Collaboration in Animal-Assisted Therapy in Rehabilitation Medicine

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Abstract

This paper introduces Animal-Assisted Therapy (AAT) and describes how a team of students at the University of Alberta brought together the departments of Rehabilitation Medicine, namely Communication Sciences and Disorders, Occupational Therapy, and Physical Therapy, in an event that showcased the use of AAT in the therapy room. The paper goes over the background of AAT and its history, attitudes towards AAT, methodological shortcomings of previous literature, and alternative explanations for previous findings. Following this, the benefits of AAT, a brief overview, AAT and adults, and a snapshot of AAT at Corbett Hall are explored. Next, risks and barriers are covered, specifically important considerations for the use of AAT and populations to avoid. The purpose of the "Dog Day" event at Corbett hall and the event itself are discussed at length, including: preparation and planning, information booths, handlers, establishing goals for the AAT demonstrations, the logistics of scheduling, venue, advertising, and media, and finally the multidisciplinary collaboration on the day of the event. The final section of the paper suggests future steps for AAT at Corbett Hall and for the field of AAT in general.

Introduction

Animal-Assisted Intervention (AAI) is a comprehensive term used to describe interventions that use animals to provide therapeutic gains. AAI is based on the premise of creating a positive relationship between the client and therapy animal. AAI continues to develop and diversify in rehabilitation medicine professions, with professionals in Occupational Therapy (OT), Speech-Language Pathology (SLP), and Physical Therapy (PT) becoming involved in this approach to treatment. These professionals provide services, in conjunction with therapy animals and the animals' handlers, to clients of all ages with various medical issues and developmental disabilities (Davis et al, 2015). The umbrella term, Animal-Assisted Intervention, can be further classified into Animal-Assisted Therapy (AAT), Animal-Assisted Activities (AAA), and Service-Animal Programs (SAP; Palley, O'Rourke, & Niemi, 2010). AAT is a method of delivering intervention, in which the therapy animal is a critical component in achieving a specific goal. In contrast, AAA refers to recreational and leisure activities in which therapy animals and handlers work with a client; however, there are no specific goals during the sessions, and no trained professionals (i.e. OT, PT, SLP) are required to carry out the therapy (Palley, O'Rourke, & Niemi, 2010). Finally, SAP refers to service animals that have been trained to help individuals with disabilities in performing daily-life activities (Munoz-Lasa, Bocanegra, Alcaide, Arratibel, Donoso & Ferriero, 2013). This project focused on AAT.

AAT has been explored in the field of Speech-Language Pathology primarily with the pediatric population; less work has been done with adults. There is a large gap in the research literature addressing how AAT can be used with adults receiving SLP care, specifically those with neurological disorders. One of the contributing factors to this dearth of information may be a lack of awareness in the public and by clinicians about what AAT is and how to implement it

in therapy sessions. The goal of this project was twofold: to raise awareness in the SLP community concerning AAT, and to encourage interdisciplinary collaboration in the implementation of AAT in concert with therapy goals. This paper includes a literature review that examines the history of AAT, attitudes towards AAT, and a critique of research on AAT. We also discuss the benefits, risks, and barriers to using AAT with specific populations as they are currently understood. Following that, we describe how our group organized an event to highlight the use of AAT in SLP, PT, and OT. Our paper concludes by discussing future directions of AAT in SLP with adult clients and the ramifications of interprofessional collaboration.

Background

History

Historically, there has always been a relationship between humans and animals (Maber-Aleksandrowicz et al, 2015). One of the first recorded uses of animals in the therapeutic process was at the York Retreat in 1796, which focused on rehabilitating those with mental illnesses instead of receiving treatments in asylums (Serpell, 2010). Another instance of animal involvement in patient care during therapy was by Florence Nightingale in the late 1800s. She noted how small animals were able to calm children and adults in psychiatric institutions (Ernst, 2014). One of the first academic studies on the use of animals as part of the therapy process was in the 1960s by Boris Levinson. Levinson noted that a nonverbal child he was working with began to talk when the boy saw Levinson's dog, Jingles (Urichuk & Anderson, 2003).

Methodological Shortcomings

There has been difficulty evaluating the effectiveness of AAT as the practice and implementation of AAT is not standardized, and its effectiveness has often been reported only anecdotally (Davis et al, 2015). A commonality among the meta-analyses of the AAT literature is the presence of significant flaws in the methodology of the studies and a low standard of research design (Maber-Alexandrowicz, 2015). This has led to contradictory findings about the efficacy of AAT. Suggestions have been made that additional research of higher quality be conducted (Davis et al, 2015). Maber-Aleksandrowicz (2015) states that some of the flaws in the methodologies of AAT efficacy studies include: issues with controlling confounding variables, not reporting attrition rates, using non-randomised designs, using non-standardized tools to report data outcomes, using non-standardised data outcome tools, not reporting on whether or not outcome raters were blinded to conditions, and using small sample sizes.

Attitudes towards AAT

Despite the lack of quality empirical evidence to support AAT, the attitudes of individuals who use the service do not seem to be affected (Rabbitt et al, 2015). Rabbitt et al (2015) found that 81% of parents in their study saw AAT as a highly acceptable form of treatment for their children who were exhibiting behavioural issues. In addition, this study found that individuals who did not have prior experience with animals were open to AAT and found it to be effective (Rabbitt et al, 2015).

