

5-2014

Animal-Assisted Therapy and its Effects on Children in Schools

Jordan N. Putz
St. Catherine University

Recommended Citation

Putz, Jordan N. (2014). Animal-Assisted Therapy and its Effects on Children in Schools. Retrieved from Sophia, the St. Catherine University repository website: https://sophia.stkate.edu/msw_papers/379

This Clinical research paper is brought to you for free and open access by the School of Social Work at SOPHIA. It has been accepted for inclusion in Master of Social Work Clinical Research Papers by an authorized administrator of SOPHIA. For more information, please contact amshaw@stkate.edu.

Animal-Assisted Therapy and its Effects on Children in Schools

by

Jordan N. Putz, B.S.W.

MSW Clinical Research Paper

Presented to the Faculty of the
School of Social Work
St. Catherine University and the University of St. Thomas
St. Paul, Minnesota
In Partial fulfillment of the Requirements for the Degree of
Master of Social Work

Committee Members
Andrea A. Nesmith, Ph.D., LISW (Chair)
Victoria Wilt, LISW
Kelly Reed, OTR/L

The Clinical Research Project is a graduation requirement for MSW students at St. Catherine University/University of St. Thomas School of Social Work in St. Paul, Minnesota and is conducted within a nine-month time frame to demonstrate facility with basic social research methods. Students must independently conceptualize a research problem, formulate a research design that is approved by a research committee and the university Institutional Review Board, implement the project, and publicly present the findings of the study. This project is neither a Master's thesis nor a dissertation.

Abstract

Animal-assisted therapy could be used in schools as a supportive intervention provided by school social workers. The purpose of this project was to explore how animal-assisted therapy in schools, specifically using dogs, could be a complimentary and supportive form of intervention provided by social workers in a school setting. Using a qualitative design, five school social workers and three therapy dog handlers were interviewed regarding their perceptions on using therapy dogs in schools and how the therapy dogs may impact students. The data was analyzed using the content analysis method in which themes were developed from participant responses, integrating the perceptions of the school social workers and the therapy dog handlers, and then were linked to previous literature. The findings indicated that using therapy dogs in schools could benefit students by serving as an intervention and helping students learn skills that result in better connection and relationships, and skills that can assist with self-regulation and self-control. In addition, objections to using therapy dogs in schools were addressed and countered in participants' responses. These findings emphasize the potential benefit of using therapy dogs in school social work practice as a supportive intervention.

Table of Contents

| | |
|--|-----------|
| Abstract..... | 2 |
| Introduction..... | 4 |
| Literature Review | 6 |
| History | 6 |
| Roles of AAT..... | 8 |
| Objections to AAT..... | 13 |
| Roles of School Social Workers | 15 |
| Conceptual Framework..... | 18 |
| Methods..... | 20 |
| Design | 20 |
| Sampling..... | 20 |
| Protection of Participants..... | 21 |
| Measures | 21 |
| Analysis | 21 |
| Advantages and Disadvantages..... | 22 |
| Findings..... | 23 |
| Different Behavior Issues Happening Within Schools..... | 24 |
| How Dogs Can Assist Students | 25 |
| How Students Respond to Dogs | 29 |
| Stress Management Techniques for Dogs..... | 31 |
| Discussion..... | 33 |
| Interpretation of Findings | 33 |
| Implications for Future Research and Practice | 36 |
| References | 38 |
| Appendix A..... | 43 |

Introduction

Animal-Assisted Therapy (AAT) is not a new intervention (Levinson, 1978). In recent years, increasing research supports the physiological, psychological, and social benefits of interactions with animals and the therapeutic potential of animal-assisted programs in a wide range of settings including schools (Walsh, 2009). Yet within a school setting, empirical research regarding AAT's effects on behavior is limited (Heimlich, 2001).

According to Melson (2003), more than 70% of households with children in the United States also have pets. Companion animals, or pets, are not new to the lives of people. Relationships between humans and animals have developed over many years. The roles have changed overtime, but humans and animals have created strong bonds lasting many generations. The majority of pet, or companion animal owners, consider their animal "part of the family." (Risely-Curtis, 2010; Schvaneveldt, Young, Schvaneveldt & Kivett, 2001; Walsh, 2009). The first documented therapeutic relationship occurred in the late 18th century in England at the York Retreat, which intended to be a supportive and healing environment for those who were mentally ill (Urlichuk & Anderson, 2003; "Our History," 2013). Levinson (1978) kick started research on animal assisted therapy with his research and findings and claimed the way people treat animals coincides with the manner in which they relate to people.

There is a substantial amount of evidence that suggests AAT has a positive effect on humans and children especially (Barker, 1999; Friesen, 2009; Geist, 2011; Jalongo, Astorino & Bomboy, 2004; Levinson, 1965; O'Haire, 2010; Schvaneveldt et al., 2001; Zilcha-Mano, Mikulincer & Shaver, 2011). Numerous studies have examined the effect animals have on children with disabilities, children's general development, positive academic growth, and positive behavioral growth (Friesen, 2009; Melson, 2003; Kogan, Granger, Fitchett, Helmer &

Young, 1999; Walsh, 2009). Some studies directly relate children's behavior to animal therapy. Heimlich (2001) found positive effects with 14 children with cognitive impairments including, cerebral palsy, epilepsy, autism, down syndrome, and seizure disorder, ranging in age from 7 to 19 after working with a therapy dog in school.

Social workers have worked with animals in their practices for quite a number of years, but little is known about the effect of the consistent appearance of an animal on behavioral issues in school (Walsh, 2009). School social workers use interventions when working with children in schools and using animals could be an opportunity to further provide and reinforce an accepting, friendly, and safe environment with the school social worker (Jackson, 2012; Thompson, 2009). Additional, positive changes in behavior would also assist school social workers and other school personnel (Chandler, 2001; Kogan et al., 1999).

This project will examine how animal-assisted therapy in schools, specifically using dogs, could be a complimentary and supportive form of intervention provided by social workers in a school setting. This research is not suggesting AAT as a main therapy technique in school, but a form of support for behavioral interventions and skill building. The literature review will examine how therapy animals have been included in social work in the past, the importance and roles of AAT, arguments against using AAT in schools, the importance and roles of school social work, and how the two subjects can support each other. Animals' positive effects on children could help school social workers open up a new avenue of support.

Literature Review

A growing body of research has been developing supporting the potent relationship between humans and animals; therefore it is important for social workers to be educated about animals and their relationships with humans (Risely-Curtiss, 2010). The use of AAT as an adjunct to other forms of intervention used by school social workers could help the process of skill building or applying interventions by allowing children to be more comfortable in the setting. The premise of animal assisted therapy – that animals provide an additional support and a great source of trust for people – is relevant to the goals of school social work. This relevance could shed light on animal-assisted therapy as an additional support service to school social workers working with children with behavior issues.

