AN EXAMINATION OF THE STATUS OF EQUINE ASSISTED ACTIVITIES AND THERAPIES IN RECREATION THERAPY

by

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LIST OF ABBREVIATIONS

Abbreviation **Description**

RT - Recreation Therapy or Recreation Therapist
CTRS - Certified Therapeutic Recreation Specialist
NCTRC - National Council of Therapeutic Recreation Certification
ATRA - American Therapeutic Recreation Association
PATH Int-Professional Association of Therapeutic Horsemanship International
EAAT - Equine Assisted Activities and Therapies
EAT - Equine Assisted Therapy
EAA - Equine Assisted Activities
HPOT - Hippotherapy
THR - Therapeutic Horseback Riding
CAM - Complementary and Alternative Medicine

ABSTRACT

Equine assisted activities and therapies are becoming a popular form of complementary and alternative medicine (CAM) in the field of recreation therapy (RT). Equine assisted activities and therapies (EAAT) is a term that encompasses a variety of equine-related interventions such as equine-assisted therapy (EAT), equine-assisted activities (EAA), and hippotherapy (HPOT). EAAT is used as a therapeutic component to improve mental and physical functioning in individuals with various disabling conditions. There is minimal peer reviewed literature and few published studies addressing the use of EAAT in the field of RT. The purpose of this quantitative study was to examine the status of EAAT in RT; specifically, the demographics makeup of EAAT in RT, how RT professionals are currently using EAAT, and the perceived outcomes of EAAT when provided by a certified therapeutic recreation specialist (CTRS). A 30- item survey had a sample size of 56 RT professionals from around the country. Descriptive statistics were utilized to examine relationships between the field of RT and the use of EAAT. Results illustrated that EAAT is being used as a therapeutic modality in the field of RT successfully. This study contributes to evidence-based practice by providing an analysis of current practice that can inform efforts to unify EAAT and RT.

1. INTRODUCTION TO THE STUDY

Chapter one presents an introduction to the status of equine assisted activities and therapies (EAAT) in recreation therapy (RT). Following the introduction, the problem is introduced, and the purpose of the study is defined. The final section of chapter one addresses the aims of the study and the research questions.

Professionals in the field of RT are becoming aware of the use of EAAT as a therapeutic intervention. EAAT includes interventions that use a horse as a therapeutic component to improve mental and physical functioning in individuals with various disabling conditions (Professional Association of Therapeutic Horsemanship International [PATH Int.], 2019). There is evidence to support EAAT as a practical therapeutic approach for multiple diagnoses or conditions, including intellectual disabilities (Ambrozy et al., 2017; Giagazoglou et al., 2013), anxiety (Earles, Vernon, & Yetz, 2015; Holmes, Goodwin, Redhead & Goymour, 2011; Romaniuk, Evans, & Kidd, 2018), post-traumatic stress disorder (Earles et al., 2015; Romaniuk et al., 2018), depression (Earles et al., 2015), stress (Romaniuk et al., 2018), cerebral palsy (Park, Rha, Shin, Kim, & Jung, 2014; Sterba & France, 2002; Winchester, Kendall, Peters, Sears, & Winkley, 2002), attention deficit hyperactivity disorder (Hyun et al., 2016), down syndrome, spina bifida, developmental delay, traumatic brain injury (Winchester et al., 2002), spinal cord injury (Lechner et al., 2003), stroke (Beinotti, Correia, Christofoletti, & Borges, 2010), schizophrenia (Corring, Johnston, & Rudnick, 2010), autism spectrum disorder (Anderson & Meints, 2016; Bass, Duchowny & Liabre, 2009; Hawkins, Ryan, Cory& Donaldson, 2014; Kern et al., 2011; Tan & Simmonds, 2017), and language learning disabilities (Macauly & Guiterrez, 2004). Further, EAAT can promote

participation in recreation, leisure, play, and socialization (Hawkins et al., 2014), as well as improved quality of life, ability to better develop relationships with peers, various perceived physical and mental benefits, an increase in cognitive abilities, development of horse-riding skills (Corring et al., 2010; Elliot, Funderburk, & Holland, 2008; Malkin, Freels, & Gerstenberger, 2011), and overall well-being (Bass et al., 2009).

The Leisure and Well-Being Model (Carruthers & Hood, 2007) provides foundational support for the use of EAAT in the field of RT. The model provides backing for overall well-being as a desired outcome of service. When provided by a certified therapeutic recreation specialist (CTRS), EAAT can create experiences that foster independence, positive functional outcomes, knowledge of leisure resources, and overall improved capabilities of individuals (Bass et al., 2009; Corring et al., 2010; Elliot, Funderburk, & Holland, 2008; Malkin, Freels, & Gerstenberger, 2011). Additional research is needed to develop stronger evidence for the use of EAAT as a prescriptive activity in combination with RT.

Statement of the Problem

There is a lack of literature on EAAT, more specifically that relates to RT (Hawkins et al., 2014). There is limited evidence about the total number of EAAT programs that exist, the terminology and standards that are used, criteria for the use of EAAT as a therapeutic intervention, who can be a EAAT provider, functional outcomes of EAAT when employed by a RT professional, and the populations it serves. Most of the information that exists has been reported through anecdotal accounts and case studies from therapists, families, and clients who have experienced a form of EAAT (Hawkins et al., 2014).

Purpose of the Study

Evidence-based practice is necessary in the field of RT to improve services and inform practitioner judgment in selecting effective programs and modalities (Buettner & Fitzsimmons, 2007; Skalko, 2012; Stumbo & Pegg, 2010). Thus, the purpose of this study is to examine the status of EAAT in RT. The information provided from the current research could help shape future studies and validate evidence-based practice for the use of EAAT within RT. This study is needed in the field of RT to provide new research about complementary and alternative medicine (CAM) in an actively growing profession, and to contribute to the need for evidence-based practice in the field. A significant and growing trend in American health care is the integration of CAM (Osterlund & Beirne, 2001). Styles of alternative treatment, such as EAAT are evolving and emerging rapidly. RT professionals require a vast array of resources when planning and implementing therapy as no two clients have the same needs or leisure interests. EAAT can provide another intervention for prescriptive practitioner use.

Research Questions

1. What are the demographics behind the use of equine assisted activities and therapies in recreation therapy?
2. How are recreation therapy professionals currently using equine assisted activities and therapies?
3. What are the perceived outcomes, if any, of equine assisted activities and therapies, when provided by a recreation therapist?

Assumptions

This study evolved from the following assumptions:

1. EAAT is being provided by RT professionals in the field.
2. The EAAT that is being provided by RT professionals in the field is not being documented or measured effectively; therefore, it is not contributing to evidence-based practice and little support is linking EAAT to RT.
3. RT professionals can adequately provide EAAT.
4. The terminology in the survey was familiar to participants answering the questions.
5. Participants have vested interest in answering the survey questions to establish credibility for this therapeutic modality in the field of RT.
6. The survey questions elicited the information they were intended to.

