal." During the photo-tours, a couple of the participants similarly engaged the researcher in playing games, controlling and instructing the way in which the game played out. For example, Liam had the researcher stand outside of the trampoline while he was jumping on it, and throw the large green horse ball over the safety netting so he could dive out of the way to avoid it. He would then throw the ball back and have the researcher try to catch it so she could throw it back over the net again.

**Safety/Rules.** Safety and rules were discussed during most of the interviews. The trampoline that is at one of the farms was the source of much joy for many of the participants, but had rules and safety precautions with its use to ensure participants did not get hurt. Jessica shared that her mother does not allow her to go on her neighbour's trampoline at home because it does not have the safe style of springs or a safety net like the one at the farm does. She also explained that the farm trampoline has a lock on it that an adult or volunteer has to open it and at all times must remain either outside its doorway or on it with the participant.

Other equipment used in the equine assisted therapy programs designed for safety included a special saddle which Alison described as a double saddle so that an adult or volunteer can ride behind the participant. Participants also have the choice of different types of equipment to use that best suits them. For example, Jessica said that while she often rides the horses, she has the option to ride in the carriage on days that she needs to explaining "it depends how many seizures I have during the year...Cus when I just get out of the hospital or something, I usually go on the carriage." Sometimes participants required an adult or volunteer to walk alongside them while riding to ensure that they did not fall off the horse. Evan and

Carter's mother acted as a side-walker for them while the instructor of the program walked along the other side as she gave the boys instructions to ensure that they were safe from falling off of both sides.

**Knowledge.** There were elements of enhanced knowledge present during each of the interviews. The most common was knowledge about the places and spaces, as well as the equipment used in around the farm. For example, Jessica identified what a piece of equipment was used for, "That's the riding ring with cavaletti poles, but they're not actual cavaletti poles...I trotted over them...I hear it's a jumping exercise." The cart used by Biscuit was mentioned in all of the interviews of participants who attended sessions at the farm where he lived. For example, Liam commented, "That was Biscuit's, let me think, cart...with wheels." Alison explained that the cart also has an attachment to turn it into a sleigh for the winter, "there is also sleigh runners and I've been on that too." Knowledge of diagnosis was evident in the interview of the oldest participant. Jessica spoke about when she has seizures, but also acknowledged that purple was the official color for epilepsy awareness. One of the bedrooms at the farm where she sometimes stays for respite care is painted purple and she says that it is her favorite room in the house.

Knowledge of some of the tasks that need to be completed at one of the farms was described in some of the interviews. As mentioned above when discussing control, Alison explained that she sometimes helps lunge and train the horses. A couple other participants shared their experience of cleaning the barn. While Jessica claimed that she does not mind

cleaning the barn, Liam laughed and said that he does not like cleaning the barn because it was hard work and made him sweat:

Interviewer: Do you ever get to clean the stalls?

Liam: Yeah, I cleaned all of them!

Interviewer: You cleaned all of them!?

Liam: In one day.

Interviewer: Wow, did that take a long time?

Liam: That took about an hour or so.

Interviewer: Wow, did you like doing that?

Liam: It was either an hour or one hour.

Interviewer: Wow, was it fun?

Liam: No (smiles and laughs).

Interviewer: Ha ha it was a lot of work?

Liam: Yeah! I was even sweating.

He went on to explain how they use baking soda mixed in with the shavings to keep the odors down so he does not think it smells too bad. Similarly, knowledge about the horses was shared in a couple interviews as participants identified the names of each of the ones who could do tricks, and Alison knew the breed of each horse, for example, “She’s [Summer’s] a Morgan horse and Biscuit’s a miniature and Willow’s a Paint.”

Knowledge emerged in other forms as well. One way was in the skills that were gained through equine assisted therapy sessions. As mentioned above, Jessica would often sit on a horse’s back in the barn on days that it was raining and read a book. By doing so, she was able to practice her reading skills and as her mother stated during the interview, her reading skills were improved. Similarly, Alison’s mother noted on the demographic survey that sometimes her daughter would also sit bare back on a horse’s back while practicing her math skills, which had been effective in improving those abilities. For Evan, who has been diagnosed with ASD,

time on a horse's back was used to practice communication. According to his mother, "he will go around and he will give commands so ya know and...she is just working on his speech right now, his communication...she'll use phrases, he'll have to repeat them to the horse to do something, and then he gets a reward afterwards."

Finally, opportunities for exploration and understanding were identified for the two participants who were blind. Evan and Carter's mother explained that for them, therapeutic horseback riding was a very sensory experience with all the new smells, sounds, and things to touch, "when Carter was with Sandy, he would really, he would just reach out, feel all over, he was very explorative, it was great." Her other son Evan enjoyed exploring the horse with his hands, but made a game of the situation by pretending as though he did not enjoy it:

...we would just let him wander around and he would touch Sandy and then after about three seconds of touching then he would go "ahhhh!" which was totally a game because he is very aware of his...position in space so he knows where he is and he would walk back over to Sandy and he would touch him again though he knew what he was doing, he was just being, ya know, just exploring, but didn't want us to know that he was enjoying it.

Since both Carter and Evan are visually impaired, their mother had wanted to enroll them in therapeutic horseback riding for the sensory part of it so they could explore and learn, but also because she wanted them to expand their interests in animals, and as well as to understand that their actions have an effect on how the horse reacts. She wanted them to understand that when they are on the horse and they ask the horse to walk that it will start moving and to be aware of their sense of space while astride the horse both at a standstill and while in motion.