History

Definition of Animal Assisted Therapy (AAT)

Before a background of AAT is presented, it is necessary to define what exactly animal assisted therapy encompasses. AAT incorporates animals into the therapeutic process (Chandler, Fernando, Barrio Minton, O’Callaghan & Portrie-Bethke, 2010). AAT is not to be confused with animal-assisted activities (AAA). AAT is planned for a specific child, specific goals are developed for the child, documentation is kept, and progress is recorded while AAA is short-term and the participants are not planned or tracked (R.E.A.D. Dogs Minnesota, 2013a; Friesen, 2009). With AAA, the emphasis is on recreational activities in contrast to AAT, in which an animal is included in the treatment plan (Endenburg & van Lith, 2011). Definitions for AAT and AAA from the previous sources are similar to those of the Delta Society.

The Delta Society (1996), which promotes positive human-animal interactions and provide information about animal-assisted therapy and activities, defines AAT as a goal-directed

intervention in which an animal is incorporated as an integral part of the clinical healthcare treatment process and delivered by a professional health or human service provider who demonstrates skill and expertise regarding the clinical applications of human-animal interactions. Animal-assisted activities (AAA) provide opportunities for motivational, educational, and recreational benefits to enhance a person's quality of life and are delivered by a professional, para-professional or volunteer who demonstrates knowledge about animals and the human populations with which they interact. Although AAT can be provided with a variety of animals, for the purpose of this research, the focus will be on the assistance of therapy dogs.

The Beginning of AAT to Present

The human-animal bond has is not a new concept. Animals and humans have established strong, therapeutic relationships for many years (Walsh, 2009; Levinson, 1978). The York Retreat in England is attributed as the first recorded therapeutic setting where animals were utilized as adjuncts to therapy (Heimlich, 2001; Jackson, 2012). In the 1960s Boris Levinson laid the groundwork for animal-assisted therapy with his experiments involving his own dog, Jingles. Levinson was one of the first to document his development of planned and controlled ways of incorporating animals, mainly his dog, into therapy sessions (Levinson, 1965).

Trained therapy dogs are now becoming an increasingly common sight in schools and other educational settings, many through visitation programs (Jalongo et al., 2004). These visitation programs use volunteer trained therapy dogs and handlers. One of the most well known visitation programs that bring trained therapy to school to encourage children's reading is Reading Education Assistance Dogs (R.E.A.D.) which began in 1999 (Jalongo et al., 2004). R.E.A.D. visits both libraries and schools, in the libraries offering AAA and in the schools offering AAT.

AAT Certification and Training

In order to perform animal therapy, training and certification are required for both the animal and the handler. However, not just any dog should be used in therapy. According to Thompson (2009), some of the preferred characteristics of a therapy dog include:

Being well socialized having an interest in playing with humans; possessing the ability to calm itself easily; being able to handle loud noises, lots of activity, and quick movements by children; desiring human contact; having a high frustration tolerance; lacking aggressive tendencies; and getting along with other canines. (p. 204-205)

Therapy dogs also need to be insured and the handler and therapy animal must complete any other clearances required by the school district. Other requirements could include the dog's shots must be up-to-date, the dog is well groomed prior to arrival, and the dog is kept on a leash during a visit. The best response to liability concerns is to prevent problems by working exclusively with trained therapy dogs and to be protected with liability insurance. It is imperative to have permission documented from a child's parent or guardian that allows that child to participate in animal visitation and therapy in schools. (Jalongo et al., 2004; Chandler, 2001)

Roles of AAT

General Importance

AAT can help improve physical, emotional, and social issues by providing support for these issues (O'Haire, 2010). Some of the documented physical benefits of therapy with animals include lowering of blood pressure and heart rate, increased relaxation, and a tendency to forget about pain and limitations (R.E.A.D. Dogs Minnesota, 2013b). Self-esteem, which has a significant impact on a person's emotions and desire to socialize, can also be greatly impacted by

AAT. A ten-year-old participant in the R.E.A.D. program read an entire book to a therapy dog for the first time in her life and accomplished the challenge of reading (R.E.A.D., 2013a).

Animals can be greatly important for people during times of hardship. Walsh (2009) states that, “Companion animals provide socioemotional support that facilitates coping, recovery, and resilience and offer comfort, affection, and a sense of security” (p. 482). The presence of the animal can facilitate a trust-building bond between the therapist and client and relieve tension and anxiety of therapy while having fun (Chandler et al., 2010). Talking to the animal while the therapist listens can be easier than talking to the therapist about more difficult issues and animals often help clients focus on an issue as they interact with the animal (Jackson, 2012). Animals can help people get in touch with their feelings and sharing these feelings with or about the animal can initiate the emotional sharing process with the therapist (Chandler, 2001). For the client, the animal is seen as a friend and ally, thus presenting a safe and secure atmosphere for sharing (Walsh, 2009). The animal offers nurturance through a presentation of unconditional acceptance and interaction (Chandler, 2001; Chandler et al., 2010; Jackson, 2012). The experience of a client interacting with an animal could potentially provide knowledge to the client about boundaries and limit setting by observing and imitating the therapist-animal interactions. Furman (2005) poses the notion that traditional family relationships may not meet all of an individual’s needs and a number of animal owners report that their animal provides as much or more emotional support than human family and friends in times of stress. Levinson (1978) proposes that animals constantly offer acceptance and affection without strings attached and an animal accepts a child for what they are, not for what they might or ought to be which can give the child a sense of worth that they might not be getting from the rest of their environment.

Other studies and theories provide evidence of the importance of AAT by presenting the primary roles of therapy animals in child development. Many studies of AAT affecting child development focus on social and cognitive development (Melson, 2003). Animals may contribute to the development of a child based on Erikson's (1963) psychosocial development (Barker, 1999). Animals provide a basic sense of trust through the animal's security, reliability, love and affection; a sense of autonomy and initiative through the pet's serving as an active playmate and promoting exploration of the environment, and encouraging patience and self-control; a sense of industry through the animal's trainability and response to the child's basic commands; and a sense of identity through the animal's serving as a companion and confidant, and providing social and emotional support. Studies of children and animals effect cognitive, social, and emotional development while involving diverse sub-populations of children (Endenburg & van Lith, 2011). Levinson (1978) suggests relating to an animal affects the development of children's self-concept and self-esteem by completing commands and tricks, promotes a sense of competence and expands impulse control, and heightens the capacity to love and empathize.

Populations Served by AAT

Animal-assisted therapy has been used with individuals across the lifespan, including children, adolescents, adults, the elderly, couples, and families (Endenburg & van Lith, 2011; Walsh, 2009; Jackson, 2012). For the purpose of this research, the focus will be on children in school. In schools, AAT has been used with students who are uncommunicative, have disabilities, require work on skill building and positive behaviors, and in crisis situations (Chandler, 2001). AAT sessions can be integrated into individual or group therapy and with a very wide range of age groups and persons with varying ability (Endenburg & van Lith, 2011).

Approach to Therapy

There are different techniques used with AAT depending on a client's goals and needs. AAT has been shown to facilitate the achievement of therapeutic goals and is generally used in conjunction with other interventions (Barker, 1999; Endenburg & van Lith, 2011; Friesen, 2009). A therapist can incorporate the animal into many different professional styles of therapy the therapist already performs (Chandler, 2001).

