

The Effects of a Therapy Dog on At-risk Youth in High-school

Research Proposal

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## **Chapter One: Introduction**

Animals can often bring joy and comfort to the people they interact with. They may also play a more specific role for some individuals. The use of animals for therapeutic purposes is becoming increasingly popular particularly within the scientific community. Many studies that examine human-animal interaction involve easily domesticated animals such as dogs, cats, horses, birds, or fish, and occur most often within healthcare or educational settings. It is within these settings where individuals are possibly experiencing increased physical, social, and emotional pressures.

Since becoming a teacher, I have witnessed many difficulties that high school students often face on a daily basis. After reflecting on my own personal remedy for stress and anxiety, I provided the students in my class with a similar therapeutic opportunity which was to work directly with an animal. By enhancing some of my lessons and extra-curricular time with dog-centered activities, the students were exposed to conditions not normally present in a traditional classroom. The effects of having a dog in the classroom became more apparent with each visit. Students who were often very vocal and easily distracted appeared to be calmer and more focused. The students normally more withdrawn seemed to become more engaged in class conversations. In many instances some students would ask when would the dog be returning and if they could have a chance to personally interact with the dog. This encouraged me to pursue my own research on the use of therapy dogs in a learning environment.

## **Chapter Two: Literature Review**

According to Pet Partners (2014), a non-profit organization that provides standardized training in animal-assisted activities and therapy, Animal-Assisted-Therapy (AAT) is defined as, “A goal directed intervention designed to promote improvement in human physical, social,

emotional and/ or cognitive functioning.” (Pet Partners, 2014, p. 13) AAT also requires documentation of progress with a specific end in mind. AAT is not to be confused with Animal-Assisted-Activities (AAA) which are more casual occurrences with no specific goals, direction, or supervision by a health and human service provider. These are meet-and-greet type of activities where no official records are needed. For the purpose of this project, the focus will be AAT because of the thorough documentation it can provide.

During the past decade there has been a dramatic increase in research demonstrating the importance and positive effects of AAT. Current findings suggest AAT generally tends to reduce stress levels, lower anxiety and promote overall emotional well-being (Anderson & Olson, 2006; Buttleman & Rompke, 2014; Hunt & Chizkov, 2014). The extent of these effects often depends on the demographics and situation of the individuals involved.

There is an abundance of AAT research focusing on children in the primary grades (e.g., Anderson & Olson, 2006; Hunt & Chizkov, 2014; Jalongo, Astorino & Bomboy, 2004; Tissen, Hergovich & Spiel, 2007). Perhaps this is the age group that is most accepting of animal influences and also where most academic, social and emotional interventions are first made. For children in the primary grades with severe emotional disorders, AAT can encourage psychological wellbeing, reduce emotional crisis, as well as increase positive self-awareness, responsibility, and empathy (Anderson & Olson, 2006; Rabbitt, Kazdin & Hong, 2014). It has also been shown to reduce aggression in the primary classroom setting (Tissen et al., 2007). The neuroscience behind these results involves the hormone oxytocin. It is responsible for delivering signals to the brain after a positive encounter with another animal (Uvnas-Moberg, 2010). This could be what the children are experiencing after an AAT session.

A similar experience is also true for hospitalized adults suffering from psychotic disorders. Anxiety levels are lower in patients in an AAT program than those participating in recreational therapy and results can be noticed as early as the first therapy session (Barker & Dawson, 1998).

In addition to the documented positive results, there are other reasons to support AAT. The use of a therapy animal usually comes at little cost to the individuals wanting to implement the program and an animal can often be easily integrated into current activities (Barker & Dawson, 1998; Kotrschal & Ortbauer, 2003). A suitable animal is usually certified by a non-profit organization and is accompanied by a volunteer. The animal remains in the volunteers care in-between and after sessions so there are no added financial or personal commitments for the educator, healthcare or service provider (unless the animal's owner is the individual administering the program, then they would have their own costs and commitments already invested). This type of treatment is therefore viewed as more acceptable than some traditional methods (Kotrschal & Ortbauer, 2003; Anderson & Olson, 2006). Parents, of young children diagnosed with externalized behavior disorders, also view AAT as an acceptable form of treatment when compared to more traditional methods such as medication, psychotherapy or the wait-and-see approach. This may be because AAT requires fewer demands, is non-invasive, inexpensive and can be implemented while waiting to see if age and/or maturity level affects a child's diagnosis (Barker & Dawson, 1998; Rabbitt et al., 2014). AAT also does not interfere with other behavioral therapies already taking place and additional evidence suggests there is no need to have previous experience with animals or pets in order to benefit from this type of therapy (Hunt & Chizkov, 2014; Rabbitt et al., 2014).