Limitations and Scope of Study

Not all equine providers and programs were represented in the data. Some of the respondents did not answer all of the questions on the survey particularly related to demographic information; this created gaps in the available data. Additionally, the survey was not distributed to every EAAT provider in the country. Due to the nature of this study being a broad examination that focused on the status of EAAT in RT, the actual success of EAAT was not specifically investigated.

Definition of Terms

There is little to no uniformity amongst the professional bodies when describing EAAT and the terminology it encompasses (Anderson & Meints, 2016). Professionals in relevant fields conduct different types of EAAT and use the horse's instincts and

movements to promote functional changes in the populations they serve (Maclean, 2011). The programmatic aspects of EAAT are associated with several functional outcomes. Understanding each programmatic element can become complicated. Therefore, the definitions of terms are distinguished below.

Professional Association of Therapeutic Horsemanship International (PATH Int.): PATH Int. is the national body responsible for certifying the use and application of horses for therapeutic work, as well as the credentialing, accreditation, and certification of instructors, equine specialists, and equine centers. It is a high-quality professional membership organization that advocates for EAAT and provides standards for safe and ethical equine interaction, through education, communication, standards, and research (PATH Int., 2019).

Equine Assisted Activities (EAA): PATH Int. (2019), recognizes EAA as any activity that includes a horse (i.e., therapeutic riding, mounted or ground activities, grooming and stable management, shows, parades, demonstrations, and more).

Equine Assisted Therapy (EAT): PATH Int. (2019), recognizes EAT as a treatment that incorporates equine activity and the equine environment. In EAT rehabilitative goals are individualized to fit the patients' needs and the medical professional's standards of practice.

Hippotherapy (HPOT): The American Hippotherapy Association Incorporated, (2019), recognizes HPOT as a treatment that uses equine movement in correlation with physical, occupational, and speech therapists to address impairments, functional limitations, and disabilities in patients with neuromotor and sensory dysfunction.

Therapeutic Riding (THR): THR is a form of EAA and is recognized by PATH Int. (2019), as a treatment that contributes to the cognitive, physical, emotional, and social well-being of individuals with ranging abilities.

II. LITERATURE REVIEW

Chapter Two of this thesis explores existing literature about RT, the Leisure and Well-being Model (Carruthers & Hood, 2007), and various components of EAAT. The literature review includes subsections to analyze existing studies as they pertain to the problem, purpose statement, aims of the study, and research questions. The existing literature has been reviewed for evidence-based support and existing themes relevant to the status of EAAT in RT.

Recreation Therapy (RT)

Recreation therapy is defined by the American Therapeutic Recreation Association (ATRA, 2019, p.2) and the National Council of Therapeutic Recreation Certification (NCTRC, 2019, p.2), as a "*systematic process that utilizes recreation and other activity-based interventions to address the assessed needs of individuals with illnesses or disabling conditions, as a means to improve psychological and physical health, recovery and well-being*." According to (NCTRC, 2019, p.2),

> *Recreational therapy includes, but is not limited to, providing treatment services and recreation activities to individuals using a variety of techniques including arts and crafts, animals, sports, games, dance and movement, drama, music, and community outings. Recreational therapists treat and help maintain the physical, mental, and emotional well-being of their clients by seeking to reduce depression, stress, and anxiety; recover basic motor functioning and reasoning abilities; build confidence; and socialize effectively.*

Through this, the RT profession plays an important role in supporting clients to create a life of meaning, in spite of their challenges and limitations (Carruthers & Hood, 2007).

RT is provided in a variety of settings where the therapeutic process is used and is provided by a qualified professional known as a CTRS (ATRA, 2019; NCTRC, 2019). Recreation therapists are healthcare providers who plan, direct, deliver, and evaluate recreation-based interventions for individuals with illnesses and/or disabling conditions. They provide evidence-based interventions that are based on client assessments and targeted client outcomes (ATRA, 2019). A CTRS uses assessment, planning, implementation, evaluation, and documentation (APIED) to provide support for best practice and evidence-based interventions to the individuals they serve (ATRA, 2019; NCTRC, 2019). Requirements to become a CTRS include a bachelor's degree or higher from an accredited university, an extensive internship, and passing a national competency exam (ATRA, 2019; NCTRC, 2019; Stumbo, Carter, Wilder, & Greenwood, 2012).

RT is known not only for its creative use of resources, but also its openness to collaboration, use of holistic approaches, and the overall positive outcomes that it provides (Anderson & Heyne, 2012). RT is individualized to each person by his or her past, present, and future leisure interests and lifestyle choices (ATRA, 2019). Recreation therapy professionals weave together health, well-being, and the treatment process to not only improve overall functioning but also to enhance independence and successful involvement in all aspects of life (ATRA, 2019). Recreation and leisure are the foundation of positive change for a high quality of life and have historically been the core of the RT profession (Anderson & Heyne, 2012).

RT is enhanced by using a strengths-based approach versus a deficit approach to better individualize the therapeutic process for people with various abilities and needs. Using a strengths-based approach allows for RT professionals to understand people in the

context of their daily lives as well as their potential future environment (Anderson & Heyne, 2012). The Leisure and Well-Being Model advocates for the use of strength orientation in two main areas of RT practice: enhancing the leisure experience and developing a range of resources (Carruthers & Hood, 2007).

The Leisure and Well-Being Model

The Leisure and Well-Being Model (Carruthers & Hood, 2007) is a service delivery model of RT practice. It provides both theoretical support for RT as a therapeutic modality and has adopted well-being as the desired outcome of service. Service delivery models are essential to the RT profession as they ground practice in theory and research and provide a framework for practitioners. The leisure and well-being model can help assist professionals in determining the desired outcomes of clients and suggest methods for attaining those outcomes. In recent years, health and human service fields, such as RT, have made the shift from primarily focusing on the deficit approach to client ability or the strengths-based approach. The focus of this new style is to increase the cultivation of strengths, interests, and capacities of individuals and move toward overall well-being. This model can further develop and support the field of RT by guiding and developing meaningful research initiatives that will lead to evidence-based practice (Carruthers & Hood, 2007).

The Leisure and Well-Being Model is based on the idea of Keyes and Lopez, as stated in Carruthers and Hood (2007), that the resolution of one's problems will not result in positive effect or personal growth, which are identified as core dimensions of well-being. Instead, the model proposes that it is necessary to facilitate experiences that increase positive emotion and development of the resources and capabilities of the

individual that support overall well-being. Thus, the Leisure and Well-Being Model, with a foundation in strengths-based practice can foster a positive partnership relationship between therapist and client. That partnership relationship can promote feelings of hope, inspire change, validate client experiences, and support clients in their overall therapeutic experience (Carruthers & Hood, 2007).

Well-being is defined by Pollard and Rosenberg, in (Carruthers & Hood, 2007, pg. 280), "*as a state of satisfying and productive engagement with one's life, as well as the realization of one's cognitive, social-emotional, and physical potential*". Many factors affect and contribute to one's overall well-being, including physical geography, cultural heritage, environment, socioeconomic status, personality, family status, structure, and others. Well-being is identified as a long term or distal goal of RT practice.