Many uses of AAT in schools are with students with disabilities. Research has demonstrated marked physiological, physical, social, and emotional benefits of therapy-dog-assisted interventions for children with disabilities (Bibek, Cavalier, Manley & Obrusnikova, 2012). In a study of four children with autism spectrum disorder (ASD) at a health club using therapy dogs, parents and instructors of all four children believed their child was more focused in the presence of the therapy dog team and enjoyed having the team with them during the sessions (Bibek et al., 2012). Another report studying children with autism and AAT reported increased social response by children towards both the animal and therapist (Barker, 1999). Heimlich's (2001) study of fourteen students ranging in ages from 7 to 19 with various types of developmental disabilities saw an increase in speech, vision, and hearing abilities. The study was conducted over two separate 8-week trials consisting of two 30-minute sessions with a trained therapy animal each week. Levinson (1962) reported that his dog served as a communication link during therapy sessions, providing the children with a sense of security in the therapy setting, quickened the therapy process and found that AAT worked well with children who were nonverbal, inhibited, withdrawn, and also children with autism, schizophrenia, and obsessive-compulsive disorder or culturally disadvantaged particularly helping to strengthen children with autism's contact with their environment. Friesen (2009) also reported that interacting with dogs

can help to encourage children's social interaction with peers and adults in special needs classrooms due to therapy dogs' perceived non-judgmental nature.

AAT's Impact in Schools

As mentioned earlier, previous research has determined the success of AAT mostly related to academics including visitation programs that help with reading and communication skills and serving special education students. According to Jalongo et al. (2004), the presence of a calm, attentive dog moderates the stress responses more than the presence of an adult and even more than the presence of a supportive friend when children read aloud. A study in Canada analyzed the effects on student literacy in four elementary schools with an adult literacy mentor and participating therapy animal and found that in addition to establishing a supportive and engaging learning environment, the animal-assisted literacy learning sessions provided meaningful opportunities for literacy skill development by asking children to explain the reading to the dog and write creatively to reflect on the readings (Delisle & Friesen, 2012).

A fair amount of research has been done on the success of visitation programs using therapy animals. According to R.E.A.D (2013a), "The handlers are often surprised to find themselves in the role of therapist, hearing amazing revelations from these kids, which they then pass on to the proper school representative" (p. 1). Other findings pertaining to the R.E.A.D. program and other programs alike have indicated students have increased their reading fluency by two grade levels (Jalongo et al., 2004). Animals are ideal reading companions. Animals help increase relaxation and lower blood pressure, listen attentively, do not judge, laugh, or criticize, allow children to proceed at their own pace, and are less intimidating than peers (Jalongo et al., 2004; R.E.A.D., 2013a). Therapy dogs have also been used in crisis situations with schools. Chandler (2001) gives examples of therapy dogs in school providing unconditional acceptance

and emotional support during visits after the shootings at Thurston High School in Springfield, Oregon and at Columbine High School in Littleton, Colorado.

AAT's Impact on Skill Building and Behavior

Not much empirical research has been done on AAT's impact on children's ability to control emotions, focus in class, improve behavior, or build other skills. R.E.A.D. (2013b) claims participating children not only make enormous strides in reading communication skills, but also in building self-esteem, confidence, and social skills along with performance in other subjects, attendance, and even personal hygiene. Barker (1999) presented a study in which an AAT and nature education program for children in residential treatment with a diagnosis of attention-deficit/hyperactivity and conduct disorders were found to be effective in decreasing agitated and aggressive behavior, improving cooperation with instructors, engaging students in learning, and improving behavioral control in regular classrooms (as cited in Katcher & Wilkins, 1994). Kogan, Granger, Fitchett, Helmer & Young's (1999) study of two boys with emotional and behavioral disturbances took part in 11 weekly 60-minute AAT sessions at school and found the two boys demonstrated growth and improvement in all of their goals. Some of their goals were decreasing negative comments and increasing positive comments, improving relationships with peers, increasing amount of eye contact with people, increasing age-appropriate behavior and decrease tantrums, and improving appropriateness of voice expression with people.

Objections to AAT

Ethical Issues with AAT

Even with all the reports of the success of AAT there are some objections to using AAT in schools. Some studies suggest the main obstacles of incorporating AAT into a school include sanitary and allergy issues. In some cultures dogs are regarded as unclean and a nuisance

(Jalongo et al., 2004; Friesen, 2009; R.E.A.D., 2013a). In any AAT program, informed consent needs to be given by both the child and their parent or guardian prior to any interaction between the child and the animal (Friesen, 2009). Jalongo et al. (2004) acknowledges some dogs can be carriers of diseases and infections that can be transmitted from animals to human beings, however, therapy dogs are trained not to lick or scratch, thereby controlling a major potential source of infection, and therapy dogs are also required to have regular check-ups with their veterinarians. Friesen (2009) presents concerns about cleanliness and allergic reaction due to animal dander as barriers of animals working with children. Jalongo et al. (2004), however, mentions that, therapy dogs are generally bathed or well groomed before a visit to a school so animal dander, the most common source of an allergic reaction, is significantly reduced.

Although in order to use a therapy dog around students, parent/guardian approval must be acquired and interaction between dog and student should not be forced (R.E.A.D., 2013a). Safety can be another issue in schools. Friesen (2009) reports that dog bites are common among young children. Jalongo et al. (2004) however, stated that, “Displays of aggression are highly unlikely due to required specialized obedience training with therapy dogs” (p. 13). Therapy dogs are also usually required to wear a vest or scarf so they are easily identified as a working therapy dog (Jalongo et al., 2004).

The animal’s needs must be taken into account during therapy as well. Therapy animals should not be overscheduled and burned out. Therapy animals are not tools or machines, but individuals with their own needs and preferences (R.E.A.D., 2013a). A therapy dog’s needs have to be met and respected just like a human’s needs. Just as other professionals are subject to burnout, animals may also experience burnout and fatigue if they are overworked (Jackson, 2012). The welfare of animals must be protected in the best possible way and although some

research touches on the effects of providing therapy with therapy animals, more research is needed to best recognize the animal's need (Endenburg & van Lith, 2011).

Roles of School Social Workers

General Importance and Impact

Little is known about school social workers as handlers using therapy dogs to affect children's behavior. Some school social workers could benefit being handlers of therapy dogs to further support the work they do and their roles in schools. Animal assisted therapy has been paralleled to play therapy and children's responses to play therapy and AAT have been similar (Thompson, 2001; Thompson, 2009). Providing another avenue that allows children to be more comfortable talking about their issues could benefit school social workers. School social work has been recognized in the United States and other countries for more than a century (Allen-Meares, Montgomery & Kim, 2013). Around the world social workers serve schools in a variety of capacities, providing services such as skills training, individual, group, and family counseling, crisis intervention, home visits, parent support and education, and advocacy for students, families, and school systems (Allen-Meares et al., 2013). School social workers are present in elementary, middle, and high schools and their techniques and goals differ accordingly. School social workers assist students with traditional academic problems, and aid others whose specific social, psychological, emotional or physical difficulties put them at risk for falling through the cracks including homeless youth, gay and lesbian youth and young people with physical or mental health disabilities (National Association of Social Workers, 2013). The primary roles of school social work differ throughout different schools, but it is clear that social workers have a significant presence in schools.