Alternative Explanations

Marino (2012) discussed the possibility of the animals used in AAT creating a novelty effect; the animal involved in AAT causes excitement in the patient, which is the cause of the patient's improvement in treatment. This may lead to the efficacy of AAT treatment waning over

time as clients become more familiar with AAT treatment. The idea that the progress seen in AAT is due to a novelty effect has been thought to threaten the construct validity of AAT studies. Furthermore, it has been identified that none of the studies included in the systematic review have been able to determine whether the animal or the person administering AAT is a causal factor in the outcome of AAT (Maber-Aleksandrowicz et al, 2015). In order to increase the quality of AAT studies, Maber-Aleksandrowicz (2015) proposes that future studies should utilize a randomised control trial approach, which will allow confounding factors to be controlled for at the beginning of the studies.

Benefits of AAT

Overview of Benefits

The use of animals in therapy has several positive ramifications. A study by Berek (2013) found evidence of reduced levels of stress, lowered blood pressure, and a reduction in client anxiety and aggression. These findings impact patient perceptions of care and can result in greater motivation to attend and follow through with therapy. Greater patient buy-in generally leads to greater success. There is also neurochemical evidence to support AAT. A study by Odendaal (2000) measured six neurochemicals that are associated with a decrease in blood pressure before and after positive human-canine interactions compared to a control activity such as quiet book reading. They found that endorphins, oxytocin, prolactin, phenylacetic acid, and dopamine, all of which are pleasure hormones, increased significantly, while cortisol, the hormone most associated with stress, decreased significantly in humans following interactions. This suggests that time spent with an animal lowers the stress response and increases a feeling of calm and wellbeing, more than time spent in a different calm activity.

Animal-assisted therapy has been explored with adults in cardiovascular disease

prevention and remediation. Wolff and Frishman (2005) published a meta-analysis on the benefits on the cardiovascular health of adults. One study by Friedmann, and colleagues (1980) spoke of the survival rate of individuals who had myocardial infarcts; of the ninety-two patients, only 5.7% of the pet owners died within one year after hospitalization as compared to 28% of non-pet owners. While this does not speak to AAT in therapy, it does bring awareness to the complementary benefits of animal interaction, principally lower blood pressure and reduced stress levels. Stress interferes with the process of learning; AAT can reduce the stress levels of a patient, which, in turn, can facilitate greater gains in learning and therapy.

AAT and Adults

Due to the benefits of animal interactions, AAT has been implemented in various situations and modalities. One means of harnessing the therapeutic benefits of AAT was observed with American military personnel in Iraq. In 2007, the first pair of therapy dogs were sent to Iraq with their handlers who were OTs. The soldiers reported that the dogs' presence and involvement in activities that targeted PTSD and stress led to a better perception of quality of life, despite the circumstances. It follows, then, that when there is a higher perceived quality of life, therapy can be more effective, as the participants have a greater willingness to join in therapy. This is further corroborated by a pilot study by Abate, Zucconi, and Boxer (2011), who found that patients with heart failure who were involved in AAT were more willing to participate in ambulation therapy, and were able to walk farther than patients who did not participate in any form of AAT. A quasi-experimental design study examined the relationship between children and pain reduction (Braun, Stangler, Narveson, & Pettingell, 2009). The study found that pain reduction was four times greater in children who were in AAT than those in a non-AAT control group (Braun, Stangler, Narveson, & Pettingell, 2009).

Dementia has also been an area where AAT with adults has been explored. A French study examined the effects of AAT in three individuals suffering from severe dementia who had minimal social interaction (Tribet, Boucharlat, & Myslinski, 2007). The researchers found that the dogs calmed the patients and their presence contributed to a more secure and interactive environment for the patients. The petting of the dog was highly motivating for the participants who would to attempt to interact with the dog despite a lack of verbal language. One of the goals of speech-language therapy is social wellness, especially for individuals with a diminished capacity of communication. Tribet and colleagues (2007) suggested that the dog's presence in therapy appeared to appease the fears of the patients, since it was a trustworthy and non-judgemental listener. An unexpected benefit was that the dog served as a catalyst for memory retrieval, as it reminded the participants of a time in their past, thus enabling the patients to access personal memories and recover elements of their personality.

A case study involving a 61-year-old male with non-fluent aphasia examined the impacts of the introduction of a dog in speech therapy sessions. When the dog was present on walks, the patient was more animated and outgoing, and eager to answer any questions members of the public asked him about the dog (LaFrance, Garcia, & Labreche, 2006). The researchers found that in conditions of interaction with the SLP and the dog versus without the dog, the participant was a more active communicator overall. Another pilot study looked at three men with varying degrees of non-fluent aphasia. The participants did one semester of traditional speech-language therapy, and another semester of AAT (Macauley, 2006). Results from the Western Aphasia Battery (WAB) and a questionnaire were compared before and after each semester of treatment. Although their WAB scores did not show significant change, the participants' responses in the questionnaires did. Their answers showed that they felt that they had made more progress during

AAT and were able to meet and exceed their goals. The participants also reported greater engagement in sessions and were observed to show more emotion when the dog was present, which facilitated conversations concerning their own pets.