Even though there are many positive aspects to using AAT, there some considerations to make before implementing a program. Proper protocol, rules and regulations must be followed in order to successfully conduct AAT sessions (Anderson & Olson, 2006). Trained, certified animals are preferred as it ensures the appropriate animals are used and that there is adequate insurance coverage for unpleasant incidents should any arise (Kotrschal & Ortbauer, 2003). By using certified therapy animals, the handler is well equipped with knowledge of safety or sanitary concerns, possible allergies, cultural differences, and the possible fear of the animal. With this knowledge, an individualized program can be developed and all parties involved will be prepared for the animal's arrival. There is also the animal's welfare to consider which a trained handler would be familiar with (Jalongo et al., 2009).

Even though there are many considerations when implementing AAT, the benefits appear to outweigh the challenges. However, before AAT can be considered to be a conventional method, further study in this area needs to be addressed. There is a need to study a broader range of treatments such as the amount of time spent with animal or duration of the session (Hunt & Chizkov, 2014; Rabbitt et al., 2014). Also additional age categories and education levels need to be considered (Tissen et al., 2007). After reviewing the literature, AAT is shown to be affective for elementary-aged children, hospitalized patients, and university students experiencing anxiety (Barker & Dawson, 1998; Jalongo et al., 2004, Buttelmann et al., 2014). Other AAT studies have focused on children with mental and physical disabilities, adults experiencing high levels of anxiety and the elderly (Anderson & Olson, 2006, Nimer & Lundahl, 2007). There appears to be a gap in the research regarding the effects of AAT on youth specifically involving dogs as the therapy animal (Nimer & Lundahl, 2007). By focusing on youth in high school specifically, additional data can be gathered. This data also needs to be analytical rather than anecdotal in

order to achieve maximum external validity (Barker & Dawson, 1998; Buttleman & Rompke, 2014).

There appears to be very little research conducted on at-risk youth. The term “at risk” tends to describe individuals who come from single-parent homes, show signs of emotional or behavioral problems and lack the support to manage developmental tasks. Students in this category often show increased aggression towards others, struggle with regular attendance in school, and are difficult to engage in appropriate tasks (Keating, Tomishima, Foster & Alessandro, 2002). Since AAT can improve attitudes about school and encourage social engagement, at-risk youth may benefit from such sessions (Kotrschal & Ortbauer, 2003; Anderson & Olson, 2006). Also, AAT tends to facilitate long-term outcomes for anxiety relief, decrease behavioral extremes and can provide extreme introverts and extroverts with additional appropriate activities (Hunt & Chizkov, 2014; Kotrschal & Ortbauer, 2003). For these reasons and the benefits described earlier, AAT may provide at-risk youth in high school with an effective program.

Overall, AAT is becoming increasingly popular among scientific, educational and healthcare communities. The research clearly finds AAT successful at relieving stress and positively affecting other areas in the lives of young children, hospitalized individuals and the elderly. Using dogs as the therapy animal presents a few challenges however the benefits seem to outweigh the risks. As there is little documentation on youth, specifically those considered to be at-risk, there is a need for further study with this population, particularly for quantifiable purposes. Since at-risk youth often struggle socially and academically in high school, the following research questions are proposed:

1. Will AAT decrease anxiety of at-risk youth in high school?

2. Will AAT increase attendance of at-risk youth in high school?
3. Will AAT increase academic performance of at-risk youth in high school?
4. Is the effect of AAT enhanced with increased time spent with a therapy dog?

### **Chapter Three: Research Method**

#### **Participants**

The individuals participating in this study will be a sample of 30 high school students, ranging in ages from 13 to 15 years, in School District #73, who fit the criteria of “at-risk” according to their school counselors. This is the number of students the local volunteer therapy dog program can support. The therapy dogs involved with the study will be part of the local St. John’s Ambulance (SJA) Therapy Dog Team. Team members and their dogs have been certified for the purpose of volunteering at local health and educational facilities. Each student will be assigned a dog team (certified dog and handler) according to agreeing schedules. Each student will also complete a demographics form prior to the study that will include information about the student’s age, gender, family structure, and household pets.

#### **Methods**

This study will be conducted using a mixed-methods approach as the data from school records, surveys, and semi-structured interviews will be analysed. This will support the need for quantifiable data while also gaining the individual’s perspective about their experience. A repeated measures design will allow for the longitudinal analysis of data over the course of one school-calendar year (see Figure 1). A base-line measure will be taken at the start of the school year followed by a second measure by the end of the first semester before any treatment. This will allow for the consideration of any personal growth and behavioural changes that may occur naturally for the student. The 30 participants will be randomly split into two treatment groups;



one experiencing a therapy session for one hour per week, while the other, a two hour session. These session lengths are common practice for SJA volunteers. Data will be taken at 13 week intervals, the approximate length of a school term. Post surveys and interviews will also be completed the following school year to analyze any possible sustained benefits.

