

**THE ROLE OF SERVICE DOGS FOR TWO CHILDREN WITH AUTISM SPECTRUM
DISORDER**

Jennifer Waldie

**A Thesis Submitted in Partial Fulfilment of the Requirements
For the Degree of
Master of Education**

**FACULTY OF EDUCATION
LAKEHEAD UNIVERSITY
Thunder Bay, Ontario**

**August 2005
©2005 Jennifer Waldie**



Library and
Archives Canada

Bibliothèque et
Archives Canada

Published Heritage
Branch

Direction du
Patrimoine de l'édition

395 Wellington Street
Ottawa ON K1A 0N4
Canada

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file *Votre référence*
ISBN: 978-0-494-15645-2
Our file *Notre référence*
ISBN: 978-0-494-15645-2

NOTICE:

The author has granted a non-exclusive license allowing Library and Archives Canada to reproduce, publish, archive, preserve, conserve, communicate to the public by telecommunication or on the Internet, loan, distribute and sell theses worldwide, for commercial or non-commercial purposes, in microform, paper, electronic and/or any other formats.

The author retains copyright ownership and moral rights in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

AVIS:

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque et Archives Canada de reproduire, publier, archiver, sauvegarder, conserver, transmettre au public par télécommunication ou par l'Internet, prêter, distribuer et vendre des thèses partout dans le monde, à des fins commerciales ou autres, sur support microforme, papier, électronique et/ou autres formats.

L'auteur conserve la propriété du droit d'auteur et des droits moraux qui protègent cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

In compliance with the Canadian Privacy Act some supporting forms may have been removed from this thesis.

Conformément à la loi canadienne sur la protection de la vie privée, quelques formulaires secondaires ont été enlevés de cette thèse.

While these forms may be included in the document page count, their removal does not represent any loss of content from the thesis.

Bien que ces formulaires aient inclus dans la pagination, il n'y aura aucun contenu manquant.


Canada

ABSTRACT

This qualitative study investigated the role of service dogs for two children with autism spectrum disorder. The participants in this study were eight adults who all had direct and continuing interaction with a service dog team. Six themes emerged following an analysis of the qualitative data: (a) safety – the service dogs helped the children avoid dangerous situations; (b) anxiety – the service dogs were seen as a calming influence; (c) normalizing effects – the service dogs assisted in allowing families to engage in activities outside the home; (d) communication – the service dogs helped to encourage the children to speak and interact with others; (e) friendship – the service dogs provided a constant source of friendship for the children; and (f) educating the school community – service dogs for autism are still a relatively rare phenomenon, and as such it is important that parents, students and teaching staff are all given the necessary information so that implementation and transitions run smoothly. Although service dogs are not a cure for autism, all of the participants in this study strongly believed that the service dog was a beneficial and useful tool for children with autism spectrum disorder.

ACKNOWLEDGEMENTS

*"The one absolutely unselfish friend that man [sic] can have in this selfish world, the one that never deserts him, the one that never proves ungrateful or treacherous, is his dog. . . .He will kiss the hand that has no food to offer; he will lick the wounds and sores that come in encounter with the roughness of the world. . . .When all other friends desert, he remains."
- George G Vest*

I would like to thank Dr. Connie Russell, my thesis supervisor, for her patience, guidance, and for always being positive and upbeat in her feedback and support.

I would like to thank my committee member, Dr. Mary Clare Courtland, for her valuable insight and suggestions.

I would like to thank the eight participants who gave freely their time and shared their experiences with me.

Finally, for inspiration, loyalty, and true friendship, I would like to thank my past and present canine companions: Raisins, Annie, Shadow, Duchess, Duke, Dirtwater Fox, Marnie, Kodee, Rubeelou, and Raven.

TABLE OF CONTENTS

Abstract.....	i
Acknowledgments.....	ii
Table of Contents.....	iii
List of Tables.....	v
CHAPTER ONE: OVERVIEW OF THE STUDY.....	1
Research Question.....	2
Rationale.....	2
Definition of Terms.....	4
Animal-assisted Therapy.....	4
Animal-assisted Activities.....	4
Service Animals.....	4
Service Dogs.....	4
Service Dog Team.....	5
Research Design and Methodology.....	5
Significance of the Study.....	6
Limitations.....	6
CHAPTER TWO: REVIEW OF THE LITERATURE.....	8
Pets and Children.....	8
Therapeutic Use of Animals.....	12
Service Animal Studies.....	15
Animals and Autism.....	17
CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY.....	20
Introduction.....	20
Qualitative Research.....	20
Multiple Case Study Design.....	21
Interviews.....	23
Observations.....	25
Artefacts.....	26
Participant Selection.....	26
Ethical Considerations.....	27
Data Analysis.....	28
CHAPTER FOUR: RESEARCH FINDINGS.....	31
How a Service Dog Team Functions.....	31
Safety.....	32
Normalizing Effects.....	34
Anxiety Reduction.....	39
Communication.....	42

Friendship.....	44
Educating the School Community.....	47
CHAPTER FIVE: DISCUSSION AND RECOMMENDATIONS.....	52
Discussion.....	52
Recommendations.....	56
REFERENCES.....	57
APPENDIX A: GUIDING INTERVIEW QUESTIONS FOR PARENTS.....	65
APPENDIX B: GUIDING INTERVIEW QUESTIONS FOR EDUCATORS.....	66
APPENDIX C: GUIDING INTERVIEW QUESTIONS FOR ADMINISTRATORS.....	67
APPENDIX D: GUIDING INTERVIEW QUESTIONS FOR DOG TRAINERS.....	68
APPENDIX E: COVER LETTER FOR PARENTS.....	69
APPENDIX F: COVER LETTER FOR TEACHERS/ADMINISTRATORS.....	70
APPENDIX G: COVER LETTER FOR DOG TRAINERS.....	71
APPENDIX H: CONSENT FORM FOR PARENTS (Interview and Observation).....	72
APPENDIX I: CONSENT FORM FOR PARENTS (Interview Only).....	73
APPENDIX J: CONSENT FORM FOR TEACHERS/ADMINISTRATORS.....	74
APPENDIX K: CONSENT FORM FOR DOG TRAINERS.....	75

LIST OF TABLES

TABLE 1: Examples of Statements Supporting Individual Themes	30
--	----

CHAPTER ONE

OVERVIEW OF THE STUDY

This qualitative study examined the roles of service dogs for two children with Autism Spectrum Disorder (ASD). This study involved exploring the perceptions of people who have had direct and continuing interaction with a service dog and child team. Data were collected between May and August of 2003, through informal interviews, observations, and the analysis of artefacts.

A service animal is defined as “any animal individually trained to do work or perform tasks for the benefit of an individual with a disability” (U.S. Department of Justice, 1993, section III-4.2300). A service dog refers to any dog specifically trained to help a person with a disability. Service dogs can be trained to do many tasks and often help their owners become more independent by assisting with both physical tasks and emotional needs. Guide dogs for the blind have been around for many years. Other types of service dogs include hearing dogs, which alert the handler to sounds; seizure alert dogs, which respond when the handler has a seizure; and mobility assist dogs which act as the arms and legs for a physically disabled person. It is only very recently that some facilities have begun to train service dogs to work with people who have ASD. These dogs are specifically trained to stop a child from wandering into a dangerous situation, but according to participants in this study, there are a number of other benefits as well. This study is significant because service dogs have only recently become an option for people with ASD and limited information currently exists regarding the ways in which a specially trained dog can help mitigate the impact of this disabling condition.

Research Question

The purpose of this study was to examine the role of service dogs for two children with Autism Spectrum Disorder. The main research question for this study was: What are the roles of service dogs for two children with ASD? Three sub-questions helped to guide this research:

- 1) How can a service dog physically assist a child with ASD?
- 2) How can a service dog therapeutically assist a child with ASD?
- 3) How can a service dog help a child with ASD in an educational setting?

Rationale

ASD is a group of pervasive and debilitating conditions which affect the brain and cause delays in an individual's development. ASD is often related to problems with communication, social interaction and repetitive behaviours. It is estimated that over 100,000 Canadians currently live with some form of autism (Autism Society of Canada, 2001).

People challenged by ASD often exhibit challenging and difficult behaviors. The symptoms and characteristics of ASD can be evident in a wide variety of combinations, and can range from mild to severe. Although two children can have the same diagnosis of ASD, their behaviour and skills can differ dramatically. The following are examples of behaviours that may be present in people with ASD:

- Insistence on sameness; resistance to change
- Difficulty in expressing needs; uses gestures or pointing instead of words
- Repeating words or phrases in place of normal, responsive language
- Laughing, crying, showing distress for reasons not apparent to others
- Prefers to be alone; aloof manner
- Tantrums

- Difficulty in mixing with others
- May not want to cuddle or be cuddled
- Little or no eye contact
- Unresponsive to normal teaching methods
- Sustained odd play
- Spins objects
- Inappropriate attachments to objects
- Apparent over-sensitivity or under-sensitivity to pain
- No real fears of danger
- Noticeable physical over-activity or extreme under-activity
- Uneven gross/fine motor skills
- Not responsive to verbal cues; acts as if deaf although hearing tests in normal range
- Self-injurious and/or aggressive behaviours

(Autism Society of America, 2002)

Although much progress has been made in the study of ASD, the specific causes are not yet known, nor are there any reliable cures (Shriebman, 1994). There are, however, various techniques and strategies that can be employed to improve behaviour and attempt to alleviate some of the social problems that are present. One such technique, which has only recently begun receiving recognition, involves training a service dog to support an individual with ASD.

Researchers have already demonstrated that animals can form beneficial relationships with children, adults, and people with various disabilities (for examples, see Blue, 1986; Bryant, 1990; Mallon, 1992; Serpell, 1991; Voelker, 1995). Guide dogs have been used successfully with blind people for many years, and hearing ear dogs and seizure response dogs are becoming more common for people with certain special needs. Service dogs for individuals with ASD are not yet common nor are they as readily accepted by the general public (Burnett, 2001). The first Canadian service dog trained to assist an autistic child began her duties only eight years ago (Henderson, 2002). Since then, many dogs have been successfully trained to assist people with autism both in Canada and the United

States. This study has the potential to inform parents, researchers and policy makers with regard to autism service dogs. Because the use of service dogs for people with ASD is such a new phenomenon, there are few, if any, studies available which consider the potential benefits and impacts related to using a service dog. As well, there is currently very little in place in terms of policy guidelines for schools and other institutions.

Definition of Terms

Animal-assisted therapy is defined formally as “a goal directed intervention in which an animal that meets specific criteria is an integral part of the treatment process” (Delta Society, 1997, p.1). Animals can have therapeutic value for many people, but most animal therapy programs involve specific treatment goals and are usually associated with children and adults with mental and physical disabilities.

Animal-assisted activities involve trained volunteers and their pets visiting individuals or groups at prisons, schools, nursing homes, hospitals and other locations (Lipton, 2001).

Service animals include any animal specifically trained to assist in any way an individual with a disability.

Service dogs are dogs that aid and accompany a person with a disability in order to help with a variety of tasks. These dogs may also be referred to as assistance dogs. Increasingly, dogs are being trained to assist individuals with a wide range of disabilities. There seems to be no uniformly accepted term for such dogs; sometimes they are referred to by their function (e.g., a hearing dog or a guide dog) and sometimes they are simply referred to as service dogs or assistance dogs.

A *Service dog team* is the term that describes the unit formed when the person with the disability is accompanied by the service dog (i.e., they work together as a team). In the case of autism service dogs, this unit also includes a handler, who controls the dog with basic commands.

Research Design and Methodology

This qualitative study involved gathering information through a multiple case study approach. The primary means of data collection was the semi-structured interview. Observation and the analysis of artefacts were also conducted.

The participants for this study were eight individuals who had direct experience with a service dog team. Participants were purposefully sampled (Patton, 2001) and included school personnel, family members and a dog trainer.

Interviews lasted from 45 minutes to two hours and were conducted at a time and a place convenient to the participant. Some of the interviews were conducted over the telephone due to geographical constraints. Each interview was audio-taped with permission and transcribed. Field observations occurred on two different occasions. Hand-written field notes were kept and later analysed along with the other sources of data. Analysis of data involved the constant comparative approach (Bogdan & Biklen, 2003), whereby data were continually reviewed and re-evaluated to determine emerging patterns and themes. A thorough description of the research design and methodology can be found in Chapter Three.

Significance of the Study

This study is significant because it is one of the first to explore a new option which may be used to help people with autism. This research has helped to provide a better picture of how a service dog can assist a child with ASD, physically, therapeutically and educationally. At this point in time there is a lot of interest and very little literature available with regard to autism service dogs. This study could provide a starting point for other researchers who are interested in exploring the topic in greater depth. The information in this study may also be useful for parents who are considering obtaining an autism service dog as an additional support for a child with ASD. As well, this study may be helpful for educators and policy writers who are dealing with the challenges related to bringing an autism service dog into an educational setting.

Limitations

Time and geographical constraints as well as a small sample size meant that it was possible only to gain a brief glimpse into the world of the autism service dog. As well, the sample was likely biased in favour of service dogs. All of the participants were very positive about their experiences with the service dog. Because the participants were all recommended by an individual who was involved in the training of the dogs, they may have been reluctant or unwilling to discuss any negative issues or experiences.

In this chapter I have provided an overview of the purpose, rationale, design and methodology, significance and limitations of this study, as well as definitions of key terminology. Chapter Two contains a literature review which addresses four areas relevant to the study: pets and children; therapeutic use of animals; service animal

studies; and animals and autism. Chapter Three contains a detailed discussion of the research design and methodology. In Chapter Four the findings of the study are presented. The final Chapter involves a discussion of the results and recommendations for future research.