No matter the school level, certain goals are characteristic of all school social work including the child realizing their full capacities through school experience and adults realizing school is only one part of children's lives and certain experiences happen in and outside of school (Chandler et al., 2010; Cox, 1963; Endenburg & van Lith, 2011). School social workers may work with both special education students and general education students varying from district to district and elementary to secondary age students. School social workers act as a link between home, school, and the community providing emotional and behavioral support as well as academic support (Poppy, 2012). In schools, social workers often address school-wide issues such as bullying. School social workers complete a variety of tasks each day. School administrators however, may have different ideas of what school social workers should be doing. In a study of 198 school administrators in Minnesota, Poppy (2012) found that most administrators agreed that improving school attendance and collaborating with teachers to improve caring and coping skills in the classroom were the most important functions of a school social worker. Other highly rated functions of school social workers from this study include child study team, facilitation of groups, and referrals to outside agencies.

Approach to Services

Qualifications and training required for school social workers vary across districts and states, thus school social workers use different techniques to go about serving their students depending on the school district in which they are employed, the specific school, and their own personal style. According to Allen-Meares et al. (2013), school social workers provide interventions that are intended to prevent the development of problem behaviors and reinforce positive behaviors. As a link from the student to the school, parents, and the community, school social workers provide interventions based on the needs of an individual student and may refer to

outside resources when needed. According to the NASW (2013), school social workers help young people overcome the difficulties in their lives, and as a result, give them a better chance at succeeding in school through counseling, crisis intervention and prevention programs. School social workers are sensitive to cultural issues and address issues involving race, ethnicity, gender, and sexuality along with other vulnerable groups of students (Dupper, 2003).

Impact on Skill Building and Behavior

Previous research has presented school social workers' impacts on children's ability to control emotions, focus in class, improve behavior, or build other skills. School social workers also assist in guiding impulse control and fostering strengths (Cox, 1963). According to the NASW (2013), school social workers work with students to develop goals motivating self-confidence and coping skills. School social workers develop intervention strategies that prevent school violence and at times, help ensure appropriate special education placements (University of Washington, 2013). Social workers in schools can also work to develop and continue school-based prevention programs related to bullying, evaluate and assess students for suicide, address behavioral problems, and develop skill building with students with disabilities (Dupper, 2003). Interventions can be a large part of a school social worker's job. Student focused interventions address externalized behavioral problems (classroom behavior, bullying, violence, and sexual harassment) and internal behavioral problems (anxiety, grieving, depression, and suicide) (Dupper, 2003).

Conceptual Framework

There are a few different frameworks that can be applied to animal-assisted therapy (AAT). In a school setting, Social Cognitive Theory could be most applicable when using animals in therapy with individual students or assigned groups. In all settings of therapy there are goals to be made and accomplished, but in a school, goals may need to be accomplished faster than in a separate setting due to time constraints of working with students around their academic schedules.

An important aspect of cognitive theory is self-efficacy, believing in one's ability to behave in ways that will achieve an expected and desirable outcome (Braastad & Berget). According to Social Cognitive Theory, a person is more likely to change their behavior if they know what to do, know how to do it, want to do it, believe they can do it, and have a supportive environment (Hayden, 2008). Social Cognitive theory incorporates self-efficacy, observational learning, expectations, expectancies, emotional arousal, behavior capability and reinforcement. The single most efficient method for achieving increased self-efficacy is performance accomplishment, the successful performance of a behavior that was once feared (Braastad & Berget). With Social Cognitive Theory, individuals not only learn by trial and error, but also depending on expectations, reinforcement, and the environment surrounding the individual. These are not independent elements; rather, they all influence each other.

In the past Social Cognitive Theory has been used for a few different quantitative experiments. Social Cognitive Theory was used over a 3-year period to reduce alcohol use among students in grades 6 through 12. Access to alcohol and community norms were changed over the 3-year period (University of Twente, 2013). A second study predicted aggression towards gay adolescents. Prati (2012), using Social Cognitive Theory, found that observations of

peer aggression towards perceived homosexuals predicted the self-reported aggression towards perceived homosexuals. Another study using social cognitive predicted physical activity and fitness in middle school children. Martin, McCaughtry, Flory, Murphy & Wisdom (2011) found the best predictors of physical activity were self-efficacy, classmate social support, and gender which predicted fitness level.

Social Cognitive Theory has not specifically been used with social workers applying AAT in schools. Social Cognitive Theory would be a good match because in a school, teachers are mostly using learning theory whether they are aware or not. In an attempt to facilitate children's learning it is best to focus on the learning and refer children and their families to outside therapy when we recognize signs of attachment issues and such. School social workers often deal with attendance issues, behavior issues, discipline, special education plans, and many other tasks throughout the day. By increasing a student's self-efficacy they could potentially be more able to handle their own problems as they arise. When deeper issues such as abuse or suicide arise, school social workers should refer students to outside resources while still providing support. School social workers could still provide support by using the therapy animal to reduce anxiety and identify and express feelings.

Social Cognitive Theory will be used to guide interview questions around activities in which the participants have experienced with a therapy dog and students in grade schools. Social Cognitive Theory incorporates not only what the children are observing and learning in school, but also the environment in which the children are learning in the case of being supportive or unsupportive. Although Social Cognitive Theory has mostly been used in experiments using quantitative data, the anticipated data will be gathered using interview questions. Taking

personal accounts of observed behavioral changes will strengthen the argument of using therapy animals in schools.

Methods

Design

This research addressed the question: How does AAT effect children's behavior in schools? There is a need for further research on the effects of AAT on children's behavior in general. In schools social workers provide many different interventions and determining AAT's effectiveness in schools offers a potential intervention for certain students. This exploratory project helped define AAT's role in schools and establish a starting point for further research or determine AAT is an ineffective intervention in schools. A qualitative, cross-sectional study was used to gather information and to explore AAT in schools.

Sampling

With a limited number of social workers who are also therapy dog handlers placed in schools, therapy dog handlers and school social workers were interviewed separately to gain a better understanding of both lenses and to complete a sense of them merging together. Snowball-sampling was used beginning with connections through the committee members of this project. One committee member is a school social worker and supplied connections to other school social workers. The other committee member previously handled a therapy dog in schools and supplied connections to other therapy dog handlers who bring the dogs in schools. The targeted participants included eight school social workers at any school grade level and eight therapy dog

handlers who bring the dogs into schools. Any therapy dog handler who has not brought therapy dogs into schools was excluded.

Protection of Participants

The protection of the participants in this project was ensured through the approval of the University of St. Thomas' Institutional Review Board (IRB), informed consent form, and confidentiality strategies. Participation in this qualitative study offered no risk to the participants.

Measures

Participants were interviewed in-person with open-ended questions regarding social work, children's behavior, and AAT in schools. No standardized scales were used to measure participants' responses. Themes of the participants' responses and direct quotes were used to present information and results of the interviews. Before each interview was conducted the researcher ensured that the informed consent form was signed and that participation was completely voluntary.

Analysis

The researcher used the content analysis method when analyzing the results of this study. There has not been a considerable amount of research completed specifically relating to AAT effecting children's behavior in schools, therefore a goal of this project was to understand what some professionals believe about the effectiveness of AAT in schools. The researcher analyzed the participants' opinions using direct quotes, and overall themes from the responses to the interview questions.

