

2010

Accessibility of animal-assisted therapy for children with autism : a parent's perspective : a project based upon an independent investigation

Cheryl P. Giglio

Follow this and additional works at: <http://scholarworks.smith.edu/theses>

Recommended Citation

Giglio, Cheryl P., "Accessibility of animal-assisted therapy for children with autism : a parent's perspective : a project based upon an independent investigation" (2010). *Theses, Dissertations, and Projects*. Paper 1172.

This Masters Thesis has been accepted for inclusion in Theses, Dissertations, and Projects by an authorized administrator of Smith ScholarWorks. For more information, please contact elanzi@smith.edu.

Cheryl P. Giglio
The Accessibility of
Animal-Assisted Therapy
for Children with Autism:
A Parent's Perspective

ABSTRACT

This qualitative study was designed using flexible research methods to explore the accessibility of animal-assisted therapy for children with autism. The research question this study explored was *Is animal-assisted therapy accessible to children with autism?* An analysis of the literature revealed 1 out of every 150 children is diagnosed with autism and incidences are increasing rapidly. While there is no known cure for autism, many treatments have been found effective. Animal-assisted therapy has been shown to reduce the behavioral symptoms associated with autism, increase socialization and communication, and positively influenced the quality of life for those living with autism, making animal-assisted therapy viable intervention for this population.

The findings were based on 12 semi-structured interviews with parents of children diagnosed of autism. Each participant was asked to share his/her experience with animal-assisted therapy. Their initial answer was categorized into two groups: those who have participated in animal-assisted therapy, and those who have not. Specific questions then targeted their experience with accessibility of animal-assisted therapy.

The findings suggest there is a lack of accessibility to animal-assisted therapy for children with autism. Due to small sample size and isolated demographics, sample may not be representative of the entire population and may be limited by geographical area. However, these promising results have set the groundwork for future studies with a larger sample size.

ACCESSIBILITY OF ANIMAL-ASSISTED THERAPY FOR CHILDREN WITH
AUTISM: A PARENT'S PERSPECTIVE

A project based upon an independent investigation
submitted in partial fulfillment of the requirements
for the degree of Master of Social Work.

Cheryl P. Giglio

Smith College School for Social Work
Northampton, Massachusetts 01063

2009

ACKNOWLEDGEMENTS

This thesis could not have been accomplished without the assistance of many people whose contributions are gratefully acknowledged.

I wish to thank my research advisor, Nora Padykula, for her patience and commitment to keeping me on task when other life struggles begged for priority; my friend, Carolyn Andrews, for sticking with me through the “Smith Experience” and this thesis process; my friend, Linda Johnson for being the voice of reason to keep me grounded when it felt as though my world was crashing down around me; my mother, Dot Noble, for her constant, unwavering encouragement and support in too many ways to count; to my beautiful, loving daughter, Heather, who is my daily dose of sunshine and inspiration; my sweet, loving son, Gregory, whose struggles with autism and atypical relationship with animals inspired this investigation; and most of all, to my husband, Lenny, for his many years of love and support which has allowed me to find my purpose in life.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	ii
TABLE OF CONTENTS.....	iii
CHAPTER	
I INTRODUCTION.....	1
II LITERATURE REVIEW.....	4
III METHODOLOGY.....	30
IV FINDINGS.....	39
V DISCUSSION.....	48
REFERENCES.....	54
APPENDICES	
Appendix A: Informed Consent for Parents.....	58
Appendix B: Counseling Referrals.....	60
Appendix C: Autism Parent Support Programs/Organizations.....	61
Appendix D: Advertising Flyer for Participants.....	62
Appendix E: Demographic Information/Research Questions.....	63
Appendix F: Connecticut Animal-Assisted Programs.....	65
Appendix G: Approval Letter from the Human Subjects Review Committee.....	66

CHAPTER I

INTRODUCTION

Autism currently affects 1 out of every 150 children. There is no known cause or cure for autism (Autism Society of America, 2007; Autism Speaks, 2007; Center for Disease Control and Prevention, 2007; National Autism Association, 2007). The impact of this disorder on children and their families is astronomical. Autism affects each family differently; however, most families with children with autism endure additional stressors each day that many of us are fortunate to not have to endure. These parents have daily concerns about their child's safety and future prognosis, must advocate daily for their child's physical care and educational needs, and receive very few supports to help lighten their load. While parents of typically developing children have these concerns as well, their children have the internal resources to share their daily excursions with their parents. Most children with autism do not. Children with autism must rely on their parents to interpret their needs and ensure those needs are taken care of.

Although there is no one treatment that works for every child with autism, there are many treatments that reduce symptoms and improve the lives of those living with autism. Among those treatments showing promise is animal-assisted therapy (Heimlich, 2001; Law & Scott, 1995; Martin & Farnum, 2002; Nimer & Lundahl, 2007; Parshall, 2003; Sevals, 1999; White, 2005).

There is a scarcity of empirical research on using animal-assisted therapy with children with autism. However, available studies indicate that animal-assisted therapy

has been helpful to many living with autism (Heimlich, 2001; Law & Scott, 1995; Martin & Farnum, 2002; Nimer & Lundahl, 2007; Parshall, 2003; Sevals, 1999; White, 2005).

Due to the limited information available, it is questionable how accessible this intervention is to those who may benefit from it. It is greatly possible there are barriers to the accessibility of animal-assisted therapy to those who could benefit from it most.

The purpose of this thesis is to explore the accessibility of animal-assisted therapy to children with autism. This research project was a qualitative study that used flexible research methods to explore whether or not children with autism can access animal-assisted therapy. The primary research question is “How accessible is animal-assisted therapy for families who have a child with autism?”

Study participants included twelve (12) parents of children with autism and their experiences with animal-assisted therapy or lack thereof. Of the twelve (12) participants interviewed, only three (3) had experience with animal-assisted therapy, while the remaining nine (9) reported not having any experience with animal-assisted therapy.

In conducting interviews of the 12 participants, five themes emerged from the data collected: 1) Information received about treatments; 2) Perceptions of animal-assisted therapy as a treatment model; 3) Managing multiple treatment needs; 4) Funding for treatments; and 5) Accessible animal-assisted facilities.

The study indicates that parents have many sources they use to gather information about potential treatments for children with autism. However, they put the most trust in information they receive from doctors, therapists, educators, or other parents who have children who have experienced success with particular treatment models. Because there appears to be limited information given regarding animal-assisted therapy as a treatment

model, many interpret the intervention as more of a social or recreational outlet for a child with autism. Because children with autism have multiple treatment needs (medical, physical, educational, social, etc.), parents must prioritize their child's needs and balance that with what they can afford. The financial strain on families with children with autism is great. Many treatments are not paid for by schools or covered by insurance. Animal-assisted therapy is typically not covered by insurance and therefore, the financial burden for this treatment lies with the parents. For parents who can afford the treatment, study participants reported there are very few facilities that offer animal-assisted therapy to children with autism in the study collection area. Of the participants who have never tried animal-assisted therapy with their child with autism, all indicated they would like their child to participate in animal-assisted therapy. However, due to the barriers of accessibility, that does not appear to be a reality for their families.

CHAPTER II

LITERATURE REVIEW

Animals have been known to enhance the quality of people's lives for hundreds of years. Much research has been done regarding the bond between animals and humans (Chandler, 2001; Hines, 2003; Jalongo, Astorino, & Bomboy, 2004; Macauley & Gutierrez, 2004; McDowell, 2005). Adults and children alike have benefited both physically and emotionally by having regular contact with animals (Chandler, 2001; Hines, 2003; Jalongo, Astorino, & Bomboy, 2004; Macauley & Gutierrez, 2004; McDowell, 2005). Animals can offer unconditional love and support that humans may have difficulty receiving interpersonally from other people (Chandler, 2001; Hines, 2003; Jalongo, Astorino, & Bomboy, 2004; Macauley & Gutierrez, 2004; McDowell, 2005). For children, animals can offer a trusting, interactive support system that may be hard to establish with adults (Chandler, 2001). Through interactions with animals, children with autism have shown improvement in their symptoms and with their quality of life (Karol, 2007; Liptak, 2005; McDowell, 2005; Servals, 1999). If animal-assisted therapy can improve the lives of people living and dealing with autism on a daily basis, how accessible is this therapy to those who need it most? This qualitative study will explore the experiences of parents regarding the accessibility of animal-assisted therapy for children with autism.

The following sections will discuss the historical background information about animal-assisted therapy, animals as therapeutic tools and animal-assisted therapy today.

Historical Background Information About Animal-Assisted Therapy

Animals have been used for centuries as workers or companions, enhancing the lives of humans (Heimlich, 2001; & Parshall, 2003). Horses have been used for many years for rehabilitation purposes and seeing-eye dogs have been used to assist blind people with navigating through their day since World War I (Parshall, 2003).

It is believed that the first recorded use of farm animals in the therapeutic role was established at the York Retreat in England, which was founded by a Quaker named William Tuke, in the late 1700s (Cusack, 1984; Heimlich, 2001; & Parshall, 2003). Patients learned how to interact and care for the farm animals at the Retreat that offered a positive outlet for the patients (Cusack, 1984; Heimlich, 2001; & Parshall, 2003).

In the early 1960s, a psychologist in New York City by the name of Boris Levinson was working with a child whom he was having great difficulty communicating with. Dr. Levinson left the child and his dog alone in a room for a few minutes and upon his return, he witnessed the child talking with the dog (Heimlich, 2001; Hines, 2003; Jalongo, Astorino, & Bomboy, 2004; Parshall, 2003). This was the beginning of animal-assisted therapy as we know it today.

Animals as Therapeutic Tools

Animal-assisted therapy has been used by therapists while working with adults and children who have various types of mental health issues and learning disabilities (Chandler, 2001; Heimlich, 2001; Hines, 2003; Jalongo, Astorino, & Bomboy, 2004; McDowell, 2005).

Researchers have found that animal-assisted therapy has multiple benefits for the elderly, persons with mental health issues, children with behavioral issues, learning

delays, and those with developmental disabilities such as autism (Chandler, 2001; Hines, 2003; Jalongo, Astorino, & Bomboy, 2004; Macauley & Gutierrez, 2004; McDowell, 2005; Parshall, 2003).

Wide arrays of people in the helping professions (e.g., occupational therapists, nurses, clinical social workers, psychologists, physical therapists) have reported clients benefiting from the usage of animals in therapy sessions with children and adults (Chandler, 2001; Hines, 2003; Jalongo, Astorino, & Bomboy, 2004; Karol, 2007; Lefkowitz, Paharia, Prout, Debiak, & Bleiberg, 2005; Liptak, 2005; Macauley & Gutierrez, 2004; McDowell, 2005; Parshall, 2003). Horses are used for therapeutic interventions by physical, occupational, and speech therapists in what is referred to as “hippotherapy” (Macauley, & Gutierrez, 2004). Therapeutic programs that use horses as a medium to conduct therapy sessions have been created to work with children and adolescents with a wide array of psychiatric diagnoses as well (Karol, 2007; Liptak, 2005).

Human-animal interactions have positively impacted elderly clients in residential care by “fostering socialization, increasing responsiveness, increased mental alertness, and enhancing an outward focus on the environment” (Heimlich, 2001, p. 48).