CHAPTER TWO

REVIEW OF THE LITERATURE

This review will address literature in four areas relevant to this study: pets and children; therapeutic use of animals; service animal studies; and animals and autism.

Pets and Children

In North America, pets can be found in the majority of households where children are present (Rowan, 1992). Pets may play an important role in the family as something children can turn to in times of emotional need (Bryant, 1990). Many parents believe that children can benefit from pets in a variety of ways including teaching a child responsibility, encouraging caring attitudes and behaviours, providing companionship, security, comfort and amusement, and offering opportunities for the expression of affection (Serpell, 1999).

In a study by Kidd and Kidd (1985), only 10% of the three- to thirteen year olds interviewed felt that there were no benefits from pet ownership. The rest of the children reported that their pets provided learning opportunities, happiness, comfort, and unconditional love. In terms of children's relationships with their pets, Bryant (1990) found four distinct types of potential benefits and seven types of costs associated with pet involvement. Benefits included mutuality (reciprocal caring between child and pet), enduring affection (the child's perception that the pet will continue to love him or her regardless of the circumstances), self-enhancing affection (the idea that pets make children feel important), and exclusivity of relationship (the ability to share with or

confide in the pet). Some of the costs that were identified in the study related to distress stemming from pet rejection or pet death, dissatisfaction with the pet's needs, worry about pet safety, 'getting into trouble' (unacceptable behaviors related to the treatment of the pet), and distress at not being able to take care of pet needs.

Attachment theory is one framework for understanding the role of pets in children's socio-emotional development (Melson, Peet & Sparks, 1991). Attachment is defined as "a lasting emotional tie between individuals such that the individual strives to maintain closeness to the object of attachment and acts to ensure that the relationship continues" (Fogel & Melson, 1988 p. 190). In a study examining the relationship between attachment to pets and socio-emotional development, Melson et al. (1991) found limited support for a relationship between attachment and empathy. The authors hypothesized that pets may play a different role in socio-emotional functioning depending on developmental level and they suggested that more research is needed in this area. In a more recent study, Vidovic, Stetic and Bratko (1999) found that children who scored higher on the Child Attachment to Pets scale showed significantly higher scores for empathy and prosocial orientation than non-pet owners or children who scored low on the pet attachment scale. The researchers also found that children with higher levels of attachment to pets rated their family environment significantly better than children who had lower attachment to pets.

Empathy, or the ability to understand how someone else feels, has been the subject of a number of studies related to children's relationships with pets. Bryant (1985) found that children who own pets felt more empathy towards other people. Similarly,

Poresky and Hendrix (1990) found that 3 to 6 year old children who owned pets achieved higher empathy scores than those who did not own pets.

The relationship between self-esteem and pet ownership is another area of interest to researchers. Bergesen (1989) found that children's self-esteem scores increased significantly when they were involved in keeping pets in the classroom. In particular, children who originally had low self-esteem scores showed the most improvement. Similarly, Covert, Whiren, Keith and Nelson (1985) found that young adolescent pet owners had higher self-esteem scores than those who did not own pets. Animals may help to enhance not only self-esteem but also social skills (Poresky & Hendrix, 1990).

A number of researchers have also suggested that pets provide important 'social support' (Bryant, 1985; Furman, 1989). When asked who they would go to with a problem, children regularly suggested they would go to their pets (Brickel, 1982). Studies have shown that children can see pets as empathetic and attentive listeners, and the pet-owner relationship can provide a substitute for other social relationships (Robin, ten Bensel, Quigley & Anderson, 1983; Van Houtte & Jarvis, 1995). The pet-owner relationship can also encourage social relationships. Guttman, Predovic and Zemanek (1985) have suggested that the attractiveness of a child's pet to other children may enhance the attractiveness of the child as a friend or playmate.

Trivedi and Perl (1995) found that students were more likely to approach a guidance counsellor if he or she had an animal present or owned an animal. The children were also more willing to talk about their problems and open up to the guidance counsellor. Staff at schools where animal therapy programs are implemented

commented that an animal's presence in the room "creates a feeling of warmth and friendly companionship, and this feeling can lead to productive conversation and therapeutic growth" (Trivedi and Perl, 1995, p.226). In a study by Mallon (1994), a dog was placed in a residential facility for children diagnosed with emotional disorders. It was observed that the children often used the dog as a confidant and felt safe in talking to the animal about their problems and troubles. Social, emotional and physical benefits were also noted for the staff members at the facility.

Ross, Vigdor, Kohnstamm, Di Paoli, Manley and Ross (1984) conducted a study related to the effects of integrating animals and children with emotional disturbances and learning disabilities at Green Chimneys, a residential treatment center and 150 acre farm. The researchers randomly selected 22 subjects from a group of 88 youth and found that "animals employed in therapeutic and educational intervention have a strong involving influence and can be the agent for the development of rapport and therapeutic change" (p.129).

A study by Katcher and Wilkins (1997) demonstrated that animals were able to capture and hold the attention of children who were disruptive in school, thus creating a more effective teaching environment. Animals were used to help calm children who had attention deficit/hyperactivity disorder and/or conduct disorders. Improvements in behaviour were observed and transferred to some other teaching contexts but were not universal in all situations. Another classroom study involving children with Down's syndrome found that a dog helped to provide better focus in terms of cooperation and positive interactions (Limond, Bradshaw & Cormack, 1997).

Therapeutic Use of Animals

One of the first documented cases of animals used therapeutically was at the York Retreat in England in the late 1700's. It was thought that by getting psychiatric patients to work in the gardens and care for small animals they would be better able to focus on activities outside themselves (McCulloch, 1983). In 1867, an animal therapy program was introduced at Bethel, a residential treatment center for epileptics in Germany. This program, which still exists today, incorporates farm animals, dogs, cats, birds and a wild game park as treatment for a wide variety of physical and emotional impairments (Bustad, 1980).

Although therapeutic benefits have been attributed to animals for years, it wasn't until the 1960's that researchers began to take note. Psychologist Boris Levinson (1962) was the first to actually report on the therapeutic benefits of pets. He found that having his dog present in therapy sessions encouraged communication with emotionally disturbed children. Levinson suggested that animals seem to act as a kind of "social facilitator," an unthreatening bridge between patient and therapist. He used his dog Jingles as an 'ice breaker' while working with troubled children. The dog served as a "relatively neutral medium through which to express unconscious emotional conflicts, worries and fears" (Serpell, 1999, n.p.). He thought that pets could act as sources of transition, allowing a child to form a relationship first with the pet, then with the therapist, and finally with other people.

Levinson (1969) believed that pet therapy could be especially useful for autistic individuals. He felt that emotionally disturbed children were able to relate to animals more readily than to humans because the animals offered unconditional attention and

affection in an unthreatening and non-judgemental manner. Levinson is considered to be one of the pioneers of animal-assisted therapy, although at the time his ideas were met with cynicism and contempt by many in his field (Rowan & Thayer, 2000). Today, the service animals involved in animal-assisted therapy are certified and trained specifically for work in a particular situation. Animal-assisted therapy is useful because it can “improve and further the therapy of physically, cognitively, psychosocially and physiologically challenged individuals” (Blackman, 1997, n.p.).

Simply having animals in the immediate environment has been shown to improve human health. For example, studies show higher survival rates among pet owners who suffer a heart attack (Friedmann & Thomas, 1995), reductions in blood pressure and stress levels (Allen, Blascovich, Tomaka & Kelsey, 1991; Katcher, Beck, Friedman & Lynch, 1983), significant reductions in minor health problems and improvements in psychological aspects of health (Serpell, 1991). Even viewing fish in an aquarium has been shown to reduce blood pressure levels in some adults (Katcher, Segal & Beck, 1984).

Companion animals are now regularly found in a variety of hospital settings. Pets have been shown to increase patient responsiveness and to act as “reality therapy” (Hibell, 1987, p.10). The unconditional acceptance and affection of pet animals can help to stimulate withdrawn patients and help to bring them out of an isolated state. Numerous studies have shown that animals can have a very positive effect on the elderly (e.g., Erikson, 1985; Stallones, 1990). For example, researchers examining the use of animals in nursing homes have noted benefits such as increased socialization and mental alertness, and improvement in attitude (Corson & Corson, 1978; Holcomb & Meacham,

1989; Proulx, 1998). Erikson (1985) found that animals provided elderly individuals with positive distractions, boosted morale and had a calming effect. Similar psychological effects, along with more positive and acceptable social behaviour, have also been demonstrated in psychiatric institutions and prisons (Beck, Seraydarian & Hunter, 1986; Holcomb & Meacham, 1989; Katcher, Beck & Levine, 1989). Animals have also been reported to be beneficial for caregivers in institutional settings, with better staff attitude and improved relations between staff and patients attributed to decreased caregiver stress (Taylor, Maser, Yee & Gonzalez, 1993; Zissleman, Rovner, Shmueli & Ferrie, 1995).

Fine (2000) has found that walking therapy is particularly effective for children with separation anxiety and selective mutism. In the case of separation anxiety, the therapist encourages the child to practice leaving his or her parents by going outside to walk the therapist's dog. With selective mutism, the walks are initially used to get the child to speak louder in order to be heard over the competing noises of the environment. Eventually, as the children become more comfortable and confident with the dog and the experience, they are taken on routes where other people are likely to initiate conversation with the child due to the presence of the dog.

The literature related to the therapeutic use of animals comes from a wide variety of disciplines and a growing body of research supports the idea that human/animal interaction can be therapeutically beneficial in certain situations. This field is still in its infancy, however, and a number of authors (Barker, 1999; Garrity & Stallones, 1998; Mallon, 1992) have suggested that more research is necessary in order to better

understand the complexities related to the therapeutic use of animals in a wide variety of contexts.

Service Animal Studies

Sachs-Ericsson, Hansen and Fitzgerald (2002) suggest that a service dog's role¹ is "to reduce the impact of disabling conditions on the day-to-day lives of individuals" (p.253). Relatively few studies exist related to the use of service dogs. Beck (2000) suggests that "there is a need to assess objectively the use of service animals so they can be considered part of the more recognized approach to help people with disabilities" (p.30). To date, research has focused mainly on how a service dog can assist an individual across a variety of domains including health, mobility, mood, social interaction and employment (Sachs-Ericsson et al., 2002).

In terms of health, only a few studies exist which examine the impact of a service dog. Mowry, Carnahan and Watson (1994) conducted a study of individuals teamed with a hearing dog and found that 86% reported that the dog helped improve their health. No specific details were given with regard to how health was improved. In another study by Fairman and Huebner (2001), 54% of participants felt that their service dog helped with physical fitness, nutrition and decreased health risk behaviours. Some respondents even reported that their service dogs helped with oral hygiene, by getting supplies and assisting with actual procedures. In a review of the research related to the benefits of service animals, Sachs-Ericsson et al. (2002) found that research in this area is lacking and at the

¹ It should be noted that although a service dog's role is defined here in terms of human interests, such dogs do have their own inherent worth outside of their 'jobs.'

time, there were no studies which examined the impact of service dogs on doctor visits, medication costs or health-care costs.

Service dogs have been shown to increase their owners' confidence and assist with safety concerns. A study of 80 blind individuals found that those people with a guide dog felt more independent and safer than those who did not own a guide dog (Steffens & Bergler, 1998). Over 90% of the participants in Mowry et al.'s (1994) study reported that their hearing dogs helped alleviate concerns related to personal security or safety. Participants in Valentine, Kiddoo and La Fleur's (1993) study reported a number of psychological benefits from owning an assistance dog, including feeling safer, more capable and more assertive. A retrospective study by Hart, Zasloff and Benefatto (1995) also reported that hearing dog owners felt safer when alone with their dogs than they did before owning the dog.

A number of researchers have suggested that service animals can also have a socializing effect on their owners. Mugford and M'Comisky (1975) suggest that animals can act as 'social lubricants' in aiding and increasing social contact among people. Steffens and Bergler's (1998) study of people who used guide dogs found that guide dogs facilitated more contact with other people. Eddy, Hart and Boltz (1987) conducted a study which examined whether people in wheelchairs received more social acknowledgements when they had a service dog with them than when the dog was not present. The results indicated that strangers were significantly more likely to smile or strike up a conversation with a person with a disability when a service dog was present. Similarly, a study by Madder, Hart and Bergin (1989) showed that children who were

wheelchair bound were approached more often by friendly strangers when accompanied by a service dog.

A study of 80 blind individuals found that those people with a guide dog felt more independent and more safe than those who did not own a guide dog. It was also found that the dog facilitated more contact with other people and provided an important source of friendship. The authors concluded that for the majority of participants, “life would not be conceivable without the dog. For a blind person with a dog, the amount of everyday stress is reduced and the amount of everyday pleasures is increased” (Steffens & Bergler, 1998, p.157). A similar study by Zee (1983) found that in comparison to pets previously owned, seeing eye dog owners felt that their relationship with the guide dog was characterized by a greater bond and more affection for the dog. Guide dogs were often seen as family members, and positive changes in attitude and behaviour were attributed to some degree to the ownership of the dog.

Animals and Autism

To date, the research related to ASD and animals is limited to a few studies which have explored the potential benefits of animal-assisted therapy (AAT) in a controlled setting.

As mentioned earlier, Levinson (1965), a clinical psychologist, was one of the first to report that having a dog present in therapy sessions encouraged communication with emotionally disturbed children. Levinson found that using a dog was particularly useful in helping autistic children maintain contact with reality.