Advantages and Disadvantages

The small sample size of this qualitative project with five school social workers and three dog handlers limited the generalizability of the results. Instead of seeking external validity, qualitative studies pursue personal narratives and accounts of real situations. The amount of interviews conducted was limited by time constraints. There was also a limited number of participants who were both social workers and handlers of therapy dogs, so some participants did not have experiences related to all of the questions. The sample was split into two different groups and a larger sample of both school social workers and dog handlers may have helped with identifying stronger themes and allowing the sample to be more diverse. Due to restrictions of school districts usually not allowing dogs used in a professional manner in school, only one school social worker participant had experience actually handling trained therapy dogs and could offer both perspectives in the interview. There were also some questions included that were closed, but were followed up with open, clarifying questions.

An advantage of this study is that the participants came from different backgrounds and previous careers before coming to hold their current positions. This fact gave the sample a variety of backgrounds, areas of focus, and experiences throughout their careers and volunteer work. Another strong point is that all five of the school social work participants had some experience with therapy animals either inside or outside of school. This gave them an experienced background and a more complete vision of how animals may benefit students in school.

Findings

The sample for this study included five school social workers and three dog handlers who currently or have brought dogs into schools to work with students. The interviews were conducted between January 17, 2014 and March 7, 2014. The school social worker participants of this study held different licensure levels, were at different points in their careers, and did not necessarily work in the same school district. One school social worker had experience with animal-assisted therapy taking place in their school. Three of the school social workers had LICSWs, one had an LISW, and one had an LSW. All school social worker participants are currently, or have had past experiences with dogs assisting students in schools. The dog handlers' full time careers were not related in any way. Two brought their dogs to schools on a volunteer basis and the other used their dog in their job.

This study sought to examine the question, how does animal-assisted therapy affect children's behavior in school? The questions asked during the conducted interviews were designed to explore how animal-assisted therapy can affect children's behavior. The questions for the school social workers focused more on the key issues they see in their school and how a therapy dog might affect those issues. The questions for the dog handlers focused more on experiences they have had with students and how they believe their dogs have affected students' behaviors.

The responses were transcribed and coded. Four common themes were found within the transcriptions of the participant's responses including different behavior issues happening within schools, how the school social workers think dogs can assist students with behavior issues, how participants think students may respond to dogs in school, and effective stress management

techniques for dogs. The following is a description of each theme and quotes that best reflect each theme.

Different Behavior Issues Happening Within Schools

This theme was identified to address several codes that emerged throughout participant responses. The school social work participants acknowledged common behavior issues they see in their respective schools. Some answers were different, however the most common issues seen in schools by the school social worker participants were anxiety and social skills. The following quote reflects students' struggles with different aspects of social skills.

I mean key social issues for kids are just social skills in general. A lot of times personal boundary space, how to control your own body, just interaction with - interacting with friends, knowing how to, knowing what to say, how to ask for a friend to play and what not. And then another one would be just emotion regulation. Either if it's, if it's due to anxiety symptoms or feelings of being anxious or worried, things like that. Or being sad or angry and then how do you show those feelings appropriately.

This quote explains how the issue of anxiety is expressed in school, what an anxious student may fear in school, and where the anxiety can lead.

I feel like what really seems to be a big one right now is anxiety. There's a lot of anxiety in students. Anxiety on looking different, being singled out, not doing well at school. You know a fear of what other kids are going to think of them, a fear of safety, feeling like sometimes maybe school isn't safe or that they're going to get sick at school. Anxiety is, really seems to be a big emotional one that stands out to be, that seems just more on the rise which can lead to school refusal.

This next quote also brings up the issue of seeing anxiety in school as well as other social skills such as getting along with others and controlling one's own self and body.

A lot of anxiety. A lot of ADHD. And along with that just kids who just have a hard time focusing and attending whether they're diagnosed or not diagnosed or whether they even you know, we think they have an issue or not. A lot of emotional issues in, I think in life but, I think we're hitting a generation of kids who are used to some immediate gratification through the use of technology whether it be tablets, phones, TV, whatever, games, gaming systems. And so when they don't have those things and there are other expectations they're melting down, they're just really struggling with the fact that they have to put forth sustained mental effort on things. It's really difficult for a lot of these kids.

How Dogs Can Assist Students

This theme was identified to address codes in the transcriptions relating to how school social workers believe dogs can assist students and how dog handlers have seen dogs assist students. The common areas in which a dog could assist students that school social worker participants identified include connection, relationships, and self-regulation. These areas are emphasized with quotes from school social worker participants. The following quote shows the participant's connection between working with the dog and the neurobiology that goes along with working with a dog in otherwise stressful situations.

It really is biofeedback. These kids are learning to feel relaxed and calm their heart rates are lower when they're holding a book and approaching text. They have a bookmark with the dog's picture on it or, all of the dogs have this you know? Bookmarks and business cards so when they go back to class that's what they use for a bookmark in their independent reading

book. And so when they take it out at independent reading time rather than their first thought being I hate to read and I'm bad at it, it raises heart rate, makes them agitated. You know the first thing they see is this really comforting, happy, positive, encouraging piece that helps you know use that biofeedback to relax and approach the task and know I'm going to read this to the dog on Friday when she comes so I need to practice it.

This quote from a school social worker participant who has used dogs in school exemplifies how useful it is for them to have a dog ready to work with a student than working one-on-one with a student.

"I can do I can do the work in half the time um with an animal when I'm doing an animal-assisted than if I'm doing it on my own. It just is so much easier to gain a rapport."

This school social worker participant uses dogs in their school on a regular basis and commented on being acknowledged by other staff members that the dogs are helping the students. The quote also points out how quickly the student got to work reading with the dog who they felt comfortable with versus reading for someone they did not know.

It's something that people told me probably couldn't be done and many schools have said oh we're not allowed to and I just didn't accept that and once I was able to show the efficacy. One of our district reading coaches was here a couple years ago. Tried to coach in a classroom with a reading group and couldn't get a kid to read and I came to pick him up and I didn't know who she was. She said, where are you taking him? And I said it's his turn to read with the dogs and she said, can I watch? Said sure. So I brought him, you know he came in you know he sat down, got right to business reading, read the whole 15 minutes he was here and as we were leaving she said, I am one of the highest trained

district reading specialists and I've been trying to get him to read for the last half an hour in his class. So I think that there is both a personal acknowledgement from people about yeah, dogs regulate and there is a lot of professional data about the actual biofeedback, the actual neurobiology around having an animal with you when you're approaching a task that feels frustrating.

This quote from a school social worker participant who regularly uses dogs in school also shows how important the dogs have become to the entire school and community, not just the students who work independently with the dogs.

Now our whole community is so invested in it. The dogs come to our family literacy night, they come to you know, they're just a part of our school community. They have their school picture taken; they're in our school yearbook. The dogs are certainly our school pets.

This school social worker participant compared using a dog as an intervention to using medication to help the student calm, focus, and build skills.