Studies have shown that persons with mood disorders and psychotic symptoms have benefited from an increase in socialization and a decrease in anxiety after being in contact with therapy animals. In a study of 230 participants diagnosed with psychotic and/or mood disorders which compared the benefits of participating in animal-assisted therapy versus recreation, it was found that psychotic patients had nearly twice the reduction in anxiety levels than those who participated only in recreation. The

participants with mood disorders showed similar benefits in reduced anxiety levels during both animal-assisted therapy and recreation (Pashall, 2003).

Children with emotional and behavioral issues, and children with Pervasive Developmental Disorder/high-functioning autism, participated in two studies in which the children were trained on how to take care of therapy dogs. Researchers found that when the children were involved with the care of the animals and in their training, their fear and anxiety was reduced; there was an increase in socialization skills, and a decrease in hyperactivity and unacceptable behaviors as well (Law & Scott, 1995; Parshall, 2003).

A project made up of two studies in Belgium used dolphins to study interaction between the dolphins and children with autism and how those interactions enhanced the children's learning and attention spans. The studies used three groups of three children each who interacted with dolphins, under the supervision of a dolphin trainer and another group of children who were taught in the classroom and did not interact with the dolphins. The results of the studies showed that the children with autism who interacted with the dolphins had learned faster and retained the information better than the children in the classroom group. However, the two studies showed inconsistencies and possible confounding factors. Firstly, the relationships between the teachers used in the study and the students could have greatly influenced the outcomes. In the first study where students showed the most positive outcome, the strong positive relationship between the children and the teacher was a factor. To the same extent, the lack of strong interpersonal relationship with the teacher in the classroom group also influenced the children's outcomes. Second, the students' reactions to other factors (i.e., water temperature, sensitivity, etc.) could not be effectively controlled. Lastly, sessions were not

standardized, and therefore, results could not be reproduced. It was impossible to determine what was responsible for the changes observed (Servals, 1999).

The use of animals in clinical work can assist therapists in building a bond and trust with clients. Many people have difficulty talking about their feelings with humans. Talking to an animal while the therapist listens might be easier for some than talking with the therapist directly. It is believed the presence of animals helps to reduce anxiety and enable clients to participate in therapy (Chandler, 2001).

Children with learning delays and developmental disabilities have also benefited from animal-assisted therapy. In 1999, the *Reading Education Assistance Dogs (R.E.A.D.)* program started in Utah. The program was designed so that children would read aloud to a therapy dog in the classroom once per week. Reading to the dog allowed them to build confidence in their reading abilities. Within one year, many students had improved two grade-levels. Because of its success, this program is being used in classrooms around the U.S. Research has also shown that animal therapy in the classroom can foster positive interactions between typically developing peers and children with disabilities and aids in the goal of inclusion (Jalongo, Astorino, & Bomboy, 2004).

A study was conducted to observe the effects of animal-assisted therapy on the behavior of mentally disabled children. Participants of the study included fourteen children with multiple disabilities, including mental retardation and developmental delays. The children's behavior was observed and documented for three weeks before the animal-assisted therapy began. The children participated in eight weeks of animal-assisted therapy and behavioral changes were observed and documented. The data showed a positive trend in reduction of undesirable behaviors and increase in socially

acceptable behaviors with the usage of animal-assisted therapy. However, there were many confounding factors. One was that the sample size was very small and could not be generalized to the population. Second, there was a possible inconsistency of the raters of behavioral change. Lastly, there was a lack of data on some treatment weeks by some of the raters, therefore making the results for a quantitative study inconclusive (Heimlich, 2001).

Researchers have found animal-assisted therapy to be a successful treatment for adult and child victims of sexual abuse and PTSD (Lefkowitz, et al. 2005; Reichert, 1998). In treating adult survivors of sexual abuse that have posttraumatic stress disorder, animals served as a way to build rapport with clients and to help exhibit a safe space for the client (Lefkowitz, et al, 2005.). When working with children, therapists have been able to connect better with clients and children have used animals to help abused children disclose the abuse and their feelings (Lefkowitz, et al. 2005; Reichert, 1998). Children can create their own story through projecting their feelings and experiences onto the animal (Reichert, 1998).

Animal-Assisted Therapy Today

Dogs and horses are often used as alternative therapeutic tools to complement traditional therapies. These alternative therapies may help a child achieve their therapeutic goals where traditional means fall short. Today, the field of animal assistance uses animals to support human independence, psychological growth and development.

Dogs are used as companions to those who have physical disabilities to pull wheelchairs or retrieving items for their human companion. Hearing disabled persons have companion dogs to alert them to sounds in everyday life (fire alarms, doorbells,

alarm clocks, etc.). Some companion dogs work in facilities with rehabilitation personnel to “help improve the mental, physical and emotional health of those in their care” (Canine Companions for Independence, 2007, pg. 2). Due to the unconditional love and attention a dog gives to people, other companion teams help persons with developmental or emotional disabilities by creating a mutual “bond of companionship, affection, and love” (Canine Companions for Independence, 2007, pg. 2). People with developmental disabilities may engage in activities such as feeding and grooming the dog in an effort to “broaden daily living skills” (Canine Companions for Independence, 2007, pg. 2).

The North Star Foundation trains service dogs to meet the unique needs of a child with autism. The most important element is the relationship between the child and the dog. From puppyhood, the dogs are socialized with the child with autism so the dog will learn how to interpret and tolerate some of the unusual behaviors that may be exhibited by a child with autism. Since dogs depend on nonverbal communication, they must learn to adjust to the atypical communication patterns displayed by the child. Many times, spending time with the dog can greatly reduce tantrums and meltdowns (North Star Foundation, 2000).

Trained clinicians often use animals to work on individual therapy goals and objectives of children with autism. The animal is integrated into therapeutic activities focusing on social interaction, sensory integration, and life skills (Mentalhelp, 2000). During treatment, the animal is the motivating factor (Delta Society, 2007). Animals have the ability to hold the autistic child’s attention during therapy, and have been known to have a calming effect as well (Mentalhelp, 2000).

Delta Society is the “leading provider of credentialing and continuing education related to animal-assisted activities and therapy and service animal/service dog issues” (Delta Society, 2007). The organization provides training courses for professionals to learn how to work with animals as part of their therapeutic approach to treatment. They provide techniques on assessment, incorporating an animal into the client’s treatment, help with achieving their goals and objectives, and evaluation. Animals can be trained through Delta Society by certified trainers and are evaluated for suitability before becoming certified through Delta Society. Delta Society created a *Standards of Practice in Animal-Assisted Activities and Animal-Assisted Therapy* which sets requirements and structure to animal-assisted therapy programs including selecting an animal, training, treatment plan development, documentation of sessions, and other resources. Delta Society also provides a handbook called *Animal-Assisted Therapy; Therapeutic Interventions and Handbook on Animal-Assisted Therapy* and continuing education to assist certified therapists (Delta Society, 2007).

As stated previously, animal-assisted therapy is currently being used as a therapeutic treatment with many populations including people with autism. Animal assisted therapy has been used to engage hard to reach clients, build rapport, self-confidence and self-esteem, decrease anxiety, and increase socialization, attention and focus. Research in this field is in its infancy. Based on limited empirical studies and testimonials from professionals in the field, the results to-date appear to be promising. However, there needs to be more evidenced-based research studies. Interpretations of these results need to take into consideration the possibility of multiple factors present during the therapy session that could be contributing to outcomes.

The following sections will introduce the developmental disability of Autism: characteristics of the disorder, various treatments, accessibility of treatments, the proposed theory of connections, and the impact of autism on families. This will conclude with an integrated discussion on the application of animal-assisted therapy with those diagnosed with autism.

Characteristics of Autism

Autism is a profound developmental disorder characterized by severe impairments in social behavior and in communication, and by restricted or stereotyped interests and behaviors (American Psychological Association, 1994). Autism is a spectrum disorder that ranges from mild to severe. Where a person with autism falls on the spectrum is determined by the degree of symptoms and behaviors they are exhibiting (Autism Society of Connecticut, 2007; Autism Speaks, 2007; Center for Disease Control and Prevention, 2007; National Autism Association, 2007). There is evidence that the incidence of children with autism has increased greatly over the past ten years (Centers for Disease Control, 2007). A recent Centers for Disease Control report found that 1 in 150 children in the United States have autism (Autism Society of America, 2007). Currently, there is no known cause of autism (Autism Society of America, 2007; Autism Speaks, 2007; Center for Disease Control and Prevention, 2007; National Autism Association, 2007). Some of the proposed etiological factors include: genetics, vaccinations (heavy metal poisoning), autoimmune attack to the developing fetal brain, and increased vulnerability to environmental exposures (Bristol-Power, 2001).

The Autism Society of America (2007) states approximately 1.5 million Americans and their families are currently affected by autism. Many children with autism

have difficulty with anxiety, short attention spans, hyperactivity, and sensory issues which make it difficult for them to regulate their behavior. Many children with autism have difficulty interacting with people and if given the choice, would retreat to the security of their inner-self and not interact with people (Autism Society of America, 2007; Autism Speaks, 2007; Center for Disease Control and Prevention, 2007; National Autism Association, 2007).

Another characteristic of autism is difficulty with sensory integration. Sensory integration is a process where the brain takes in messages from the numerous sensory inputs (sight, hearing, smells, tastes, textures) from the environment simultaneously and distributes the sensory messages to give us information about the sensory experience (Cermak & Henderson, 1990; King, 1996; Sensory Processing Disorder Foundation, 2007). In people with autism, it appears this process can be poorly organized or in some cases, missing altogether (King, 1996). People can be either hypersensitive to some stimuli and/or hyposensitive to others. Sensory Integration Therapy attempts to reorganize the sensory areas of the brain and the nervous system to help people to process the information they take in from their environment effectively (Cermak & Henderson, 1990; Sensory Processing Disorder Foundation, 2007).

Treatments in Autism

Although there is no known cure for autism, there are many treatments that have been used to help reduce behaviors and symptoms, and teach skills to foster increased independence for individuals with autism. Since autism is specific to the individual (each person has their own unique set of symptoms and severity) and there is a wide range of possible combinations, there is no intervention that will be effective for every person with

autism. Therefore, there are many different treatment options that have reduced behaviors and taught necessary life skills to people with autism. While none of the treatments available have been found to cure autism, many of the treatments have allowed individuals to learn how to function in society. Finding the correct treatment or combination of treatments that will be effective is often difficult and can take a long time. The search for effective treatments for a child with autism is most difficult for parents and caregivers as the brunt of the responsibility lies with them (Autism Society of Connecticut, 2007; Autism Speaks, 2007; Center for Disease Control and Prevention, 2007; National Autism Association, 2007).

While there are many approaches, this paper will focus on the top five types of interventions which professionals in the field of autism have used most often: Applied Behavioral Analysis (ABA), TEACCH (Treatment and Education of Autistic and Related Communication Handicapped Children), Relational Development Intervention Program (RDI), Floortime (DIR-Developmental, Individual-Difference, Relationship-Based), and the Picture Exchange Communication System (PECS). These treatments attempt to address some of the core deficits experienced by people with autism such as communication, learning, coping skills, social interactions, and behavioral issues.