In a study by Condoret (1983), an autistic girl who had never been seen to interact

with any living being, was observed watching the flight of a bird that had been brought into the classroom. After that one interaction, the child's demeanor changed and she began to interact with the class dog, other children and her teachers.

In a unique study conducted in Florida, Smith (1983) brought together eight autistic children and three trained bottlenose dolphins for six sessions of water play. After interacting with the dolphins, one of the children who was labeled 'nonverbal' began imitating dolphin clicking sounds in order to get the dolphin to participate in a ball tossing game. As well, the researchers noted that the children's reported attention spans increased from five to ten minutes to up to one hour. Parents, teachers and the investigators found the dolphin encounters to be beneficial, observing that for up to two weeks after the sessions the children were more approachable, calmer and happier. In a critical review of this study, however, Beck and Katcher (1984) note that "other than a reported, but unqualified, increase in attention span, there were no persistent changes. Thus, the treatment made no fundamental change in the major symptom of the disability...to justify so cumbersome a procedure as the use of dolphins" (p.415).

A study by Redefers and Goodman (1989) used AAT in sessions with 12 children who had autism. Social interaction, defined in this study as "any instance of verbal or nonverbal behaviour directed to therapist or dog" (p.462), increased significantly when a dog was introduced to the child. Additionally, autistic behaviours such as repetitive jumping, roaming, hand-posturing and making noises were reduced and more socially appropriate behaviours such as joining the therapist in games and initiating activities were increased. The results suggest that animal-facilitated therapy could be used for children with autism to help them better interact with others. More recently, a study of

autistic children and AAT by Campbell and Katcher (1992) also reported increased social response by children to both animal and therapist.

McNicholas and Collis (1995) conducted a series of interviews with three families where there was a young person with autism who had a close relationship with a family pet. The results indicated that all three of the subjects exhibited behaviours toward their pet that they rarely displayed towards people. Of particular note was the fact that

...pets were sought out for companionship, comfort and confiding in ways never shown to family members. Greater sensitivity toward the needs and feelings of the animal was also apparent, together with a lack of anger and aggression. In spite of a strong dislike by all the subjects to be touched or hugged there was evident enjoyment in tactile comfort with the pets. These results suggest that people with autism may be able to demonstrate behaviors towards pets that they do not display to people, even family members, and which are akin to those associated with close relationships. (n.p.)

Companion animals have been used to help people deal with a variety of ailments and disorders for over two hundred years. Dogs, cats, rabbits, birds, and even fish, are currently utilized in a variety of health care settings and preliminary research indicates a wide range of possible benefits. More research is needed in this area, especially with regard to autism, and the potential for animals to help alleviate some of the symptoms and behaviours associated with this debilitating disorder.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

Introduction

The purpose of this study was to examine the roles of a service dog for two children with ASD. In this chapter, I will describe and explain the process used to gather data for the study. The following topics will be examined: a) qualitative research as methodology, b) multiple case study methods, c) participant selection, d) ethical considerations, e) interview process, f) other data collection, and g) data analysis.

Qualitative Research

This study used a qualitative research methodology for its descriptive and exploratory nature. Bogdan and Biklen (2003) described qualitative methodology as:

...an umbrella term to refer to several research strategies that share certain characteristics. The data collected have been termed, soft, that is, rich in description of people, places and conversations, and not easily handled by statistical procedures. Research questions are not framed by operationalizing variables; rather, they are formulated to investigate topics in all their complexity, in context. (p.2)

My goal in this study was to examine the role of autism service dogs as experienced and perceived by individuals directly involved with a service dog team. This fits with

Patton's (1991) definition of qualitative methodologies which "seek direct access to the lived experience of the human actor as he or she understands and deals with ongoing events" (p. 391). Two purposes for qualitative research are understanding the meaning of experiences of the participants, and understanding the context and the influence of that context on participants and their actions (Maxwell, 1996), both of which fit with the purposes of this study.

Strauss and Corbin (1990) claim that qualitative methods can be used to better understand any phenomenon about which little is yet known. To date, very little research has been done on the use of service dogs for children with ASD. In fact, training these dogs specifically for children with this disorder only began in 1996.

Multiple Case Study Design

Descriptive information on the role of service dogs was gathered through case studies of two children with ASD. Yin (1984) defines the case study research method as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used" (p. 23). Feagin, Orum, and Sjoberg (1991) define a case study as "an in-depth, multi-faceted investigation, using qualitative research methods, of a single social phenomenon" (p. 2). Robson (1993) proposes that case studies are often exploratory, in that the research is an attempt to find out what is happening, seek new insights, ask questions, and to assess events in a new light. Tellis (1997) suggests that a case study "is done in a way that incorporates the views of the

'actors' in the case under study" (p. 2). In order to get a richer depiction of the experience, the voices of the participants in the research study are included in reporting the research rather than just the voice of the researcher.

Merriam (1988) defines a qualitative case study as "an intensive, holistic description and analysis of a single entity, phenomenon, or social unit...[that is] particularistic, descriptive, and heuristic and rel[ies] heavily on inductive reasoning" (p. 16). A case study is particularistic because it focuses on a specific phenomenon such as a program, event, process, person, institution, or group. Merriam states that a case study is descriptive, in that the end product of the study is a "rich, thick description of the phenomenon under study" (p. 11). Case studies are heuristic because of their ability to "illuminate the reader's understanding of the phenomenon under study" (p. 13). Case studies make use of inductive reasoning due to the fact that new understandings, concepts, and relationships arise from studying the data (Merriam, 1988).

Drawing from Merriam (1988), Yin (1984), and Tellis (1997), my study fell well within a qualitative multiple case study design. I focused on key people who were involved with two autistic children and their service dogs, as I sought to describe their beliefs, practices, and lives. I used inductive reasoning as I analyzed the data, searching for relationships and themes. Yin (1994) stresses that a case study occurs "within its real-life context" (p. 13) and this was an important emphasis in my study. I employed three strategies in this case study design: interviews, observations, and document analysis. I not only listened to the voices of the individuals participating in my study as Tellis suggests, but I also observed parts of their lives to gain an understanding of the context within which they operate.

According to Patton (1990), the use of a multi-method approach for collecting data can help to validate and cross-check findings. I used interviews, observations, and document analysis (artifacts) in order to help to ensure validity through triangulation, in this case by collecting data using a variety of methods and from a range of sources (Leedy & Ormond, 2001).

Interviews

An interview is a purposeful conversation "used to gather descriptive data in the subjects own words so that the researcher can develop insights on how subjects interpret some piece of the world" (Bogdan & Biklen, 1998). According to Patton (1990), qualitative interviewing should begin "with the assumption that the perspective of others is meaningful, knowable, and able to be made explicit" (p. 278). Interviews allow for a large amount of data to be collected quickly, and clarified and expanded upon immediately (Marshall & Rossman, 1995).

Interviews are also useful because they may allow the researcher to briefly enter another individual's world to experience perspectives that can assist in a better understanding of the research question. Interviews add "an inner perspective to outward behaviours" (Patton, 1987, p.109).

I conducted semi-structured interviews which were taped with the permission of the participants. A small, handheld tape recorder was used due to convenience and the fact that it was fairly unobtrusive. The downside of this method was that the microphone was small and some of the interviews were difficult to transcribe due to poor quality recordings. In total, eight interviews were conducted; five were face to face, and three

were over the telephone because of geographical and time constraints. Interview guides were used for each of the interviews. Patton (1990) describes an interview guide as:

...a list of questions or issues that are to be explored in the course of an interview.

An interview guide is prepared in order to make sure that basically the same

information is obtained from a number of people by covering the same material.

The interview guide provides topics or subject areas within which the interviewer

is free to explore, probe, and ask questions that will elucidate and illuminate that

particular subject. Thus the interviewer remains free to build a conversation

within a particular subject area, to word questions spontaneously, and to establish

a conversational style - but with the focus on a particular subject that has been

predetermined. (p.283)

Four different interview guides were developed in order to make the interviews as comprehensive as possible, one for parents (see Appendix A), one for educators (see Appendix B), one for administrators (see Appendix C), and one for dog trainers (see Appendix D). Each guide consisted of a series of open-ended questions that were developed after consideration of the literature and with research purposes in mind. The key interview questions for all interviews were:

- Describe a typical day for a child/service dog team.
- What are a service dog's responsibilities?
- How does a service dog affect the school performance of a child with ASD?
- How does a service dog affect the social interactions of a child with ASD?
- How does a service dog affect the behaviour of a child with ASD?

- Would you recommend a service dog to parents of children with ASD? Why or why not?

The interviews ranged from approximately 45 minutes to two hours. Prior to the start of the interview, I introduced myself to the participants and discussed the general nature of the research and how the interview would be conducted. I also made sure that each participant had understood and signed the consent form and was aware that the interview was being recorded. Approval to conduct this research was granted by the Ethics Committee at Lakehead University in April, 2003. Interviews were conducted between May and August of that year, at a time and in a place that was convenient and comfortable for each participant. Overall, the interviews went very smoothly. Generally, the concepts and objectives of the research were well understood by the participants of the study. People were quite willing to talk about their experience with a service dog team, and to share their thoughts, impressions, and ideas.

Observations

Due to geographical constraints, I only had an opportunity to conduct field observations twice during the course of this study. The first time I was able to accompany a child/service dog team and a parent on an outing to a mall and a bookstore. On the second occasion I was able to observe a child/service dog team in a school environment. Both of these experiences were extremely helpful in that they allowed me to learn first-hand in natural settings about the methods that are used as well as to get a better idea of some of the autistic behaviours involved.

Artefacts

One important source of data was information from newspaper and magazine articles. A number of participants were able to refer me to articles that were either written about a particular child or about service dogs in general. These articles were obtained and a filing system was devised in order to arrange the information in an organized format to enable systematic retrieval later. Through individual participants I was also able to discover a number of television documentaries and informational videos that had been produced on the subject. These were obtained and reviewed and journal notes were kept related to aspects that seemed significant.

Participant Selection

For this study, I followed Maxwell's (1996) suggestion of using purposeful sampling when persons are "selected deliberately in order to provide important information that [cannot] be gotten as well from other choices" (p. 70). Purposive sampling is based on the assumption that one wants to discover, understand, gain insight; therefore one needs to select a sample from which one can learn the most (Patton, 1991). I combined purposeful sampling with reputational selection, or participants "chosen on the recommendation of an 'expert' or 'key informant'" (Miles & Huberman, 1994, p. 28). In this case, the key informant was an instructor with the National Service Dog Training Centre located in Petersburg, Ontario. The National Service Dog Training Centre was the first Canadian assistance dog school to match assistance dogs with children who have autism (National Service Dogs Training Centre, 2001). The instructor

was able to recommend three potential participants from the Centre's list of current student/dog teams. Those recommendations led to a "snowball" or "chain" sample (Patton, 1990) whereby "cases of interest are identified from people who know people who know people who know what cases are information-rich, that is, good examples for study, good interview subjects" (Patton, 1990, p. 182). Potential participants identified through the sampling strategy were contacted via e-mail and telephone for further discussion of the research questions, methods, and procedures.

The participants for this study all had direct and continuing interaction with a autism service dog team. The real names of the participants, children, and dogs have been replaced with pseudonyms for confidentiality reasons. 'Jack' and 'Danny', the children in this study who used an autism service dog, were both males, between the ages of 7 and 12 at the time of the study. The dogs, 'Molly' and 'Shaggy', were both Labrador Retrievers, approximately 3 to 5 years of age. The participants consisted of the following: Judy and Sue, two female parents of a child with autism; Kim, the adult sister of a child with autism; three female school educational assistants/dog handlers: Anne, Trisha and Yvonne; Joe, an autism service dog trainer; and Dave, the principal of a school where a student with autism utilizes a service dog. Due to confidentiality issues, the participants will not be physically described. It should be noted, however, that each individual had a great deal of experience and expert knowledge related to the service dog team they worked with.

Ethical Considerations

This study was conducted in accordance with the rules, guidelines, and procedures

for ethical research on human subjects as written in the Lakehead University Handbook of Ethics, Procedures and Guidelines for Research on Human Subjects (2001). All adult participants were given a verbal explanation of the study and were required to read and sign a consent form which also explained the purpose of the study (see Appendices E to J). Because of the nature of ASD, the two children involved in the study were not able to give written or verbal permission; however, their parents were able to give consent for them. Participants were assured that: participation was voluntary; there were no risks involved; they could withdraw from the study at any time; participation would be anonymous and confidential; and, in accordance with the Ethics Guidelines for Lakehead University, all data will be stored in a secure location at the university for a period of seven years. Interested parties were also offered a summary of the research findings upon completion of the study.

Data Analysis

Bogdan and Biklen define qualitative data analysis as "working with data, organizing it, breaking it into manageable units, synthesizing it, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others" (1992, p. 145).

The first step in the analysis process was to transcribe the recordings of the interviews. During the transcribing process I became very familiar with the content of the interviews and I began to recognize some of the patterns and themes which were emerging. This process, also known as "open coding" (Strauss & Corbin, 1990), facilitated identification of conceptual categories into which common words, phrases or ideas could be grouped. Each key concept or theme was given a name and participant

responses – key phrases in the form of quotes – were grouped accordingly using a laborious but effective cut-and-paste method. Each theme name was placed at the top of a page and all of the quotations pertaining to that theme were cut out from a copy of the transcript and pasted on the page. Words such as ‘safety,’ ‘anxiety,’ and ‘interaction,’ were common descriptors which helped to categorize emergent themes. At least two copies of each interview were printed for this task as I quickly discovered that many of the quotes fit into more than one category. In order to make the task easier, each participant’s interview was printed in a different colour and page numbers were recorded beside the text so that I was able to keep track of who said what and where it occurred in the interview.