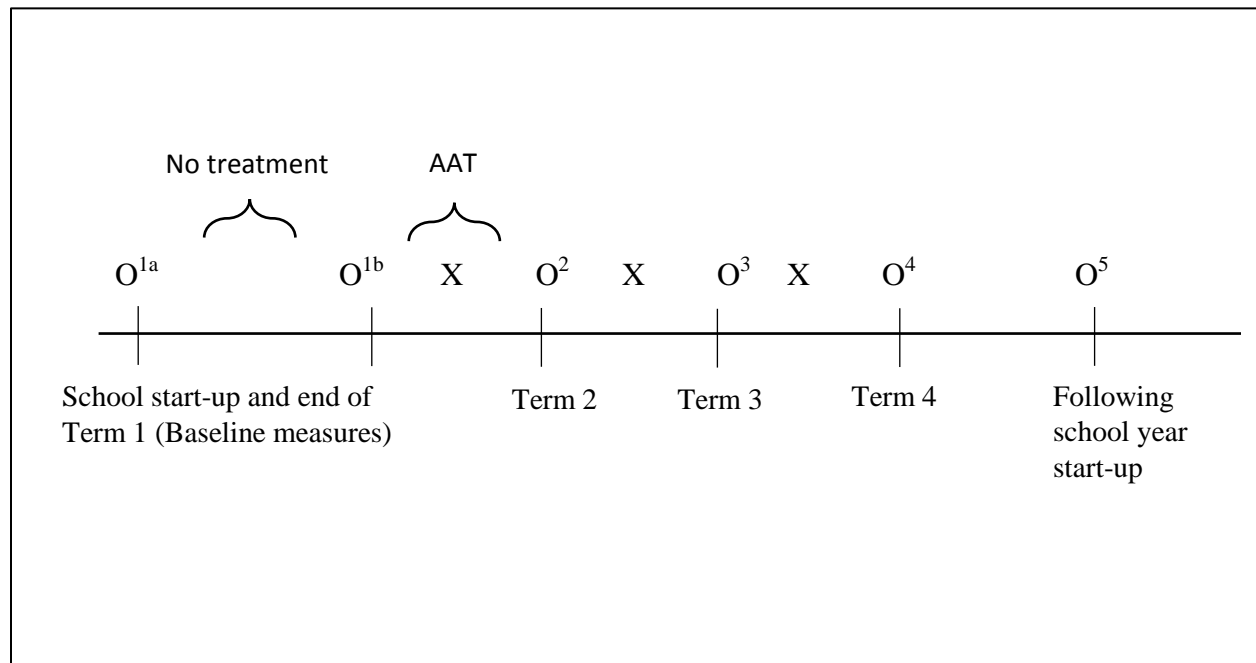


Figure 1. Timeline of study.

This study will utilize the Beck Youth Inventories, a self-reporting survey standardized for evaluating levels of anxiety, depression, anger, disruption, and self-concept in children and adolescents ages 7 to 18 years (Beck, Beck, Jolly & Steer, 2005). For the purpose of this study, only the Anxiety Inventory will be used. There are 20 items on the survey, scaled from 0 (Never) to 3 (Always). Data from the surveys will be collected and statistically analyzed, using NVivo as a part of the interpretation process.

To address the attendance and academic performance questions of this project, data will be collected directly from school records. Attendance will include accumulated absences and lates over the course of each term. For student academic achievement, final core-course marks

for each term will be converted into a number according to the grade point scale used by the Ministry of Education of British Columbia (Ministry of Education Glossary, n.d.). This data will be statistically analyzed for any correlation with the AAT sessions.

Following the fourth and final term, two group interviews, of 15 students each, will be performed. This will allow for the further discussion about ideas and experiences of the therapy dog sessions. These will take place following the final survey so not to interfere with those results. All participants will receive a lunch voucher following the final group interview. All interview data will be analyzed using NVivo software.

### **Treatment**

The 30 students will each meet with their school counsellor and assigned therapy dog team, once a week, for their pre-determined time. During these individual sessions, students will discuss their current school, home-life, and social situations, as they would during regular check-ins, a formality for many at-risk students. At this time, the therapy dog will offer interactions such as petting or grooming, being walked by the student, or more playful connections such as paying fetch or tug. The appropriate interaction will be predetermined by the counselor and volunteer.

### **Limitations**

There are a few factors to consider that may affect data collection and therefore the results of this study. Students may drop out of the study for various reasons, affecting the sample size. Also, if students are taking any medication (or stop taking medication), this could affect the outcome of the data. If an increase of therapy dogs were made available or the study was expanded to include other school districts, the increased sample size could minimize these effects.

In addition to sample size, there is the presence of the counsellor and therapy dog's handler to consider. However, Anderson and Olsen (2006) observed positive results between the therapy dog and the students, regardless of teacher interaction. There is also the opportunity for the counselors to bring their own dog if they became a certified SJA Therapy Dog Team.

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