AAT at Corbett Hall

The *Corbett Hall Early Education Program* (CHEEP) utilizes are a myriad of activities to enhance the children's speech and language, fine and gross motor skills, self-help, and social skills. One such way is AAT. Shona Nichols completed the Pet Therapy Society of Northern Alberta's (PTSNA) Pet Education Program in 2011, and began volunteering at CHEEP in 2012. We took the opportunity to observe Shona and her therapy dog, a Cavalier King Charles Spaniel named Jasper, working with the students. According to CHEEP's SLP, Jamie Maschmeyer (personal communication, August 18, 2016):

> We absolutely love Shona and Jasper's involvement in our programming and their impact is evident. Many people are drawn to dogs (especially little ones who appear calm and friendly like Jasper does from first impression) and this seems especially true for children. Jasper is a motivation to prompt interaction (with the dog and the people in the room) for children with engagement challenges. Also, the interactions naturally require communication as children learn to ask for a turn to try things with Jasper, give commands to him and express enjoyment/uncertainty/etc. about the interaction. Shona is very observant and learns a lot about our children's individual needs, goals, strengths, challenges and she accommodates these extremely well (e.g., a child that needs to just observe Jasper for several sessions before encouraging physical contact, a child that needs very specific, reinforced expectations for safety). We have found that sharing a bit of information about the children and their objectives helps Shona to tailor her visits to

allow for opportunities to build desired skills.

Maschmeyer remarks that working with a well-trained animal and experienced handler enables the staff at CHEEP to handle all challenges that arise (personal communication, August 18, 2016). Challenges involving the welfare of the children are outlined and managed by the classroom staff, such as keeping the classroom visit structured and organized. The team also deals with a child's fears or uncertainties, which are often managed best with peer and adult models, and increasing expectations as the child shows readiness and comfort. The staff model strategies and keep the handler informed regarding the unique needs and changing objectives of each student. The handler's lead is followed in terms of ways to avoid overwhelming or exhausting Jasper and keeping Jasper safe:

> Shona is in charge and we follow her lead when it comes to protecting Jasper from innocent harm and more deliberate aggression (very rare). She has learned to use simple, consistent language to explain and reinforce expectations (i.e. "gentle hands", "quiet voices", "moving slowly", "avoid touching face", etc.) Shona is great at modeling appropriate behaviours and reinforcing them - focusing on what they can do rather than what not to do. She also uses the children's affection for Jasper to help them understand what is ok (i.e. "that hurts Jasper - we can do ___ instead").

Risks & Barriers

Important Considerations

Matamonasa-Bennett (2015) suggested that there needs to be a shift in the attitudes towards AAT, as she explores the impact that AAT can have on the lives of animals, instead of what the animals can do for society. Matamonasa-Bennett (2015) suggests that there are three commonplace philosophical perspectives on the animal-human relationship. These include:

Utilitarian, Stewardship, and Liberationist. The Utilitarian perspective puts emphasis on how animals can meet human needs, whereas the perspective of Stewardship demonstrated a concern for the welfare of the therapy animals, in that it considers the needs of both the therapy animals and humans. Finally, the Liberationist perspective sees the use of animals for therapy as exploitative. As AAT becomes more commonly utilized, there may be increasing need for regulations in how the animals are used. Matamonasa-Bennett (2015) proposed guidelines for equine-assisted therapy, which included respect for the horses, a balanced life of work and leisure for the horse, a reciprocal relationship between the horse and the human, and that the human should honour the horse by providing it the best life possible.

There currently is very little literature that seeks to understand how animals used in AAT are able to cope with the possible stress. Kaiser, Heleski, Seigford, and Smith (2006) decided to explore how horses responded to therapeutic riding programs, and found that horses that were ridden by individuals with a physical disability did not demonstrate any more stressful behaviour than they would if leisure riders without a disability rode them. However, riders who were considered to have "psychological disturbances" appeared to cause more stress-induced behaviours in the horses (Kaiser et al, 2006). This study poses an important question concerning how animals themselves respond to AAT, which warrants further research.

Populations to Avoid

Animal-assisted therapy, with canines in particular, should be avoided for populations with asthma, pet-dander allergies, a fear of animals or canines, or anyone who is immunocompromised in any way. Additionally, Urbanski and Lazenby (2012) note that AAT should not be used with high-risk patients with one or more of the following: indwelling medical devices that cannot be secured or covered, have open wounds, or dermatitis that cannot be

covered. With children, AAT is not recommended for those who have aggressive tendencies or are medically compromised. For example, children who have tuberculosis, salmonella, campylobacter, shigella, strep group A, methicillin-resistant staphylococcus aureus (MRSA), ringworm, giardia, or those who have had a recent surgery and require sterile dressings, are not recommended to be involved in AAT (Urbanski & Lazenby, 2012).

Dog Day at Corbett Hall

AAT is a relatively new area of study in the realm of Speech-Language Pathology. We sought to raise awareness of the use of AAT with adults by hosting an educational seminar at Corbett Hall. The three departments of Rehabilitation Medicine (SLP, OT, and PT) were invited to participate. Students from each profession showcased how to use AAT as a means to target goals for adult clients. The purpose of the event was to raise awareness and spark interest in AAT in rehabilitation medicine with adult clients.

Preparation and Planning for the Dog Day Event at Corbett Hall

Information booths.