The next stage of analysis involved re-examination of the themes identified to determine how they were linked. At this point each category consisted of one or more pieces of paper with the theme written at the top and all the quotations pertaining to that theme pasted below. There were twenty-eight categories in total. I went back and re-examined the twenty-eight sub-themes and realized that most of them would fit into a set of six major themes. For example, the sub-themes ‘public reaction’, ‘family’, ‘frustration before receiving dog’, and ‘independence/freedom’ all fit under the major theme of ‘normalizing effects’ because all of the quotations for those categories related to the service dog helping to make life more normal for the family. The other major themes were safety, anxiety, communication, friendship, and educating the school environment. Examples of statements supporting the six themes are presented in Table 1.

Table 1

Examples of Statements Supporting Major Themes

Major Theme	Example
Safety	"Molly's responsibility is first and foremost to keep Jack safe."
Normalizing Effects	"[Molly has] really added something, a little more normalcy almost, to the family"
Anxiety	"...I think its helped him with his anxiety, if he gets anxious he'll go and lay on her."
Communication	"More kids are talking to him. Even if they don't stop and have a long drawn out conversation, they always say, 'Hi, Danny, how's Shaggy? Or 'Hi, Danny. Hi, Shaggy!'"
Friendship	"...But just having that constant that's there all the time, that he really has a friend, somebody to interact with and somebody to play with and somebody to love and somebody to love him that isn't an adult, right? But Molly has really shown him how to develop a friendship."
Educating the School Environment	"It's not as much getting permission as it is to inform or educate the community before, long before, the dog has arrived...you need to be proactive and you need to do some education in the community before [the dog] comes."

CHAPTER FOUR

RESEARCH FINDINGS

In this Chapter, I shall present the findings of this study on the roles of service dogs for two children with Autism Spectrum Disorder. In the first section of this chapter I shall describe how a service dog team operates, then I will present the findings in relation to six themes that became apparent during a thorough analysis of the interview transcripts. These themes were: safety, anxiety, normalizing effects, communication, friendship, and educating the school environment.

How a Service Dog Team Functions

An autism service dog is a dog which is specifically trained to assist a child with autism. The dogs are usually Golden and Labrador Retrievers, chosen because of their stable temperaments and high levels of intelligence. Selected puppies are initially placed in adoptive homes where they receive basic obedience and socializing. When the dogs reach 12 to 14 months of age, they receive specialized training so that they can assist with a wide variety of tasks.

An autism service dog is trained to respond to certain verbal commands such as stop, turn left or right, and proceed forward. The dog works as part of a team, with a handler and the child. The handler is usually a parent, or a specially trained educational assistant (E.A.). The child is physically attached to the dog with a leash and belt system. The child wears a belt around his or her waist, which is attached directly to the dog by

means of the leash. The dog wears a working vest with a hand loop which gives the child something to hold on to if s/he so desires. The handler walks either behind or on the other side of the dog and holds a leash, controlling both the dog and the child. For example, “if the child approaches a curb or tries to walk off the sidewalk, the handler can tell the dog to stop and stay. The dog will use all of its power to brace its footing to slow the child down and stop, which gives the parent walking behind the child time to intervene” (National Service Dogs website, 2005).

The service dog allows a parent or handler to control and guide a child who might otherwise run into traffic. Judy was able to give an example of how the system works when going for a walk with her son Jack:

...before we even cross the street out of our driveway Molly is in a sit position and connected to Jack with a belt and I get Jack to look both ways and Molly will stay, now if Jack decides to push forward without being ready, I would give a command and Molly would just lock her bottom down and with all her body weight she would prevent Jack from moving forward, once connected. And if they did get away from me then I would give the command for Molly to come and she would bring Jack back.

Safety

All of the participants involved in this study believed that the service dog contributed to keeping the child safe. A major concern for children with autism is that they may lack an awareness of dangers within the environment. Some children are prone to running or bolting into traffic or other unsafe situations. For example,

Jack has some serious safety problems, safety issues. He bolts, he doesn't, you know the bus is going down the street, or it doesn't matter what, he would just run in front, he wouldn't, he never stops to look. Running into traffic was not unheard of, leaving a classroom unannounced was not unheard of, even leaving the house. This child is a height seeker, he can leave, go out the backyard, climb the fence, I mean an eight foot fence or whatever it is, jump it and be gone.

For this family, the decision to get a service dog was primarily a safety measure:

Molly's responsibility is first and foremost to keep Jack safe. You know if he's attached to her, you know Jack can't run out into traffic, he can't because an E.A. or mom will give her the command to sit and stay and she won't move and Jack's not strong enough to move her.

Safety around water was also a concern for Judy:

And even going to the cottage at ..., we were always afraid of losing Jack. And with Molly, you know on the beach there's much more safety. Molly's right beside him. We've got great pictures of them swimming together. Molly of course loves the water but very close to Jack.

Hiding can also be a problem. Sue suggested that it was difficult to go to public places like WalMart before getting the service dog because her son "would just run away and hide in between all the racks and it was just too nerve-wracking on everybody." Now when Danny heads out the door, the dog is "right behind him because he wants to know where he is and what he's doing, make sure he's still there." The same is true for Jack, "Molly always knows where Jack is, Jack would never leave the house without Molly."

School staff also suggested that the service dog helped to keep the child safe. Anne, an educational assistant, noticed that the dog helped to keep Jack from banging into people and walls when walking down the hallway. She also noted that Molly kept Jack from leaving the school:

I mean it does prevent him. Maybe if Molly wasn't here he would try to run away more, like run out of the room or down the hall, I think he would, actually. Like, he knows that Molly is there and he's not really going that far.

Dave, a principal, noted that there was less anxiety among staff members in the school environment because the service dog was helping to keep the child safe:

Well, safety-wise, we know that it certainly makes a difference and so he's in one place more, you're not fighting with him or you're not chasing him so he'll stay in class, so he has more exposure to his environment, there's less anxious staff people because he's not about to run.

Normalizing Effects

For families with autistic children, life can be difficult. Even simple things, such as going to the grocery store, can become monumental. Before getting a service dog, Sue preferred not to take Danny shopping:

...it was more trouble than it was worth sometimes...I would always wait until my husband got home to go and do my grocery shopping or go and do whatever errands I had to do. It got to the point where I couldn't go out with him anymore because he was so out of control. You know, going to the store, I mean try and put a five-year-old kid in a grocery cart and put three hundred dollars worth of

groceries on top, it didn't work very well. Or, you know, go into Wal-Mart and he would just run away and hide in between all the racks and it was just too nerve-wracking on everybody.

Now that Danny has a service dog, the family "can go out now...peacefully. We can go for walks and go to the store...you know, going to school, just being able to go out and have him, and know that he's safe."

Although having the dog requires a little more time and effort, ...everybody is willing to wait that extra five minutes just because we have that security, we can do that now, and Danny is happier. We can go out and have a meal in a restaurant now whereas we couldn't do that before because he would just scream the whole time we were there.

Sue's family had in fact, "quit going out because it was so much of a headache."

Now, with Shaggy, the service dog, the family is able to go out and enjoy a meal together:

if we go out to a restaurant to have dinner, so you know you get your drinks and then you get an appetizer and then you get your dinner, you know, that could take up to a couple of hours, and with Danny having Shaggy there, he is always right under Danny's feet. So Danny will take his shoes off and rub his feet on Shaggy. He needs to touch him. And then, if by the time Danny has had enough, he will crawl under the table and sit with his dog and then that's our cue to finish supper, you know, he's had enough.

Judy suggested that having the service dog allowed both her and her child more physical freedom:

Without Molly I would be clutching on to his arm. You know, how uncomfortable is that? Always clinging. So you can see how he just manoeuvres. We wouldn't be doing that without Molly. And then once he got to the section he wanted, see how he was looking at his books and actually sitting, leaning in to Molly. So in terms of behaviour, in terms of behaviour, it's more normal and more comfortable for Jack. And you saw at the mall how he manoeuvred around. I wasn't really clutching him until he really got into a behaviour. And then I just put Molly into a down position.

When asked if there were things that the family could do now that they couldn't do before, Judy responded that they went on family vacations, in airplanes and to hotels. She stated that they went to movie theatres all the time now because they knew that:

...if something goes wrong, then it looks like there is something different here with the service dog, people are more willing to help as opposed to they don't know what's going on with just a child rolling around on the floor, and prefer not to get involved. They see something different, and if I ask for help, people quickly will come and respond as opposed to...they just know something is different with a service dog and a child. Um, so, the movie theatre, going on the airplane, doing just about everything, more, I feel more comfort and security for me knowing that Jack is more secure with Molly and that I have less confusion out there with Molly in taking out a special needs child, because he doesn't look like there's anything wrong with him. And I want to make him as normal, have him do as many normal things as possible and he's learning that more appropriately with Molly than without Molly.

In public situations, it appears that having a service dog helps to alert people that the child has a disability. Jack's sister recalled a time when Jack and Molly went bowling:

a bunch of kids with autism went for sort of a group outing of some sort and Jack just went crazy in the bowling alley, it was a bad day for him, whatever it was. And, uh, where usually people would sort of look at his mom and the child and be, like, your kid is like seven years old and is having a temper tantrum, and Jack is a big kid, right, so he even looks like he's ten. And, uh, this big burly biker guy came up and was like, "What can I do for you? How can I help you?" and honestly picked Jack up, took him to the car, was, like, "Do you want me to call you somebody? Can I help you with something?" – it was unheard of...It was because Molly was there for sure. Because kids with autism don't look different, I mean, unless you know what the symptoms of autism are, you know I can look at a child now and be like, yeah, that kid is probably autistic, and if something were going on, for sure I would offer to help that mom or dad but, uh, it doesn't happen very often so Molly is definitely a constant and helps with that.

Sue also believed that people were more understanding of Danny's outbursts because a service dog was present:

he is a working dog, so, I mean, there is nothing that's stamped on (Danny's) forehead that says he has a disability...but now that they've seen him attached to the dog, they're more aware that apparently there is something wrong.

Jack's sister suggested that having a service dog

...makes the family life better cause again family life is an issue, right, and Molly has really added to the family, she hasn't made it more stressful... She's really added something, a little more normalcy almost, to the family. You know you got a kid, two kids, two parents, the dog...it's a family thing and Molly, yes, is Jack's dog but is a part of the family and it's brought a sense of normalcy and a calmness to the family, definitely less worry.

The presence of a service dog also appeared to help reduce certain autistic behaviours. In Jack's case, Molly is able to get his attention so that

Jack is much more in tune with his environment, Molly is an object of his focus, more normal focussing attention, more in touch with reality than he otherwise would be. So if Jack was just left on his own he would be doing (self-stimulating) things.

Sue also noted that Danny's autistic behaviours were more pronounced at school when the service dog was not working. When Shaggy missed a couple of days of school because of a surgery, the principal said that, "You can really see the difference in Danny when Shaggy is not there. He's not focused, he's not paying attention." The same thing happened when Shaggy took some time off earlier in the school year for training purposes. Once the dog came back to school, the educational assistants could not believe the difference in Danny with the dog, "as opposed to the six weeks previous to that when he wouldn't sit still, he wouldn't listen, he wouldn't pay attention, he wouldn't focus, he would, you know, cross his arms and plant his feet on the ground and say 'I not do that'."

Anxiety Reduction

All of the participants in this study believed that the service dog was able to help decrease levels of anxiety for the child with autism. Jack's mother noted that his dog was with him twenty-four hours a day, and that she helped him with "minimizing or decreasing his anxiety." Kim, Jack's sister, suggested that Molly acted as a

portable security blanket so where Jack would be uncomfortable in the fluorescent lighting and the Loblaws and the Wal-Mart because it's an unfamiliar situation, different people and hustle and bustle, Molly is there with him and Molly is a constant so no matter what happens, no matter where he is, even if he is uncomfortable, Molly is there. And Jack has really come to rely on Molly as his portable security blanket, a constant. When he's feeling insecure, uh, he's not very good with transitions at school, he's not very good with unfamiliar situations, Molly is there. He will actually hug her and feel better about it. I mean I saw him do it today at school, because his mom and I showed up to his classroom and the lights turned off and we watched a movie and that was about autism which was a little weird for him, and he decided he was just going to get on the floor and sit with Molly and that was it. And I have seen that with him a hundred times, you know him just sort of grabbing Molly and feeling better with her there.

Judy recalled a time when her son's service dog acted independently to calm his anxiety:

We were in [the] airport and it was time to get on the plane and we were coming home from our weekend trip and it was a Sunday morning and the flight was from

[x] to [y]. There were at least a hundred people there. And we were to get early boarding and Jack decided he was just in a funk, didn't want to leave [x], you'd think he'd want to get on the airplane, but no, he was having too much fun, didn't want to go. So he was rolling around, major temper tantrum, meltdown, and, oh my god, like shortly, they've already called for pre-boarding, we've missed that, and uh, lots of people watching, like, "What's wrong with this child?" and I'm thinking, "Okay, we're definitely going to miss this flight, just get the idea in your head that you're going to miss it." So Molly got right on top of Jack. Jack was on the ground, it was the month of February, Jack had his snowsuit on, and, uh, Molly just got right beside him and went sort of on top of his chest, so the full weight of her body across his and calmed him down in a very short period of time. I was about twenty feet away just sitting back thinking, okay, and amazed that the dog got Jack to calm right down and it was about five minutes I would think, because of the time, but it didn't take a whole lot of time, but Jack got up, Molly got up, we got on the plane.