Well-being is a relevant concept for RT practice as it encompasses the domains of cognitive functioning, behavioral functioning, physical health, and mental health (Carruthers & Hood, 2007). These domains are particularly important to address when working with clients who have disabilities, chronic conditions, or illnesses. People with such conditions can create the best life possible by maximizing their capacity in multiple domains of life.

Animal-Assisted Therapy

The therapeutic relationship between humans and animals has existed for over 12,000 years (Morrison, 2007). The term animal-assisted therapy refers to the use of animals in a therapeutic setting and is the founding practice from which EAAT originated (Bass et al., 2009). The effects that animals have on humans have been well documented. According to the International Association of Human- Animal Interaction Organizations

(IAHAIO, 2014), as defined in Hallyburton and Hinton (2017), animal-assisted intervention is goal-oriented, and incorporates animals in health, education, and human service (i.e., Recreation Therapy), for therapeutic improvement in humans. Animal-assisted interventions are indicated for, but not limited to, people of all ages, genders, people who need improvement in mood, motivation, self-esteem, physical and psychological wellbeing (Morrison, 2007). Treatment using animal-assisted therapy has been shown to benefit cognitive, psychological, physical, and social domains. The use of animals in the promotion of functional outcomes and overall improved health is long-standing (Fine & Mio, 2006). Studies suggest that animal-assisted therapy can lower blood pressure, heart rate, and decrease anxiety levels (Morrison, 2007). The field of RT uses animal-assisted interventions as a treatment modality to aid clients in diverse care needs such as physical and psychological (Hallyburton & Hinton, 2017).

Therapeutic Value of Horses

The therapeutic value of horses may be attributed to many variables. Horses tend to respond to the emotional state of individuals and can work as a mirror for human emotion, therefore, they can pick up on changes in a human's body language and emotional state (Schultz, Remick-Barlow, & Robbins, 2007). While humans communicate verbally and nonverbally through eye contact and facial expressions, animals (i.e. horses) make their behavioral intentions clear through non-verbal communication (Prothmann, Ettrich, & Prothmann, 2009). Horses used as a therapeutic tool can encourage client awareness of their own interpersonal style, and how that style affects the responses of the people around them (Boshoff et al., 2015). Behavioral and evolutionary biologists have indicated that there are many universal mechanisms that

underly social behavior in humans and animals, enabling relationships to evolve and eventually affecting human social behavior (Beetz, Kotrschal, Uvnas-Moberg, & Julius, 2011). Some mechanisms that underly social behaviors between humans and horses include: biophilia, which is the tendency for humans to connect to other living things, or attachment, which is a bi-directional connection between humans and animals and may be some of the reason therapy involving horses is so beneficial (Acri et al., 2016).

Equine Assisted Activities and Therapies (EAAT)

Equine Assisted Activities and Therapies is an umbrella term that encompasses a variety of equine-related interventions such as EAT, EAA, and HPOT (Gabriels et al., 2012; PATH Int., 2019; Rigby & Grandjean, 2016). EAAT can be coupled with other therapeutic modalities, although there is a precedent for EAAT as a stand-alone treatment (Acri et al., 2016). EAAT represents many effective interventions for improvement in various domains (Boshoff, 2015; Hyun et al., 2016; PATH Int., 2019).

History. The ancient Greeks used horses for transportation and as a means of improving health and well-being for people with various disabilities (Hallberg, 2008). Hippocrates was the first to describe horseback riding as a form of rehabilitation, calling horseback riding '*universal exercise*' (Hardy, 2011, p.5). The term EAAT came later, in the 1990s, although similar activities have been around for decades (Kersten & Thomas, 2005). After the 1960s forms of EAAT were recognized as an alternative therapy method and have since been included in the German, Swiss, Austrian, English, and Dutch medical systems (Bilba, 2015). In 1969, in order to standardize the growing EAAT industry, the North American Riding for the Handicapped Association (NARHA) was established (Engel, 1997), and is now known as PATH Int. (Masini, 2010).

Outcomes. The inclusion of horses within the therapeutic process fosters growth and change in persons who have decreased or limited function in one or multiple cognitive, psychological, emotional, social, and physical domains (Boshoff, 2015; Hyun et al., 2016). EAAT is associated with benefits such as improvement in social functioning (Bass et al., 2009), empathizing, behavior, coping, and well-being (Boshoff et al., 2015), and in sensory seeking and attention (Gabriels et al., 2012). EAAT is also associated with increased physical functioning such as, adaptive and motor skills, decreased irritability, and hyperactivity (Hyun et al., 2016). Interacting with horses can be a positive experience that leads to increased overall well-being, and eventually enhancements in cognition, psychological functioning, emotional functioning, social functioning (Bass et al., 2009), and physical functioning (Hyun et al., 2016; Pendry et al., 2014; Winchester et al., 2002).

Forms of EAAT can promote improved outcomes in cognition. Such as enhancements in mental health and mental health functioning (Pendry et al., 2014), improved behavior among children with behavioral problems (Boshoff et al., 2015), improved behavior among children with autism spectrum disorder (ASD), improvements in sensory seeking behavior, and inattention- distractibility (Bass et al., 2009), decreased irritability, hyperactivity, improved social communication, and enhanced verbalizations (Bass et al., 2009). EAAT is linked to improvements in understanding of memory, knowledge of the horse, safety, eye contact, self-confidence, mastery of control, and behavioral control (Gabriel, 2012).

In addition, EAAT can promote improved outcomes in the psychological, and emotional domains. The therapeutic environment coupled with the horse encourages development of empathy, patience, relationship building skills, communication, self-

esteem, and facilitates change from behavioral function patterns to functional behavior patterns (Boshoff et al., 2015). For instance, EAAT significantly improved people's subjective well-being, problem-focused coping skills, and emotional focused coping skills (Boshoff et al., 2015). Personal well-being consists of emotional responses, domain satisfactions, and general satisfaction with one's life, subjective well-being is correlated with cognitive appraisal of life satisfaction and overall life fulfillment (Dierner, Suh, Lucas, & Smith, 1999). As reported in supporting literature, EAAT supplied participants with a source of emotional support, unlike other interventions. EAAT also works to empower clients in a safe and accepting environment (Boshoff et al., 2015).

Equally important, EAAT can promote improved outcomes in the social domain. EAAT can increase speech output, speech complexity, improve focus, improve speech-related skills, improve oral-motor function, and improve language accuracy (Bilba, 2015). Forms of EAAT have been found to improve individual levels of social support (Boshoff et al., 2015). EAAT facilitates social improvements due to the horse's behavioral response giving direct feedback to the individual, allowing for a better social understanding, and self-awareness (Gabriels et al., 2012).

Equine assisted activities and therapies can additionally promote improved outcomes within the physical domain. Use of EAAT has resulted in improvement in various physical aspects such as muscle strength, balance, and body posture. A reason for this could be that horses provide a unique neuromuscular stimulation in the form of rhythmic motion that mimics a human gate, while promoting the following: balance, coordination, and flexibility, by motor learning and sensory integration (Hyun et al., 2016). Hyun and colleagues (2016), also reported clinical symptoms and gait balance

were improved in children with ADHD after four weeks of EAAT. Interactions between horse, rider, and therapist combined with the therapeutic benefits of working with a horse can lead to improved trust, self-esteem, muscle tone, strength, flexibility, posture, coordination, and balance (Borzo, 2002). Individuals receiving EAAT with physical disabilities often show improvement in multiple ways such as flexibility, balance, and muscle strength (Hyun et al., 2016; Rigby & Grandjean, 2016).