One of the oldest and most widely used treatments in autism is *Applied Behavioral Analysis (ABA)*. Behavioral analysis was originally used by B.F. Skinner in the 1930's. Since the early 1960's, behavior analysts have used this principle to increase skills and reduce problem behaviors in people with autism. ABA is a particular behavioral approach that believes that behavior that is rewarded is more likely to have the behavior be repeated than behavior that is being ignored or disciplined. Children are

taught through a series of repetitive trials called discrete trial training and receive rewards (reinforcers) for exhibiting the desired behavior. This training is used to teach children essential life skills that range from the most basic (eating, sleeping, dressing, potty training, appropriate play) to more complex (social skills and interactions). When a child completes a task, they are given a reward, thereby reinforcing the behavior. Often, there is an increase in communication, both receptive and expressive language as well. One critique of ABA is that it emphasizes compliance training/behavioral modification and may ignore underlying neurological issues associated with autism such as executive functioning, attention, and sensory integration deficits and may not be able to be generalized to community living. Because of the rigorous training and high cost of treatment which could reach \$50,000 per year (East Tennessee State University, 2006), there is the risk of overstress on the child and the family as well (Autism Society of Connecticut, 2005; Autism Speaks, 2007; Center for Disease Control and Prevention, 2007; National Autism Association, 2007).

TEACCH (Treatment and Education of Autistic and Related Communication Handicapped Children) is a treatment intervention that was developed in the 1960s. Doctors Eric Schopler, R.J. Reichler and Ms Margaret Lansing were working with children with autism and created a program that would foster independence in the children. What makes the TEACCH approach unique is that the focus is on the design of the physical, social and communicating environment. The environment is structured to accommodate the difficulties a child with autism has while training them to perform in acceptable and appropriate ways. TEACCH programs are very structured and adapt the environment to the child's needs, not adapting the child to the environment. The goal of

this treatment approach is to provide the child with skills to understand their world and other people's behavior through improving skills in communication, coping, and social interactions. Because the program is highly structured and adapts the environment to the child versus helping the child adapt to the environment, many professionals feel this treatment may be too isolating for people with autism and may discourage adaptation to everyday situations that may occur outside their environment. Some critics (East Tennessee State University, 2006; Autism Society of Connecticut, 2005) of this approach also believe that the TEACCH method depends too much on routines and sameness. It does not place enough emphasis on communication and social development and may "give in" (Autism Society of Connecticut, 2005) to, versus combat, the symptoms of autism (Autism Society of Connecticut, 2005; Autism Speaks, 2007; Center for Disease Control and Prevention, 2007; East Tennessee State University, 2006; National Autism Association, 2007).

Another known treatment used with children who have autism is the *Relational Development Intervention Program (RDI)*. In 1995, clinical psychologists Steve Gutstein, Ph.D. and Rachelle Sheely, Ph.D. began using techniques, now referred to as RDI, in a clinic in Texas. However, the RDI program was not developed until 2001. RDI is a parent-based treatment that focuses on one of the core deficits in autism: social interactions and relationships with other people (Autism Society of Connecticut, 2005; Autism Speaks, 2007; Gutstein, 2004). With this intervention, parents are trained by RDI Consultants to teach and motivate their children through Experience Sharing Interaction. Through the use of Experience Sharing Interactions, some people with autism become able to enjoy sharing their world with others, learn to accept unplanned changes and

transitions easier, and have deeper relationships with people in their lives. RDI is an ongoing treatment process that is parent driven and very time consuming. The greatest successes seen with RDI are those whose families have developed a lifestyle around the usage of RDI. For many families, this level of commitment may be difficult. Parents must travel to workshops, often out-of-state for ongoing training. According to statistics from East Tennessee University (2006), the cost of this treatment (not including travel costs and time lost from work, etc.) can range between \$10,000 and \$20,000 per year (Autism Speaks, 2007; Center for Disease Control and Prevention, 2007; East Tennessee State University, 2006; Gutstein, 2004; National Autism Association, 2007).

In the early 1980s, a treatment approach known as Floortime (DIR-Developmental, Individual-Difference, Relationship-Based) was developed by Stanley Greenspan. This treatment approach uses play to build on interactions between a child with autism and an adult to increase communication and development. The program builds on child-directed interactions to encourage more interactions. This program addresses emotional development and sees the child as a fully integrated being. It does not treat other developmental areas separately (i.e., speech development, sensory development, motor development, etc.) but rather includes those areas as part of the play interactions. Critics believe the Floortime approach lacks focus on deficits in specific areas of development. Because the treatment is child-led, it may be difficult to engage a child who is unaware that someone is trying to interact with them, and achieve treatment goals. Floortime is time-intensive, requiring much patience and a time-commitment from parents, making it more difficult for parents who must work. The cost of this treatment approach is family-friendly, as low as \$135 per couple/\$75 per individual to attend a

training workshop, and there are no additional costs for supplies (Autism Society of Connecticut, 2005; Autism Speaks, 2007; Center for Disease Control and Prevention, 2007; East Tennessee State University, 2006; National Autism Association, 2007).

In 1985, the Picture Exchange Communication System (PECS) was developed by Andy Bondy, PhD and Lori Frost, a speech and language pathologist. This treatment approach was developed to help non-verbal children with autism to communicate their needs and wants. PECS uses the methods of applied behavioral analysis (reinforcement for desired behaviors) to teach children to use pictures to communicate their desires. The child would exchange a picture for the desired item or activity. Many children who use PECS show an increase in communication and social interactions. This method gives non-verbal children a medium to make their needs known and communicate with others around them. (Autism Society of Connecticut, 2005; Autism Speaks, 2007; Center for Disease Control and Prevention, 2007; National Autism Association, 2007). Critics of this treatment approach believe that PECS may actually suppress spoken language, although parent and therapists testimonies and anecdotal evidence support the opposite (Autism Society of Connecticut, 2005).

Temple Grandin's Theory of Connection

Temple Grandin, Ph.D. is a world-renowned designer of livestock handling facilities and a Professor of Animal Science at Colorado State University. Dr. Grandin is also very well known as a woman with autism who has studied and written books about what it is like to be a person with autism. She has also written books about animal behavior as well. Dr. Grandin travels the world speaking at conferences and seminars

sharing her experiences and findings. Based on her unusual perspective with understanding animal behavior and her many years of experience, Dr. Grandin believes that many people with autism have a special connection with animals that non-autistic people do not (Grandin, 2005).

Dr. Grandin has come to the conclusion that people with autism comprise of three different types of thinkers: visual, music and math, and verbal logic, or a combination of these (Grandin, 2005). She believes that non-autistic people think in words and that many “autistic people think in pictures and have almost no words running through their heads at all, just a stream of images” (Grandin, 2005, p. 10). Dr. Grandin herself is a visual thinker who states that during her thinking process she does not have words, only pictures. Drawing from her years of professional training as an animal scientist, Temple believes animals are visual thinkers and their behavior is controlled by what they see, not by words, which is also true for many people with autism (Grandin, 2005). In an interview with Harcourt Trade Publications, Dr. Grandin states,

It's a lot easier to understand the animals if you don't think in language. When I first started out in the feed yards, I wanted to figure out why this cattle-handling facility was working better than another cattle-handling facility. My first inclination was to get down in the chutes and see what the cattle were actually seeing. And feed-yard managers thought that was crazy, when I did that back in the seventies. It seemed just totally obvious to me to get down in there and see, "What are these cattle actually seeing?" I thought in pictures. And I thought that everyone thought in pictures. It wasn't until I got into writing *Thinking in Pictures* that I really began to understand how my thinking process is totally different from other people's thinking process. And the more I learned about that, the more insight that gave me into animals, because I thought, "Wait a minute, that's how animals have got to think. There's no other way they could think." They've got to categorize sensory-based information: pictures, smells, sounds, the way things feel. These are all things that can be put into categories. Categories are the beginning of thinking (Harcourt Books, 2005).

According to Dr. Grandin (2005) animals and people with autism do not “see their ideas of things; they see the actual things themselves that make up the world”(p.30). She states that non-autistic persons are “too cerebral,” meaning that they think too abstractly (Grandin, 2005, p. 27). Based on her experiences, Dr. Grandin states that because both animals and people with autism are visual thinkers and both have difficulty with abstract thinking, they see details that others don’t see, this is a key difference in the way that animals and people see and think (Grandin, 2005, p.31). These differences in brain function may give insight into why many people with autism seem to have a good connection to animals and a more difficult time connecting socially with other humans.

While much of her evidence is anecdotal and based on her own experiences as both an Animal Scientist and as a person with autism, Dr. Temple Grandin has contributed greatly to the field of animal science and understanding autism. She gives insight into the unusual connection between animals and persons with autism and allows us to see how animals can be a great resource for people with autism.

Accessibility of Treatments for Children with Autism

While both traditional and alternative interventions have been successful for children with autism, many of these treatments may go untried by families who are seeking help for their child. While there are many reasons families do not pursue these treatment regimes, the most common reasons are due to accessibility. This section will address issues of accessibility with respect to common knowledge and finding appropriate treatments, location and cost of treatments, financial assistance, and insurance coverage for treatments.

When a child is diagnosed with autism, many practitioners will give information about the disorder to parents, along with materials to read and digest. Due to the invention of the Internet, information regarding the vast variety of treatments targeting the symptoms of autism has become more accessible. However, there are parents who do not have access or knowledge of computers, and have no idea how to access treatment information. Without access to computers, the information available to parents regarding treatments (both traditional and alternative) is limited.

Even if parents can access information on interventions, often practitioners who specialize in these treatments are many miles from their homes, or even out-of-state. Many parents will take their child to neighboring states if they feel the benefit may outweigh the costs incurred. However, some families do not have the financial resources to access these treatments. Most treatments are expensive, and there is very little financial assistance available as many treatments families find helpful are not yet empirically-based. Most insurance companies refuse to cover many of the costs related to autism treatments. Often, insurance companies may pay for limited amounts of speech and occupational therapy, but refuse to cover costs for behavioral, educational, biomedical, or social interventions (Autism Society of Connecticut, 2007; Autism Speaks, 2007; Bartley, 2006; Center for Disease Control and Prevention, 2007; Freudenheim, 2004; National Autism Association, 2007). On the National level, the Combating Autism Act of 2006 has been signed into Law, promising to help provide funding for treatments to those in need (United States Congress, 2006). It still remains to be seen where and when those funds will reach the pockets of the needy families who live with autism.

Many individual states have introduced possible changes in legislation that would require insurance companies to cover the autism-related costs for families to get proper treatment and medical care for their child. In July 2007, the Autism Spectrum Disorders Coverage Bill was passed in Pennsylvania that holds insurance companies responsible to pay for costs associated with autism. Since then, seven other states (Texas, Colorado, South Carolina, Indiana, Michigan, Florida, and California) have passed similar laws. Legislators in Connecticut are now working on a bill that would mimic the Pennsylvania law.

While it is imperative that laws be developed to protect people with autism, this will not entirely safeguard people and families living with autism. In the states where payments for services are required by law, insurance companies will use tactics such as questioning the medical necessity of the treatment, qualifications of therapists, or will state the specific treatment in question has not been proven effective by empirical studies, to avoid paying the fees. Local school systems are required by law to pay for the educational portions of a child's treatment regimen. Insurance companies will also dispute whether an intervention is truly therapeutic treatment or an educational one in an effort to not pay the bill (Bartley, 2006; Cook & Lennox, 2000; Freudenheim, 2004; Peele, 2002). This leaves families wondering how they are going to meet the treatment needs of their child with autism without getting into debt.