During the initial planning stages of Dog Day, the priority was to identify what information we wanted to share at the event and how to reach qualified presenters and handlers who would be willing to work on this project.

The goal was to share and build upon the work done by the previous 900 project (Lau, Lisa, & McLaughlin, 2015). *Must Love Dogs: Literature Review and Manual on Animal Assisted Therapy in Speech-Language Pathology with Adult Neurological Disorders.* Unpublished manuscript, Department of Communication Sciences and Disorders, University of Alberta, Edmonton, Canada), emphasizing the difference between AAT and pet therapy. Our team produced a poster (see in Appendix A), which summarized the report created by the previous

year's project concerning AAT. It briefly defined AAT, acknowledged the researched benefits of using animals in therapy (Berek, 2013), and mentioned regulations across Canada. It also outlined the differences between two different but commonly utilized models of AAT, namely the Triangle Model, where the clinician is the animal's handler, working individually with the client and animal, and the Diamond Model, where the clinician and client work in conjunction with a handler and the handler's animal (Brooks, 2006).

Accessing experts in the field of dog handling and training was also undertaken. We determined a need to present information regarding dog behaviour and body language. There are often concerns raised regarding the client's safety in the company of animals, as well as a need to consider the welfare of the animal. A therapy animal, while a valuable therapeutic tool, is also a living creature with its own personality, temperament, needs, and safety considerations. Although the handler is ultimately responsible for the wellbeing of the therapy animal, it would be remiss for professionals incorporating AAT in their practice to be unaware of animal body language and signs of stress. The Edmonton Humane Society was approached, as they offer a course in Dog Behaviour and Training Methodology, which includes a unit regarding learning to read and interpret dog body language and how best to respond to the animal's needs. Two of the Society's educators and trainers, Kristen McKenna and Dana Bjornerud, agreed to attend and present information on this topic. Both trainers had a wealth of experience in this area, as both have Canine Behaviour Consultant Certifications (CBCC-KA), Certified Professional Dog Trainer (CPDT-KA) designations, and Dog Behaviour and Training Methodology (DBTM) certificates.

To facilitate networking and information sharing by the AAT community at Corbett Hall Dog Day, our team sent out invitations to two societies that work with agencies, facilities, and clinicians to provide AAI. They were the Pet Therapy Society of Northern Alberta (PTSNA) and Chimo Animal Assisted Wellness and Learning Society (CAAWLS). PTSNA's mission statement explains that "The Mission of the Pet Therapy Society is to provide to the community safe and effective Animal Assisted Activities and Programs" (Pet Therapy Society of Northern Alberta, 2015). Unfortunately, no volunteers from PTSNA were available for the scheduled date. However, several members of CAAWLS were able and willing to attend. The organization's website states that "CAAWLS' mission is to develop and make available effective animal assisted therapeutic services to health and social services providers. We hope to educate and promote Animal Assisted Interaction (AAI) to the community, and use AAI as a medium for health, wellness, and education" (CAAWLS, n.d. Society mission statement. Retrieved from http://www.caawls.org/).

Handlers.

The next planning stage involved locating qualified handlers who had relevant experience and expertise. First, we invited CHEEP's Shona Nichols. Since she had experience working with SLPs and clients ranging in age from 2 to 105 (personal communication, July 20, 2016), we asked her to join the Dog Day demonstration to work with the student clinician representing Communication Sciences and Disorders.

In order to find two additional handlers to work with the other departments, our team approached the Therapeutic Animal Assisted Interactions Leadership Society (TAAILS), an Edmonton-based organization that also regularly participates in the annual Occupational Therapy Professional Development Committee student-run conference at Corbett Hall. According to their

website, the organization's mission is "To advance professionalism of the practice of therapeutic animal-assisted modalities through education, standardization, and networking support for practitioners in Western Canada" ("TAAILS," n.d.). TAAILS' vision of safe, accessible therapeutic AAT was a great fit for the purpose guiding Dog Day, and, with their interest in advocacy and collaboration, two of the founding members of TAAILS agreed to participate, Linda Shaw and Cheryl Newton-Skirrow. Linda Shaw has a certificate in Animal-Assisted Therapy through the University of Oakland, School of Nursing. In 2014, she initiated a dog therapy program at NAIT with Flynn, an Australian Labradoodle and certified therapy dog. Cheryl Newton-Skirrow has long been involved in AAT through her work in adult education. Along with her certified pet, Macy, Newton-Skirrow worked with the Chimo AAT pilot project, Service Dog Testing Pilot, PTSNA, Hope Heels, and a Canadian ad-hoc Task Force on Animal-Assisted Therapy.

Establishing goals for the demonstrations.

Our team wanted to ensure that the goals of the three demonstrations focused on the purpose of Dog Day and upheld the definition of AAT. One of the priorities for each demonstration was to highlight how AAT could enhance client-centred care and the basic principles of the World Health Organization's International Classification of Functioning, Disability and Health (WHO-ICF) model ("International Classification of Functioning, Disability, and Health", 2016). In this biopsychosocial model, functioning and disability are viewed from a multidimensional perspective that encompasses people's body functions and structures, their activities (including any restrictions they face), their ability to participate and be involved in all areas of life (including any limitations), and the environmental and personal factors that contribute to or hinder their functioning. In this framework, incorporating an animal

into therapy could target any of these dimensions, from supporting a client's motivation to participate in therapy to supporting the client in a role in which they would like to participate.