It's just exciting and it's the kind of work that you know in the past I might have relied more on outside referrals for medication intervention, for things like that. A low-level antidepressant has shown efficacy in helping kids who won't participate verbally but again it's not the kids building the skill in themselves it's something that if they're on it, it helps, it does. But then when they're off it, it doesn't and they've really not grown in their confidence and so this is a really meaningful way that is way less intrusive than a medication and has better outcomes and teaches kids the skill.

This school social worker participant also commented on the calming effects a dog can have.

It is amazing to see this student and this dog you know walking down the hallway and the student has a lot of behaviorals or struggles but really when he's walking with the dog it's just so calm you know. Usually there would be more vocal noises or what not.

This quote from a school social worker participant reflects on the client-therapist relationship and how a dog can initially make a connection with a student and encourage the relationship between student and school social worker.

I think for some just having that connection and feeling like reciprocated like okay this dog likes me. Like yeah, somebody really likes me and something that's alive but yet can't say anything or say something mean or tease them or you know. That reciprocation of you know, some affections or interaction, that could really be I think the best thing, what you would be looking for in therapy.

The common areas in which dog handlers have seen dogs assist students include self-control, motivation, and communication. These areas are highlighted with these quotes from dog handler participants. This particular dog handler participant spoke of how bringing the dogs into schools can be motivating for students who may be discouraged, for whatever reason.

I love working with kids to help them learn functional skills and stuff like that. To help them learn you know these things that have happened to me they're not a reflection of me as a person, they're not my fault kind of things. And I think the dogs can be really beneficial for those, just sharing their stories. All of my dogs are rescues and they've come from all sorts of interesting situations. They've come, they've got funky looking scars and different personalities and stuff but the important part is that they're all really

strong, really stable, really confident dogs and I think the kids say hey if that dog went through all this horrible stuff and look it they turned out okay, maybe I'll be okay too.

This dog handler participant talked about seeing students change over time from the first session they had been in to a few months later when social skills and behavior towards the dog improved.

There's been a few of the consecutive programs where we can watch the kids develop more social-self-control and skills like oh okay I have to ask first okay and then having the positive reinforcement of okay you asked now you can pet my dog. I think that helps reinforce some of the self-control and stuff too.

This next quote comes from a dog handler who uses their dog regularly in school and has seen students' levels of confidence increase since working with their dog.

"It increases kids confidence to communicate, their willingness to engage in conversation and for kids who are kind of more anxious and have kind of some behaviors you see less of it when the dog's there."

How Students Respond to Dogs

This theme was identified to address codes in the transcriptions related to how students may respond negatively to dogs in school. Quotes from school social worker participants who are currently using dogs in school and quotes from dog handler participants are included to represent this theme. The following quote from a school social worker participant shows how this participant explains the dog's presence in school.

What I tell kids is you know what when you come to the nurse's office and your arm is broken you get something different than if you come to the nurse's office and you have a sliver. And everyone gets what they need and that's what makes it fair. And so not

everyone is going to get to read with the dogs, some kids get a turn everyday. Some kids get a turn once a week, it's based on it's based on needs and outcomes and and a very purposeful use of that time.

This quote shows how possible disruptions in school can actually work well and be a benefit rather than a distraction.

Kids get used to a lot of things like we have a whole classroom that went to stability balls and who would ever think a classroom of twenty-some kids sitting on a bouncy rubber ball would work but you know what it does. You put the expectation out there and clear about the boundaries and the rules and I think yeah, it's amazing.

These dog handler quotes share student reactions they have encountered while using their dogs. The following quote describes how students have responded to dogs brought into school by the dog handler participant.

The kids are usually pretty well behaved for us. Definitely we get some attention seeking behaviors and stuff like that as far as you know wanting to run the conversation and it's always fun you're talking about dog bites and somebody comes up with a story about their friend's dog that had puppies and you're like whoa where did this come from?

This quote from a dog handler participant exemplifies how dogs may not always be related to negative behaviors from students.

It comes down to the individual kids. I mean yes some kids just seek attention but I don't think it's dog related, they're just seeking attention, and that is the thing in the room that they can potentially get attention from. So it's just a kid on kid basis and I don't think it's ever necessarily been tied to a dog. It's just tied to the situation, which is a little abnormal.

Stress Management Techniques for Dogs

This theme was identified to address the codes related to managing the stress therapy that dogs encounter when working with students in schools. The quotes include common courses of action taken to prevent stress on the dog or to relieve the dog's stress and signs of the dog being stressed. The following quotes from dog handler participants speak to dogs' signs of stress. The first quote speaks to different signs of how dogs tire throughout the day.

My dogs tend to get less responsive to cues when I'm asking them to do things. Even my best dog, like they're freshest in the morning and then as we go through the day we're doing like a 4 hour bunch of sessions, by the end of it they're like you want me to sit again? Really? We did this already. I sniffed 50 million kids' hands. We're done. So they tend to get more fatigued and this is one of those things where I kind of know my dogs and stuff like that. As far as more higher level warnings, things where I'm like okay we need to be done um I have um you know you seem them licking, you see turn away a lot with the kids and stuff like that. I have some dogs that stress pant; I have some dogs that they just slow down, they stop moving.

This quote explains how dogs are going to show different signs of stress when in a working situation.

It's just like people um we all speak the same language right, we're both speaking in English but we're both going to have different phrases that we say more often or different words that we use with a certain intention. So it's kind of the same thing with dogs, they're each going to have different signals and different queues that they use more often even though they're all communicating in the same language.

The following quotes from dog handlers speak to the courses of action taken with dogs under a significant amount of stress.

Usually when I'm doing a longer program I usually try to take a break between each program and we pee, well they pee I don't so much. And they get a few minutes away from the kids to decompress. The longer programs like that too I'm very careful about which dog I bring. I want a dog that's got a higher tolerance for being able to work like that cause it is really hard work for the dogs definitely. And they do, they come home and it's not physical work, but they come home and they crash. They're just like too much braining. I'm done!

This quote demonstrates what would be an appropriate way to respond to a situation that is more intense than a typical visit with students and further explains the responsibility of the dog handler meeting the needs of the therapy dog.

The appropriate thing to do if your dog got rattled in a therapy dog visit would be to first and foremost recognize that the dog is looking to you for guidance and then it kind of depends on the situation. If I felt like the situation was not going to abate immediately I would simply take the dog from the situation. That's actually why therapy dogs are supposed to have not like buckle collars that are hard to get undone, they're supposed to have quick release collars so that you should be able to quick release the collar and take the dog from the situation immediately. And, but yeah if it's going to abate quickly I would get a treat out and distract the dog from whatever the distraction was and reward the focus on the trainer which is how you, that's how you train for refocusing and confusing situations.

The four themes found in this research helped define how animal-assisted therapy can affect children's behavior in school. The answers obtained from the participants of this study explored different behavior issues currently happening in schools, how dogs may be able to assist students in schools, how students may respond to dogs working in schools, and effective stress management techniques to use for dogs working in schools. Different perspectives from school social workers and dog handlers helped to present a variety of views of using dogs in school with students. These four common themes and participant responses are further reviewed in the Discussion portion of this project.