Impact of Autism on Families

The impact on families does not stop with the financial burdens of raising a child with autism. Many families with typically-developing children can take their children to daycare, hold a job or even have a career, and are blessed with the luxury of watching

their child participating in school sporting events and activities with other children their age. Many parents of children with autism are unable to find childcare that can handle the demands of their child. These parents often either work different shifts (i.e., mother works first shift, father works second shift) or one parent needs to stay home to meet the needs of their child. For those who do work, often they are forced to miss work, reduce their hours and work part-time, or quit all together to care for their autistic child. The financial strain also wreaks havoc with the family unit. Parents of children with autism often give up much of their own life's desires in an effort to provide for the special needs of their child and their family (Autism Society of Connecticut, 2007; Autism Speaks, 2007; Bartley, 2006; Center for Disease Control and Prevention, 2007; Freudenheim, 2004; National Autism Association, 2007; National Autistic Society, 2006).

Having a child with autism presents many challenges to a family. Mothers often take the brunt of the caring responsibilities and coordinating the educational, medical, and daily living needs of the child. Many fathers often work long hours, which limits their ability to provide respite to their wives. Mothers tend to have much higher levels of distress due to lack of family support and the daily challenges associated with caring for someone with autism. These parents are at greater risk for depression, anxiety, social isolation, and fatigue than parents of typically developing children (Autism Society of Connecticut, 2007; Autism Speaks, 2007; Bartley, 2006; Center for Disease Control and Prevention, 2007; Freudenheim, 2004; National Autism Association, 2007; National Autistic Society, 2006). The divorce rate for parents raising a child with autism is reported to be approximately 80% (Autism Society of America, 2006).

Siblings of children with autism often experience stress as well. Since a child with special needs requires extra time and attention, jealousy by siblings and peers can be an issue. At times, siblings can be targets of the autistic child's aggressive behavior. Siblings can be embarrassed or frustrated with their brother or sister's atypical behavior. They may witness their parents' stress, overhear arguments and disagreements between parents, wonder about their sibling's future prognosis, and/or worry about the security of their family unit (Autism Society of Connecticut, 2007; Autism Speaks, 2007; Bartley, 2006; Center for Disease Control and Prevention, 2007; Freudenheim, 2004; National Autism Association, 2007; National Autistic Society, 2006). These families are at great risk due to the constant demands and stressors of raising a child with autism.

While these families of children with autism are at great risk, they have strengths as well. These families have a lot of love and compassion for each other. Parents are dedicated to doing all they can to give their children the best chance at a happy, productive life. They are very empathetic to others who have children with autism and provide a great source of support. Siblings often help out with caring for the well-being of their autistic brother or sister. These parents work hard to learn all they can about the disorder and what they can do to help their child (Autism Society of Connecticut, 2007; Autism Speaks, 2007; Bartley, 2006; Center for Disease Control and Prevention, 2007; Freudenheim, 2004; National Autism Association, 2007; National Autistic Society, 2006).

Finding available services for your child with autism is a difficult task. As mentioned previously, doctors provide parents with some information regarding the disorder and services that might help their child. However, a majority of the grueling

task lies with the parents. With the invention of the Internet, information is more readily available to parents. Some of this information can be confusing, incorrect, or overwhelming for parents. The Internet does not provide the human interaction many people need to make sense of the vast amounts of information available and this can be a daunting task to undertake alone. There are organizations that provide resources to help families get through the maze of information (Autism Society of Connecticut, 2007; Autism Speaks, 2007; Bartley, 2006; Center for Disease Control and Prevention, 2007; Freudenheim, 2004; National Autism Association, 2007; National Autistic Society, 2006).

Federal and State policies are also in place to assist families. Early Intervention services for children with autism are available at the State government level. States are required by federal law to provide early intervention services to families. In Connecticut, the Birth-to-Three system is in place to evaluate and offer services to children who are developmentally delayed or have health-related issues which will make the child at high risk for becoming developmentally delayed. The first evaluation will determine if a child is developmentally delayed and what services may be necessary. If a child is deemed eligible due to developmental delays and symptoms indicative of a possible autism diagnosis, they would be referred to autism-specific programs offered by Birth-to-Three. The Academy of Pediatrics recommends that all children be screened for autism-related disorders between the ages of eighteen and twenty-four months old. Funding for these programs comes from federal, state, and local funding sources (State of Connecticut, 2008; State of Connecticut, Department of Developmental Services, 2008).

Once a child reaches three years old, they are no longer covered under the Birth-to-Three programs. Local school systems are responsible for providing services for the child from the age of three until they either graduate high school or reach the age of 21. Birth-to-Three providers will make recommendations to school systems as to what treatment modality currently is working for the child; however, many times the school systems will not follow the recommendations and parents are left having to fight for their child's rights and to try and get the school system to do what is in the best interest of the child, not their budget (Autism Society of Connecticut, 2007; Autism Speaks, 2007; Bartley, 2006; Center for Disease Control and Prevention, 2007; Freudenheim, 2004; National Autism Association, 2007; National Autistic Society, 2006; State of Connecticut, 2008; State of Connecticut, Department of Developmental Services, 2008).

The Individuals with Disabilities Act (IDEA) is a federal law that guarantees a free and appropriate public education for children with disabilities, which includes children with autism. The IDEA also provides rights for parents to oversee and seek appropriate educational services for their child with autism. While parents want the best they can get for their child, the IDEA only sets a standard for the minimum requirements schools must provide, not what the parent desires. In order for states (and eventually local school systems) to receive funds from the federal government, they must meet the minimum service requirement. There is no cap on the amount of services they provide. Unfortunately, federal law does not require states to provide the educational program a parent feels is best for their child. It only requires them to provide an appropriate program that meets the child's needs. These services must also be provided in the least restrictive environment (LRE). The least restrictive environment means that each child

should be individually evaluated to determine what type of environment would allow the child the ability to perform as safely and independently as possible, and as close to the environment of his/her peers without disabilities. Many times a school district will offer speech/language therapy and occupational or physical therapy for the child as well, which will be funded through IDEA grants (Autism Society of Connecticut, 2007; Autism Speaks, 2007; Bartley, 2006; Center for Disease Control and Prevention, 2007; Freudenheim, 2004; National Autism Association, 2007; National Autistic Society, 2006).

Animal-Assisted Therapy for those with Autism

As reviewed in this paper, there are many interventions that have been beneficial to children with autism. Some of these interventions have been tested through empirical evidence and others have not. Animal-assisted therapy appears to be an up-and-coming alternative treatment that has entered the scope of interventions for children with autism mostly supported by anecdotal and testimonial evidence. A statement made by Dr. Aaron Katcher in White's article *Greening the Blues* (2005) is a good example of this. Dr. Katcher, a psychiatrist at the University of Pennsylvania who works with children with autism, stated that in his experience "the introduction of animals into a school or clinical setting led to improved attention, increased laughing, more speech, improved sociability, and decreased aggression even among the most withdrawn" (p. 58).

There are empirical studies that strongly support these claims as well (Heimlich, 2001; Law & Scott, 1995; Martin & Farnum, 2002; Nimer & Lundahl, 2007; Parshall, 2003; Sevals, 1999). In a study constructed to evaluate the effects of interaction with dogs on children with pervasive developmental disorders, researchers exposed children to

three separate conditions: a ball, a stuffed dog, and a live dog and evaluated the interactions of the children with each item. Results revealed that when the children interacted with the live dog, they were more focused, were in a more playful mood, and were more aware of their social environment (Martin & Farnum, 2002).

In 2007, a meta-analysis of 49 studies on animal-assisted therapy was conducted in the United Kingdom. Several of the studies analyzed the usage of animal-assisted therapy with children with autism to increase positive social interaction skills, decrease self-absorption, and increase communication. Results indicated that in all the studies analyzed, animal-assisted therapy showed moderately strong positive changes by decreasing the autism-related behavioral symptoms, and increasing social interaction and communication (Nimer & Lundahl, 2007).

These studies, along with the anecdotal and testimonial evidence of those who have witnessed first-hand how animals have improved the quality of life for those with autism, offer strong support for the inclusion of animal-assisted interventions for children with autism.

Conclusion

Autism is a complex developmental disorder that severely impacts the lives of children and families. This incidence of autism has increased rapidly and currently affects 1 out of every 150 children. While there is no known cure for autism, there are many treatments that have been found effective. However, because every person experiences autism differently, there is no one intervention that can be applied to all...no cookie-cutter fix. Often, families must try many interventions before they find one that

might work for their child. (Autism Society of America, 2007; Autism Speaks, 2007; Center for Disease Control and Prevention, 2007; National Autism Association, 2007).

As this paper has shown, animal-assisted therapy has reduced the behavioral symptoms associated with autism, increased socialization and communication, and positively influenced the quality of life for those living with autism. Treatments for autism can be very costly and time-consuming for families as these much-needed interventions are not covered by insurance and not provided by federal or state government agencies. This being said, questions around accessibility of animal-assisted for children with autism arise. Are parents aware of animal-assisted therapy as a potential intervention for their child? If so, what barriers in accessibility might be present for families that would prevent them from pursuing this intervention for their child? This study intends to explore the parents' perspective on these questions.

CHAPTER III

METHODOLOGY

Problem Formulation

Autism currently affects 1 out of every 150 children. There is no known cause or cure for autism. The impact of this disorder on children and their families is astronomical. Although there is no one treatment that works for every child with autism, there are many treatments that reduce symptoms and improve the lives of those living with autism. Among those treatments showing promise is animal-assisted therapy. However, it appears there are barriers to the accessibility of animal-assisted therapy to those who could benefit from it most (Autism Society of Connecticut, 2007; Autism Speaks, 2007; Center for Disease Control and Prevention, 2007; National Autism Association, 2007). These barriers to treatment have prompted the research question within this study: Is animal-assisted therapy accessible to children with autism?

The research consisted of a qualitative study using flexible research methods to explore the accessibility of animal-assisted therapy for children with autism. In researching the literature regarding children with autism and animal-assisted therapy, there appears to be a scarcity of empirical research on using animal-assisted therapy with children with autism. However, the available studies indicate that animal-assisted therapy has been helpful to many living with autism. Due to the limited information available, this researcher questioned how accessible this intervention is to those who may benefit from it.

The following sections will describe the sampling method, data collection/research questions, and data analysis procedures to be used in the study.

Research Question

Due to the apparent limited information available to families regarding animal-assisted therapy for children with autism in Connecticut and world-wide, this study explores the parent's perspective on accessibility. The research question that this study explored is the nature in which animal-assisted therapy is accessible to children with autism from the parents' perspective. While research in this area is limited, there are strong indications that animal-assisted therapy could make a positive impact on the lives of those with autism and their families. That being said, the question is raised that if this is an alternative treatment that can enrich the lives of children with autism, do parents have access to this treatment for their children? It was a working hypothesis that some participants will either not know about the potential treatment, will not know of facilities or therapist conducting animal-assisted therapy nearby, or animal-assisted therapy will not be accessible due to cost factors.