To assist in determining appropriate goals for adults in the Speech-Language demonstration, our team approached Andrea Ruelling, Clinical Assistant Professor in the department of Communication Sciences & Disorders (CSD). She canvassed her colleagues for ideas for using animals to reach their adult clients' goals. Suggestions included targeting activity- and functioning-based goals, such as: reading aloud to the dog to enhance reading skills; writing goals, which include writing out and then trialing a training goal, or journaling about interactions with the dog; or focusing on apraxia goals at word or phrase level, for example, rehearsing basic commands. Other suggestions centred on environmental and personal factors, such as creating a more supportive and motivating environment with the pet to enhance rapport or providing a medium for interaction and reminiscing for a client with dementia. From this, three scenarios were established for simulated clients with different goals and needs. The outline from the SLP demonstration is included in Appendix B.

Students from both OT and PT were invited to participate in Dog Day, in the scenarios with the simulated clients. To solicit volunteers the secretary of their respective departments distributed the request, and the interested students contacted us. The team then set up an interaction with a client, a dog, its trainer, and the student clinician. Prior to Dog Day, all three teams of demonstrators (the handler, the dog, the student clinician, and the student client) met to rehearse a scripted scenario.

Logistics

Schedule

On Dog Day, the three demonstrations ran concurrently for ten minutes, followed by a rest break for the dogs. The demonstrations were then repeated two more times, for a total of three performances for each team, giving the guests an opportunity to view each demonstration at least once. After this, there was a half-hour for media, questions, and networking.

Venue

This event was originally planned to take place on the lawn in front of Corbett Hall, with a room reserved inside Corbett Hall in case of rain. The front lawn was booked through Central Bookings and room 2-44 was booked with the help of our Communication Sciences and Disorders administration assistant, Noriko Hessmann. The Dean's Office granted permission for animals to be in Corbett Hall for this event. It should be noted that we were unaware of the need to also receive permission from the Research Ethics Office and University Veterinarian, as it is required that permission be obtained when animals take part in events on campus. Any future activities involving animals must take the necessary steps to obtain permission. The required steps are highlighted in this paper in the section 'Future Steps for AAT in the Faculty of Rehabilitation Medicine'.

On the day of the event, the decision was made to move the event inside instead of hosting it on the lawn as the grass was wet and there was rain in the forecast. In retrospect we concluded that the indoor location was better suited to this event as the furniture in the room was organized to have space for three separate presentation areas, as well as distinct zones for each presentation. Chairs were arranged in semicircular rows to allow approximately 20 attendees to view each of the presentations.

Advertising

Fifty posters were printed and posted at various locations around campus prior to the event. A version of this poster was broadcast on screens around Corbett Hall and an announcement was made to speech-language pathology students.

Media

Invitation of the media was not a part of the initial plan for this event but was suggested by the Public Relations department of the Faculty of Rehabilitation Medicine. Public relations representatives created a press release following consultation with members of our student group. Following approval of the content of this release by our student group and Dr. Paslawski, our supervisor, the press release was distributed to local news outlets. The press release appeared on the website for the Faculty of Rehabilitation Medicine (see Appendix C).

Day of the Event

The event took place from 11:30 a.m. to 12:30 p.m. This time coincided with the lunch break for students and faculty in Rehabilitation Medicine. A table was stationed outside of the main room to direct attendees and collect the contact information from those who wished to be sent more information about AAT (Unfortunately, due to a technological problem, this information was lost). Approximately 100 individuals were in attendance, and included Rehabilitation Medicine students, faculty, and members of the public. In addition to the handlers taking part in demonstrations, eight representatives from CAAWLS and TAAILS attended with their dogs and interacted and shared personal experiences with attendees.

Each member of our group was assigned a specific role for the day of the event. These roles included media representative, booth coordinator, and registration coordinator. This division of labour and responsibility facilitated smooth transitions and overall organization of the

event.

Representatives from CTV, Metro, Global, and the Edmonton Sun attended dog Day. All news outlets, apart from the Sun, published stories on the event (see Appendix D).

Multidisciplinary Collaboration

During the physical therapy interaction, a PT student clinician demonstrated how AAT can be used during therapy sessions as a motivator for the client. In this interaction, a simulated client demonstrated how throwing a ball for the dog can be both motivating and functional for arm rehabilitation. The PT student clinician commented that Dog Day was a very positive and valuable experience, and that she appreciated the opportunity to integrate across the professions of Rehabilitation Medicine. She also said that having the dog be a part of the focus took some pressure off of her to perform, and made her feel more comfortable during her therapy demonstration. The simulated client reported that she experienced the motivation to participate in therapy because of the dog (e.g., to bend down and pet the dog, throw the ball for him, pick up toys, walk short distances, and get up from her chair). This demonstration highlighted how adapting and modifying PT activities can be centered around the animal to increase enjoyment, motivation, and functionality.

The OT student showed how an AAT dog can be used to provide companionship to the client, as well as to assist in strengthening handgrip when the client uses a brush on the dog. The OT student explained that by using AAT during therapy sessions, you can work on things such as hand grip through leash holding, and that by having AAT dogs, the motivation to the patient is increased, as “dogs bring a motivation factor that is both interactive and fun” (K. Oakley, personal communication, June 15, 2016).