Discussion

Interpretation of Findings

Overall, the responses of this study indicated that using therapy dogs in schools could benefit students by serving as an intervention and helping students learn skills that result in better connection and relationships, and skills that can assist with self-regulation and self-control. The participants of this study contributed significantly by their willingness to share experiences they have had professionally working with students and therapy dogs. The four themes identified in the findings section including; behavior issues happening within schools, how dogs can assist students with behavior issues, how students respond to dogs in school, and stress management for dogs, will now be discussed more in depth.

The first theme of behavior issues happening in schools consisted of various issues, although the most common were issues of anxiety, connection and relationships with others, and self-regulation and self-control. Even within these issues there are numerous symptoms and

behaviors that are exposed depending on each individual student. The complexity of this theme confirms the need of different interventions including the motivating, concrete, and rewarding intervention of using a therapy dog. The findings from this theme support the literature review. Numerous authors discuss how the presence of an animal can facilitate trust, connection, communication, and relieve anxiety (Chandler et al., 2010; Jackson, 2012; Chandler, 2001 & Walsh, 2009). Bibek et al. (2012) also found children to be more focused and in control in an experiment with children with ASD.

The second main theme, how dogs can assist students with behavior issues, included responses from both school social work participants and dog handler participants. There were many experiences to share from the participants. The school social worker participants mainly identified connection, relationships, and self-regulation as areas a therapy dog could help students improve also supporting the literature review similarly to the first theme. One of the participants shared a story about achieving goals in a shorter period of time when using a dog than without using a dog supporting Delisle & Friesen's (2012) study in Canada analyzing student literacy when working with animals. In both cases the students' literacy levels increased and students were more willing to work on reading skills.

The third main theme, how students respond to dogs in school, reflected some reactions from students. School social worker participants discussed how students who would not usually interact with a dog in school might be overexcited until they get used to the dog being there. For dog handler participants, the theme reflected reactions from the students in attendance at a visitation session. Students who are not assigned to work with a dog while in school may be envious or jealous, however the participants had responses ready. Expectations of how the dogs are to be used seemed to be an important component to this theme. The expectation of asking to

pet the dog before petting or coming into contact was key for both the school social work participants and the dog handler participants.

The fourth main theme, stress management for dogs, was important to note in that the participants described the dogs as an adjunct to other forms of intervention. The school social worker participants spoke of other interventions they use to deal with behavior issues in school including, group sessions with students, mindfulness exercises, and skill-building activities among others. Dog handler participants were specific about how they give their dogs breaks and attend to their dogs' stress when stress signals arise. The responses from the participants relating to this theme coincide with Jackson's (2012) discussion of being careful not to subject animals to being overworked. Both Jackson's (2012) discussion and the responses from the dog handler participants referred to acting and removing the dog from an over stressful situation and taking them to an area to become calm and recover from the situation.

In addition to the four main themes found in the coding of the research interviews, a few other sub-themes are to be noted. In regard to achieving permission to bring dogs in schools and use them for intervention purposes, all five school social worker participants mentioned how difficult it is to gain permission from the school district in which they work. Issues around students having allergies to dogs, students being afraid of dogs, or students' culture and the values they have about dogs could all be obstacles when it comes to bringing a dog in school to work directly with certain students. All five school social work participants addressed these issues, and they all shared solutions or real-life examples of overcoming these obstacles. With allergies, the school social work participants discussed how the dogs would not be taken into classrooms for an extended period of time, such as the entire school day, and the dogs would not have direct contact with students who are allergic. School records would indicate which students

are allergic to dogs. The dogs would be kept in a designated room or area of the school for the majority of the day. As one participant explained, it would be no different from a student with dog hair on their clothes coming into contact with a student who is allergic to dogs.

Students who are afraid of dogs would also not have direct contact with the dogs. The dogs would not be a forced intervention, simply an alternative for students who could benefit from the connection and relationship they could make with the dog. Any student who is afraid of dogs would not need to come into direct contact with the dog and as mentioned before, for the majority of the day the dog is kept in a certain room or area of the school. Students whose cultural values do not accept dogs as pets or service animals would also not need to come into direct contact with the dog. Any student who states that they do not want to come into contact with the dog would not be forced or even encouraged to touch or address the dog.

Implications for Future Research and Practice

Two of the three dog handler participants did not hold jobs related to school mental health at all. These handlers support Jalongo et al. (2004) in that trained therapy dogs are becoming more popular through visitation programs. With the other dog handler holding a job related to school mental health and recognizing all school social worker participants had experience with dogs in schools in the past, momentum towards change within school districts allowing and even encouraging animal-assisted therapy in schools could be building. All participants of this study had experience with therapy dogs, or dogs meant to assist students in school at some point. As these experiences become more common, so might therapy dogs in schools.

In order to practice with a therapy dog in school, a large enough space to house a dog while they are in school would be needed. Training and certification is also necessary in order to

keep the students and animals as safe as possible. While approval from the specific school district is usually needed to use dogs in schools, many schools are already allowing the use of trained dogs for specific students as noted in the findings section. Other barriers like allergies and cultural beliefs about dogs seemed to be minor in that consent was gained from objective parents to use dogs in some of the participant's schools. A therapy dog could be seen similarly to an accommodation for a student with a service dog, such as a guide dog for the visually impaired. Future research should focus on policy changes in using animals in school with respect to students of different cultures, allergies, and fear of animals. The all or nothing directive restricts animal-assisted therapy from being used as a positive intervention. This findings of this research study reflected support from professionals working in schools to use therapy dogs as an alternative intervention when working with students. As a supportive intervention, using dogs in school could help establish connection and relationships with others, lower anxiety levels, and help assist with self-regulation and self-control.

References

- Allen-Meares, P., Montgomer, K. L. & Kim, J. S. (2013). School-based social work interventions: a cross-national systematic review. *Social Work* 58(3), 253-262.
- Barker, S. B. (1999). Therapeutic aspects of the human-companion animal interaction. *Psychiatric Times* 26(2).
- Bibek, J. M., Cavalier, A. R., Manley, K. & Obrusnikova, I. (2012). Integrating therapy dog teams in a physical activity program for children with autism spectrum disorders: therapy-dog-assisted interventions provide physical, social, and emotional benefits for children with disabilities. *The Journal of Physical Education, Recreation & Dance* 83(6), 37-47.
- Braastad, B. O. & Berget, B. *Theoretical frameworks for animal-assisted interventions* (PowerPoint slides). Retrieved from http://www.umb.no/statisk/greencare/meetings/abstracts_presentations/costwg1braastadtheoretical_frameworks.pdf
- Chandler, C. (2001). Animal-assisted therapy in counseling and school settings. *ERIC Digest*. Retrieved from <http://www.counseling.org/resources/library/ERIC%20Digests/2001-05.pdf>
- Chandler, C. K., Fernando, D. M., Barrio Minton, C. A., O'Callaghan, D. M. & Portrie-Bethke, T. L. (2010). Matching animal-assisted therapy techniques and intentions with counseling guiding theories. *Journal of Mental Health Counseling* 32(4), 354.
- Cox, R. D. (1963). Social work in the elementary schools: techniques and goals. *Social Work* 8(2), 77-81.