Lastly, EAAT may be exceptionally well suited for people with neurological disorders, who frequently present with motor, cognitive, and social disabilities (Bass et al., 2009). EAAT has been proposed as an alternative therapy for diagnoses including ADHD, autism, and schizophrenia (Hyun et al., 2016). One symptom of ASD is the fixation with rigid object-oriented routines. Interaction with a horse demands a high level of physical and active engagement, which can help create a new, ever changing and stimulating environment. During most EAAT sessions, participants are responsible for listening to directions, verbalizing commands to their horse, and completing activities such as identifying horse anatomy. Programmatic aspects of EAAT require participants to engage in the intervention actively and maintain a certain level of involvement (Bass et al., 2009). Bass and colleagues (2009) also found that participants with ASD demonstrated a sustained level of focus and attention after riding that is not generally seen within this population. A highly structured intervention like EAAT, as previously explained, could captivate participants' attention, which in turn leads to a sustained level of focus. The stimulation through working with horses is different than other forms of therapy, the distinctive stimuli can encourage participants to break away from any previous routine (Bass et al., 2009). Animal-assisted activities such as EAAT, provide a

multisensory environment that is beneficial to children with profound social and communication deficits, and neurological disorders (Bass et al., 2009). Tan and Simmonds (2017) interviewed parents about the outcomes of equine-assisted interventions with their children with ASD. Parents described the warm social behaviors that their children demonstrated toward the horse, and parents related those social behaviors to themes of friendship and connection between their child and the horse. Kern (2011) reported reductions in behaviors associated with ASD after just three months of equine therapy.

In addition to the benefits that equine assisted activities and therapies have on various human domains, horses also provide recreational opportunities for individuals with disabilities to enjoy the great out of doors (PATH, 2019). EAAT facilitates healing and feelings of normality, particularly among individuals with disabilities; EAAT is a distraction from distressing emotions and experiences (Acri et al., 2016). The horse and the horse environment play equally important roles when used as a therapeutic modality.

Recreation Therapy and Equine Assisted Activities and Therapies

Recreation therapy interventions are designed to address impairments in cognitive, psychological, emotional, social, and physical domains (ATRA, 2019; NCTRC, 2019). RT professionals can use EAAT as a prescriptive activity to decrease symptoms and behaviors associated with various disabilities and chronic conditions (Hallyburton & Hinton, 2017). Participation in recreation activities and leisure is an integral part of everyday life. Recreation and leisure have the power to help people feel good about their lives and allow them to further their well-being through positive life changes (Anderson & Heyne, 2012). People with a disability may experience limited

access to recreation and leisure resources and possess fewer tools to negotiate those limitations. Wise (2010) conducted a longitudinal study on adults with moderate to severe TBI (n=160) and found that at one year, 81% of the participants did not return to pre-injury levels of leisure engagement and around 60% of participants were severely bothered by this change. They reported a reduction of almost 50% in the number of leisure activities post-injury, along with an increase in more isolative home-based, non-social activities, and engagement in fewer sports and outdoor activities. Considering the reviewed literature, it is evident that the provision EAAT with RT could support engagement in meaningful recreation activities and promote positive outcomes in cognitive, psychological, emotional, social, and physical domains.

Certified therapeutic recreation specialists in combination with EAAT can maximize therapeutic effects and functional outcomes for people with disabilities, while promoting overall well-being. The refinement of standards and progression in service delivery within the RT profession over the years provides evidence that RT continues to evolve with the changes in health care, technology, research, and funding (Richard, 2016). Based on RTs scope of practice, knowledge of therapeutic interventions/ modalities, and overarching definition the CTRS credential makes recreation therapy professionals more than qualified to provide EAAT. Outcomes can be developed, driven and structured through the use and knowledge of the Leisure and Well-being Model (Carruthers & Hood, 2017).

III. METHODS

As described in chapter 1, the following research questions were addressed: (1) What are the demographics behind the use of equine assisted activities and therapies? (2) How are recreation therapy professionals currently using equine assisted activities and therapies? (3) What are the perceived outcomes, if any, of EAAT, when provided by a recreation therapist? Utilizing the theoretical constructs of the reviewed literature, as well as the practices outlined by ATRA (2019), NCTRC (2019) and PATH Int. (2019) to guide implementation, the purpose of this study was to examine the status of EAAT in RT. This chapter describes the conceptual framework, instrumentation, data collection, and data analysis in the study.

Research Design

This study utilized a quantitative research design (Creswell, 2018). More specifically this study used a web-based descriptive rating and likert type survey. A rating survey instrument allows participants to feel familiarity with the topic and allows the researcher to make comparisons amongst the respondents using descriptive statistics. Surveys provide methods to discover psychological relationships, variable frequency and prevalence (Wright, 2017). Web-based surveys have many benefits such as: being more cost effective than other options, providing a way to reach otherwise difficult geographical populations, the ability to have specifically designed data collection capability, and the option to forgo face to face contact; which can provide a higher level of confidentiality (Wright, 2017). Disadvantages, according to Wright (2017) include potential inaccuracy of validity and sampling, because it is nearly impossible to survey an entire population or to address all possible content. Therefore, the overall content validity

and the degree in which the population is represented become concerns of the researcher. Wright (2017), also expressed the importance of paying special attention to sampling, design, confidentiality, response rates, and distribution methods. In the design of this survey specific care was taken to have direct questions, an easy to read format, familiar terminology from both EAAT and RT, and questions that were arranged logically. The objective of this study was to determine the status of EAAT in RT, by gathering information from current programs and providers.

Research Participants

The target population in this study were RTs that had provided equine assisted activities and therapies for at least one year. Specific inclusion criteria for this study required that individuals: (a) have graduated from their accredited university program in RT or related services; (b) hold a CTRS certification or equivalent license for a minimum of one year; (c) self-report using EAAT as a current intervention; and (d) have had over one year of experience using EAAT as a therapeutic intervention. This study was not age, gender, ethnically, or religion specific. Prospective participants were excluded from participating in this study if they did not meet the above criteria.

Sampling

For the purpose of the study both convenience sampling and snowball sampling were used. While the survey was shared on multiple chosen platforms it was also shared amongst a group of professionals that network widely. The sampling design was convenient in nature, due to the researcher choosing the platforms in which the survey was shared. The researcher took special care to choose platforms that had a wide range of RTs from all over the country. Participants were solicited using only two specific

platforms; therefore, excluding the many RT equine service providers that were not members of the chosen platforms. Participants did not receive incentives for participation; however, they were aware that participating in this study helps educate and advocate for the future use of EAAT as a therapeutic intervention in the field of RT.