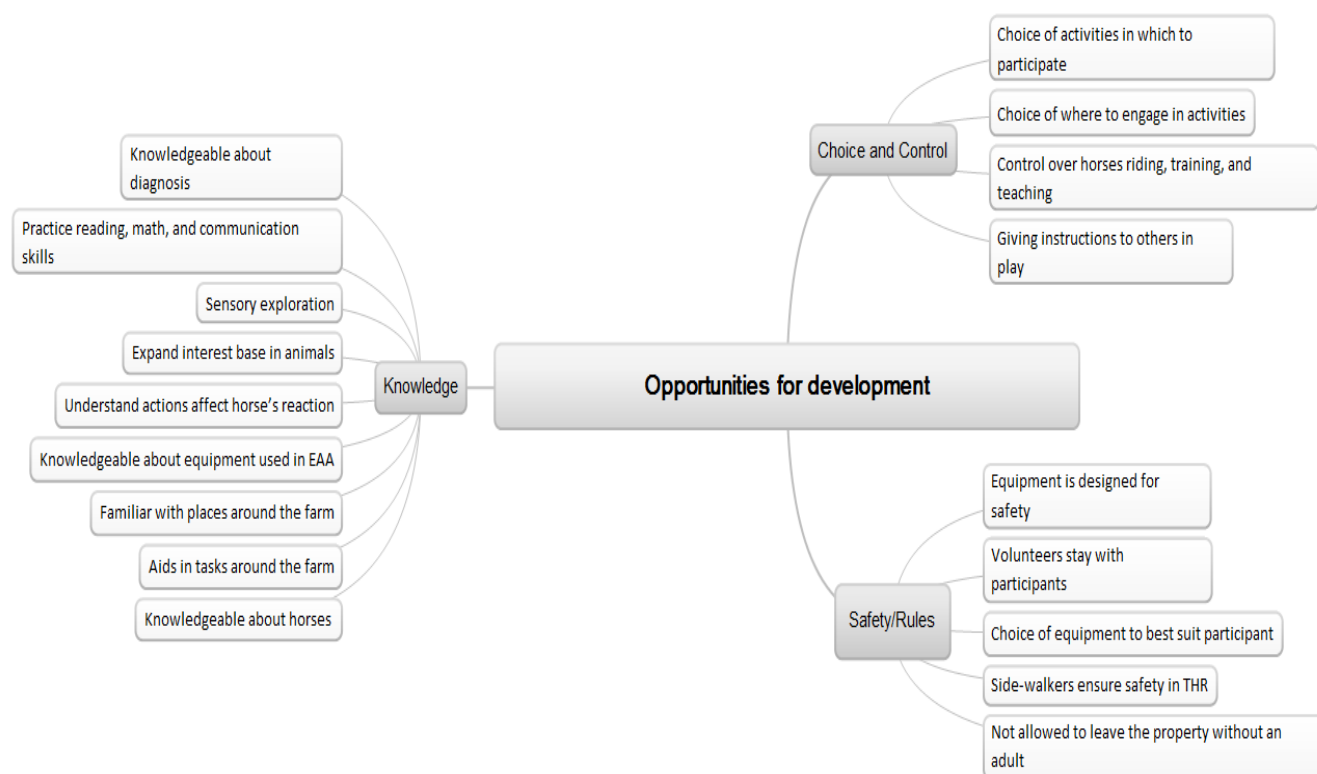


Figure 5. *Thematic Network #3*. Adapted from Attride-Stirling, J. (2001). Thematic networks: an analytic tool for qualitative research. *Qualitative Research*, 1, 385-405.

## **Chapter 5**

### **Discussion**

The purpose of this study was to gain an understanding of the stories and experiences of children with special needs who participate in equine assisted therapy. This study was conducted using a qualitative child-focused research method. Although conducting quantitative research is important for understanding the benefits of EAT, it is also important to understand the experiences of the children. In an attempt to add the voices of the children to the body of EAT literature, the child-based approach used in this study provided children the opportunity to engage in a photo-tour and discussions of their EAT program and facilities. Although parents were present during the child and researcher interactions, the researcher encouraged the children to share their stories and experiences without adult direction. The study was designed to have the children take the researcher on a photo-tour of the facility while they took photographs of their favorite spaces, animals, and items, followed by an interview. The design of the study was intended to be as fun as possible, while providing children with an avenue to share their perspectives about their experiences of participating in equine assisted therapy.

In an effort to understand EAT program experiences from the perspectives of children, four research questions are discussed through an integration of the study themes and existing literature. The voices of the children will be placed at the centre of the discussion of the following: 1) the experiences of children who participate in equine assisted therapy as a form of intervention; 2) the feelings of the children about their EAT experiences; 3) children's most and

least favorite feature about participating in EAT; and 4) the suggested benefits of the program experience for the children.

**“I’m going to get a big horse and ride it to the waterfall!”**

What are the experiences of children who participate in equine assisted therapy as a form of intervention? Play and work experiences were features of the conversations with the children. For all of the children, EAT provided the opportunity for autonomy through the flexibility and freedom to exhibit choice and control over the activities in which they chose to participate. When Liam said, “I’m going to get a big horse and ride it down there and next time I want...to go to the waterfall!” he demonstrated his ability to be independent in his choices; this is consistent with Erikson’s concept of autonomy established in the earlier stages of development (Christie, Johnson, & Wardle, 2005). The opportunity for choice and control was expressed by all of the children as they talked about the activities that they enjoyed including playing games and helping with tasks around the facility.

During the photo-tour and interview, Jessica, Alison, and Liam engaged the researcher in play that was typical for their age. Consistent with Erikson’s theory of play and children’s interest in including other people in their play scenarios (Christie, Johnson, & Wardle, 2005), the creation of make-believe interactive play was observed as each child engaged the researcher during the tour of the facility. For example, Alison and the researcher pretended that they were horses galloping through the woods as they ran along the trails taking photographs. The experiences provided at the EAT programs allowed the children to participate beyond the therapeutic elements of the interaction with the horses and provided a safe and

flexible environment for child directed play. It may be that elements of play were missing from Evan and Carter's stories because the researcher conducted the interview with their mother who may not have been focused on sharing their experiences as they related to moments of play.