Judy also noted that Molly helped Jack with sleeping,

Jack has a huge problem getting to sleep but he [now] knows his dog is right there, right on top of the bed. And, actually, Jack likes a lot of weight and pressure, which is probably, I don't want to say typical for autism, but I know he really likes that extra pressure. And Molly will get right on him or very close to him and that's really, he will say, "Molly come," get her in bed with him.

In the school situation, the service dog also assisted in helping the child to feel less anxious. Jack's educational assistant stated that

He used to scream a lot more and stuff than he does now. That could be a combination of everything but I definitely think Molly's presence lets him feel more secure...Molly is pretty much kind of just like a security for him, I think it's a comfort for him to have her there...I think its helped him with his anxiety, if he gets anxious he'll go and hug her and lay on her.

She too used the term 'security blanket' when talking about their relationship. When asked about the way that Jack leaned against the dog during an assembly in the gym, she replied: "that's the norm in the gym when there are that many people in there. He uses her kind of like a security blanket, I think."

Danny's educational assistant saw an even wider benefit: "The dog asserts a calming effect on the whole class, on him and the whole class."

The calming effect of the service dog was viewed as a 'learning tool' by Jack's sister, Kim:

If Jack has anxiety he doesn't learn, he gets anxious in new situations, new surroundings, new people, transitions, from math to drawing to science, whatever it is. And Molly is there all the time so I can't stress how important it is to have that constant, because not only does it mean that Jack feels safe, if Jack feels safe, he learns. So she really is a learning tool.

Jack's mother also noted that the service dog had helped her son in terms of his abilities at school:

...I think he is more focussed, because Jack is belted [meaning attached to the dog with a belt] most of the time at school and he just, that kind of anchors him. He can, you know, sit for a longer period of time, he knows his best buddy is right

there, the anxiety is always more in check than it otherwise would be, so he can focus on his academic skills. So I think it trims down, Molly trims down the extraneous for Jack, more than without Molly. Be it his anxiety, all the other things that would affect him, she's a constant.

Communication

Many individuals who are affected by autism have difficulty socializing with others and using language to communicate. Service dogs in this study were seen to assist with both social skills and speech.

One mother, Judy, discussed how she uses her son's service dog to encourage him to speak:

I will direct the questions if they don't direct them directly to Jack, "what's your dog's name?", "Can I touch your dog?" to Jack, so then it gives Jack an opportunity to develop his skills, his communication skills. He does all the feeding of Molly, under, with supervision, but we put Molly in a full sit, and he scoops out the food and then he says "Molly, ready, set, go" and you know, so everything is language.

Judy suggested that Molly is a "communication temptation" for Jack, because they are able to use the service dog to encourage Jack to use his words,

... so it's kind of a special thing for Jack and, uh, helps with verbalization, a communication temptation. So the more we have of those things for Jack, the better, and the more responsibilities. The bonding quickly took place but I can see the bonding is maturing and developing more as each month goes by and his

communication is more. He is expecting more out of Molly, which is a good thing, and I'm teaching him how to say, like, how if he really wanted Molly to come shopping, so the communication temptation was "Molly, come, get into the car," so I let him give the command.

Danny's mother also shared the view that the service dog was helping her son to communicate with other people:

Shaggy has helped Danny a lot with his social skills and his speech. Um, we are one of the fortunate ones who has an autistic child that talks. Um, and it's been a lot of hard work, to get him to talk, but to keep that up. And his social skills, as you know, these kids could care less about the world around them. And I got into the habit very early after Shaggy came home, somebody would ask, you know, "What's the dog's name?" or "Who's that?" and I've always pushed it off onto Danny. I'll say, "You have to listen, Danny. What are they saying?" and then, you know, the person will say "What's your dog's name?" and I'll make him answer. So then, you know, even though, it could be the minister at church or, you know, the meat clerk at the store, even though it's adults, it's still working on his social skills.

She also attributed more social interaction with other children to having a service dog:

"More kids are talking to him. Even if they don't stop and have a long drawn out conversation, they always say, 'Hi, Danny, how's Shaggy?' or 'Hi, Danny. Hi, Shaggy!' or 'Hi, Danny, how's Shaggy today?' you know, that kind of stuff."

Anne, one of the educational assistants, also mentioned the service dog in terms of increasing social interactions in the school environment because kids are naturally attracted to dogs:

Most kids love dogs and it's a focus, you know, everyone knows Jack and Molly in the school. And I think it helps, cause the kids say hi to him and things like that. I mean, it's hard, because the kids aren't allowed to interact with Molly, but I definitely think it maybe gets him more attention and people are more apt to say hi to him.

Friendship

Because autistic children often struggle with communication and social skills, they can have a difficult time making friends. Participants in this study saw the service dog assisting with friendship in two ways. First, the service dogs were viewed as a constant source of love, friendship and companionship, and second, the dogs encouraged other children to interact and perhaps make attempts at friendship with the autistic child.

When asked what Shaggy's responsibilities were, Sue explained that "First and foremost, he is Danny's best friend. He gives him unconditional love. And to go to school, he gives him that security to walk through the doors every day." Judy also saw Jack's service dog in a similar light; "He's very comforted by having Molly around. He's happy, it's his best friend. Molly is his best friend."

Kim also said her brother was much happier with the service dog:

He's definitely, definitely a happier kid. And, you just know it, but he can't tell you that...He definitely is a happier kid. And he's happier which makes family

life happier, which makes it better for him to learn, which makes, it just makes the world go round in a much, much better way...I mean, I can tell you what Molly has done for him, but what the long term effects of that are, I don't know. I just know that he is much happier. We would never ever change this decision, ever, there's just no question about it. And, you know, Molly works for ten years and we'll be on a waiting list for another NSD dog until that happens. Our hope is that Jack has a dog always. And that's where we are with that.

Kim was also able to explain how difficult it is for children with autism to make friends and how important Molly is as a friend for Jack:

Kids with autism don't understand making friends. They understand having feelings for somebody. Jack knows that I love him...but if he looked at you and you were crying he wouldn't, he couldn't, he knows what it's like to be sad, but he doesn't know what it's like for you to feel sad, he couldn't put his thoughts in that situation. So to make friends is very difficult cause he doesn't, I personally don't think he gets that give and take kind of relationship, because he interacts with adults and then he goes to school and he doesn't really know, but the kids know and they interact with him first. But having Molly, Molly does things for him and he feeds her, and he, you know, brushes her sometimes, and he plays with her and he loves her. Potentially, you know. She puts her head in his lap and he knows that she wants to be petted and that's really the basis of friendship in general, you know, not just the give and take but just the loving and being loved. And he would not have ever experienced that, if, I mean, there are kids in the class, one little girl Ashleigh, she's so sweet with him. But just having that

constant that's there all the time, that he really has a friend, somebody to interact with and somebody to play with and somebody to love and somebody to love him that isn't an adult right? But Molly has really shown him how to develop a friendship.

Although Kim did see the bond between Jack and Molly as extremely important, she also acknowledged that this service dog is not a solution or a cure for Jack's problems.

Although I speak so highly of her, I need to always bring myself down a notch. Explain to people she's not a substitute for an adult, she's not a substitute for medication, she's not a substitute for any of those things, but she just adds things, things that we couldn't provide. As much as I love Jack, I could never be what Molly is to him, and uh, she's just important. We just love her.

She also acknowledged that it was hard to tell what changes in her brother could be attributed to the service dog and what changes might just be a matter of getting older, "I mean, he is getting older, right? So what do you chalk up to the dog?" She noted that since the dog had come into their lives, Jack was "better able to attract to people, especially kids." As well, she stated that self-injury such as hitting his head on the ceramic floor and hitting himself had mostly stopped, and that Jack was "less aggressive," but she didn't know whether he had "grown out of that or whether it can be attributed to Molly."

With regard to encouraging friendship from other children, Judy suggested that having a service dog had given her son more social opportunities in terms of social exchanges with peers, and Jack's educational assistant, Anne, saw the service dog as "a

point of interest...so it kind of ignites a sense of maybe going over and trying to be friends with him whereas sometimes kids are scared or they don't know what to say, so I think Molly helps him getting them to come over and talk to him."

Educating the School Community

The process involved in allowing an autism service dog into the school can be lengthy. The service dogs in this study were trained by an officially registered charity. Like guide dogs for the blind, they have an identification card which gives them access to public places such as schools or churches. Still, for some participants, getting the dog accepted into the school system was a challenge. The principal at Sue's son's school was hesitant at first: "you know, what if he messes on the floor? What if he bites somebody? What if he's, you know, what if somebody's got allergies?" But it was suggested to the principal that the dog was like a wheelchair, "and Danny certainly wouldn't be asked to leave his wheelchair at home."

Kim made a similar comparison when discussing the challenges of getting an educational assistant to work with Jack and Molly in the school environment:

Molly is like Jack's wheelchair, would you take the wheelchair of a child with a disability and put it in a corner somewhere and then put the child in a separate corner because nobody knows how to work the wheelchair, or would you find somebody to work it?

Kim noted that it was a challenge getting people to understand "why the dog was there, it wasn't just an extra thing for Jack, it really was an essential tool."

Dave, a school principal, emphasized the importance of educating the public well before the service dog arrived in the school:

It's not as much getting permission as it is to inform or educate the community before, long before, the dog has arrived. It's not a hard sell, to sell supports for students with learning difficulties or learning problems or assistance, that's not the sell that you have to do, everybody supports that. Uh, having a service dog in the school, you need to be proactive and you need to do some education in the community before it comes. It's not as much of a struggle if you do that as it might be if the service dog all of a sudden arrived. All the questions about, all the million questions that you get about dog allergies, where does the dog go to the bathroom, who picks up, who ah, you know all of those questions that people have with an animal in school, they're all answered long before, months before the dog ever arrives. Through newsletters, through letters to parents sent home, through education of staff, through education of children, so that's kind of how it's introduced in the school.

One of the concerns that was mentioned a number of times was the potential for other students or staff in the school to have an allergic reaction to the dog. Initially, one or two parents were concerned about allergies in Jack's school. Dave noted that educating people about the breed of dog - "the lab doesn't have, you know it's not long hair so there aren't a lot of allergy problems..." - was done early in the placement process. Now that everyone is educated about the service dog,

...there hasn't been one concern, not one concern about a dog in the school. In fact, everybody knows how to deal with Molly, all the kids are very familiar. So

Jack will go through, now that the education has been done, he'll go through elementary school with that group if he stays at this school, so there won't have to be a re-explanation every year.

Another obstacle seemed to be the initial organizing that was required. Dave explained that there needed to be a "coordinated effort between the parents and the teachers and the E.A.'s and the principal and the board office people." Transportation to and from school was an issue for Jack and his dog, and the educational assistant that handles the dog needed to be specially trained. Dave suggested that it took a special person to do this particular job: "you can't just bring anybody into (this position) because they don't have the training...and because of the uniqueness of the situation, we want to make sure the right person is here." Dave had concerns initially as far as

who might be best suited with an autistic child, an E.A. and a dog in the classroom. So what professional staff might be more suited to dealing with that and so those kinds of things come into my planning. And to who might be the next teacher? Because there is, uh, although the kids don't need to be educated, the new teacher does. Not only about space and physical planning, of the classroom but also their own professional development about autism and how to program and, you know, keeping those kinds of things in mind. And then the staffing of the E.A. who also works with Jack, not Jack's E.A. but works with Jack, and trains the dog or has the dog training. And it's a very specific job, so I have concerns trying to hire the right person for that job...So I worry a bit about that and I worry about, um, making sure that person gets to feel like they are part of the staff, because they're busy all the time...

Scheduling also has to be considered because a trained handler always needs to be with the dog. Jack's E.A., Anne, brings Molly to the staff room during her lunch break and "she is never alone, she uses the bathroom down here because when she goes to the bathroom she takes Molly into the bathroom with her. So she is never off duty..." Other staff and students also have to be trained not to approach the dog when she is working. For instance,

one of the things that we've had to train our student population is don't interact with Molly, don't call her name, you know, don't encourage her to chase the ball or anything like that because she is working, she can't be distracted.

As well, the dog's size and physical needs are a consideration. Molly is a fairly large labrador retriever: "...she takes up, I mean she's a pretty big dog so she takes up a lot of room, so that affects where Jack sits in class and stuff." For Dave, having a service dog in a classroom was also a consideration when determining class size and location:

We're going to try and keep him in the building next year because we only have to grade three in the building, and then we have seven portables. So we'll try to keep him in as long as possible, just for Anne, you know, having to run all around. Classes, maybe I try to keep a little smaller in that class because you've got a dog, and an E.A.

In spite of all the organizing, educating and planning that is required to implement a service dog team, school administration in Jack's school was still very positive about the benefits: "...it has made a huge difference for Jack. I couldn't imagine Jack not having an E.A. or a dog or both, I couldn't imagine, I don't know how he could attend school if he didn't have those supports."

Dave also mentioned that there was no policy in place with regard to autism service dogs:

Our school board, although they have a policy of inclusion, they don't have a policy or a protocol for service dogs being introduced into the school system, because we're the first one. So there is nothing written. In fact, I believe around the province there is not much written, because I've had inquiries from the Toronto boards, you know asking what our policy is and there isn't one for our school board.