Participants

Parents/legal guardians are responsible for making choices pertaining to treatments for their children with autism. Therefore, the population sampled in this study was parents and legal guardians of children who have autism. Inclusion criteria for this study included: A parent or legal guardian who has a child under the age of 18 with a primary diagnosis of autism by a medical doctor (i.e., neurologist, pediatrician, primary care doctor, psychiatrist, etc.), and must live in Connecticut. These children may have comorbid diagnoses, but all needed a primary diagnosis of autism to meet the inclusion criteria

Sampling

This study was focused on a limited population. Therefore, convenience and snowball sampling was considered the best sampling method choice. The convenience portion of the sample was completed through advertising for interested participants using an email request and recruitment flyer for participants (Appendix C). The recruitment emails and flyers were distributed through parent organizations and support groups who have members with children with autism. The parent organizations and support groups who received recruitment information include: Autism Society of Connecticut, Autism Spectrum Resource Center, CT FEAT (Connecticut Families for Effective Autism Treatment), Families United for Children's Mental Health, and National Alliance for Mentally Ill-Connecticut (Child and Adolescent Network). Prospective parent participants were asked to contact the researcher through either email or telephone. Parents who inquired and/or participated were asked by the researcher to share the study and researcher contact information on to other parents who fits the criteria that might be interested in participating in the study, creating the snowball effect. Snowball sampling was chosen because parents who have children with autism often interact and have relationships with other parents who have children with autism which would provide the researcher with greater access to potential participants. A total of 12 participants were recruited and interviewed. An informed consent form for parents is located as Appendix A.

Data Collection

Participants were self-selected based on contacting the researcher directly via telephone or email to request being part of the study. At that time, it was determined if

the potential parent met the criteria to participate in the study. If study criteria were met, an initial telephone conversation was initiated to gather contact information. During the initial telephone contact, the researcher answered any questions pertaining to the study, and informed potential participants that they may withdraw from the study at any time. A verbal agreement to participate in the study was obtained and an appointment time and place was scheduled.

Then, the researcher mailed a copy of the Informed Consent Form (Appendix A) to the participant for review prior to interview date. Extra copies were provided at the time of interview as well.

Prior to the beginning of the interview, the Informed Consent Form (Appendix A) was reviewed with the participant and signed. The informed consent form outlines the purpose of the study, the rights of the study participants, and the participant's right to not answer any question, and/or withdraw from the study at any time prior to October 15, 2008. After October 15, 2008, research findings were written. As required by federal regulations, all materials related to the interviews will be kept secure and confidential for three years. After this time, the materials will be destroyed. Both the researcher and participant received a signed copy of the informed consent form during the interview. The data collection process did not begin until the informed consent was reviewed and signed by the parent.

Interviews were conducted in a discreet location in an effort to protect confidentiality such as an office, home, or other location chosen by the participant that could provide the necessary security. Each interview took approximately 45 minutes to

one hour to complete. Participants were given the option to contact the researcher via email or telephone to request a copy of the study results.

In an effort to ensure accuracy of information obtained, each interview was tape-recorded. In an effort to protect the confidentiality of the study participants, each interview session was coded with a number and no personal identifying information was used to provide anonymity. All study participants were informed that all personal information will be kept confidential and will not be used during analysis or reporting of the data. The interviewer wrote a code number on the tape itself, and spoke the number into the recorder.

The interviewer (the researcher) used a listing of research questions (Appendix E) to keep the interviews structured. Participants were asked to elaborate to whatever extent they wish on each question. These questions included demographic information such as age of the child, gender of the child, occupation of the parents, treatments (ABA, TEACCH, Floortime, RDI, PECS) their child has participated in. Interview questions pertaining to animal-assisted therapy (Appendix E) were also asked. These questions included: Please explain what you know about Animal-Assisted Therapy. *For those families who have participated in animal-assisted therapy, the following questions were explored:* Please share how you learned about this type of intervention; Can you tell me more about your experience in arranging animal-assisted therapy for your child? Was this difficult to arrange?; Please share with me what the intake process was like. Did you have to wait? Was the intake appointment at a time that was convenient for you and your family?; How long has your child participated in animal-assisted therapy?; Where are the sessions conducted? Approximately how far is this location from your home? How does

your child get to/from sessions? Did/Do you have any issues with transportation getting your child to/from sessions? Who pays for the animal-assisted therapy sessions (self-pay, insurance, family, combined with other treatment, etc.)? Have you approached your insurance company about coverage for sessions? If so, what was their response? If not, what reasons kept you from contacting them? How do you think your occupation, education, income bracket impacted you seeking this as a resource?

For those families who have NOT participated in animal-assisted therapy, the following questions were explored: Please explain your thoughts about using animal-assisted therapy for your child with autism. Are you familiar with the idea that this type of therapy may be helpful for children with autism?; Please explain what you feel the primary reason is for your child not participating in animal-assisted therapy. What other reasons do you think influence your ability to access this type of treatment for your child?; Please share your thoughts on how accessible animal-assisted therapy is to children with autism. Do you feel it may be difficult to arrange? Do you know of locations where this type of intervention takes place? Are these close to where you live? Could transportation be a barrier to having your child participate in animal-assisted therapy? Do you feel cost is a factor to being able to obtain this treatment for your child? Does your child's health insurance cover animal-assisted therapy?

Method of Analysis

Upon completion of the interview, the tape recording of the session was transcribed verbatim. The researcher transcribed the interviews, and an outside transcriber was not used. Once the transcriptions were completed on all the interviews, data was entered into Excel and line-by-line coded in an effort to identify similar

concepts and themes. The researcher used open coding in an effort to understand the raw data as it is, and “resist the temptation to rely on priori concepts” (Padgett, 1998, p. 76). Then, as themes continued to emerge, the researcher used “constant comparative analysis” as outlined by Deborah Padgett (1998), which “as themes emerge from the initial coding, one goes back over the data to ensure that it is coded in accordance with those themes. “As one combs back through the data, new codes often emerge” (p. 77). As the new codes emerged, subcategories were created as needed. This process was continued until there was redundancy indicating a saturation of the data. Once coding was completed, the researcher looked for common themes in the coded data. These themes represent a relationship that was reported in the results.

Limitations of the Study

Because of the limited population being sampled in Connecticut only, the information received is difficult to generalize to any other area. There may be many factors that influence a parent’s opinion of accessibility (isolation, education, income, etc.). Because of the self-selection process, a disproportionate number of parents who have not participated in animal-assisted therapy responded to the request for study participants. Given the research question (Is animal-assisted therapy accessible to children with autism?), the findings are limited to the sample interviewed. Of those interviewed, only 3 out of the 12 had experience with animal assisted therapy.

Potential Risk to Study Participants

Participants were made aware that the interview might bring up some memories or feelings that may be painful for them. The study, therefore, is not without risk although the risk is expected to be minimal. Participants were informed that they may

call the researcher if they have any concerns, and a list of resources for counseling was provided to study participants at the beginning of each interview (Appendix B). Listings of parent support group/organizations were also given, along with a list of animal-assisted therapy organizations (Appendix C).

Potential Benefits to the Study Participants

Participants in this study were able to give voice to their experiences and feelings surrounding issues of accessibility of interventions for their child with autism. It is the hope that participation in this study will empower parents to continue to tackle the issues of accessibility of possible treatments within the system that governs it. Additionally, it is hoped this study will raise awareness of this issue of accessibility of potentially beneficial treatments such as animal-assisted therapy for people with autism. There was no monetary or reward benefits for participation in this study. Participation was completely voluntary and without coercion of any kind.

Researcher Bias

The researcher has some bias due to having a child with autism and being familiar with many of the services available for children with autism in Connecticut. The researcher attempted to maintain neutrality by asking research questions and not engaging in conversations regarding treatments that could alter the responses provided by participants. The researcher was also aware of the potential for biases with analysis and interpretation of the results, and they are included in the final discussion/conclusion.

Conclusion

Autism is a family-altering diagnosis that currently affects 1 out of every 150 children. Currently, there is no cure for autism, and no one treatment works for every

child. However, animal-assisted therapy is one treatment that continues to show promise (Autism Society of Connecticut, 2007; Autism Speaks, 2007; Center for Disease Control and Prevention, 2007; National Autism Association, 2007). This research study explored the issue of accessibility of animal-assisted therapy from a parent's point of view and what accessibility issues influenced their decision to pursue (or not) animal-assisted therapy for their child with autism.

CHAPTER IV

FINDINGS

This chapter presents findings of interviews with 12 participants who are parents of children with autism and their experiences with animal-assisted therapy or lack thereof. In researching literature regarding children with autism and animal-assisted therapy, there appears to be a scarcity of empirical research on using animal-assisted therapy with children with autism. However, the available studies indicate that animal-assisted therapy has been helpful to many living with autism (Heimlich, 2001; Law & Scott, 1995; Martin & Farnum, 2002; Nimer & Lundahl, 2007; Parshall, 2003; Sevals, 1999; White, 2005). Due to the limited information available, this researcher questioned how accessible this intervention is for those who may benefit from it. The research question guiding this study was: Is animal-assisted therapy accessible to children with autism?

Participant Characteristics

The primary exclusionary criterion for this study was that participants must be parents of children with autism living in Connecticut. All participants in the study were parents of children who were diagnosed with autism as their primary diagnosis. All were located living in Connecticut and found through advertising or snowballing efforts. There is a lack of diversity in the sample. The entire population sample is 100% (n=12) Caucasian. The gender breakdown was 92% (n=11) female and 8% (n=1) male. The approximate age of the participants is between 30 and 60 years of age. Participants are all parents who have children diagnosed with autism as their primary diagnosis. There were (5) parents whom had children with autism who were considered non-verbal. There

were a total of (7) parents whom had children with autism who were verbal. The ages of their children with autism ranged from 6-17. All participants have accessed multiple treatment models during their child's life.

Each participant was asked to share his or her experience with animal-assisted therapy. Their initial answer was then categorized into two groups: those families who have participated in animal-assisted therapy, and those families that have not participated in animal-assisted therapy. Of the sample population, three (3) families had experience with animal assisted therapy, while (9) did not have experience with animal-assisted therapy. Specific questions were asked of each group based on whether or not they had experience with animal-assisted therapy.

Qualitative Themes

In conducting the interviews, five themes emerged from the data collected: 1) Information received about treatments; 2) Perceptions of animal-assisted therapy as a treatment model; 3) Managing multiple treatment needs; 4) Funding for treatments; and 5) Accessible animal-assisted facilities. .

Theme One: Information Received About Treatment

The first theme - how people who have children with autism receive information about treatment models - emerged in response to learning how these participants became aware of animal-assisted therapy and other treatments. Both "how" people learned about treatments and "what" they learned were salient factors in this theme. Of the 12 families interviewed, only three (3) had experience using animal-assisted therapy for their child with autism. Two out of those three had received a recommendation from their child's physical therapist. The other person received a recommendation from a friend who also

had a child with autism who had benefited from the treatment. All three of the parents who have experienced animal-assisted therapy had similar experiences where they credited their therapist or friend with pushing them to try the intervention with their child as noted by Jessica:

I was referred to X agency for physical therapy for my son. After a few weeks the physical therapist said she thought my son might do well with the horses as it might help to build his core area and improve his balance. I felt that I had no choice because if she felt it was going to help him then of course I was going to do it.

Nine (9) participants have not experienced animal-assisted therapy with their child with autism. Of those interviewees without experience in animal-assisted therapy, all had heard of animals being used with children with autism except two (2). One parent, Tanya, describes her child's experience as:

During summer camp a woman who worked at the school would bring in a dog to summer school every other week. Besides that, I only know what I have read or seen things on TV that kids with autism connect with animals or really enjoy being around animals....