Instrumentation

The instrument used in the present study is a survey designed specifically to explore the status of EAAT in RT (see Appendix A). The survey was designed by the researcher based on available literature that examined current EAAT programs, on the authors experience working with horses as a therapeutic modality, as well as the viewpoint of other RTs currently using EAAT in the field. The survey was reviewed for face validity by the thesis committee, which was made up of three Texas State University faculty members who have extensive research experience, and two of which hold a CTRS certification. Two pilot surveys were sent to two different CTRS EAAT providers at SOAR Therapeutic Riding Center in San Marcos, Texas. The revisions made to the survey were to better clarify and represent the intended data goals.

The survey went through various phases of revision and clarification. The first phase (content validity) involved designing questions based off of available resources such as, the NCTRC Job Analysis (2014), current literature, and EAAT programs and providers. The goal of this phase was to create questions that would illicit responses to successfully answer the research questions. The NCTRC Job Analysis (2014), works as a benchmark for the profession in its ability to routinely monitor its own practice through self-regulation, and enables the profession of RT to safeguard consumers by deciding who is competent to implement service. Demographic questions were similar to that of

the NCTRC Job Analysis (2014), to allow the participants to feel familiarity with the topic and terminology and to also create validity in the survey instrument. The second phase of the survey development involved creating more program specific questions about the use of EAAT in the field of RT. During this phase EAAT providers were asked to pilot the current survey and pay special attention to wording of the EAAT questions. The third phase of the instrument involved the editing and revision of the survey questions and the overall formatting of the web-based tool (Qualtrics). All of these phases were supported by the thesis committee.

The survey included 30 questions and took approximately 10-15 minutes to complete. The survey was divided into multiple sections for easier understanding; (a) provider demographic characteristics, (b) EAAT characteristics, (c) reported outcomes of EAAT , and (d) patient/ client demographic characteristics.

Data Collection

Data was collected through the use of Qualtrics. Qualtrics was used to build the survey, create a reusable link to share amongst participants, collate data, and check response rates. Following IRB approval (see Appendix B) the survey was distributed on the following platforms: RecreationalTherapylistserv, Texas CTRS Network, and through professional networking (email). The researcher received written permission by the owner/manager of both platforms (see Appendix C). A brief description about the researcher and the goal for the study was added to the platform and shared by email with the survey link to attract participants (see Appendix D). The survey was designed to allow only one response per IP address, therefore not allowing duplicate responses. It was also designed to require participants to fill out a consent form (see Appendix E) in order

to move to the start of the survey. Instructions for each question were placed with each survey question for easy completion. Once respondents completed and closed the survey, the answers were retained and protected under the researcher's university account on Qualtrics.

Data Analysis

Data analysis was done using Qualtrics for initial computations. SPSS (version 25.0) was used to run descriptive statistics, specifically frequencies and percentages. The survey data is primarily nominal and ordinal; thus, frequencies and percentages were measured.

IV. RESULTS

The results of this study were guided by the following research questions: (1) What are the demographics behind the use of equine assisted activities and therapies in recreation therapy? (2) How are recreation therapy professionals currently using equine assisted activities and therapies? (3) What are the perceived outcomes, if any, of equine assisted activities and therapies, when provided by a recreation therapist? This chapter will explain the survey method used and the overall findings. This section will be broken into subsections specific to the research question in which the data relates. This descriptive information is critical to the credibility of EAAT in RT because there is little known in regard to the use of EAAT for therapeutic interventions in the field of RT.

Survey Method

Participants in the study were targeted on the following two platforms: RecreationalTherapylistserv and Texas CTRS Network. RecreationalTherapylistserv is an electronic mailing list that distributes messages to RT professionals all over the country. The listserv currently has 718 members. The Texas CTRS Network is a social media page on Facebook that has 673 members, who are all RTs in the state of Texas. The survey was also shared through professional networking and distributed over email with interested parties. In total the survey was available to 1,391 recipients from the two platforms and 5 people by email, but it is important to note that the actual number of recipients that are CTRS EAAT providers within the sample was unknown, and the number of duplications of participants being on both sites is also unknown.

The participants clicked on the embedded link in the invitation and were brought directly to a consent form. Once the required consent form was complete participants

were then directed to the first page of the survey. Participants who decided not to participate in the study after clicking the embedded link were allowed to opt out of the survey at any time. The survey was closed exactly four weeks after the first invitation was sent. A reminder message was shared on both platforms at the two week mark. All respondents completed a consent form and were members of either the RecreationalTherapylistserv or Texas CTRS Network.

Missing data. Missing values were uncommon in the data collected and accounted for less than 5% of the responses. The respondents who did not answer a question were not included in the analysis of that particular question. Although, not included in the analysis for the question they failed to answer; they were still included in the subsequent analysis of other questions. Participants were not excluded from the study if they answered at least 50% of the survey. Only 3 participants failed to answer at least 50% of the survey.

Research Question # *1:* *What are the demographics behind the use of equine assisted activities and therapies in recreation therapy?*

Basic provider demographic information. The total number of participants in the study was 56 people (n=56). Of these, 5 participants did not meet the required criteria to participate in the study as evidence by not having completed education related to RT (n=1), no longer holding a CTRS certification (n=1), and/or did not make an effort to complete the survey questions (n=3). Of the remaining 51 participants that met the required criteria 94.1% (n=48) were female, while 5.9% (n=3) were male see table 1.

The ages of participants in the study varied; 11.8% (n=6) of participants were 18-24 years old; 43.1% (n=22) of participants were 25-34 years old; 25.5% (n=13) of

participants were 35-44 years old; 7.8% (n=4) of participants were 45-54 years old, and 11.8% (n=6) participants were over 55 years old see table 1.

Participants were primarily white (non-Hispanic) totaling 92.2% (n=47), while 3.9% (n=2) were black/ African American, and 3.9% (n=2) of participants were Hispanic/ Latino, (see Table 1) for additional participant ethnicity information. Participants in the study were from all over the country, primarily residing in the Southwest at 31.4% (n=16), and Northwest regions at 27.5% (n=14); while, 9.8% (n=5) of participants selected the "other" option and put the following: "Illinois", "Pacific West", and "Midwest", see table 1 for additional participant region information.

When participants were asked of the approximate population of where they worked, a total of 37.3% (n=19) participants selected a population of less than 100,000 people with only 17.6% (n=9) stating they worked in a city with over 1 million people; while, 2% (n=1) selected the "other" option and put the following: "less than 10,000 people", (see Table 1) for additional participant population information.

Specific provider demographic information. The primary level of education varied; however, most respondents reported having a bachelor's degree totaling 72.5% (n=37); with 19.6% (n=10) of participants reported having a master's degree, and 7.8% (n=4) reported having a Doctorate degree.

When asked how long participants had held a CTRS certification 33.3% (n=17) answered 1-3 years, and 25.5% (n=13) answered 10 or more years, see (Table 2) for additional information regarding how long participants have held a CTRS certification.

The current employment status of participants varied, but 76.5% (n=39) of participants answered full-time RT/TR; while 9.8% (n=5) answered part time RT/TR;

3.9% (n=2) used the “other” option and answered, “volunteer part-time” and “not currently employed as a TR, but as a PATH CTRI”. See additional employment status information in table 2.