The program environment also allowed for the children to participate in tasks around the farm. Children had many opportunities to try new tasks and identify activities that provided a sense of pleasure. For example, Alison and Jessica occasionally helped to teach one of the horses how to do tricks. For each of them, this type of "work" with the horse was something that they enjoyed. Liam also helped out with tasks around the farm, such as cleaning the stalls in the barn. Unlike Jessica who claimed that she did not mind cleaning stalls, Liam found humor in telling the story; he laughed and said that he did not really enjoy cleaning the barn because it was hard work and made him sweaty. Each child appeared to be happy to talk about the chance to try something new. This feeling of happiness fits with Paige-Smith and Rix's (2011) suggestion that allowing children with special needs the freedom of choice can lead to feelings of empowerment and happiness. Therefore, the experiences likely provided each child a sense of competence, contributing to an overall positive experience when participating in EAT.

### **"Happy, happy, happy!"**

How does participating in this type of intervention make them feel? Alison said it best, "happy, happy, happy!" Jessica and Liam expressed how happy they were when they were at the farm, and Carter's mother expressed that he enjoyed participating in therapeutic riding



sessions from day one. Feelings of happiness and excitement were at the forefront of the children's experience of participating in EAT.

A number of factors may contribute to the children's positive feelings about the program. Dingman (2008) asserts that adults often do not allow children the opportunity to be in control or make their own choices because they sometimes feel that their children will not make the right choices. However, it appears the EAT programs are set up to provide not only the therapeutic riding experience, but also a flexible environment filled with unique opportunities for exploration and experimentation. Piaget's discussion of games with rules and Erickson's concept of industry (Christie, Johnson, & Wardle, 2005), are reflected as each child is allowed to be an active agent in the novel environment and gain mastery as they experience new tasks. Rules are followed as each child makes decisions around the farm adding to the sense of independence and trust. Perhaps that is one of the reasons why Jessica, Alison, and Liam seemed so happy and excited when taking photographs during the photo-tour. The researcher encouraged the children to take the lead and to use the camera themselves to take the photographs, which allowed them to try a new activity, to be in control of the photo-tour, and to gain competency in taking photographs.

Additionally, and supported by Scott's (2005) observation that EAT provides opportunities for social interaction and the formation of friendships, is the nature of relationships experienced at the program. All of the children identified bonds and connections that were formed with staff, volunteers, and the animals. The children stated that they had consistent opportunities to interact with the same instructors and volunteers, which often

resulted in the formation of positive relationships. For example, both Carter and Evan had formed a special bond with Charlotte, the instructor of the program that they attended. Their mother explained, “They both really love her. When we get there, they both want to cuddle with her and hug.” The relationship that Carter and Evan shared with Charlotte demonstrates a sense of trust in others as discussed in Erikson’s early stages of psychosocial development (Mooney, 2013). Jessica explained that she enjoyed spending time and playing games with Julia, one of the program volunteers. Her relationship with Julia similarly demonstrates trust in others, but also corresponds with Erikson’s concept of group play (Christie, Johnson, & Wardle, 2005). The feelings of trust and opportunities for fun that were identified in the relationships between the children and instructors or volunteers, likely contributed to their feelings of happiness.

Just as interaction with the instructors and volunteers at the programs resulted in the formation of relationships, so too did the interaction with the animals. Liam continuously spoke about his favorite horse Biscuit and it was clear that he had a special connection with that horse. For example, he explained how all of the other horses often bullied and teased Biscuit which made Biscuit feel bad. Liam’s sense of empathy towards Biscuit supports the argument made by Granados and Agis (2011), that when a child observes and interacts with an animal, they may begin to understand how that animal may be feeling. Perhaps these friendships with instructors, volunteers, and animals promote feelings of happiness because there is trust, fun, and understanding in the relationships, which contribute to their overall psychological well-being.

**“I don’t got a favorite, everything’s my favorite.”**

What is their favorite thing about participating in EAT? Jessica conveyed a feeling that was commonly expressed by most of the children when she said, “I don’t got a favorite, everything’s my favorite.” None of the children in the study pinpointed only one particular thing as their favorite when participating in EAT; instead, they seemed to have many favorites. By having the opportunity to try new things, the children were able to discover more than one new activity which they enjoyed doing, thus allowing for many favorite activities. For example, it was clear for Liam that riding in the cart with Biscuit was something he very much enjoyed because it was something that he said chose to do every time he was at the farm. His enjoyment of the activity fits with Paige-Smith and Rix’s (2011) concept that the independence and the sense of competence he felt from learning how to drive the cart himself was what made the activity one of his favorites. At the same time, Liam enjoyed jumping on the trampoline and also called it one of his favorite activities. Maybe Liam regarded the trampoline as one of his favorite activities because it provided an opportunity for play, which according to Ford, Tesch, and Carter (2011), can be a source of happiness and fun. Many of the activities which the children expressed as their being one of their favorites, were associated with fun, thus promoting positive feelings and enjoyment for that activity.

What is their least favorite aspect? Not all of the children described their least favorite aspect of attending EAT sessions. The children that did share a negative feature did so in a joking manner, such as when Jessica said she did not like picking up trail markers when they fell off trees, but that it was just a part of life. Jessica’s display of humour was similar to Liam’s

comedic response about cleaning stalls, which according to Lieberman, is a trait of playfulness (Christie, Johnson, & Wardle, 2005). Similarly, Evan's mother said that while he did not like sitting on the horse at first, he was able to explore the environment by making a game out of touching the horse, which may have allowed him to enjoy the experience more. While these activities were described to the researcher as negative aspects to participating in EAT, the children responded in a positive way by describing the situations with humour and exhibiting playfulness, which could mean the tasks were not actually all that negative.

**“On rainy days, we’ll put her on the horse bareback. It helps with her reading.”**

Are there any benefits gained from using EAT as a form of intervention? Some of the benefits experienced by the children were already identified by exploring the previous research questions. For example, the children shared experiences of gaining: a sense of autonomy, feelings of competency, positive relationships, and empathy for others. However, additional benefits were also realized by the children, such as cognitive, social, and physical benefits.