As illustrated in the previous quote, these parents had heard about animal-assisted therapy through friends and family, other parents, or on television, articles in magazines, or searching autism information on the Internet.

Theme Two: Perceptions of Animal-assisted Therapy as a Treatment Model

The second theme that emerged is the perceptions of animal-assisted therapy as a treatment model. This theme emerged through learning the greatly varied perceptions among the interviewees who did not have experience with animal-assisted therapy and indirectly through reports of referral sources by the participants who did experience the treatment. The seven (7) participants who had heard of animals working with children

with autism (but have not had experience with animal-assisted therapy) reported they have limited knowledge about the treatment. They described animal-assisted therapy as dogs that watch kids to help keep them safe (companion dogs), horses that helped kids (hippotherapy), dogs coming into school to assist with lessons (therapy dogs), and dolphins swimming with children with autism in Florida or California.

Two (2) of the participants without experience (Sara and Jane) were aware there was a treatment called animal-assisted therapy and they both had similar experiences:

I have had no experience with animal-assisted therapy myself, but I am familiar with children with autism working with horses and dogs. I know a few people who have done hippotherapy with their child and I have a friend in New York who has a therapy dog for her child with autism.

Jane shared that she also has...

I have a friend who has a child with autism that does horseback riding for fun, not as a therapy, but have heard of horses being used in therapy with kids with autism. I have heard of people using animals to work with children to keep them safe, keep them in the yard, but not as a therapy.

When asked how they learned of this type of intervention, two of the three participants who have had experienced animal-assisted therapy with their child with autism stated that they received the recommendation for AAT therapy from their physical therapist. Similar to Jessica's comments in the previous section, Edna received a referral from her physical therapist:

Kevin had been doing physical therapy for about two months. Cathy, the physical therapist, asked me if I would consider doing horse therapy with Kevin. She explained to me that horses walk in a similar way as humans do, and sometimes that can be helpful for people who have problems like Kevin does. Of course, I was agreeable. We are always looking to find things to help Kevin.

Demographics of participants in the study show that only four (4) of the nine participants who do not have experience had children with autism that required physical

therapy. None of these four participants received recommendations from their child's physical therapist to try animal-assisted therapy with their child.

Four of the seven parents who were familiar with the idea of animal-assisted therapy (but have never experienced it) reported that because the treatment was not suggested by a medical professional (doctor, nurse, therapist) they believed using animals with children with autism was more of a recreational activity than an actual therapy for their child when compared to physical therapy, occupational therapy, speech and language therapy, or Applied Behavioral Analysis. All four parents' statements were similar to Denise's:

Obviously, my child needs a lot more direct care than most kids his age. We have tried many therapies and continue to do many therapies every week. When I think about animal-assisted therapy, it's a fun, recreational kind of thing. When you have a child with autism, you're first priority isn't them having fun or what type of recreation are we going to get them involved in. It's what do we need to do now so they can function tomorrow.

The remaining three (3) parents believed that their child seems to have such a close bond (one stating that her child has a "special connection to animals") that animal-assisted therapy might be an avenue to help their child "come out of his shell."

Theme Three: Managing Multiple Treatment Needs

The third theme emerged in response to parents' discussions regarding how difficult it is for parents of children with autism to understand, prioritize, and juggle the multiple treatment needs of a child with autism. Again, parents turn to medical professionals and educators to help them determine what treatment models would best help their child with autism to develop the skills necessary to function in life. All parents interviewed discussed the difficulty they have with balancing their child's medical,

educational, and social developmental needs with the need for their children to have fun and just be kids. Ellen's comments summarize the feelings expressed by all parents:

When you have a child with autism, the first thing you find out about is the physical reasons and you try to fix those through occupational therapy, speech therapy, and for some kids, physical therapy. Justin had stomach problems and needs to be on a special diet, which is really hard. Then you have to worry about school because kids with autism don't learn the same way other kids learn which means they need to start school earlier. Some kids like Justin start doing ABA (Applied Behavioral Analysis) at school. At home, we needed to learn how to work with him too because, of course, he didn't come with a manual. It's never-ending. Then we have two other kids that need our attention, not just Justin. That's just the beginning. There are so many things out there that people say help and that we could probably try, but how much time and money is there to go around?

All the families who participated in the study have tried many treatments with children with autism. These include Applied Behavioral Analysis (ABA), occupational therapy, speech and language therapy, gluten/casein-free diets, vitamin supplements, heavy metal detoxification, craniosacral therapy, individual therapy, social skills groups, psychotropic medications, cognitive-behavioral therapy, biofeedback, sensory integration therapy, chelation therapy, Relationship Development Intervention (RDI) therapy. All families reported using 3-5 treatments on a weekly basis for their child with autism

Five of the nine participants interviewed that have not had experience with animal-assisted therapy stated they would love to get a dog for their child with autism to help their child with socialization and social acceptance. Tanya shared:

Mikey really loves animals, but with him and two younger kids it's been tough to even think about having a dog until recently. I think a dog would be awesome for Mikey. I have heard that dogs are good for helping with socialization for kids with autism and when they take them into the community they help them be more accepted. That would be great for Mikey...

However, all of these parents stated that their child is so busy trying to juggle therapies that they already have that there is no time to work with a dog. Three of the same nine would like for their child to become involved with hippotherapy, but did not feel there was time in their schedule. Participants in the study stated “lack of time, scheduling issues, and cost” as reasons why they have not incorporated animal-assisted therapy into their children’s weekly therapies.

Theme Four: Funding for Treatment

The fourth finding of the study was that the cost of animal-assisted therapy deters many people from pursuing it. All of the nine participants who did not have experience with animal-assisted therapy reported cost as a definite deterrent to obtaining this treatment for their child with autism. Jane summarizes the primary reason she does not access animal-assisted therapy for her child:

The primary reason is money. I don’t really know about where to find therapy around here. The only place I know of that has hippotherapy is X agency and it’s so expensive that we decided that we couldn’t do it. If there were more programs that were cheaper, we’d definitely pursue it. From what I have been told, the therapy dog you can use in the community is very expensive. I don’t go looking for these things because I know that they are going to be too expensive and that my insurance company isn’t going to cover it.

Of these nine, none of them have considered contacting their insurance company to see whether or not they would pay for AAT. Three of the nine stated they are very familiar with what their insurance covers, and animal-assisted therapy is not covered. All of the nine who did not have experience with animal-assisted therapy stated that they couldn’t afford to pay for their child to participate without assistance.

All three (3) participants who have experience in animal-assisted therapy attend hippotherapy sessions for their child with autism. All three (3) of these participants

stated that they pay for the treatment on the horse. Edna shares her experience with the insurance company's response:

My child gets physical therapy and hippotherapy at the same agency. By doing it that way, the insurance will pay for the therapist but not when my son is on the horse. That part we have to pay ourselves.

Fifth Finding: Accessible Animal-Assisted Facilities

The fifth finding of the study illustrates the difficulty in finding facilities that provide animal-assisted therapy. All three (3) of the participants interviewed who have experience with animal-assisted therapy attend the same facility for their child's therapy. Two of the three of these interviewees stated that they were placed on a waiting list for approximately 2 months before they could begin their treatments. The one remaining participant with experience stated "we got a referral from the physical therapist and were able to get right in." All three (3) were unaware of any other facilities in the area where they can obtain animal-assisted therapy for their child with autism.

Only two of the remaining nine participants interviewed (those who did not have experience with AAT) knew of facilities where they conducted hippotherapy. None of those interviewed without experience knew where to receive services for animal-assisted therapy locally with dogs or other animals. All stated that there is not much information available through the providers they frequent, or advertising for animal-assisted therapy in Connecticut for children with autism through autism support organizations (i.e., Autism Society of Connecticut, Autism Speaks, Autism Resource Center, etc.). These are the resource areas that parents with children with autism frequent, and where they receive feedback from others in the autism community regarding treatments and activities for their child.

Summary

The five major themes that comprise the study's findings: 1) Information received about treatments; 2) Perceptions of animal-assisted therapy as a treatment model; 3) Managing multiple treatment needs; 4) Funding for treatments; and 5) Accessible animal-assisted facilities represent the compilation of content received from each interview. These themes represent the process that parents of children with autism must undergo and barriers they encounter with regards to accessibility to animal-assisted therapy. The following chapter presents a discussion and analysis of these findings and how they relate to possible future studies.

CHAPTER V

DISCUSSION

Review of the Findings

The findings suggest there is in fact a lack of accessibility to animal-assisted therapy for children with autism. Of the 12 people interviewed, only 3 have had experience with animal-assisted therapy. All of the remaining 9 participants had similar experiences and similar reasons for not accessing animal-assisted therapy for their child with autism. All five of the themes that emerged in the study (1) Information received about treatments; 2) Perceptions of animal-assisted therapy as a treatment model; 3) Managing multiple treatment needs; 4) Funding for treatments; and 5) Accessible animal-assisted facilities strongly illustrate barriers which families of children with autism have encountered in accessing animal-assisted therapy for their children with autism.

According to parents in the study, information was received from doctors, educators, and friends about therapies and treatments for their child with autism. Because we are socialized to believe that medical treatments and those treatments with the most empirical evidence are considered best, many parents turn to their child's doctor for recommendations on what can help their child with autism. These doctors then naturally suggest medical components to treatment such as physical therapy, occupational therapy, and speech and language therapy. Other providers such as educators might suggest physical, occupational, and speech and language therapies as well as empirical-based treatments such as Applied Behavioral Analysis (ABA). Many times a school district will offer speech/language therapy and occupational or physical therapy for the child which is funded through IDEA grants (Autism Society of Connecticut, 2007;

Autism Speaks, 2007; Bartley, 2006; Center for Disease Control and Prevention, 2007; Freudenheim, 2004; National Autism Association, 2007; National Autistic Society, 2006). With funding being focused on certain interventions, educators may be swayed to offer these particular grant-funded therapies to children over other possibilities in which guaranteed funding is not available.

This process of receiving recommendations from doctors and educators strongly influences the internal perceptions of parents about what treatments are needed for their child with autism, and what are not. If the people who are making the referrals have limited knowledge about animal-assisted therapy, there is a good chance that parents may not be aware animal-assisted therapy is a viable option for their child. Dr. Aaron Katcher, psychiatrist at the University of Pennsylvania who works with children with autism, might sway parents' perception by sharing his professional knowledge and experience which shows that "the introduction of animals into a school or clinical setting led to improved attention, increased laughing, more speech, improved sociability, and decreased aggression even among the most withdrawn" children with autism (White, 2005).

The perception by these informants strongly influences the internal perceptions of parents with children with autism, in turn, helping them to make decisions about what therapies/treatments they need to pursue for their child. Parents are, at times, unaware there are other options available. Participants in the study concurred that they have received little information about the positive contributions of animal-assisted therapy for children with autism. Their child's doctors, therapists, and educators lacked perspective on this type of treatment. This contributed to the difficulties these parents experienced in

receiving information about animal-assisted therapy as a potential form of treatment for their child with autism.