When asked what type of employment best describes the participants current position, 25.5% (n=13) answered non-government employee; 15.7% (n=8) answered federal government employee; 9.8% (n=5) answered state, provincial or local government employee; 23.5% (n= 12) answered consultant/ contractual employee; 17.6% (n=9) answered private practice or independently owned agency employee, and 7.8% (n=4) used the “other” option reporting the following: “community nonprofit”, “therapeutic riding instructor” and “student”.

When asked what their primary employment sector was 19.6% (n=10) answered hospital; 3.9% (n=2) answered skilled nursing facility; 11.8% (n=6) answered residential/ transitional; 2% (n=6) answered human services; 23.5% (n=12) answered community parks and recreation; 5.9% (n=3) answered disability organization; 2% (n=1) answered school; 3.9% (n=2) answered outpatient/ day treatment program, 27.5% (n=14) used the “other” option answering: “private practice”, “community based”, “community waiver”, “therapeutic riding”, “therapeutic horse riding”, “adaptive sports”, “community nonprofit”, “therapeutic riding instructor”, “outpatient rehab”, “student” and “direct care for kids with disabilities”.

Research Question # 2: *How are recreation therapy professionals currently using equine assisted activities and therapies?*

RT professionals in this study were asked how long they had been providing equine services and a total of 23.5% (n=12) reported using EAAT for 1-3 years; while the

majority 29.4% (n=15) reported providing EAAT for 6-9 years; 9.8% (n=5) reported using equine services for over 12 years, and 3.9% (n=2) used the "other" option both stating "20+ years".

As mentioned previously, people use different terms to describe the equine service they provide. When respondents were asked what terminology they use for their services 21.6% (n=11) reported using "EAAT"; 17.6% (n=9) reported using "EAT"; 37.3% (n=19) reported using "THR"; 7.8% (n=4) reported using "equine therapy", and 15.7% (n=8) selected the "other" option and reported, "adaptive riding" and "equine assisted learning". See table 3 for additional details about terminology reported.

In addition, participants were asked if they held any certifications related to EAAT, a total of 52.9% (n=27) of participants declared that they do not hold any equine related certification; however; 35.3% (n=18) of participants reported holding a PATH Int. certification. Other certifications that RTs held were an Equine Facilitated Mental Health Association certification and an Equine Assisted Growth and Learning Association certification. See Table 3 for additional EAAT certification information.

Also, participants were asked how they design their equine sessions through programming, by selecting all that apply, 33.3% (n=17) participants develop select protocols; 52.9% (n=27) total participants utilize activity task analysis; 56% (n=28) respondents select adaptions/ modifications/ assistive technology or equipment for patient/ clients; while 11.7% (n=6) use existing agency programming for all clients. Some of the modifications/ assistive technology that participants reported were " rainbow reins, side walker support, and ramp to mount", "communication boards", "special saddle and rainbow reins", "adapting riding equipment for specific needs".

Participants were also asked how they implement their EAAT sessions, 27.5% (n=14) respondents implement group treatment sessions. While, 21.6% (n=11) of participants reported implementing individual treatment sessions, and 51% (n=26) reported implementing both group and individual treatment sessions.

Finally, participants were asked about the therapist makeup during their EAAT sessions, 52.9% (n=27) total participants reported being the only therapist providing EAAT during the session, while 25.4% (n=13) reported co-treating with another CTRS. CTRS EAAT providers also reported co treating with disciplines such as social workers, physical therapists, occupational therapists and speech and language pathologists.

Research Question # 3: *What are the perceived outcomes, if any, of equine assisted activities and therapies, when provided by a recreation therapist?*

RT professionals were asked if they achieved outcomes through the use of their EAAT services, a total of 78.4% (n=40) participants responded “definitely yes”; 11.8% (n=6) responded “might or might not”; and 9.8% (n=5) responded “probably yes”. See table 4 to view additional results.

Also, respondents were asked to identify what specific perceived outcomes they achieved when providing EAAT, if any, by selecting all that apply. A total of 72.5% (n=37) of participants identified increased physical functioning; 72.5% (n=37) identified increased cognitive functioning; 84.3% (n=43) identified increased social functioning, and 92.1% (n=47) identified increased positive emotion/ behavior, all as achieved outcomes of EAAT when provided by a CTRS. A total of 3.9% (n=2) selected the other option and stated, “Increase in riding skills and increase in developmental assets” and

"decrease in PTSD symptoms", see (Table 4) for a further breakdown of perceived outcomes providers achieved through the use of EAAT.

Equally important, participants were asked how they evaluate the outcomes they reported achieving, if any. A total of 29.4% (n=15) reported determining effectiveness of the individualized intervention plans; while 21.5% (n=11) participants reported revising individualized intervention plans; 68.62% (n=35) reported that they evaluate changes in patient/ client functioning, and 21.5% (n=11) evaluate through determining effectiveness of the protocols/ programs. See table 4 for a breakdown of the ways RT professionals are evaluating achieved outcomes of EAAT.

Participants in the study were asked what best represents the assessment process they use within their equine service, a total of 84.3% (n=43) respondents reported using an agency developed assessment tool; while 11.7% (n=6) respondents reported using standardized assessment tools such as: "Perceived Stress Scale" (Cohen, Kamarck, & Marmelstein, 1983), WHOQOL-BREF (World Health Forum, 1996), GAD-7 (Spitzer, Kroenke, Williams, & Löwe, 2006), PCL-5 (Weathers et al., 2013), Beck Depression Inventory (Beck & Beamesderfer, 1974), Brief COPE (Carver, 1997) , and the PROMIS Global Health Assessment (PROMIS Health Organization, 2008. A total of 2% (n=1) participant reported that assessment is not a part of their equine service; while, 2.9% (n=2) of participants stated, "I am not the one assessing these individuals" and " I use the information from the governing agency".

In relation to how RT professionals assess and evaluate the outcomes, participants were asked how they document their services. A total of 31.4% (n=16) of participants reported they document their services through the use of progress notes obtained by

themselves; while, 7.8% (n=4) of participants reported using the following to document their services: progress notes maintained by themselves, attendance/ participation by patient/ client, behavioral outcomes of patient/ client observation.

V. DISCUSSION

Introduction

This section will address the findings of the study and how they were interpreted by the researcher. Also included is a discussion of limitations that were present in this study, practice implications, and recommendations for future research.

In reviewing the demographic profile of the respondents, consistency of findings were noted; specifically, in comparison with the NCTRC Job Analysis Report (2014). Evidence in the NCTRC Job Analysis Report (2014) reported that 88% (n=2669) of participants were female and 11.4% (n=344) were male. Since the inception of the field of RT it has been primarily female driven, this held true in the current study with a total of 94.1% (n=48) of respondents being female, and only 5.9% (n=3) being male.

In addition, the ethnic background of participants in this study was also similar to that of the NCTRC Job Analysis (2014). The NCTRC Job Analysis (2014) reported 86.9% (n=2608) were White (non- Hispanic), while 6.2% (n=187) were Black/ African American, and 2.9% (n= Hispanic/ Latino). In the current study a total of 92.2% (n=47) participants in this study reported being White (non-Hispanic).