When Jessica's mother said, “if it's raining, we'll put her on the horse bareback and she'll read. It helps her with her reading,” she identified a cognitive benefit that her daughter received as a result of participating in EAT. Evan and Carter's mother explained how they would practice their counting skills by counting out loud the number of steps the horse would take forwards and backwards. Consistent with Macauley and Gutierrez's (2004) perspective regarding that the consistent and repetitive movement of the horse has an impact on children's learning, some of the parents seemed to agree that riding horses has benefited their children cognitively.

While all of the children experienced benefits from social interactions with the instructors and volunteers, they especially benefited from interactions with the animals. Evan and Carter's mother explained that one of the reasons her children participated in EAT was to aid them in gaining an understanding for animals, especially for Carter who had a negative experience with an old family dog. Now he gets along with the current family dogs. Liam showed empathy and understanding towards Biscuit when he expressed how the horse felt after being bullied and teased. Similar to a description offered by Melson (2003), the interaction, communication, and understanding that the children experienced with the animals at the facilities, can serve as practice for communicating and interacting with people. It is possible this practiced communication with animals contributed to the children's ease of sharing their experience with the researcher.

A couple of parents claimed that their children experienced physical benefits from participating in EAT. Carter's mom explained that another reason he attended sessions was to stretch and strengthen his leg muscles. The benefits Carter has experienced physically could be attributed to the warmer body heat of the horse, which according to Scott (2005) typically runs 4 to 5 degrees higher than the human body. The warmth from the horse's body may have promoted muscle relaxation allowing his legs to stretch and strengthen. For Jessica, riding also helped to increase her strength, balance, and mobility. There may be relaxation benefits from riding the horses, as discussed by Scott (2005), that also contributed to the children's feelings of happiness because physically they felt good, which may have influenced their overall psychological wellbeing.

Are there any negative effects from using EAT as a form of intervention? Just as there were few negative aspects to participating in EAT as described by the children, there were fewer negative effects experienced by the children. Evan's mother reported that in the beginning, he did not like riding on the horse and would throw little tantrums. However, she went on to say that once Evan learned what to expect from the instructor, the tantrums were fewer. Furthermore, the effect never seemed to carry forward past his time at the sessions. Evan's dislike of riding on the horse might be due to the unfamiliarity of the experience and his visual limitations. When Evan made a sort game out of exploring the environment by touching the horse and jumping back as though he did not know the horse was there, perhaps he was trying to make sense of his new environment. As discussed by Dingman (2008), control can be empowering and psychologically beneficial for children, therefore when Evan gained a sense of understanding that his actions affected the horse, and felt in control of the environment which was then familiar to him, it resulted in fewer tantrums.

## **Implications**

The majority of research conducted on children often does not utilize a child-based approach, but rather relies on adults to deliver the answers, which means that the research may not reflect the child's perspective (Lundy & McEvoy, 2011). This study was unique in that it utilized a child first approach and made efforts to allow the children participating in equine assisted therapy to have their voices heard and share their experiences. By following a child-based approach, not only were the children able to share their experiences, but in doing so, the reader is able to see the child first. For example, when reading the case studies in the instances

of Jessica, Alison, and Liam their diagnosis does not stand out as having an impact on their experiences at the program. In contrast, aspects of Evan and Carter's experience with EAT were influenced by the fact that they were visually impaired and had physical limitations. None-the-less, all of the studies presented had a positive tone. The children were given the opportunity to be in control and share their stories however they wished and therefore, present their own voices. The photographs facilitated the conversation that the children were able to have in telling their stories. Although Evan and Carter were not able to engage in the photo-tour and interview, they were able to be heard through the voice of their mother.

Based on an understanding of the experiences of the children who participated in this study, equine assisted therapy can be a successful form of alternative intervention for children with special needs. The results of this study were consistent with the literature which supports that equine assisted therapy provides opportunities for social development (Bass et al., 2009; Dingman, 2008; Gabriels et al., 2012; Kern et al, 2011; Scott, 2005; Taylor et al, 2009), psychological development (Dingman, 2008; Granados & Agis, 2011; Scott, 2005), cognitive development (Granados & Agis, 2011; Giagazoglou et al., 2012), and physical development (Champagne & Dugas, 2010; Giagazoglou et al., 2012; Macauley & Gutierrez, 2004) for children with special needs.

Understanding the experiences of children with special needs who participate in equine assisted therapy is important for other families of children with special needs so they can explore the option of whether or not this form of alternative intervention may be right for their children. However, with the limited availability of EAT programs in Nova Scotia, it may be

difficult for families of children with special needs to access these programs if they feel it would be the right form of intervention for their children. Currently in Nova Scotia, there are only nine registered equine assisted therapy programs or centers. Although Nova Scotia is not a large province, this number may not be enough to support the demand for equine assisted therapy programs. Patricia McGill, a CanTRA instructor in Blockhouse, Nova Scotia, agrees that there are not enough programs to support the demand. Ms. McGill retired to Nova Scotia with her two therapy horses from Quebec, with no intentions of operating another equine assisted therapy program. However, when she discovered the lack of available programs within the province, she felt compelled to offer her services to those in need, and thus, Hinchinbrook Farm Society opened its doors as a CanTRA registered therapeutic riding program (Scrimger, 2011).

In Nova Scotia, the majority of centers are run as non-profit organizations which rely heavily on donations. There is little funding for these types of programs, despite the demand, so few individuals or groups are willing, or are able, to implement an equine assisted therapy program. Funding is needed to rent, lease, or purchase a facility, horses, tack, and other special equipment, not to mention to pay for veterinarian fees, insurance, certification, hiring employees, and the list goes on, all of which are necessary to run a safe and effective equine assisted therapy program (Scott, 2005). McGill similarly recognizes this need for more funding in Nova Scotia, “half of our clients have ASD and I’m getting more phone calls every day. There has to be funding somewhere for this kind of therapy so it’s not a financial hardship for parents or for me” (Scrimger, 2011, p. 19).