According to parents who participated in the study, families must prioritize and juggle multiple treatment needs of their children with autism. Those interventions suggested by their child's doctor or therapists take precedent over other possibilities due to scheduling and financial constraints. Most parents in the study have additional children who have needs, and must work outside of the home in order to provide for their families. Because autism is a complex developmental disorder in which each person experiences their own unique set of symptoms and severity, there is no one intervention that is effective for all persons with autism (Autism Society of Connecticut, 2007; Autism Speaks, 2007; Center for Disease Control and Prevention, 2007; National Autism Association, 2007). Often, children with autism undergo multiple types of treatment simultaneously to combat the range of symptoms that greatly impact their daily life. Finding the correct treatment or a combination of treatments that will be effective is often difficult and can take a long time. Most of the responsibility for managing the logistics of these treatments (i.e., scheduling, transportation, follow-through, and payment) falls primarily on the parents.

Funding for animal-assisted therapy is scarce; therefore, socioeconomic status is a driving factor in who is fortunate enough to be able to access this treatment module. Research has shown that insurance companies may pay for limited amounts of speech and occupational therapy, but refuse to cover costs for behavioral, educational, biomedical, or social interventions (Autism Society of Connecticut, 2007; Autism Speaks, 2007; Bartley, 2006; Center for Disease Control and Prevention, 2007;

Freudenheim, 2004; National Autism Association, 2007). All participants confirmed that lack of financial resources greatly impacted their ability to seek alternative treatment opportunities beyond those that are paid for by schools or through medical insurance. Study participants stated that, to their knowledge, their insurance company would not pay for animal-assisted therapy. This places the burden for payment entirely on the parents, thus limiting the access to this therapy even more. Many of the participants stated that they “haven’t even tried” to ask their insurance company to cover the costs of animal-assisted therapy, or their insurance company “won’t pay for doctor-recommended therapies we have requested so I know they would never pay for animal-assisted therapy.” These statements further support the literature (Bartley, 2006; Cook & Lennox, 2000; Freudenheim, 2004; Peele, 2002) which indicates that insurance companies will also dispute whether an intervention is truly a therapeutic treatment or an educational one in an effort to not pay the bill. Socioeconomic status (and indirectly education and occupation) plays a part in whether or not families can access animal-assisted therapy for their child with autism due to funding not being available through insurance companies and families must self-pay for treatments. Families that cannot fit the expense of treatment into their budget are exempt from opting this therapy for their child with autism.

According to parent reports, it appears there are few facilities in Connecticut that offer animal-assisted therapy for children with autism. With the exception of one facility offering primarily hippotherapy, which was approximately 30 minutes away from the furthest participant, participants were unaware of any other facilities offering animal-assisted therapy. It appears there may be a lack of advertising for this type of

intervention for children with autism both in paper form and on the Internet. This lack of advertising further limits parents' ability to access information regarding facilities that conduct animal-assisted therapy for children with autism in Connecticut. If parents are not receiving information regarding these therapeutic facilities from doctors or professionals who work with their child, and there is a lack of advertising, accessing these facilities will continue to be difficult for parents.

Study Limitations

The most obvious limitation is the sample size (n=12) and location. The sample size is small and most participants lived in central, northern, or eastern Connecticut. These demographics may not be representative of the entire population and may be limited by geographical area. There is a lack of diversity in the study sample and this researcher wonders if and how diversity might alter the findings.

There were only three study participants who had experience in animal-assisted therapy. This researcher had difficulty recruiting participants who had experience as many participants were recruited through snowballing effect. Had there been a more even distribution of experienced versus non-experienced participants, the results would have been less skewed.

Since there are very few empirical studies on animal-assisted therapy with children with autism, and no known studies on the accessibility of animal-assisted therapy for children with autism, there are no studies with which to test validity of the findings.

Implications for Further Research

Due to the small sample size of this study and its lack of empirical validity, the first implication for further study is an expanded study with similar design that incorporates a much larger sample size and increased diversity.

Another possible future research area is the perceptions of animal-assisted therapy by doctors and therapists who make referrals to interventions for children with autism. These professionals have direct contact with their patients who could benefit from animal-assisted therapy and could provide helpful information to reduce accessibility issues for those families. There appears to be a very limited amount of advertising regarding facilities as well and this is another area in which a future study would be beneficial to families with children with autism.

References

- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author
- Autism Research Institute. (2007). ABA and other therapies. Retrieved November 30, 2007, from http://www.autism.org/ari/faq/faq_aba.htm.
- Autism Society of America. (2007) IDEA and your child's rights. Retrieved July 21, 2007, from http://www.autism-society.org/site/PageServer?pagename=about_education_IDEA.
- Autism Society of America. (2007) Understanding autism. Retrieved July 21, 2007, from http://www.autism-society.org/site/PageServer?pagename=about_what_is_home.
- Autism Society of Connecticut. (2005). Therapies. Retrieved November 25, 2007, from <http://www.autismsocietyofct.org/therapies.htm>.
- Autism Speaks Inc. (2007). Your child's rights. Retrieved November 25, 2007, from <http://www.autismspeaks.org/howtocooperate/index.php>.
- Autism Speaks Inc. (2007). What is autism? An overview. Retrieved November 25, 2007, from <http://www.autismspeaks.org/whatisit/index.php>.
- Bristol-Power, M. (2001). Etiology of autism. Retrieved January 19, 2008, from <http://www.autisminfo/bristolpower.ppt>.
- Canine Companions for Independence. (2007). Canine companion services. Retrieved November 27, 2007, from www.caninecompanions.org/national/our_services.html
- Centers for Disease Control and Prevention. (2007). Autism information center. Retrieved November 25, 2007, from www.cdc.gov/ncbddd/autism/.
- Cermak, S. & Hendersen, A. (1990). Efficacy of sensory integration procedures. *Sensory Integration Quarterly*, 3(1).
- Chandler, C. (2001). Animal-assisted therapy in counseling and school settings. *ERIC/CASS Digest*, ED459404 2001-10-00. Retrieved June 18, 2007, from ERIC database.
- Cook, A. & Lennox, N. (2000). General practice registrars' care of people with intellectual disabilities. *Journal of Intellectual and Developmental Disability* 25(1), 69-77. Retrieved November 27, 2007 from PsychINFO database.
- Cusack, O. (1984). *Pets and the elderly: The therapeutic bond*. Binghamton, NY: Haworth Press

- Dombeck, M. (2006). Mental help net: Therapeutic animals, chelation and facilitated communication. Retrieved on November 23, 2007, from www.mentalhelp.net/poc/view_doc.htm?type=doc&id=8795&cn=20.
- East Tennessee State University, Northeast Tennessee Autism Society. (2006). Treatment issues and approaches. Retrieved February 11, 2008, from <http://www.etsu.edu/cpah/commdis/AutismSociety/TreatIssApp/>
- Grandin, T. (2005). Autism – the way I see it: Different types of thinking in autism. Retrieved December 8, 2007, from <http://www.templegrandin.com/templegrandinart.html>.
- Grandin, T. & Johnson, C. (2005). *Animals in translation: Using the mysteries of autism to decode animal behavior*. Orlando, FL: Harcourt
- Grandin, T. (1995). *Thinking in pictures and other reports from my life with autism*. New York, NY: Doubleday
- Gutstein, S. (2004). Relationship development intervention: Home of the RDI treatment program for autism spectrum disorders. Retrieved November 30, 2007, from <http://rdiconnect.com>.
- Heimlich, K. (2001). Animal-assisted therapy and the severely disabled child: A quantitative study. *Journal of Rehabilitation*, 67(4), 48-54. Retrieved July 21, 2007, from the Academic Search Premier database.
- Hines, L.M. (2003). Historical perspectives on the human-animal bond. *American Behavioral Scientist*, 47(7), 9-16. Retrieved June 18, 2007, from ERIC database.
- Jalongo, M.R., Astorino, T., & Bomboy, N. (2004). Canine visitors: The influence of therapy dogs on young children's learning and well-being in classrooms and hospitals. *Early Childhood Education Journal* 32(1), 9-16. Retrieved June 12, 2007, from PsycARTICLES database.
- Karol, J. (2007). Applying a traditional individual psychotherapy model to equine-facilitated psychotherapy (EFP): Theory and method. *Clinical Child Psychology and Psychiatry* 12(1), 77-90.
- King, L. (1996). Interview with Lorna Jean King, OTR, FAOTA. Retrieved January 6, 2008, from <http://www.autism.org/interview/ljk.html>.
- Law, S., & Scott, S. (1995). Pet care: A vehicle for learning. *Focus on Autistic Behavior*, 10(2). Retrieved June 21, 2007, from Academic Search Premier database.
- Lefkowitz, C., Paharia, I., Prout, M., Debiak, D., Bleiberg, J. (2005). Animal-assisted prolonged exposure: A treatment for survivors of sexual assault suffering posttraumatic stress disorder. *Society and Animals* 13(4), 275-295.

- Liptak, G.S. (2005). Complementary and alternative therapies for cerebral palsy. *Mental retardation and developmental disabilities research reviews* 11(1), 156-163.
- Macauley, B. & Gutierrez, K. (2004). The effectiveness of hippotherapy for children with language-learning disabilities. *Communications Disorders Quarterly*, 25(4). 205-217. Retrieved June 21, 2007 from Academic Search Premier database.
- Melson, G. (2003). Child development and the human-companion animal bond. *American Behavior Scientist* 47(1), 31-39.
- Martin, F. & Farnum, J. (2002). Animal-assisted therapy for children with pervasive developmental disorders. *West Journal of Nursing Res* 24(6), 657-670.
- Mash, E., & Barkley, R. (2006). *Treatment of childhood disorders. (Third Edition)*. New York: Guilford Press
- McDowell, B. (2005). Nontraditional therapies for the PICU – Part 2. *Journal for Specialists in Pediatric Nursing*, 10(2), 81-85. Retrieved June 12, 2007, from PsycARTICLES database.
- Nimer, J. & Lundahl, B. (2007). Animal-assisted therapy: A meta-analysis. *Anthrozoos*. 20(3), 225-238.
- North Star Foundation. (2000). Service dog placements for children with autism. Retrieved November 23, 2007, from www.northstardogs.com/autism.shtml.
- Padgett, D. (1998). *Qualitative methods in social work research: Challenges and rewards*. Thousand Oaks, CA: Sage Publications
- Parshall, D. (2003). Research and reflection: Animal-assisted therapy in mental health settings. *Counseling and Values*, 48, 47-56. Retrieved June 21, 2007, from PsycARTICLES database.
- Peele, P., Lave, J., & Kelleher, K. (2002). Exclusions and limitations in children's behavioral health care coverage. *Psychiatric Services* 53(5), 591-594. Retrieved November 27, 2007 from PsychARTICLES database.
- Reichert, E. (1998). Individual counseling for sexually abused children: A role for animals and storytelling. *Child and Adolescent Social Work Journal* 15(3), 177-186
- Risley-Curtiss, C., Holley, L., & Wolf, S. (2006). The Animal-Human Bond and Ethnic Diversity. *Social Work*, 51(3), 257-268. Retrieved June 21, 2007, from Academic Search Premier database.