The findings in this study also concluded that participants were from many regions all over the country, but primarily reported being from the Southwest at 31.4% (n=16); due to one of the platforms consisting of just RT professionals from Texas, it would make sense that a large portion of the sample was from the Southwest. In addition, a large number of respondents reported working in a geographic area with less than 100,000 people. One participant even reported " less than 10,000". Horses are large animals and require an abundance of room for grazing, exercise and daily maintenance. It is likely that

respondents were generally from more rural areas of the US. Equally important, 72.5% (n=37) participants reported having a bachelor's degree from an accredited program. In order to be certified as a CTRS you are required to hold a bachelor's degree (NCTRC, 2019), so it was likely that the number of people with a bachelor's degree would outnumber respondents with other degrees such as a masters or doctorate degree. In recent years, the profession has decided to remain at an entry level bachelors degree to practice (ATRA, 2019).

There were significant findings throughout this study to establish evidence that the APIED process is being used by RTs who use EAAT as a therapeutic modality. RTs use assessment, planning, implementation, evaluation, and documentation (APIED) to provide support for best practice and evidence-based interventions to the individuals they serve (ATRA, 2019; NCTRC, 2019). There is also a significant relationship between the top job tasks reported in NCTRC Job Analysis (2014), and the job tasks identified in this study. For instance, in both studies participants reported conducting assessments, developing select protocols and utilizing task analysis, monitoring effectiveness in interventions/ programs, evaluating changes in functioning and documenting services. The APIED process is especially crucial to promote and provide evidence based practice. RT professionals in both the NCTRC Job Analysis (2014), and the current study, were able to identify other disciplines with which to co-treat with such as physical therapy, speech and language pathology, social work, and occupational therapy. The Lesiure and Well-Being Model (Carruthers & Hood, 2007) credits RT in the ability to openly collaborate with others. Collaboration with other disciplines can foster a greater

understanding from others of what RT does, as well as encourage new and growing interventions.

In addition, a total of 84.3% (n=43) respondents in the current study reported using an agency developed assessment tool for their equine services. Assessment is an important part of the RT process. Standardized assessments are formal tests that are administered and scored in the same way for all patients and provide objective data to determine a patient's abilities and level of functioning (Griswold, 2014). Agency developed assessment tools may not match the validity and reliability of a standardized assessment tool, which can inturn affect the overall validity and reliability of reported results. This finding is significant, as it could provide evidence that RTs are not doing what they can to establish evidence-based practice using EAAT as a therapeutic modality. This brings specific attention for the need of assessment tools in the field of EAAT that can be utilized by a CTRS. Participants identified a number of standardized assessments they used, however each participant listed a different assessment. This may provide evidence that there is little to no standardized tool to fit the needs of EAAT RT providers. Further, over half of the listed assessments were created prior to the year 2000, making each over 20 years old. As RTs continue to work in the area of EAAT it is imperitive that standardized assessments be developed. Intitial findings in the assessment can be used to determine the baseline of function for the patient/ client. The baseline can direct the development of the plan for therapeutic intervention. To build support for RT professionals as EAAT providers, valid and reliable findings are essential.

Participants were asked how they program for their equine sessions, most participants utilized activity task analysis 52.9% (n=27) and selected adaptions/ modifications/

assistive technology or equipment for patient/ clients 56% (n=28), all of which are positively identified as job task domains by NCTRC Job Analysis (2014). Some of the modifications/ assistive technology that participants reported were " rainbow reins, side walker support, and ramp to mount", "communication boards", "special saddle and rainbow reins", "adapting riding equipment for specific needs". As identified by Carruthers & Hood (2007), the Leisure and Well-Being Model proposes that it is necessary to facilitate experiences that increase positive emotion and development of the resources and capabilities of the individual that support overall well-being. Through creativity and standards of practice, RTs can adapt and modify horseback riding and equivalent horse activities to provide endless resources and experiences for patients/ clients that lead to overall well-being.

In addition, participants were asked how they implement their EAAT sessions, 27.5% (n=14) respondents implement group treatment sessions. While, 21.6% (n=11) of participants reported implementing individual treatment sessions, and 51% (n=26) reported implementing both group and individual treatment sessions. Group and individual sessions were also identified as job task domains in NCTRC Job analysis (2014).

Based on the reported results from CTRS EAAT providers, participants are using the following to evaluate EAAT and their services: determining effectiveness of individualized intervention plans, revising individualized intervention plans, evaluating changes in patient/ client outcomes and determining effectiveness of protocols and programs. In addition, a total of 31.4% (n=16) of participants reported documenting their services through the use of progress notes obtained by themselves and 7.8% (n=4) of

participants reported using the following to document their services: progress notes maintained by themselves, attendance/ participation by patient/ client, behavioral outcomes of patient/ client observation. CTRS EAAT providers are utilizing the same job task domains as practitioners in other service settings (Carter and Van Allen, 2011).

Significant findings were attained in regard to the perceived outcomes of EAAT provided by a CTRS. A majority of participants reported achieving desired outcomes through the use of EAAT, 78.4% (n=40) participants responded "definitely yes" to achieving outcomes; 11.8% (n=6) responded "might or might not"; and 9.8% (n=5) responded "probably yes". Perceived outcomes included improvement in physical, social, cognitive and emotional domains as well as behaviors related to specific diagnostic groups such as ASD and PTSD. As stated in the Leisure and Well-being Model (Carruthers & Hood, 2007) there are many dimensions that contribute to the overall well-being of a person but the realization of one's full physical, social, emotional and cognitive potential plays a significant role. The model embraces the complexity of human functioning through those same domains. These domains are particularly important to address when working with clients who have disabilities, chronic conditions, or illnesses. People with such conditions can create the best life possible by maximizing their resources and capabilities in all domains of life, and this is being met through EAAT services in recreation therapy. Identification of outcomes addressed in EAAT is start to identifying asessments that might be used or developed. Outcome meaurements can be used to determine the level of service provided and can provide a common language with which to evaluate the success of therapy interventions amoung healthcare professionals.

Many of the outcomes that RT address with clients are in the area of psychosocial domain, as indicated by the identified assessments in this study.

In addition, within the field of EAAT, there is an ambiguity of terminology. Specifically, terms such as “THR” “and “HPOT that have historically been used interchangeably, despite the known understanding that these are two distinctly different treatment strategies that target different client outcomes (PATH Int., 2019). The variation in terminology creates a grey area as to how equine providers should not only market their services but what they can and cannot provide based on their scope of practice and the terminology used. This makes it especially difficult for practices like RT that offer such a broad range of services and focus on the whole human body. The variety of names used by participants in this study show that RTs have not arrived at a definitive title for EAAT provided in our services. A first step in establishing ourselves as EAAT providers is to determine which of the many types of EAAT are most alighed with our scope practice.