Although positive benefits of EAT are documented and a demand for more spaces exists, government support is necessary to grow opportunities for children to participate in EAT. An examination of current programs within the province indicates that funding is a major obstacle to program development. The reason for this is most likely due to the fact that as a form of intervention, equine assisted therapy is still emerging. As a result, there is not yet an evidence base for the government to be willing to invest a lot of money into such programs. However, it is the responsibility of the government, based under the Convention on the Rights of the Child, to ensure that children with disabilities have the right to special care and support, including resources (United Nations, 2012). Although equine assisted therapy may not be a traditional form of intervention for children and youth with disabilities, research is emerging to show that it is a form of intervention that has positive results, thus the government should be responsible for providing more funding for more programs.

The results of this study are consistent with the positive outcomes reported in the literature and will contribute to the body of knowledge pertaining to the use equine assisted therapy for children with special needs. The child-based approach of this study sets the groundwork for more research to follow to bring to light the perspectives of children who participate in EAT. By understanding the perspectives of children who participate in EAT, we are able to understand how their experiences of participating in EAT effect them, compared to traditional adult-based measures which may not accurately represent the children's experiences. These results can be used to advocate for more EAT programs because they show that for children with special needs, EAT can be a successful form of intervention. EAT programs can also draw on the experiences of the children in this study when implementing practices for

their participants. For example, choice and control was identified repeatedly throughout the results as a positive aspect of participating in EAT, therefore programs could implement opportunities for choice and control in an attempt to provide a similar positive experience for their participants.

Additional research including a larger number and more diverse participants is needed to enhance public awareness efforts to promote the benefits of equine assisted therapy. With more awareness in the communities of Nova Scotia, there will be an increased demand, thus promoting individuals, groups, or centers to look to the government for funding to start up equine assisted therapy programs. How one would promote this is not necessarily clear, but perhaps one way could be through social networking and media. Both are influential in our world today. The creation of local forums, discussion groups, and blogs, for example, may be the first step to creating public and professional awareness. Existing EAT program operators could also be informed of the results of this study and influenced to adapt or expand their programs accordingly to allow more freedoms and choices within their programs to encourage a positive experience for their participants. In addition, child and youth practitioners, early interventionists, therapists, and early childhood educators, can be educated on the documented benefits and be included in the promotion of equine assisted therapy as a form of intervention for the families of children with special needs that they serve.

### **Limitations**

There are a few limitations to this study. First, the access to participants was limited in that there were only nine established programs within Nova Scotia at the time of the study. Of

those nine, the researcher was only successful in making contact with the instructors of six programs. Two instructors were interested in allowing the study to take place at their facility and agreed to recruit participants; however, no families contacted the researcher about participating in the study. Another instructor was interested in the study; however, her program was not in operation during the time of the study because the facility in which the program operated was under renovation. The participants for this study were recruited from the remaining three programs.

Second, due to the limitation of access to participants, the number of participants who participated in this study was small. Only five participants were successfully recruited to participate in the study. Contact was made with the researcher by a couple additional families who wanted to find out more information about the study; however, those families did not decide the study was right for their family. The small number of participants in this study limits the range of diverse voices to be shared about the experiences of participating in EAT.

Third, while this study used a child-based approach, a parent was present with each child during the photo-tour and interview since the participants were minors. Although the researcher explained to each parent that the focus of the study was to allow their child's voice to be heard and directed the questions to the child, a couple of the parents offered input as well. While sometimes it is beneficial for a parent to interpret or articulate their child's answer, the input from the parent may influence how the child responds. Therefore, some of the children's responses may not be true to their experiences. Similarly, two of the participants were unable to participate in the photo-tour and interview due to their physical and cognitive

delays, therefore their mother agreed to participate in an interview to share their experiences of participating in EAT. Although their mother spends the most time with them when attending sessions and best understands how EAT affects them, the stories did not come directly from the boys themselves and may not accurately represent how they view their experiences of participating in EAT.

Despite these limitations, valuable insight has been gained into understanding the experiences of children with special needs who participate in equine assisted therapy. While the number of children who participated in this study was small and some responses may have been influenced by a parent, this study provided the children who participated, an avenue to share their stories and have their voices heard.

### **Future Research**

While the results of this study provide insight into the experiences of children with special needs who participate in equine assisted therapy, the small number of participants limits the diversity of voices, therefore, future research should conduct studies with a greater number of participants so that the results will be more representative of all children with special needs who participate in equine assisted therapy. In order to achieve a greater number of participants, the research should not be conducted under tight time restrictions. The limited time frame of this study meant that some programs were not in operation during the data collection stage which limited access to participants. Conducting a study in another province or country where more programs are in operation may also allow for greater access to participants and an increased number of children who participate.

As well, future research should continue to use a child's based approach in order to understand the experiences of children who participate in EAT and to extend the existing literature, but should also incorporate a study design that does not discourage families from participating. For example, some families in this study contacted the researcher, but decided not to participate because they did not think their children could participate in all aspects of the study, despite the researcher's assurance that they did not have to participate in all aspects of the study. The experiences of all children with special needs who participate in EAT are important and contribute to the understanding of their experiences, therefore, future research can be designed to identify ways to attract and encourage diverse families and children with special needs to share their stories. Perhaps recruitment material can provide a variety options in which the children and their families can choose aspects of the study that they feel comfortable and confident engaging in, such as just an interview for a child that is visually impaired and may not be able to take photographs. In addition, the option for participant observation as a form of data collection may encourage more participants because some families may not feel that their child is able to participate in any other aspect of a study. Observation would still allow the researcher to gain an understanding and insight in to how those children experience EAT, without discouraging families from participating because of the perceived children's abilities.

As mentioned above, Nova Scotia is limited in available equine assisted therapy programs and the demands are ever growing. More research can create a greater awareness and therefore a further need for this type of program. Optimistically it will be a demand which

can be met in the form of government funding, so more facilities can provide adequate services and more children with special needs can have access to an alternative form of intervention that aids their development.