- Sams, M. J., Fortney, E.V., & Willenbring, S. (2006). Occupational therapy incorporating animals for children with autism: A pilot investigation. *The American Journal of Occupational Therapy* 60(3), 268-274.
- Sensory Processing Disorder Foundation. (2007). Defining SPD and its subtypes. Retrieved January 6, 2008, from <http://www.sinetwork.org/aboutsped/defining.html>.
- Servais, V. (1999). Some comments on context embodiment in zootherapy: The case of the Autidolfin project. *Anthrozoös*, 12(1), 5-15. Retrieved July 1, 2007, from PsycINFO database.
- Smith, T., Scahill, L., Dawson, G., Guthrie, D., Lord, C., Odom, S., Rogers, S., & Wagner, A. (2007). Designing research studies on psychological interventions in autism. *Journal of Autism and Developmental Disorders*. 37(1), 354-356.
- State of Connecticut. (2008). Connecticut birth to three system: Autism-specific programs as of 2008. Retrieved February 1, 2008, from <http://www.birth23.org/Publications/Autism%20Insert%201%2008.pdf>
- State of Connecticut, Department of Developmental Services. (2008). CT birth to three system: Service Guidelines #1. Retrieved February 1, 2008, from <http://www.birth23.org/Publications/Autism%202008.pdf>
- Velde, B.P., Cipriani, J., & Fisher, G. (2005). Resident and therapist views of animal-assisted therapy: Implications for occupational therapy practice. *Australian Occupational Therapy Journal* 52(1), 43-50.
- White, E. (2005). Greening the blues. *Ecologist* 35(8), 56-60. Retrieved February 3, 2008, from <http://libproxy.smith.edu:4801/login.aspx?direct=true&db=aph&AN=18524144&site=ehost-live>.
- Zapf, S.A., & Rough, R.B. (2002). The development of an instrument to match individuals with disabilities and service animals. *Disability and Rehabilitation* 23(1/2/3), 47-58.

Appendix A

Informed Consent for Parents

Dear _____:

My name is Cheryl Giglio. I am a graduate student, and the purpose of this study is to evaluate the accessibility of animal-assisted therapy to children who have autism. This research will be used for my thesis in partial fulfillment of the Master's of Social Work degree at Smith College School for Social Work and for future presentation and publication on this topic.

You are being asked to participate in this study because you are a parent with a child with autism, living in Connecticut. I will be asking you questions about the age and gender of your child, the age your child was diagnosed with autism, siblings in the home, other children diagnosed with autism in the household, age of child's parents, occupation of the parents, treatments (therapeutic, biomedical, educational, alternative) child has participated in, your experience with animal-assisted therapy, and the accessibility of animal-assisted therapy for your child with autism.

Interviews will be conducted between September 15, 2008 and October 15, 2008. The interview process should take approximately 45 minutes to one hour. Interviews will take place in a mutually agreed upon place that will provide some level of confidentiality such as a home or office.

I will be tape recording the interview session in an effort to have complete accuracy of your answers. I will not say your name on the tape so that your answers will be kept confidential. Your name will not be placed on the tape or on any notes that are taken during the interview. An identification code will be assigned to the tape and notes. A transcriptionist will be transcribing the taped interview. This transcriptionist has signed an Assurance of Research Confidentiality and has pledged to keep any information in the tapes confidential and to not discuss it with anyone. The data will be kept with me at all times and kept in a locked space when possible. I must keep all notes, tapes and transcripts for at least three years according to U.S. federal requirements. After this time the data will continue to be kept secured until I physically destroy them.

The information will be reported as a collective total, and there will not be use of any identifiable quotes or identifiable information in the reporting, publication, or presentation of the interview information.

This study is an evaluation of the accessibility of animal-assisted therapy for children with autism, as reported by parents who have children diagnosed with autism. By participating in this study, you may request a copy of the summary of findings by contacting the researcher via email or telephone.

These results can help you to understand the perceptions of others with regard to the accessibility of animal-assisted therapy for their child with autism. By participating in this study, you will have made a helpful contribution to promoting awareness and understanding the accessibility of interventions for children with autism. There will be no monetary compensation for your participation.

There are no outright risks to participating in this study. As a parent who has a child with autism, you may experience some emotions while answering some of these questions. Therefore, I will provide you a listing of referrals for individual counseling. If you feel that a question or line of questioning is unsettling or troublesome in anyway, please let me know immediately and we will discontinue that line of questioning. If at any time you feel you do not wish to continue the interview or wish to withdraw from the study, please let me know and you can discontinue participating at any time, no questions asked.

You may refuse to participate in this study without any repercussion or loss of services. If at any time you wish to stop the interview, please tell me and we will discontinue immediately without any question as to why. If you would rather not answer a question, please let me know and we will disregard that question, no questions asked. If you decide you do not want your interview to be part of the study, you can withdraw your participation by contact me at cgiglio@email.smith.edu or XXXXXXXXXXXX by October 15, 2008 and all data you have provided will be destroyed. You may contact the Smith College School for Social Work Human Subjects Review Committee at (413) 585-7974 if you have any questions or concerns.

YOUR SIGNATURE INDICATES THAT YOU HAVE READ AND UNDERSTOOD THE ABOVE INFORMATION; THAT YOU HAVE HAD THE OPPORTUNITY TO ASK QUESTIONS ABOUT THE STUDY, YOUR PARTICIPATION, AND YOUR RIGHTS AND THAT YOU AGREE TO PARTICIPATE IN THE STUDY.

Signature of Participant: _____ Date: _____

Signature of Researcher: _____ Date: _____

* If you have any questions or wish to withdraw your consent, please contact:
Cheryl Giglio, XXXXXXXXXXXX or email: cgiglio@email.smith.edu.

PLEASE KEEP A COPY OF THIS FORM FOR YOUR RECORDS

Appendix B

Counseling Referrals

Community Health Resources,

995 Day Hill Rd, Windsor, CT (860) 731-5522

24-hour Central Access and Crisis Triage Center

Local: (860) 683-8068 Toll-Free: (877) 884-3571

Connecticut Mental Health Center

34 Park St.

New Haven, CT 06519

(203) 974-7300

Genesis Center (subsidiary of CHR)

587 East Middle Turnpike

Manchester, CT 06040

(860) 646-3888

Institute of Living (Outpatient Services Assessment Center)

200 Retreat Avenue

Hartford, CT 06106

(860) 545-7200

(860) 673-2411

North Central Counseling Services (subsidiary of CHR)

47 Palomba Drive

Enfield, CT 06082

(860) 253-5020

United Services, Inc. (Adult Mental Health Outpatient Services)

1007 North Main Street

Dayville, CT 06241

(860) 774-2020

United Services, Inc. (Adult Mental Health Outpatient Services)

132 Mansfield Avenue

Willimantic, CT 06226

(860) 456-2261

West Haven Mental Health Clinic

270 Center Street

West Haven, CT 06516

(203) 789-7858

Appendix C

Autism Parent Support Programs/Organizations

Autism Society of Connecticut
P. O. Box 1404
Guilford, CT 06437
(888) 453-4975

Autism Spectrum Resource Center
Lois Rosenwald, Co-director
101 North Plains Industrial Road
Wallingford, CT 06492
(203) 265-7717

CT FEAT (Connecticut Families for Effective Autism Treatment)
P.O. Box 370352
West Hartford, CT 06137
(860) 571-3888

East of the River Collaborative
Beth Mix, Co-Chairperson
C/O Manchester Youth Services
Center Street
Manchester, CT 06045

National Alliance for Mentally Ill – Connecticut
Child and Adolescent Network
241 Main Street, 5th Floor
Hartford, CT 06106
(860) 882-0236 Local
(800) 215-3021 Toll-Free

Appendix D

Advertising Flyer for Participants

For Parents of Children with Autism

Interview Participants Needed for Research Study
exploring the accessibility of
Animal-Assisted Therapy for children with Autism

For further information contact:

**Cheryl Giglio
XXXXXXXXXX**

or

cgiglio@email.smith.edu

Appendix E

Demographic Information/Research Questions

Age of Child(ren) with Autism: _____ Gender: _____

Parents' Occupations: _____

Treatments child has participated in: _____

Please explain what you know about Animal-Assisted Therapy.

*For those families **who have participated in animal-assisted therapy**, the following questions will be explored:*

- Please share how you learned about this type of intervention
- Can you tell me more about your experience in arranging animal-assisted therapy for your child? Was this difficult to arrange?
- Please share with me what the intake process was like. Did you have to wait? Was the intake appointment at a time that was convenient for you and your family?
- How long has your child participated in animal-assisted therapy?
- Where are the sessions conducted? Approximately how far is this location from your home? How does your child get to/from sessions? Did/Do you have any issues with transportation getting your child to/from sessions?
- Who pays for the animal-assisted therapy sessions (self-pay, insurance, family, combined with other treatment, etc.)? Have you approached your insurance company about coverage for sessions? If so, what was their response? If not, what reasons kept you from contacting them?

- How do you think your occupation, education, income bracket impacted you seeking this as a resource?

*For those families **who have NOT participated in animal-assisted therapy**, the following questions will be explored:*

- Please explain your thoughts about using animal-assisted therapy for your child with autism. Are you familiar with the idea that this type of therapy may be helpful for children with autism?
- Please explain what you feel the primary reason is for your child not participating in animal-assisted therapy. What other reasons do you think influence your ability to access this type of treatment for your child?
- Please share your thoughts on how accessible animal-assisted therapy is to children with autism. Do you feel it may be difficult to arrange? Do you know of locations where this type of intervention takes place? Are these close to where you live? Could transportation be a barrier to having your child participate in animal-assisted therapy?
- Do you feel cost is a factor to being able to obtain this treatment for your child? Does your child's health insurance cover animal-assisted therapy?

Appendix F

Connecticut Animal-Assisted Programs

Connecticut Animal-Assisted Programs

Delta Society, Inc.
875 124th Avenue NE, Suite 101
Bellevue, WA 98005
(425) 679-5500

North Star Foundation
Patty Dobbs Gross
20 Deerfield Lane
Storrs, CT 06268
(860) 423-0664

Soul Friends
Kate Nicoll, LCSW
80 South Main Street
Wallingford, CT 06492
(203) 679-0849

Tails of Joy Therapy Dog Program Connecticut
Terri Carpenter
175 Adams Street
Manchester, CT 06040
(860) 742-8611

Appendix G

Approval Letter from the Human Subjects Review Committee



Smith College
Northampton, Massachusetts 01063
T (413) 585-7950
F (413) 585-7994

September 24, 2008

Cheryl Giglio
49 South Road
Bolton, CT 06043

Dear Cheryl,

Your revised materials have been reviewed and all is now in order. Your expansion of the questionnaire is very good and should serve to get the kind of information you need to fulfill your purpose.

Please note the following requirements:

Consent Forms: All subjects should be given a copy of the consent form.

Maintaining Data: You must retain all data and other documents for at least three (3) years past completion of the research activity.

In addition, these requirements may also be applicable:

Amendments: If you wish to change any aspect of the study (such as design, procedures, consent forms or subject population), please submit these changes to the Committee.

Renewal: You are required to apply for renewal of approval every year for as long as the study is active.

Completion: You are required to notify the Chair of the Human Subjects Review Committee when your study is completed (data collection finished). This requirement is met by completion of the thesis project during the Third Summer.

Good luck with your interesting study.

Sincerely,

A handwritten signature in cursive script that reads 'Ann Hartman'.

Ann Hartman, D.S.W.
Chair, Human Subjects Review Committee

CC: Nora Padykula, Research Advisor