- Delisle, E. & Friesen, L. (2012). Animal-assisted literacy: a supportive environment for constrained and unconstrained learning. *Childhood and Education* 88(2), 102-107.
- Delta Society. (1996). *Standards of practice for animal-assisted activities and therapy*. Retrieved from <http://www.petpartners.org/page.aspx?pid=267#ServiceTherapy>
- Dupper, D. R. (2003). *School social work: Skills and interventions for effective practice*. Hoboken, NJ: John Wiley & Sons, Inc.
- Endenburg, N. & van Lith, H. A. (2011). The influence of animals on the development of children. *The Veterinary Journal* 190(2), 208-214.
- Friesen, L. (2009). Exploring animal-assisted programs with children in school and therapeutic contexts. *Early Childhood Education Journal* 37, 261-267.
- Hayden, J. (2008). *Introduction to health behavior therapy*. Burlington, MA: Jones & Bartlett Publishing.
- Heimlich, K. (2001). Animal-assisted therapy and the severely disabled child: A quantitative study. *Journal of Rehabilitation* 67(4), 48-55.
- Jackson, J. (2012). Animal-assisted therapy: The human-animal bond in relation to human health and wellness. *Winona State University*. Retrieved from http://www.winona.edu/counseloreducation/images/justine_jackson_capstone.pdf
- Jalongo, M. R., Astorino, T. & Bomboy, N. (2004). Canine visitors: The influence of therapy dogs on young children's learning and well-being in classrooms and hospitals. *Early Childhood Education Journal* 32(1), 9-16.
- Katcher, A. H. & Wilkins, G. G. (1994). The use of animal assisted therapy and education with attention-deficit hyperactive and conduct disorders. *Interactions* 12(4), 1-5.

- Kogan, L. R., Granger, B. P., Fitchett, J. A., Helmer, K. A. & Young, K. J. (1999). The human-animal team approach for children with emotional disorders: Two case studies. *Child & Youth Care Forum* 28(2), 105-121.
- Levinson, B. M. (1965). Pet psychotherapy: Use of household pets in the treatment of behavior disorder in childhood. *Psychological Reports* 17, 695-698.
- Levinson, B. M. (1978). Pets and personality development. *Psychological Reports* 42, 1031-1038.
- Martin, J. J., McCaughtry, N., Flory, S., Murphy, A. & Wisdom, K. (2011). Using social cognitive theory to predict physical activity and fitness in undeserved middle school children. *Research Quarterly for Exercise and Sport* 82(2). Retrieved from http://go.galegroup.com.ezproxy.stthomas.edu/ps/i.do?action=interpret&id=GALE%7CA259155151&v=2.1&u=clic_stthomas&it=r&p=ITOF&sw=w&authCount=1
- Melson, G. F. (2003). Child development and the human-companion animal bond. *American Behavioral Scientist* 47(31), 31-39.
- National Association of School Workers. (2013). *School social work*. Retrieved from <http://www.socialworkers.org/pressroom/features/issue/school.asp>
- O'Haire, M. (2010). Companion animals and human health: Benefits, challenges, and the road ahead. *Journal of Veterinary Behavior: Clinical Applications and Research* 5(5), 226-234.
- Poppy, A. A. (2012). The role of a school social worker from an administrator's perspective. *St. Catherine University*. Retrieved from http://sophia.stkate.edu/cgi/viewcontent.cgi?article=1074&context=msw_papers

- Prati, G. (2012). A social cognitive learning theory of homophobic aggression among adolescents. *School Psychology Review* 41(4). Retrieved from http://go.galegroup.com.ezproxy.stthomas.edu/ps/i.do?action=interpret&id=GALE%7CA323144112&v=2.1&u=clic_stthomas&it=r&p=ITOF&sw=w&authCount=1
- R.E.A.D. Dogs Minnesota. (2013). *Frequently asked questions*. Retrieved from <http://www.readdogsmn.org/frequently-asked-questions.html>
- R.E.A.D. Dogs Minnesota. (2013). *What is R.E.A.D.?*. Retrieved from <http://www.readdogsmn.org/index.html>
- Risely-Curtiss, C. (2010). Social work practitioners and the human-companion animal bond: A national study. *Social Work* 55(1), 38-46.
- Schvaneveldt, P. L., Young, M. H., Schvaneveldt, J. D. & Kivett, V. R. (2001). Interaction of people and pets in the family setting: A life course perspective. *Journal of Teaching in Marriage & Family* 1(2), 34-52.
- The Humane Society of the United States. (2013). *Pets by the numbers*. Retrieved from http://www.humanesociety.org/issues/pet_overpopulation/facts/pet_ownership_statistics.html
- The Retreat York. (2013). *Our history*. Retrieved from <http://www.theretreatyork.org.uk/about-the-retreat/our-history.html>
- Thompson, M. J. (2009). Animal-assisted play therapy: Canines as co-therapists. *Compelling Counseling Interventions: VISTAS 2009*, 199-209.
- University of Twente. (2013). Social cognitive theory. Retrieved from http://www.utwente.nl/cw/theorieenoverzicht/Theory%20clusters/Health%20Communication/Social_cognitive_theory.doc/

University of Washington School of Social Work. (2013). *What is school social work?*.

Retrieved from <http://socialwork.uw.edu/programs/ce/k12/what-is-school-social-work>

Urichuk, L. J., & Anderson, D. (2003). *Improving mental health through animal-assisted therapy*. Alberta, Canada: Chimo Project.

Walsh, F. (2009). Human-animal bonds II: The role of pets in family systems and family therapy. *Family Process* 48(4), 481-499.

Zilcha-Mano, S., Mikulincer, M. & Shaver, P. R. (2011). Pet in the therapy room: An attachment perspective on animal-assisted therapy. *Attachment & Human Development* 13(6), 541-561.

Appendix A**Interview Questions**

Therapy Dog Handlers

1. What is your occupation?
2. What is your degree, what license/s do you possess?
3. How long have you been working with therapy dogs?
4. Have you ever used a therapy dog to work with a student and their behavior?
 - a. If no: How do you believe a therapy dog would affect a student's behavior?
 - b. If yes: Describe an experience when working with a student or therapy dog addressing the student's behavior.
5. What are some experiences you have had or have heard from others about animal-assisted therapy affecting students' self-esteem and self-confidence?
6. What are some experiences you have had or have heard from others about animal-assisted therapy affecting communication skills?
7. What are some experiences you have had or have heard from others about animal-assisted therapy affecting social skills with peers?
8. What are some experiences you have had or have heard from others about animal-assisted therapy affecting negative behaviors such as attention seeking, oppositional/defiant, and aggressive behaviors?
9. Are there any other experiences you have had or have heard from others about animal-assisted therapy affecting expression of emotions, self-regulating, emotional management, or other unique ways to use the dog in school?
10. How often does the dog go to school and how much time does it spend there on a given day? How often are breaks given to the dog?

11. What are signs your dog is stressed? How do you help your dog relieve stress?

School Social Workers

1. What is your degree, what license/s do you possess?
2. How long have you been working in schools?
3. What are your experiences with therapy dogs in school?
4. What are some key social issues you see in school?
5. What are some key emotional issues you see in school?
6. What are some key behavioral issues you see in school?
7. How do you usually handle such issues?
8. How do you think a therapy dog could be used in schools to meet student needs?