## References

- American Hippotherapy Association (2010). Hippotherapy as a Treatment Strategy. Retrieved November 24, 2011 from <http://www.americanhippotherapyassociation.org/hippotherapy/hippotherapy-as-a-treatment-strategy/>
- Attride-Stirling, J. (2001). Thematic networks: an analytic tool for qualitative research. *Qualitative Research, 1*, 385-405.
- Bass, M. M., Duchowny, C. A., & Llabre, M. M. (2009). The effect of therapeutic horseback riding on social functioning in children with autism. *Journal of Autism and Developmental Disorders, 39*(9), 1261-1267.
- Becker, M., Canfield, J., D.V.M., Hansen, M., Peluso, T., Seidler, G. & Vegso, P. (2003). *Chicken Soup for the Horse Lover's Soul*. Deerfield Beach, Florida: Health Communications, Inc.
- CanTRA Member Centres (n.d.). Retrieved March 27, 2012 from <http://www.cantra.ca/membercentre.shtml>
- Champagne, D., & Dugas, C. (2010). Improving gross motor function and postural control with hippotherapy in children with down syndrome: Case reports. *Physiotherapy Theory & Practice, 26*(8), 564-571.
- Christie, J.E., Johnson, J.E., & Wardle, F. (2005). *Play: Development, and Early Education*. Boston, MA: Pearson Education Inc.
- Clark, A. (December 01, 2001). How to listen to very young children: The mosaic approach. *Child Care in Practice, 7*, 4, 333-341.



- Debuse, D., Gibb, C., & Chandler, C. (2009). Effects of hippotherapy on people with cerebral palsy from the users' perspective: A qualitative study. *Physiotherapy Theory & Practice*, 25(3), 174-192.
- Dingman, A. (2008). Hoof prints: Equine therapy for autistic children. *Encounter*, 21(4), 11-13.  
Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=36645801&site=ehost-live&scope=site>
- Ford, K., Tesch, L., & Carter, B. (2011). FUNdamentally important: humour and fun as caring and practice. *Journal of Child Health Care: for Professionals Working with Children in the Hospital and Community*, 15, 4, 247-9.
- Gabriels, R. L., Agnew, J. A., Holt, K. D., Shoffner, A., Zhaoxing, P., Ruzzano, S., . . . Mesibov, G. (2012). Pilot study measuring the effects of therapeutic horseback riding on school-age children and adolescents with autism spectrum disorders. *Research in Autism Spectrum Disorders*, 6(2), 578-588.
- Giagazoglou, P., Arabatzi, F., Dipla, K., Liga, M., & Kellis, E. (2012). Effect of a hippotherapy intervention program on static balance and strength in adolescents with intellectual disabilities. *Research in Developmental Disabilities*, 33(6), 2265-2270.
- Granados, A. C., & Agís, I. F. (2011). Why children with special needs feel better with hippotherapy sessions: A conceptual review. *Journal of Alternative & Complementary Medicine*, 17(3), 191-197.

Hippotherapy. (2008). *Palaestra*, 24(1), 43-44. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=32855705&site=ehost-live&scope=site>

Kern J. K., Fletcher C. L., Garver C. R., Mehta J. A., Grannemann B. D., Knox K. R., . . . Trivedi M. H. (2011). Prospective trial of equine-assisted activities in autism spectrum disorder. *Alternative Therapies in Health and Medicine*, 17(3).

Language Learning Disabilities Association of Canada. (2002). Official Definition of Learning Disabilities. Retrieved from <http://www.ldac-acta.ca/learn-more/ld-defined/official-definition-of-learning-disabilities>

Lundy, L., & McEvoy, L. (2012). Children's Rights and Research Processes: Assisting Children to (In)formed Views. *Childhood: a Global Journal of Child Research*, 19, 1, 129-144.

Macauley, B. L., & Gutierrez, K. M. (2004). The effectiveness of hippotherapy for children with language-learning disabilities. *Communication Disorders Quarterly*, 25(4), 205-217. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=17403970&site=ehost-live&scope=site>

Melson, G. F. (2003). Child Development and the Human-Companion Animal Bond. *American Behavioral Scientist*, 47, 1, 31-39.

Miller, V.A., Drotar, D., & Kodish, E. (2004). Children's Competence for Assent and Consent: A Review of Empirical Findings. *Ethics & Behavior*, 14(3), 255-295.

Mooney, C. G. (2013). Theories of childhood: An introduction to Dewey, Montessori, Erikson,

Piaget, and Vygotsky. St Paul, MN: Redleaf Press.

O'Brien, P. A., & Kreger, A. (2010). The effects of a 5-week therapeutic horseback riding program on gross motor function in a child with cerebral palsy: A case study. *Journal of Alternative and Complementary Medicine - New York* -, 16(9), 1003-1006.

PATH Intl. History (2012). Retrieved from <http://www.pathintl.org/about-path-intl/about-path-intl/history>

Paige-Smith, A., & Rix, J. (2011). Researching early intervention and young children's perspectives - developing and using a 'listening to children approach'. *British Journal Of Special Education*, 38(1), 28-36.

Scrimger, J. (October-November, 2011). Bringing the horse to the child: Hinchinbrook farm introduces Horse Boy method to Nova Scotia. *Atlantic Horse and Pony*, 25, 2, 16-19.

Scott, N. (2005). *Special needs, special horses: A guide to the benefits of therapeutic riding*. Denton, Tex: University of North Texas Press

Smith, A., Duncan, J., & Marshall, K. (2005). Children's perspectives on their learning: exploring methods. *Early Child Development and Care*, 175, 6, 473-487.

Stephenson, A. (2013). Horses in the sandpit: Photography, prolonged involvement and 'stepping back' as strategies for listening to children's voices. *Early Child Development and Care*, 179, 2, 131-141.

Taylor, R. R., Kielhofner, G., Smith, C., Butler, S., Cahill, S. M., Ciukaj, M. D., & Gehman, M.