When asked if he would recommend a service dog to parents of children with autism, Dave recommended it, and noted that it would be much easier if there was a policy in place that school boards could access when faced with all the questions that come with bringing a service dog into a school:

I would encourage people to do it, I think that because of the so few experiences that people have had around the country, I think that, you know, if people wrote something up about that or tried to describe those situations in some kind of report that would be a real benefit to boards. Because I think right now everybody is discovering it at the same time. Everybody is sort of experiencing and going through it and tend to have all the questions, whereas if there was a team out there, if there was a book to read or a policy to follow it would make it a lot simpler for schools.

CHAPTER FIVE

DISCUSSION AND RECOMMENDATIONS

The purpose of this study was to get a better understanding of the roles of service dogs for two children with Autism Spectrum Disorder (ASD). The eight participants provided detailed insight into how they perceived their experiences with an autism service dog. The results of the study showed that all of the participants have had positive experiences related to the use of an autism service dog and would recommend a service dog to parents of children with ASD. Six themes were revealed during the course of this study. Each theme will be discussed in the following section. Recommendations for future research will follow.

Discussion

Six recurring themes were identified during the course of this study: safety, anxiety, normalizing effects, communication, friendship, and educating the school community. First, all of the participants agreed that autism service dogs provided an important safety measure for children with ASD. Many children with ASD have no sense of fear when it comes to dangerous situations. Bolting into traffic, running away, and leaving home unannounced were all problems mentioned by participants. Autism service dogs are trained to alert the family if the child leaves the home, and in a working situation, the dog helps to physically prevent the child from entering an unsafe situation. A number of studies (e.g. Steffens & Bergler, 1998; Mowry et.al., 1994; Valentine, Kiddoo and LaFleur, 1993) report that guide and hearing dog owners feel safer because of their dogs, however, no literature currently exists related to the potential safety benefits

of service dogs for children with ASD. This is definitely an area for future research as safety is a major concern for many families of children with ASD.

Second, service dogs were found to be helpful in reducing the amount of anxiety experienced by children with ASD. Children with ASD can become stressed and anxious in unfamiliar or new situations. The dogs were seen to have a calming effect on the children in unfamiliar situations. The dogs act as a constant for the child, or, as one participant described it, as a 'portable security blanket'. The weight and touch of the dogs also seems to help to relieve anxiety. Temple Grandin, a researcher who has autism, has noted that some children with ASD seek pressure on their bodies and will become quite calm when pressure is applied. She defines deep touch pressure as "the type of surface pressure that is exerted in most types of firm touching, holding, stroking, petting of animals, or swaddling" (1992, n.p.). Parents of autistic children have reported that their children engage in pressure-seeking behaviour, such as sleeping under mattresses or multiple blankets and crawling under sofa cushions (Grandin, 1992). The parents in this study noted that their children became more calm when they were touching their dogs and that they slept better with the dog on or beside them in bed. One particularly striking example of the service dog's ability to calm a child with ASD was when Jack was displaying some anxiety at an airport and his service dog exerted pressure by laying on top of him, calming him considerably so that the family was able to board the plane.

Third, for both the families, and the children themselves, autism service dogs helped to make life more 'normal.' One consequence of ASD is that families often tend to isolate themselves from social contact with others (Gray, 1993). Family members often felt confined and restricted due to the potential for unwanted behaviours to occur in

public places. One family had stopped going to many public places because it was just too difficult. After acquiring the service dog they were able to go out again and do things that many of us take for granted, such as going grocery shopping or to a restaurant. Service dogs were seen to be helpful in reducing unwanted behaviours, and their presence alerted other people to the fact that the child was disabled. Children with ASD look like other children, and when an outburst occurs, people can be very judgemental. “One of the most painful aspects of raising a child on the autism spectrum can be the stares, disapproving looks, and critical remarks from passersby. This issue is often particularly problematic in families in which the children look outwardly normal (and most of them do)” (The Asperger’s Connection, n.d.). With a service dog attached to the child, it becomes more evident to outsiders that the child has a disability. Family members said that they felt more comfortable in public settings, knowing that the dog could help to calm their child if need be, and knowing that the visible presence of a service dog would encourage people to be more tolerant.

Fourth, participants viewed the dogs as useful in encouraging children with ASD to communicate with others around them. A number of studies have shown that the presence of a service dog can facilitate exchanges with other people (for examples, see Eddy, Hart & Bolts, 1987; Madder, Hart & Bergin, 1989; Steffens & Bergler, 1998). Respondents in this study found that the service dog often generated questions and contact from people on the street that would not have occurred otherwise. The dogs were viewed as “social catalysts” (Nielsen & Delude, 1989), in that they helped to encourage the children to interact and communicate verbally with other people. When people ask questions about the animals, the dog handlers direct the questions to the children, in an

attempt to promote verbal communication. One respondent called their service dog a ‘communication temptation,’ because the animal was helpful in getting the child to speak and use words related to the dog.

Fifth, the service dogs were seen as an important source of friendship for children with ASD. Many children with autism have limited interaction with their peers. One study of high-functioning children with autism suggested that these children can and do have feelings of loneliness, despite the fact that they sometimes seem like they would rather be alone (Bauminger & Kasari, 2000). While a service dog can’t replace a person, the respondents in this study felt that their service dogs were important and constant companions for these children, providing unconditional love and friendship twenty-four hours a day, seven days a week.

Finally, participants’ noted that there were some struggles involved in having service dogs in the school environment and that it was important to properly educate and inform all potential stakeholders. The dogs in this study were considered as important as a wheelchair would be to someone with a physical disability. Most people were found to be accepting of the dogs when it came to the school environment, however, much planning was required in advance in order to properly address issues and concerns related to having a dog in the school. School Boards will need to have policies in place as these dogs become more common in the school system. Exploration of this issue is an area for future research, as there is no literature yet available on this topic.

All of the people involved in this study clearly indicated that they felt a service dog could be beneficial for a child with ASD. Although small in scope, this study has

implications for parents, educators and researchers interested in alternative or complimentary methods of addressing the needs of children with ASD.

Recommendations

The participants in this study said that they would recommend service dogs for children with ASD, however, they all agreed that having such a dog requires a lot of work and dedication. Autism service dogs are not a cure; however, they can make life a lot easier for children with ASD and their families. Although service dogs have been a useful tool for people with other disabilities for some time, they are a relatively new aid for people with autism. Very few people are aware that such a thing even exists, and if the dogs are useful, as this small study suggests, then there needs to be a greater awareness both on the part of the public and among educators.

Further research, on a larger scale, would help to promote this awareness and give a more accurate assessment of the function of an autism service dog. A longer term, comparative approach, focusing on children with ASD before and after receiving a service dog, would help to clarify the benefits associated with service dog use. Finally, because this is such a new phenomenon, there is no policy in place to help guide administrators and teachers when introducing a service dog into the school system. More research could help to guide policy writers and educators so that the challenges are minimized when bringing a service dog into a classroom setting.

REFERENCES

- Allen K.M., Blascovitch J., Tomaka J., Kelsey R.M. (1991), Presence of human friends and pet dogs as moderators of autonomic responses to stress in women. *Journal of Personality and Social Psychology*, 61(4), pp. 582-589.
- Asperger's Connection (n.d.). Asperger's syndrome: Emotional and social implications. [Retrieved September 15, 2005 from: http://www.ddleadership.org/aspergers/courses/esimplications/daily_stresses.html]
- Autism Society of America (2002). *Common characteristics of autism*. [Retrieved January 28th, 2003 from: <http://www.autismsociety.org/site/PageServer?Pagename=autismcharacteristics>]
- Autism Society of Canada (October, 2001). *Current prevalence of autism and other pervasive developmental disorders*. [Retrieved October 15, 2002 from the ASC website: <http://www.autismsocietycanada.ca/en/index.html>]
- Barker, S.B. (1999). Therapeutic aspects of the human-companion animal interaction. *Psychiatric Times* 16(2). [Retrieved online November 17, 2001 from: <http://www.mhsource.com/pt/p990243.html>]
- Bauminger N. and Kasari C. (2000). Loneliness and friendship in high functioning children with autism. *Child Development* 71(2), 447-456.
- Beck, A. (2000). The use of animals to benefit humans: Animal-assisted therapy. In A.H. Fine (Ed.) *Handbook on animal-assisted therapy: Theoretical foundations and guidelines for practice*. (pp. 21-39). New York: Academic Press.
- Beck, A., & Katcher, A.H. (1984). A new look at pet-facilitated therapy. *Journal of the American Veterinary Medical Association*, 184(4), 414-421.
- Beck, A., Seraydarian, L. & Hunter, G.E. (1986). Use of animals in the rehabilitation of psychiatric in-patients. *Psychology Reports*, 58, 63-66.
- Bergesen, F. J. (1989) *The effects of pet facilitated therapy on the self-esteem and socialization of primary school children*. Paper presented at the 5th International conference on the relationship between humans and animals, Monaco.
- Blackman, D. (1997). *What is animal assisted therapy?* [Retrieved November 1st, 2002 from: <http://www.dog-play.com/therapy.html>]
- Blue, G.F. (1986). The value of pets in children's lives. *Childhood Education*, 24, 85-89.

- Bogdan, R., & Bilken, S. (2003). *Qualitative research for education: An introduction to theory and methods* (4th ed.). Boston: Allyn and Bacon.
- Brickel, C. M. (1982) Pet facilitated psychotherapy: A theoretical explanation via attention shifts. *Psychological Reports*, 50, 71-74.
- Bryant, B. (1985). The neighborhood walk. A study of sources of support in middle childhood from the child's perspective. *Monographs of the Society for Research in Child Development*, 50 (Serial No. 210).
- Bryant, B. (1990). The richness of the child-pet relationship: A consideration of both benefits and costs of pets to children. *Anthrozoos*, 3(4), 253-261.
- Burnett, J. (2001, August 01). Dogs give more than companionship: Service animals aid more people with disabilities that aren't apparent. *Milwaukee Journal Sentinel Online*. [Retrieved November 1st, 2001 from: <http://www.jsonline.com/news/metro/aug01/service14081301a.asp>]
- Bustad, L.K., (1980). *Animals, aging, and the aged*. Minneapolis: University of Minnesota Press.
- Campbell C., Katcher A (1992). *Animal assisted therapy dogs for autistic children: Quantitative and qualitative results*. Paper presented at the Sixth International Conference on Human-Animal Interactions. Montreal.
- Condoret, A. (1983). Speech and companion animals: Experience with normal and disturbed nursery school children. In A.H. Katcher & A.M. Beck (Eds.), *New perspectives on our lives with companion animals* (pp.467- 471). Philadelphia: University of Pennsylvania Press.
- Corson, S.A., & Corson, E.O. (1978). Pets as mediators of therapy. *Current Psychiatric Therapies*, 18, 195-205.
- Covert, A.M., Whiren, A.P., Keith, J. & Nelson, C. (1985). Pets, early adolescents and families. *Marriage and Family Review*, 8, 95-108.
- Delta Society (1997). *Animal assisted therapy: Therapeutic interventions*.
- Eddy, J., Hart, L.A., & Boltz, R.P. (1987). The effects of service dogs on social acknowledgements of people in wheelchairs. *The Journal of Psychology*, 122(1), 39-45.
- Erickson, R. (1985). Companion animals and the elderly. *Geriatric Nursing*, March, 92-96.

- Fairman, S. & Huebner, R. (2001). Service dogs: A compensatory resource to improve function. *Occupational Therapy in Health Care*, 13, 41-52.
- Feagin, J., Orum, A., & Sjoberg, G. (Eds.) (1991). *A case for case study*. Chapel Hill, NC: University of North Carolina Press.
- Fine, A. H. (2000). Animals and therapists: Incorporating animals in outpatient psychotherapy. In A.H. Fine (Ed.) *Handbook on animal-assisted therapy: Theoretical foundations and guidelines for practice* (pp. 179-211). New York: Academic Press.
- Fogel, A., & Melson, G.F. (1988). *Child development: Individual, family and society*. Minneapolis, MN: West Publishing Company.
- Friedman, E., & Thomas S.A. (1995). Pet ownership, social support and one-year survival after acute myocardial infarction in the cardiac arrhythmia suppression trial (CAST). *American Journal of Cardiology*, 76(17), 1213-1217.
- Furman, W. (1989) The development of children's social networks. In D. Belle (Ed.) *Children's social networks and social support*, (pp.151-172). New York: Wiley.
- Garrity, T.F., & Stallones, L. (1998). Effects of pet contact on human well-being: Review of recent research. In C.C Wilson and D.C. Turner (Eds.) *Companion animals in human health* (pp. 3-22). Thousand Oaks California: Sage Publications.
- Grandin, T. (1992). Calming effects of deep touch pressure in patients with autistic disorder, college students, and animals. *Journal of Child and Adolescent Psychopharmacology* 2(1). [Retrieved online July 28, 2004 from <http://www.grandin.com/inc/squeeze.html>]
- Gray, D. E. (1993). Perceptions of stigma: The parents of autistic children. *Sociology of Health and Illness*, 15(1), 102-120.
- Guttman, G., Predovic, M. & Zemanek, M. (1985). The influence of pet ownership in non-verbal communication and social competence in children. In *Proceedings of the International Symposium on the Human-Pet Relationship* (pp. 58-63). Vienna: Institute for Interdisciplinary Research on the Human-Pet Relationship.
- Hart, L.A., Zasloff, R.L., & Benefatto, A.M. (1995). The pleasures and problems of hearing dog ownership. *Psychological Reports*, 77, 969-970.
- Henderson, H. (2002, June 29). Autistic boy saying goodbye to canine companion and guide. *Toronto Star*. [Retrieved online October 15, 2002 from the star.com: <http://www.thestar.com/ContentServer?pagename=thestar/Henderson23/html>]