Looking Forward

Overall, Dog Day was a success in bringing more public and faculty awareness about the potential use of AAT in rehabilitation therapy. We believe that if another event like Dog Day was to be held at Corbett Hall, it would allow for the continued advocacy of the value of AAT in rehabilitation medicine. Through any future events, students and professors, as well as interested practicing clinicians, can be made aware of the value of AAT in therapy. Additionally, because Dog Day garnered much attention from the media, future AAT events may also attract more media attention to the value of AAT use in rehabilitation therapy.

Future Steps for AAT in the Faculty of Rehabilitation Medicine

While the first Dog Day at Corbett Hall was a success in educating the faculty and public about the use of AAT in Rehabilitation Medicine, there are a few factors that could be improved upon at future AAT events. First, there is a need to inform the Research Ethic Office about bringing the dogs on campus. This was not a step that was taken in the planning of the first Dog Day, but must be taken in the future, to ensure that the University Veterinarian can support the animals in the event's activities as needed. In advance of any initiatives involving animals, the "Exceptions to ACUC Review form," which can be found on the Research Ethics Office website, within the Forms Cabinet must be completed and approved. Another improvement that should be made in the future is amplification of sound during the demonstrations. Because the participants of the demonstrations did not have microphones, it was difficult for the audience to hear what each presenter was saying. Providing future participants with microphones would allow the audience to hear the demonstrations more clearly. A suggestion that was made by the PT student, Chelsea, was to include an interdisciplinary station, to have SLP, OT, and PT work together to make goals for a particular patient involving AAT. We also recommend that surveys be sent out

following AAT activities at Corbett Hall in order to examine their impact on participants. Such data collection and analysis can provide a meaningful base for future student teams, so that they can draw conclusions and make critical decisions regarding the future of AAT at Corbett Hall. Furthermore, we recommend maintaining a connection with the media to aid in spreading awareness and educating the public about the use of AAT in rehabilitation therapy. Future events may evolve to include demonstrations of AAT in rehabilitation with other animals typically used in therapy; for example, equine-therapy.

It may be helpful for future first-year Speech Pathology students to learn more about AAT, with a focus on its differences from pet therapy (such as AAA) and how it can be effectively incorporated into therapy. This may be achieved in several ways. For example, Chelsea Jones is an OT who has presented on "Therapeutic Use of Animals" to the OT students. In her presentation she offers a comprehensive overview of AAT use, and includes explanations of the differences between pet therapy and AAT, as well as benefits of AAT. This talk is a means to introduce students to AAT, as well as interest them in the possibility of working with AAT in future therapy practices.

Additionally, AAT could also potentially be incorporated into interdisciplinary and SLP therapy at student clinical placements in Corbett Hall. Future possibilities of trialing AAT in placements at Corbett Hall should be discussed within the departments and faculty of Rehabilitation Medicine.

Future Steps for the Field of AAT

As discussed above, the field of AAT is still in its infancy. In order for research to make contributions to this field, studies must remediate the methodological weaknesses in previous AAT efficacy studies. Additionally, the potential impact of the novelty effect needs to be

determined in future research. As suggested by Maber-Aleksandrowicz (2015), futures studies should utilize a randomised control trial approach in order to eliminate confounding factors.

The evaluation of AAT has been difficult due to a lack of standardization of its practice and implementation- its effectiveness is often judged anecdotally (Davis et al., 2015). It is important to move towards a more standardized way of incorporating AAT into therapy to clearly see its effectiveness and judge whether it truly is making a difference for those clients receiving therapy, for both child and adult clients. It is also important to explore the possible stress or anxiety the animals experience during interactions with clients as the research to date suggests that having a calm and relaxed animal would be beneficial to creating the most effective AAT therapy sessions. Looking forward, we foresee the need for more randomized control studies to better evaluate how to best use AAT with populations treated by rehabilitation medicine. This is an area where further research is very much needed.

Conclusion

In this paper, we have reviewed some of the literature on AAT, including its history and attitudes surrounding it, and some of the documented benefits and risks. This led us to create an event to raise awareness and gain experience in the use of AAT in rehabilitation medicine. Our hope is that this event inspired motivation for all rehabilitation medicine departments to consider ways of incorporating AAT into curriculum or perhaps just in the minds of future clinicians.