(2009). Volitional change in children with autism: A single-case design study of the impact of hippotherapy on motivation. *Occupational Therapy in Mental Health, 25*(2), 192-200.

United Nations (1989). Convention on the rights of the child. Retrieved from [http://www2.](http://www2.ohchr.org/english/law/crc.htm#art23)

[ohchr.org/english/law/crc.htm#art23](http://www2.ohchr.org/english/law/crc.htm#art23)

Zadnikar, M., & Kastrin, A. (2011). Effects of hippotherapy and therapeutic horseback riding on postural control or balance in children with cerebral palsy: A meta-analysis. *Developmental Medicine & Child Neurology, 53*(8), 684-691.

**Appendix A: Demographic Survey for Parents**

Please complete the following. You do not have to answer any question(s) which cause you discomfort. All questions relate to your child and their participation in equine assisted therapy.

1. Gender of Child:      ☐ Male                      ☐ Female
  
2. Age of Child:
  
3. Does your child have special needs? If yes, describe: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
4. For what reason(s) does your child participate in equine assisted therapy? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
5. How long has your child been participating in equine assisted therapy?: \_\_\_\_\_
  
6. Does your child have access to a horse outside of equine assisted therapy? \_\_\_\_\_
  - a. If yes, explain that access and how the horse may be utilized?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Appendix B: Follow Up and Consent Letter to Riding Facility**

(Letterhead)

Dear \_\_\_\_\_,

My name is Katherine McNutt and I am a student in the Master of Arts (Child and Youth Study) program at Mount Saint Vincent University. I am writing to you as a follow-up to our recent phone conversation regarding my research study on children and youth with special needs who participate in equine assisted therapy. The aim of this research is to gain insight into the experiences and perspectives of children who participate in equine assisted therapy as a form of intervention. Information gained from this study should increase our understanding of the experiences and perspectives of children who participate in equine assisted therapy.

In order to conduct this research, I am asking you to sign the section below to consent to allowing this study to be conducted at the facility in which the equine assisted therapy program operates. In addition, I am asking you to distribute the enclosed packages to parents who have children with special needs between the ages of 4-18 who are currently enrolled and participating in equine assisted therapy. Each package contains a) a letter explaining the purpose of this study, responsibilities of participants and the researcher, and outlining participants' rights; b) a demographic survey seeking information such as participants' age and gender and how long they have been participating in equine assisted therapy; and c) an informed consent form to sign if parents are willing to have their child participate in the research study photo-tour and interview. The photo-tour and interview should take approximately 30-40 minutes, will be audio-taped, and take place at a mutually convenient time at the riding center. Within the time agreed upon and perhaps during a follow up session if more time is needed, the child will be encouraged to take pictures around the riding facility and participate in the interview about their experiences of participating in equine assisted therapy. The photographs could be of places throughout the facility, the animals, the equipment, their favorite thing to do while they are there, for example.

As we discussed, participation in this research is completely voluntary. Participants may skip or decline to respond to any questions they are uncomfortable answering and may withdraw from the study at any time. They will be informed that the quality of the photographs taken is not important; however, if they wish to not complete the photo-tour, it is not mandatory. All information obtained in this study will be kept strictly confidential. The surveys, photographs, and interviews will be numerically coded to ensure participants' confidentiality. Surveys will be shredded in a secure shredder located at Mount Saint Vincent University after they have been coded and digital audio files deleted. Only my supervisor and I will have access

to the data. Quotes from the interviews will be used in the thesis, however, no names or identifying information will be reported in the thesis or in future presentations or articles. All paper data will be stored in a locked file cabinet in the research supervisor's office for five years and electronic files on the researcher's computer will be password protected. Following completion of the thesis, a summary of the findings will be sent to individual participants at the address they provide. The final thesis will be available through the Mount Saint Vincent Digital Library.

If you have any further questions or concerns regarding this study or your involvement, please contact me at (902) 233-5586 or by email at [katherine.mcnutt@msvu.ca](mailto:katherine.mcnutt@msvu.ca) or you may contact my thesis supervisor, Dr. Joan Turner at [Joan.Turner@msvu.ca](mailto:Joan.Turner@msvu.ca) or (902) 457-6750. If you have any questions and would like to speak to someone who is not directly involved in the study, you may contact the chair of the University Research Ethics Board c/o MSVU Research and Interactional Office at (902) 457-6350 or through email at [research@msvu.ca](mailto:research@msvu.ca)

Thank you for considering this research project.

Sincerely,

Katherine McNutt  
Master of Arts (CYSH) Student  
Mount Saint Vincent University

**Appendix C: Recruitment Poster**

# Fun and Unique Opportunity for Your Child

**Seeking families to participate in an inclusive  
qualitative research study**

## **Aim of the Study**

To allow all children participating in equine assisted therapy the chance to share their experiences and perspectives through the use of photography, in regards to participating in equine assisted therapy as a form of intervention.

If interested or for more information, please contact by email at [katherine.mcnutt@msvu.ca](mailto:katherine.mcnutt@msvu.ca) or phone (902)233-5586.

## **Who am I?**



- My name is Katherine McNutt
- I am a Masters of Arts student (Child and Youth Study) at MSVU
- I work as an Early Childhood Educator at St. Joseph's Children's Center
- I am a horse owner and horse lover
- I have been a volunteer with an equine assisted therapy program over the past eight years



## **Appendix D: Letter to Parents**

(Letterhead)

### **Letter to Parents**

Dear Parents,

My name is Katherine McNutt and I am a student in the Master of Arts (Child and Youth Study) program at Mount Saint Vincent University. I am writing to you regarding my research study on children and youth with special needs who participate in equine assisted therapy. The aim of this research is to gain insight into the experiences and perspectives of children who use equine assisted therapy as a form of intervention. Information gained from this study should increase our understanding of the experiences and perspective of children who participate in equine assisted therapy.