- Hibell, G. (1987). Pet therapy on a hospital ward. *Geriatric Nursing and Home Care*, July, 8 –11.
- Holcomb, R., & Meacham, M. (1989). Effectiveness of an animal-assisted therapy program in an inpatient psychiatric unit. *Anthrozoos* 2(4), 41-44.
- Katcher, A.H., Beck, A.M., Friedman, E., Lynch, J. (1983). Looking, talking and blood pressure: The physiological consequences of interaction with the living environment. In A.H. Katcher and A.M. Beck (Eds.) *New perspectives on our lives with companion animals* (pp. 351-359). Pennsylvania: University of Pennsylvania Press.
- Katcher, A.H., Beck, A.M. & Levine, D. (1989). Evaluation of a pet program in prison. *Anthrozoos*, 2(3), pp.175-180.
- Katcher, A. H., Segal, H., & Beck, A. (1984). Contemplation of an aquarium for the reduction of anxiety. In R. K. Anderson, B. Hart, and L. Bart (Eds.) *The pet connection*, (pp.171-178). Minneapolis: The Center for the Interaction of Animals and Society.
- Katcher, A.H. & Wilkins, G.G. (1997). Animal-assisted therapy in the treatment of disruptive behavior disorders in children. In A. Lundberg (Ed.), *The environment and mental health: A guide for clinicians* (pp.193-204). Mahwah, NJ: Lawrence Erlbaum Associates.
- Kidd, A.H., & Kidd, R.M. (1985). Children's attitudes towards their pets. *Psychological Reports*, 57, 15-31.
- Lakehead University Research Ethics Board (2001). Ethics procedures and guidelines for research involving humans.
- Leedy, P. D., & Ormond, J. E. (2001). *Practical research: Planning and design* (7th ed.). New Jersey: Prentice-Hall.
- Levinson, B. M. (1962). The dog as co-therapist. *Mental Hygiene*, 46(1), 59-65.
- Levinson, B. M. (1965) Pet psychotherapy: The use of household pets in the treatment of behavior disorders in children. *Psychological Reports*, 17, 695-698.
- Levinson, B.M. (1969). *Pet-oriented child psychotherapy*. Springfield, Illinois: Charles C. Thomas.
- Limond, J.A., Bradshaw, J.W., & Cormack, K.F. (1997). Behavior of children with learning disabilities interacting with a therapy dog. *Anthrozoos*, 10 (2/3), 84-89.

- Lipton, L. (2001, February 02). Some patients petting their way to improved mental health. *Psychiatric news*. [Retrieved online November 25, 2001 from: <http://www.psych.org/pnews/01-02-02/petting.html>]
- Madder, B., Hart, L.A. & Bergin, B. (1989). Social acknowledgements for children with disabilities: Effects of service dogs. *Child Development*, 60, 1528-1534.
- Mallon, G. (1992). Utilization of animals as therapeutic adjuncts with children and youth: A review of the literature. *Child and Youth Care Forum*, 21(1), 53-65.
- Marshal, C. & Rossman, G. (1995). *Designing qualitative research* (2nd ed.). Newbury Park: Sage.
- Maxwell, J.A. (1996). *Qualitative research design: An integrative approach*. Thousand Oaks California: Sage.
- McCulloch, M.J. (1983). Animal-facilitated therapy: Overview and future direction. In A.H. Katcher & A.M. Beck (Eds.) *New perspectives on our lives with companion animals* (pp. 410-426). University of Pennsylvania Press.
- McNicholas, J., & Collis, G.M. (1995, September). *Relationships between young people with autism and their pets*. Paper presented at the 7th International Conference on Human-Animal Interactions, Animals, Health and Quality of Life, Geneva, Switzerland. [Retrieved from the Delta Society Website, November 12th, 2002: <http://www.deltasociety.org/dsx207.htm>]
- Melson, G.F., Peet, S., & Sparks, C. (1991). Children's attachment to their pets: Links to socio-emotional development. *Children's Environments Quarterly*, 8(2), 55-65.
- Merriam, S. B. (1988). *Case study research in education: A qualitative approach*. San Francisco, CA: Jossey-Bass Publishers.
- Miles, M.B. & Huberman, A.M. (1994). *Qualitative data analysis: An expanded sourcebook*. Thousand Oaks California: Sage.
- Mowry, R.L., Carnahan, S., & Watson, D. (1994). *A national study on the training, selection, and placement of hearing dogs*. Little Rock, AR: University of Arkansas Rehabilitation Research and Training Center for Persons who are Deaf or Hard of Hearing.
- Mugford, R.A. and M'Comisky, J.G. (1975). Some recent work on the psychotherapeutic value of caged birds with old people. In R.S. Anderson (Ed.), *Pet animals and society* (pp. 54-65). Springfield, IL.: Charles C. Thomas.

- National Service Dogs Training Centre (2001). [Retrieved November 1st, 2001:
<http://www.nsd.on.ca/>]
- Neilsen, J. A. and Delude, L. A. (1989). Behaviour of young children in the presence of different kinds of animals. *Anthrozoos*, 3(2), 119-129.
- Patton, M.Q. (1987). *How to use qualitative methods in evaluation*. Newbury Park, CA: Sage.
- Patton, M. (1991). Qualitative research on college students: Philosophical and methodological comparisons with the quantitative approach. *Journal of College Student Development*, 32(5), 389-396.
- Patton, M. Q. (2001). *Qualitative evaluation and research methods* (3rd ed.). Thousand Oaks, CA: Sage.
- Poresky, R.H., & Hendrix, C. (1990). Differential effects of pet presence and pet-bonding on young children. *Psychological Reports*, 66, 931-936.
- Proulx, D. (1998). Animal-assisted therapy. *Critical Care Nursing*, (18), 80-84.
- Redefer, L.A. & Goodman, J.F. (1989). Pet-facilitated therapy with autistic children. *Journal of Autism & Developmental Disorders*, 19(3), 461-467.
- Robin, M., ten Bensel, R., Quigley, J.S. & Anderson, R.K. (1983). Childhood pets and the psychosocial development of adolescents. In A.H. Katcher and A.M. Beck (Eds.), *New perspectives on our lives with companion animals* (pp. 436-443). University of Pennsylvania Press.
- Robson, C. (1993). *Real world research: A resource for social scientists and practitioner-researchers*. London: Blackwell.
- Ross, S.B., Vigdor, M.G., Kohnstamm, M., Di Paoli, M., Manley, B., & Ross, L. (1984). The effects of farm programming with emotionally handicapped children. In R.K. Anderson, B.L. Hart, & L.A. Hart (Eds.), *The Pet Connection* (pp.120-130). Minneapolis: University of Minnesota Press.
- Rowan, A.N. (1992). Companion animal demographics and unwanted animals in the United States. *Anthrozoos*, 5(1), 222-225.
- Rowan, A.N., & Thayer, L. (2000). Foreword. In A.H. Fine (Ed.), *Handbook on animal-assisted therapy: Theoretical foundations and guidelines for practice* (pp. xxvii-xliv). New York: Academic Press.

- Sachs-Ericsson, N., Hansen, N.K., & Fitzgerald, S. (2002). Benefits of assistance dogs: A review. *Rehabilitation Psychology*, 47(3), 251-277.
- Salomon, A. (June, 1981). Animals and children: The role of the pet. *Canada's Mental Health*, 9-13.
- Schreibman, L. (1994). General principles of behavior management. In E. Schopler & G.B. Mesibov (Eds.), *Behavioral issues in autism* (pp. 11-38). New York: Plenum Press.
- Serpell, J. (1991). Beneficial effects of pet ownership on some aspects of human health and behaviour. *Journal of the Royal Society of Medicine*, 84, 717-720.
- Serpell, J. (1999). Guest editor's introduction: Animals in children's lives. *Society and Animals Journal of Human Animal Studies*, 7(2). [Retrieved online, November 14, 2002 from the PSYETA website: <http://www.psyeta.org/sa/sa7.2/serpell.html>]
- Smith, B. (1983). Project inreach: A program to explore the ability of Atlantic bottlenose dolphins to elicit communication responses from autistic children. In A.H. Katcher & A.M. Beck (Eds.), *New perspectives on our lives with companion animals* (pp.460-466). Philadelphia: University of Pennsylvania Press.
- Stallones, L. (1990). Companion animals and health of the elderly. *People, animals, Environment*, 8(4), 18-19.
- Steffens, M.C., & Bergler, R. (1998). Blind people and their dogs. An empirical study on changes in everyday life, in self-experience, and in communication. In C.C Wilson and D.C. Turner (Eds.), *Companion animals in human health* (pp. 149-157). Thousand Oaks California: Sage Publications.
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, California: Sage.
- Taylor, E., Maser, S., Yee, J., & Gonzalez, S. (1993). Effect of animals on eye contact and vocalizations of elderly residents in a long term care facility. *Physical and Occupational Therapy in Geriatrics*, 11(4), 61-70.
- Tellis, W. (July 1997a). Introduction to case study. The Qualitative Report (On-line serial), 3(2). [Retrieved February 2003 from <http://www.nova.edu/ssss/QR/QR3-2/tellis1.html>]
- Trivedi, L. and Perl, J. (1995, February). Animal facilitated counselling in the elementary school: A literature review and practical considerations. *Elementary School Guidance and Counselling*, 29(3), 223-234.

- U.S. Department of Justice. (1993). *Americans with disabilities act: ADA title III technical assistance manual covering public accommodations and commercial facilities*. [Retrieved online January 28th from the ADA website: <http://www.usdoj.gov/crt/ada/taman3.html>]
- Valentine, D., Kiddoo, M., & LaFleur, B. (1993). Psychosocial implications of service dog ownership for people who have mobility or hearing impairments. *Social Work in Health Care*, 19(1), 109–125.
- Van Houtte, B. & Jarvis, P.A. (1995). The role of pets in preadolescent psychosocial development. *Journal of applied developmental psychology*, 16, 463–479.
- Vidovic, V.V., Stetic, V.V. & Bratko, D. (1999). Pet ownership, type of pet, and socio-emotional development of school children. *Anthrozoos*, 12 (4), 211-217.
- Voelker, R. (1995). Puppy love can be therapeutic, too. *JAMA*, 274 (24), 1897-1899.
- Yin, R. (1984). *Case study research: Design and methods* (1st ed.). Beverly Hills, CA: Sage.
- Yin, R. (1994). *Case study research: Design and methods* (2nd ed.). Thousand Oaks, CA: Sage.
- Zee, A. (1983). Guide dogs and their owners: Assistance and friendship. In A.H. Katcher and A.M. Beck (Eds.) *New perspectives on our lives with companion animals* (pp. 473-483). University of Pennsylvania Press.
- Zissleman, M.H., Rovner, B.W., Shmuelly, Y., & Ferrie, P. (1995). Pet therapy interventions with geriatric psychiatry patients. *The American Journal of Occupational Therapy*, 50(1), 47-50.

APPENDIX A

Guiding Interview Questions for Parents

This interview schedule will serve as a guide during the interview. Other questions may emerge as the interviews proceed. I will begin with a brief introduction stating the purpose of the study.

1. How many years ago did you get your service dog?
2. Tell me about how your family decided to get a service dog for your child.
3. What are your service dog's responsibilities?
4. What kinds of obstacles have you had to overcome with regard to owning a service dog?
5. How has your son/daughter's life changed as a result of having the service dog?
6. What can your son/daughter do now that he/she could not do before owning the dog?
7. How has your life changed as a result of having the service dog?
8. How have the lives of other members of your family changed?
9. What process was involved in gaining permission for your child's service dog to go to school?
10. How has having a service dog affected your child?
Probes: In terms of school performance?
 In terms of social interactions?
 In terms of behaviour?
11. What sorts of changes have other people noticed in your child since you acquired your service dog?
12. Would you recommend a service dog for other parents of children with ASD?
 Why or why not?
13. Is there anything else you would like to add?

APPENDIX B

Guiding Interview Questions for Educators

This interview schedule will serve as a guide during the interview. Other questions may emerge as the interviews proceed. I will begin with a brief introduction stating the purpose of the study.

1. How long have you been involved with this service dog team?
2. Is this your first experience with a service animal? If not, please describe any previous experiences.
3. Please describe for me a typical day for the child/service dog team.
4. What are the service dog's responsibilities?
5. What concerns did you have when you heard a service dog would be coming in to your classroom?
6. Please describe the process involved in allowing the dog into the school/classroom?
7. How has having a dog in your classroom affected you?
 Probes: The daily routine?
 The way you teach?
 The other students?
 The school environment?
8. How has having a service dog affected the child's school performance?
 Probes: In terms of school performance?
 In terms of social interactions?
 In terms of behaviour?
9. Would you recommend a service dog to other parents of children with ASD?
 Why or why not?
10. Is there anything else you would like to add?

APPENDIX C

Guiding Questions for Administrators

This interview schedule will serve as a guide during the interview. Other questions may emerge as the interviews proceed. I will begin with a brief introduction stating the purpose of the study.

1. How long have you been involved with this service dog team?
2. Is this your first experience with a service animal? If not, please describe any previous experiences.
3. Can you describe the process involved in allowing the dog into the school/classroom?
4. Can you tell me about any policies that exist (within your school board) related to service animals in the schools?
5. What concerns did you have when you heard a service dog would be coming in to your school?
6. What are the service dog's responsibilities?
7. How has having a dog in the school affected life at the school?
 Probes: The daily routine?
 The other students?
 The teaching staff?
 The school environment?
8. How has having a service dog affected the child's school performance?
 Probes: In terms of school performance?
 In terms of social interactions?
 In terms of behaviour?
9. How has having a dog in your school affected the daily routine? The other students? The teaching staff? The school environment?
10. Would you recommend a service dog to other parents of children with ASD?
 Why or why not?
11. Is there anything else you would like to add?