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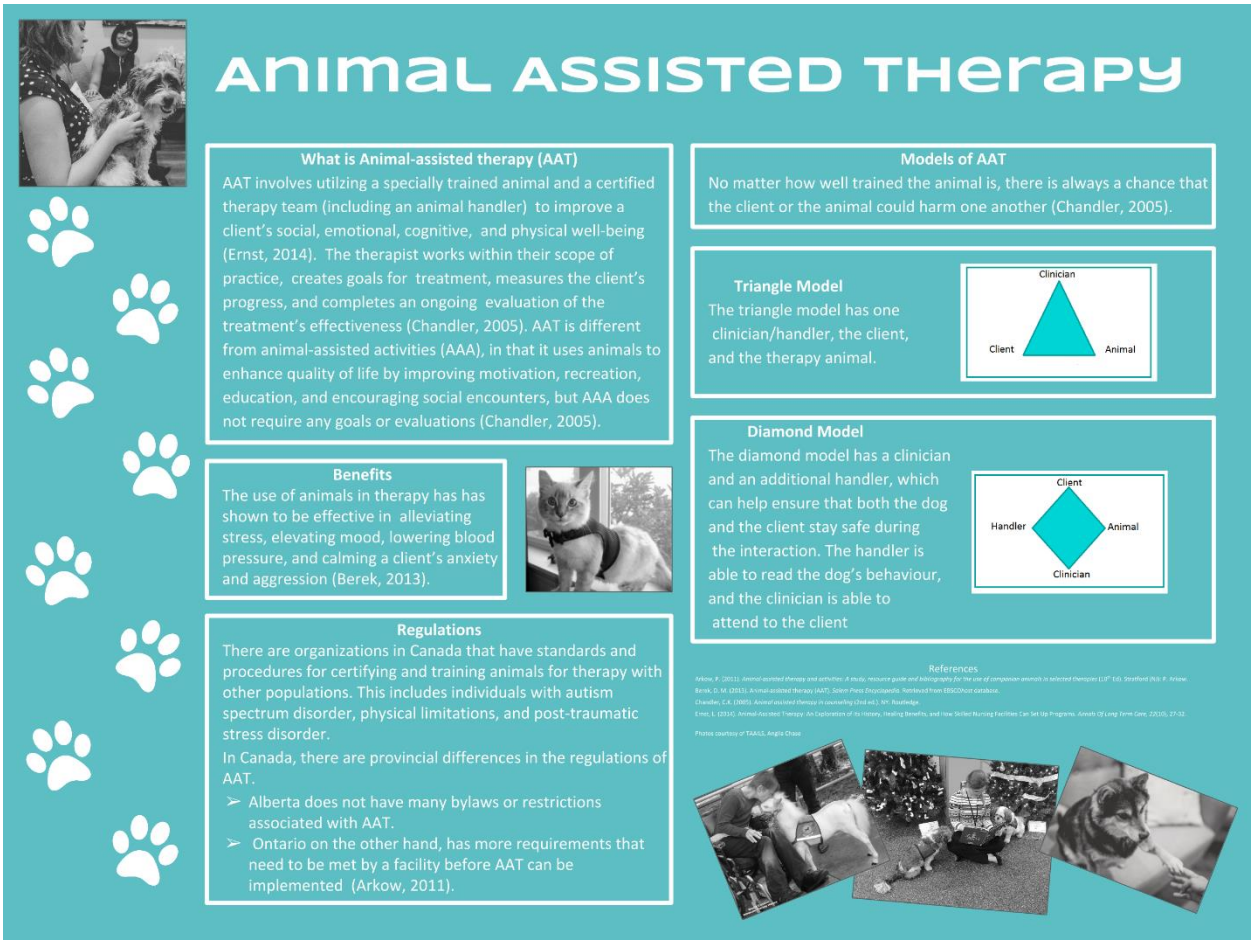
Appendix A

Poster Summarizing Report by "Must Love Dogs"



Appendix B

Script for the SLP Demonstration

Introductions: have everyone introduce themselves.

Today, we would like to show you some sample therapy moments incorporating Animal-Assisted Therapy into speech therapy with an adult with aphasia.

(Jenny remains seated, Shona and I move aside)

Hi, Shona, today I want to introduce you to Jenny. She is a 67-year-old woman who had a left hemisphere stroke 18 months ago and has a diagnosis of Broca's aphasia. Are you familiar with this?

Give Shona info if she desires it. (*Her understanding is relatively intact, and she understands speech quite well, especially if we keep things simple. Her speech is typically less that four words, and she can really struggle to find the words she wants*).

I would really like this next part to be more natural. This is just a sample script, but a back and forth between Shona and me would be ideal.

She has been doing really well in her recovery and is quite mobile, but speech is really taxing for her, and she is often really exhausted during therapy. I know she loves pets, so maybe working with Jasper can make this a little easier for her. Do you mind introducing her to Jasper and showing her his tricks?

Shona could ask what the goal is for the session

Sometimes she finds it too hard to find her words, so my goal here is to motivate her to want to try to speak and also to encourage her to use gestures to support getting her message across.

Shona, Jenny and I role play

(Move back out of scene) What I really love about this goal is that there is such much

opportunity for this to be an interdisciplinary session, perhaps working with a Physical Therapist on the motor aspects of the tricks for some clients.

SCENE 2

Hi, Shona,

Today we will be working with Jen. She is a 58 year old who had a stroke 4 months ago. The language area of her brain has been damaged, but she'll understand you well as long as your speech is clear and simple. We have been working on adding melody to her speech, as music taps into different brain regions which are still intact. This is going really well, but she is uncomfortable practicing in front of people, so I was hoping Jasper would be a great conversation partner for her. We have worked on a lot of functional phrases for her, as one of her goals is to order coffee at her favourite cafe, but when she heard Jasper was coming for a visit she asked if we could sing something just for him.

Jen, let's tap out the tune we were working on before he got here, to the tune of happy birthday. Ready?

Jasper is a puppy, Jasper is a puppy, Jasper is a good puppy, Jasper is a puppy.

Here the three of us can chat about it, how Jasper responds, whether he likes it, how much he likes her voice, etc.