If you are willing to have your child participate in the study please review the Demographic Survey, the Consent Form, and email me at [katherine.mcnutt@msvu.ca](mailto:katherine.mcnutt@msvu.ca) to arrange a meeting.

The study involves an individual photo-tour of the facility and an interview about their experiences participating in equine assisted therapy. The photo-tour and interview should take approximately 30-40 minutes, unless it is mutually agreed that more time is needed, and will be digitally recorded. Within the time agreed upon and perhaps during a follow up session if more time is needed, the child will be encouraged to take pictures around the riding facility which will support a conversation (interview) with myself about their experiences participating in equine assisted therapy. The photographs could be of places throughout the facility, the animals, the equipment, their favorite thing to do while they are there, for example. If you agree to have your child take part in the study, email me at [katherine.mcnutt@msvu.ca](mailto:katherine.mcnutt@msvu.ca) to arrange a mutually convenient time to meet at the riding facility for the photo-tour and the interview.

Please understand that participation in this research is completely voluntary. Your child may skip or decline to respond to any questions he/she is uncomfortable answering and may withdraw from the study at any time. They will be informed that the quality of the photographs is not important; however, if they wish to not complete the photo-tour it is not mandatory. All information obtained in this study will be kept strictly confidential. The surveys, photographs, and interviews will be numerically coded to ensure participants' confidentiality. Surveys will be shredded at a secure shredder located at Mount Saint Vincent University after they have been coded and digital audio files will be deleted. Only my supervisor and I will have access to the data. Quotes from the interviews will be used in the thesis, however, no names or identifying

information will be reported in the thesis or in future presentations or articles. All paper data will be stored in a locked file cabinet in the research supervisor's office for five years and electronic files on the researcher's computer will be password protected. Following completion of the thesis, a summary of the findings will be sent to the postal or email address you provide. The final thesis will be available through the Mount Saint Vincent Digital Library.

If you have any further questions or concerns regarding this study or your involvement, please contact me at (902) 233-5586 or by email at [katherine.mcnutt@msvu.ca](mailto:katherine.mcnutt@msvu.ca) or you may contact my thesis supervisor, Dr. Joan Turner at [Joan.Turner@msvu.ca](mailto:Joan.Turner@msvu.ca) or (902) 457-6750. If you have any questions and would like to speak to someone who is not directly involved in the study, you may contact the chair of the University Research Ethics Board c/o MSVU Research and Interactional Office at (902) 457-6350 or through email at [research@msvu.ca](mailto:research@msvu.ca)

Thank you for considering this research project.

Sincerely,

Katherine McNutt  
Master of Arts (CYSH) Student  
Mount Saint Vincent University

## Appendix E: Free and Informed Consent

(Letterhead)

### FREE AND INFORMED CONSENT

**Thesis Title:** Equine Assisted Therapy Through the Eyes of a Child

**Thesis Student:** Katherine McNutt

I, \_\_\_\_\_, am willing to have my child participate in a one-on-one photo-tour and interview as part of a research study being conducted by Katherine McNutt as part of her Master of Arts thesis in the Department of Child and Youth Study at Mount Saint Vincent University. The aim of this research is to gain insight into the experiences and perspectives of children who use equine assisted therapy as a form of intervention. Information gained from this study should increase our understanding of the experiences and perspectives of children who participate in equine assisted therapy.

I have been informed that the time commitment expected of my child for the individual photo-tour and interview will be approximately 30-40 minutes. More time can be requested if needed. I am aware that the interview will be audio-taped and then transcribed by the researcher, at which time the digital audio file will be deleted. I understand that the transcripts will be kept in a locked file cabinet in the thesis supervisor's office for five years and that the electronic files on the researcher's computer will be password protected.

I understand that my child's participation in this research is entirely voluntary and that my child may withdraw at any time without consequence. I know my child may skip or decline to respond to any questions that he/she is uncomfortable answering and s/he may not complete the photo-tour if s/he does not wish to. I understand that all information obtained in this study is confidential and that no participant will be identified.

I am aware that all audio files, transcripts, photographs, and surveys will have numerical codes to maintain confidentiality. I also understand that quotes from interviews will be used in a future publication of the thesis to illustrate themes arising from the data. No identifying information will be reported and my child's identity will not be revealed in any way. However, I am also aware that the researcher is legally obligated to report any information that is shared with her which may indicate that a child or an animal is being abused or harmed in any way. I am aware that I can have a summary of the research findings if I wish, when the thesis is

completed. I am aware that there will be compensation for participating in the study in the form of a video slideshow made with the photos my child has taken and selected.

I understand that this research has been approved by the Child and Youth Study Department and the Research Ethics Board of Mount Saint Vincent University, Halifax, Nova Scotia. If I have any questions, I may freely contact the researcher, Katherine McNutt, at (902) 233-5586 or by e-mail at [katherine.mcnutt@msvu.ca](mailto:katherine.mcnutt@msvu.ca) or her research supervisor Dr. Joan Turner at (902) 457-6750 or at [Joan.Turner@msvu.ca](mailto:Joan.Turner@msvu.ca). If I have questions about how this study is being conducted and wish to speak to someone who is not directly involved in the study, I may contact the chair of the University Research Ethics Board c/o MSVU Research and International Office, or by phone at (902) 457-6350 or by e-mail at [Research@msvu.ca](mailto:Research@msvu.ca).

### **Informed Consent**

I have read the information provided above. I understand that by signing below I am agreeing to have my child participate in this research study.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

I agree to the interview being audio-taped: \_\_\_\_\_

Phone Numbers I can be reached at: \_\_\_\_\_

**and/or**

E-mail Address: \_\_\_\_\_

Times I may be reached at: \_\_\_\_\_

Researcher's Signature: \_\_\_\_\_

Postal address or e-mail where a summary of the results may be sent:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### **Assent**

My child has been asked and verbally agreed to participate in the study.

Parent Signature: \_\_\_\_\_ Date: \_\_\_\_\_