APPENDIX D

Guiding Interview Questions for Dog Trainers

This interview schedule will serve as a guide during the interview. Other questions may emerge as the interviews proceed. I will begin with a brief introduction stating the purpose of the study.

1. How long have you been training service dogs? Approximately how many dogs have you trained over the years?
 2. What types of disabilities do you train service dogs for?
 3. How did you become involved in the training of dogs for children with autism?
 4. Approximately how many autism service dogs have you trained?
 5. What types of dogs are used as autism service dogs? Why?
 6. Tell me about the training process from the time the dog is a puppy until it is ready to go to work as a service dog?
 7. How does a child with autism become partnered with one of your dogs?
 8. How can an autism service dog assist a child with autism?
 9. What types of things are autism service dogs trained specifically to do?
 10. What are the ways in which an autism service dog can benefit the family of a child with autism?
 11. How can an autism service dog help an autistic child in school?
 12. What kind of training is required of the people involved with an autism service dog? (for example the parents, siblings and teachers)
 13. Have you had any unsuccessful experiences? When might a service dog be inappropriate for a child with autism?
- Is there anything else you would like to add?

APPENDIX E

Cover Letter for Parents

Dear Participant:

Thank you for agreeing to take part in this study investigating the role of service dogs for children with Autism Spectrum Disorder.

The purpose of this study is to learn more about what service dogs can do for children with Autism Spectrum Disorder. To date, very little research has been done on this topic.

This research will involve interviews with parents and other individuals involved in an Autism Service Dog Program. The interviews will be conducted at a time and location convenient to you and will be at least 45 minutes in duration. Interviews will be recorded and transcribed. In addition to the interviews, I also hope to observe some of the everyday activities of your child and service dog at home and at school and possibly examine some relevant documentation. In order to do this, I will need your written consent. To ensure confidentiality, participants' names will not be identified and pseudonyms will be assigned. There are no known risks or benefits associated with participation in this research project other than potentially increasing knowledge and awareness related to the use of service dogs for children with ASD. Your participation is strictly voluntary and you have the right to withdraw from this study at any time.

All of the information collected for this study will remain confidential. The data will be analyzed and incorporated into a thesis which will be submitted as partial requirement for completion of the Masters of Education Program at Lakehead University. The data will be stored securely at Lakehead University for a period of seven years after which time it will be destroyed. A summary of the findings will be made available to you upon completion of the project.

I look forward to meeting you to discuss your experiences related to this topic. If you have any questions or need further clarification please contact me at (807)767-1234.

Sincerely,

Jennifer Waldie

APPENDIX F

Cover letter for Teachers/Administrators

Dear Participant:

Thank you for agreeing to take part in this study investigating the role of service dogs for children with Autism Spectrum Disorder.

The purpose of this study is to learn more about what service dogs can do for children with Autism Spectrum Disorder. To date, very little research has been done on this topic.

This research will involve interviews with parents, teachers and other individuals involved in an Autism Service Dog Program. The interviews will be conducted at a time and location convenient to you and will be at least 45 minutes in duration. Interviews will be recorded and transcribed. In addition to the interviews, I also hope to observe some of the everyday activities of the child and service dog at school and possibly examine some relevant documentation. In order to do this, I will require both the permission of the parents and your written consent. To ensure confidentiality, participants' names will not be identified and pseudonyms will be assigned. There are no known risks or benefits associated with participation in this research project other than potentially increasing knowledge and awareness related to the use of service dogs for children with ASD. Your participation is strictly voluntary and you have the right to withdraw from this study at any time.

All of the information collected for this study will remain confidential. The data will be analyzed and incorporated into a thesis which will be submitted as partial requirement for completion of the Masters of Education Program at Lakehead University. The data will be stored securely at Lakehead University for a period of seven years after which time it will be destroyed. A summary of the findings will be made available to you upon completion of the project.

I look forward to meeting you to discuss your experiences related to this topic. If you have any questions or need further clarification please contact me at (807)767-1234.

Sincerely,

Jennifer Waldie

APPENDIX G

Cover letter for Dog Trainers

Dear Participant:

Thank you for agreeing to take part in this study investigating the role of service dogs for children with Autism Spectrum Disorder.

The purpose of this study is to learn more about what service dogs can do for children with Autism Spectrum Disorder. To date, very little research has been done on this topic.

This research will involve interviews with parents, teachers and dog trainers involved in an Autism Service Dog Program. The interviews will be conducted at a time and location convenient to you and will be at least 45 minutes in duration. Interviews will be recorded and transcribed. In addition to the interviews, it would be helpful to observe some of the training activities that you perform with the dogs and review any relevant documentation. In order to do this, I will require your written consent. To ensure confidentiality, participants' names will not be identified and pseudonyms will be assigned. There are no known risks or benefits associated with participation in this research project other than potentially increasing knowledge and awareness related to the use of service dogs for children with ASD. Your participation is strictly voluntary and you have the right to withdraw from this study at any time.

All of the information collected for this study will remain confidential. The data will be analyzed and incorporated into a thesis which will be submitted as partial requirement for completion of the Masters of Education Program at Lakehead University. The data will be stored securely at Lakehead University for a period of seven years after which time it will be destroyed. A summary of the findings will be made available to you upon completion of the project.

I look forward to meeting you to discuss your experiences related to this topic. If you have any questions or need further clarification please contact me at (807)767-1234.

Sincerely,

Jennifer Waldie

APPENDIX H

Consent Form for Parents (Interviews and Observations)
Consent for Participation

Title of the Study: The Role of Service Dogs for Two Children with Autism Spectrum Disorder

Investigator

This study is being conducted by Jennifer D. Waldie, a graduate student in the Masters of Education Program at Lakehead University. The faculty supervisor for this study is Dr. Connie Russell.

Study Purpose

The purpose of this study is to examine the role of service dogs for children with Autism Spectrum Disorder. I am interested in exploring the experiences of individuals who are directly or indirectly involved in an Autism Service Dog Program.

Procedures

Three types of information will be collected in this study. The primary method of data collection will involve an in-depth interview conducted at a time and location convenient to you. The interviews will be tape-recorded and transcribed verbatim. I also hope to spend some time observing some of the everyday activities of your child and service dog at home and at school. Also, it will be helpful to examine any documentation that you feel is important or relevant. In order to do these things I will require your written consent. Collected data will be analyzed and incorporated into a thesis which will be submitted as partial requirement for completion of the Masters of Education Program at Lakehead University. The data collected in this study will be kept completely confidential and all participant's names will be replaced with pseudonyms in the final written report. The collected data will be stored securely at Lakehead University for a period of seven years, after which time it will be destroyed.

Dissemination of Results

All interested participants will receive a summary of the research findings. The thesis in its entirety will be available at the Education Library at Lakehead University.

Risks and Benefits

There are no known risks or benefits associated with this research project.

Freedom to Withdraw

Participation in this study is voluntary. You have the right to withdraw at any time, even after signing this form.

Approval of Research

This research project has been approved, as required, for projects involving human subjects by the Research Ethics Board at Lakehead University.

I, _____ agree to participate in this study examining the role of service dogs for children with Autism Spectrum Disorder. I agree to be interviewed and to allow my child, _____, to be observed by the researcher. I have read and understand the consent form and I have had all of my questions answered.

Signature of Participant

Date

Please check this box and include mailing address below if you would like a summary of the research findings.

If you have any questions regarding any aspect of this study please contact:

Jennifer Waldie

or

Connie Russell

Connie.russell@lakeheadu.ca

APPENDIX I

Consent Form for Parents (Interview only)
Consent for Participation

Title of the Study: The Role of Service Dogs for Two Children with Autism Spectrum Disorder

Investigator

This study is being conducted by Jennifer D. Waldie, a graduate student in the Masters of Education Program at Lakehead University. The faculty supervisor for this study is Dr. Connie Russell.

Study Purpose

The purpose of this study is to examine the role of service dogs for children with Autism Spectrum Disorder. I am interested in exploring the experiences of individuals who are directly or indirectly involved in an Autism Service Dog Program.

Procedures

The primary method of data collection will involve an in-depth interview conducted at a time and location convenient to you. The interviews will be tape-recorded and transcribed verbatim. In order to conduct this interview, I will require your written consent. Collected data will be analyzed and incorporated into a thesis which will be submitted as partial requirement for completion of the Masters of Education Program at Lakehead University. The data collected in this study will be kept completely confidential and all participant's names will be replaced with pseudonyms in the final written report. The collected data will be stored securely at Lakehead University for a period of seven years, after which time it will be destroyed.

Dissemination of Results

All interested participants will receive a summary of the research findings. The thesis in its entirety will be available at the Education Library at Lakehead University.

Risks and Benefits

There are no known risks or benefits associated with this research project.

Freedom to Withdraw

Participation in this study is voluntary. You have the right to withdraw at any time, even after signing this form.

Approval of Research

This research project has been approved, as required, for projects involving human subjects by the Research Ethics Board at Lakehead University.

I, _____ agree to be interviewed for this study examining the role of service dogs for children with Autism Spectrum Disorder. I have read and understand the consent form and I have had all of my questions answered.

Signature of Participant

Date

Please check this box and include mailing address below if you would like a summary of the research findings.

If you have any questions regarding any aspect of this study please contact::

Jennifer Waldie

or

Connie Russell

Connie.russell@lakeheadu.ca

APPENDIX J

Consent Form for Teachers/Administrators
Consent for Participation

Title of the Study: The Role of Service Dogs for Two Children with Autism Spectrum Disorder

Investigator

This study is being conducted by Jennifer D. Waldie, a graduate student in the Masters of Education Program at Lakehead University. The faculty supervisor for this study is Dr. Connie Russell.

Study Purpose

The purpose of this study is to examine the role of service dogs for children with Autism Spectrum Disorder. I am interested in exploring the experiences of individuals who are directly or indirectly involved in an Autism Service Dog Program.

Procedures

Three types of information will be collected in this study. The primary method of data collection will involve an in-depth interview conducted at a time and location convenient to you. The interviews will be tape-recorded and transcribed verbatim. If the parents are willing, I also hope to spend some time observing the child and dog in the classroom and school environment. Also, it will be helpful to examine any documentation that you feel is important or relevant. In order to do these things I will require your written consent. Collected data will be analyzed and incorporated into a thesis which will be submitted as partial requirement for completion of the Masters of Education Program at Lakehead University. The data collected in this study will be kept completely confidential and all participant's names will be replaced with pseudonyms in the final written report. The collected data will be stored securely at Lakehead University for a period of seven years, after which time it will be destroyed.

Dissemination of Results

All interested participants will receive a summary of the research findings. The thesis in its entirety will be available at the Education Library at Lakehead University.

Risks and Benefits

There are no known risks or benefits associated with this research project.

Freedom to Withdraw

Participation in this study is voluntary. You have the right to withdraw at any time, even after signing this form.

Approval of Research

This research project has been approved, as required, for projects involving human subjects by the Research Ethics Board at Lakehead University.

I, _____ agree to participate in this study examining the role of service dogs for children with Autism Spectrum Disorder. I have read and understand the consent form and I have had all of my questions answered.

Signature of Participant

Date

Please check this box and include mailing address below if you would like a summary of the research findings.

If you have any questions regarding any aspect of this study please contact:

Jennifer Waldie

or

Connie Russell

Connie.russell@lakeheadu.ca

APPENDIX K

Consent Form for Dog Trainers

Consent for Participation

Title of the Study: The Role of Service Dogs for Two Children with Autism Spectrum Disorder

Investigator

This study is being conducted by Jennifer D. Waldie, a graduate student in the Masters of Education Program at Lakehead University.

The faculty supervisor for this study is Dr. Connie Russell.

Study Purpose

The purpose of this study is to examine the role of service dogs for children with Autism Spectrum Disorder. I am interested in exploring the experiences of individuals who are directly or indirectly involved in an Autism Service Dog Program.

Procedures

Three types of information will be collected in this study. The primary method of data collection will involve an in-depth interview conducted at a time and location convenient to you. The interviews will be tape-recorded and transcribed verbatim. I also hope to spend some time observing some of the training activities you perform with the dogs. Also, it will be helpful to examine any documentation that you feel is important or relevant. In order to do these things I will require your written consent. Collected data will be analyzed and incorporated into a thesis which will be submitted as partial requirement for completion of the Masters of Education Program at Lakehead University. The data collected in this study will be kept completely confidential and all participant's names will be replaced with pseudonyms in the final written report. The collected data will be stored securely at Lakehead University for a period of seven years, after which time it will be destroyed.

Dissemination of Results

All interested participants will receive a summary of the research findings. The thesis in its entirety will be available at the Education Library at Lakehead University.

Risks and Benefits

There are no known risks or benefits associated with this research project.

Freedom to Withdraw

Participation in this study is voluntary. You have the right to withdraw at any time, even after signing this form.

Approval of Research

This research project has been approved, as required, for projects involving human subjects by the Research Ethics Board at Lakehead University.

I, _____ agree to participate in this study examining the role of service dogs for children with Autism Spectrum Disorder. I have read and understand the consent form and I have had all of my questions answered.

Signature of Participant

Date

Please check this box and include mailing address below if you would like a summary of the research findings.

If you have any questions regarding any aspect of this study please contact:

Jennifer Waldie

or

Connie Russell

Connie.russell@lakeheadu.ca