SCENE 3

Hi, Shona,

I have a 75 year old patient today named Jenny-Lynn. She has been suffering with Alzheimer's for a while, and the staff at the home she lives in say she has recently really stopped talking and seems quite withdrawn. I noticed she has a photo of a dog in her room, so thought maybe spending some time with Jasper might help.

(Shona's input)

Jenny-Lynn, this is Jasper and Shona. We three just chat here. The focus is on connection.

Thank you, Jenny, Jasper and Shona for helping us today. This is clearly just a quick sample of goals, and we would like to thank Andrea Ruelling for her suggestions for today. She canvassed her colleagues who work with adults with language difficulties, and provided us with an ample list, including:

- reading goals- where a patient could read aloud to the dog
- apraxia goals at word or phrase level - basic commands to the dog, verb + dog or name
- targeting prepositions - dog can go in, under, on, behind, etc
- connected speech: sentence descriptors of dog, related items, places they can go, places they can't, types of dogs, pros and cons have having
- Writing goals: write a training goal for the dog step by step and attempt to achieve, journaling each interaction opportunity with the dog
- To reduce anxiety with highly anxious clients ; building rapport
- to target social thinking/pretend play
- to target storytelling, making a story about a dog
- movement break within session
- to motivate carry over of functional goals such as using a loud voice

Our takeaway for today is that animal-assisted therapy isn't about changing the way we do things in SLP or just having a cat in the room--it is about enhancing the session to help our clients achieve their current goals, adding that extra motivation to augment what we already do.

Appendix C

Article on the Faculty of Rehabilitation Medicine Website on Dog Day:

Dog Day at U of A showcases benefits of animal assisted Therapy

Everyone knows that dogs can play fetch. But did you know that dogs can be used in rehabilitation? Canines Jasper, Flynn and Macy proved just that at Dog Day today, June 15, hosted by the Faculty of Rehabilitation Medicine's Speech-Language Pathology students in collaboration with students from Occupational Therapy and Physical Therapy, to showcase how animals can be used in rehabilitation.

"Dogs don't just console people, they can also assist therapists in achieving the goals of therapy by helping patients and clients complete exercises as part of their rehabilitation," says Charlotte Smith, first-year MSc Speech-Language Pathology student at the University of Alberta. Smith, alongside five fellow classmates, organized Dog Day as part of their 900 project in the Department of Communication Sciences and Disorders.

Animal-Assisted Therapy (AAT) is currently used in a number of ways, in efforts to help improve clients' social, emotional, physical and/or cognitive functioning. While there hasn't been a lot of research in this area of rehabilitation medicine, there appears to be a lot potential to incorporate AAT into practice. For example, AAT might be used in Speech-Language Pathology with an adult client to encourage communication with the animal directly, or the animal can facilitate conversation between the client and other people.

"I'm very proud of our students for hosting this event and demonstrating how AAT might be used in treatment, be it in Physical Therapy, Occupational Therapy or Speech-Language Pathology," says Teresa Paslawski, associate professor, Department of Communication Sciences and Disorders, who is supervising this project.

Students in Physical Therapy, Occupational Therapy and Speech-Language Pathology attended the event inside Corbett Hall. Students acted as clients and clinicians in 10-minute mock scenarios where Animal-Assisted Therapy could be used. Dog handlers like Linda Shaw were on hand to lead the dogs through each scenario.

But of course, the stars of the event were Flynn, Jasper and Macy, dogs from various AAT certifying agencies such as Chimo Animal Assisted Wellness and Learning Society (CAAWLS) and the Pet Therapy Society of Northern Alberta.

"Flynn is very friendly and likes interacting with people," says Shaw about her Australian Labradoodle. Flynn helped demonstrate how dogs can assist in Physical Therapy treatments by helping clients gain mobility and strength through accompanying them on walks and playing fetch.

Jasper, a Cavalier King Charles Spaniel, showed the crowd how dogs assist Speech-Language Pathologists in providing therapy that encourages clients to speak louder, or repeat phrases.

Macy, a Labrador, showed how a dog can help an Occupational Therapist assist an elderly client who has suffered a stroke with hand mobility by gripping a leash or a brush.

"There is some research that demonstrates that people with dementia who interact with animals are less withdrawn and exhibit fewer agitated behaviours," says Smith, who first became interested in working with dogs because her parents have two search and rescue dogs.

The event also featured booths from the Edmonton Humane Society and the Chimo Animal Assisted Wellness and Learning Society (CAAWLS). Members from the organizations spoke about understanding dog behaviour and how to get dogs certified for AAT.

The 'Must Love Dogs' 900 group, as they informally call themselves, hope the event

expanded people's perceptions of what dogs are capable of. "As Animal-Assisted Therapy is a growing field, we hope that there will be more clinicians interested in using it, and more research exploring its benefits. We hope Dog Day raised awareness around AAT," says Smith.

"The credit for this day really goes to the students - they have taken a lot of initiative and have been extremely positive about this project from the beginning," says Paslawski.

Appendix D
Links to Media Coverage on Dog Day

Global News
http://globalnews.ca/video/2765523/how-dogs-are-helping-patients-with-physical-therapy

Metro News
http://www.metronews.ca/news/edmonton/2016/06/16/students-say-dogs-can-make-a-big-impact-in-rehab-medicine-.html