Similarly, the findings in this study suggest that over 50% of RTs who provide EAAT services are not acquiring a related certification. The approval of respected organizations such as PATH Int. (2019), ensures that the professional has obtained the skills and understanding to effectively handle any challenge a patient/client may impose on him or her. The accrediting entity also ensures the practicing individual has sufficient knowledge of EAAT and reliable knowledge of horse related challenges. Accrediting bodies are able to provide a competency based test and provide endless support and resources for practitioner use (PATH Int, 2019). With no related training or certification

RT providers of EAAT may be leaving themselves vulnerable to to being perceived as unqualified.

In this study, the Leisure and Well-Being Model (Carruthers & Hood, 2007) a service delivery model of RT practice, was used as framework to provided theoretical support for RT as a therapeutic modality and determined well-being as the desired outcome of service. In addition, the model may help assist RTs in determining the desired outcomes of clients and suggest methods for attaining those outcomes. Well-being is a relevant concept for RT practice as it utilizes the domains of cognitive functioning, behavioral functioning, physical health, and mental health (Carruthers & Hood, 2007). These domains are particularly important to address when working with clients who have disabilities, chronic conditions, or illnesses. People with such conditions can create the best life possible by maximizing their capacity in multiple domains of life. With the Leisure and Well-Being model guiding RT practice and using a horse as a therapeutic modality there is built a potential to foster overall well-being.

Limitations

The nature of conducting a study to determine the status of EAAT in RT inherently involves certain limitations. First, this is a very broad topic, because of the broadness surrounding this subject it was difficult to refine aims for the study and determine the research questions. There were no other studies similar to this found in the literature review by this researcher. This made it challenging to develop the foundation for this research as a master's thesis. Overall, having no estimate as to how many recreation therapists across the nation may be using horses in their practice, there was no prediction of how many people might respond. Similarly, at the conclusion of this study

there is no indication of what percentage of RT providers of EAAT services received or responded to this survey. Excluded were practitioners who did not hold a membership to the platforms used for survey distribution or were unknown to the researcher. By excluding these populations, the status of EAAT in RT that emerged from this data is a snapshot of the respondents and a first step in better understanding EAAT in RT, but is in no way generalizable for inferential.

Similarly, the variance of terminology provided limitations in the study as equine providers unknowingly use a name for their services that may not match the actual services they are providing. This made it difficult to determine what services and activities RTs were actually facilitating, if the terminology choice matched their services, and what outcomes they were targeting. When conducting the literature review, in the early stages of the study, the term EAAT was chosen as the primary term because of the fact that it is the umbrella term for all equine interventions (PATH Int., 2019), but also because of the lack of literature regarding any kind of equine therapy. Due to the lack of literature regarding EAAT, specifically literature related to RT (Hawkins et al., 2014), the all-encompassing term of EAAT was chosen to ensure the most results, but because of this it made filtering the literature difficult. EAAT as detailed by PATH Int. (2019), and explained in earlier chapters, as a term that is broken down into two distinct definitions EAT and EAA, which is then broken down into further terms. HPOT is not a service we as recreation therapist are currently able to provide, as it is provided by physical therapists, occupational therapists, and speech and language pathologists (PATH., 2019). Articles in the literature review were carefully selected to include only ones that referenced “EAAT” or terms such as “THR” versus articles that only referenced

"HPOT". This was done to to ensure I was referencing information more closely related to RT's scope of practice and the needs of our clients and patients.

Throughout this study, PATH Int. (2019) was used as a foundational support and many participants in this study. However, PATH Int. does not does not recognize a RT as a qualified provider eligible to seek their specialized certification. It comes as no surprise that based on this and the lack of RTs with a specialized certification in EAAT, that we need to continually advocate for our profession and the services we provide. RT's scope of practice and the foundation of our services provide a level of justification for the growth of EAAT services within recreation therapy.

Practical Implications

Horses have been used for thousands of years, in various modes for different populations; all of which have enhanced the lives of people (Fine & Mio, 2006). This study is one of the first to explore the status of EAAT in RT. As such, this study can be the foundation for further research. The current study illustrates that EAAT is being used successfully in the field of RT. The use of EAAT when provided by a RT has the ability to increase positive outcomes and experiences within clients. RT is responsible for using the horse as a catalyst to facilitate goal oriented strength-based treatment. Previous research and the current study identify misconceptions regarding who can provide the various forms of EAAT. RTs can advocate for the use of EAAT in the field. They can also advocate for the ability to provide other forms of this modality by emphasizing the scope of RT within EAAT. In addition, RT professionals can provide stronger evidence for the success of EAAT when linked with RT by using valid and credible assessments, conducting continued research, providing influential data, and measurements of improved

patient/ client outcomes. Each study undertaken in this field contribute to more change and allow a greater connection between RT and EAAT to flourish.

Future Research

Future studies are endless, there is an obvious need for studies involving the use of EAAT when employed by a RT. It would be most insightful to explore what perceived benefits EAAT furnishes for people with disabilities, when provided by a RT. It would be especially critical to focus on the various domains of the human body: physical, cognitive, emotional and spiritual, and how those are affected by the use of the horse and horse environment. Further, actual measurements of perceived benefits would provide insight for RTs and other related health professionals, as well as provide additional clinical support for the use EAAT as a therapeutic intervention.

Future research may also incorporate qualitative methodology to capture the personal dimension of both practitioner and client lived experience (Creswell, 2012). Research in EAAT is desperately needed to relate client factors such as measured functional outcomes, personal experience and overall wellbeing to recreation and leisure. There is little known about the true breadth of EAAT within the field of RT, further studies should focus on more specific aspects of how EAAT is being used in RT.

Summary

This study has provided an examination of the status of EAAT in RT. Findings suggest that RTs are in a position to blend evidence-based practice, CAMS, and prescriptive activity through EAAT to meet the functional needs of people with various disabilities and illnesses. Overall, there is support here to validate the status of EAAT in RT. While few past studies linked EAAT with RT this study provided many examples of

how EAAT is successfully being used in the field. There is great opportunity to expand on the vision of EAAT in RT.

Tables

Table 1. *Basic Provider Demographic Characteristic.*

Participant Characteristics		Frequency (n=51)	Percentage (%)
Gender			
	Male	3	5.9
	Female	48	94.1
Age			
	18-24 years old	6	11.8
	25-34 years old	22	43.1
	35-44 years old	13	25.5
	45-54 years old	4	7.8
	Over 55 years old	6	11.8
Ethnicity			
	White (non- Hispanic)	47	92.2
	Hispanic/ Latino	2	3.9
	Black/ African American	2	3.9
Region			
	North Central	2	3.9
	Southeast	6	11.8
	Northeast	2	3.9
	Southwest	16	31.4
	South Central	6	11.8
	Northwest	14	27.5
	Other	5	9.8
Population Density			
	1 Million or More	9	17.6

Table 1. Continued

	250,000-299,999	12	23.5
	100,000-249,999	10	19.6
	Less than 100,000	19	37.3
	Other	1	2.0

Table 2. *Specific Provider Demographic Characteristics*

Participant Characteristics	Frequency (n=51)	Percentage (%)
CTRS Certification (years)		
1-3	17	33.3
4-6	9	17.6
7-9	10	19.6
10 or more	13	25.5
Other	2	3.9
Employment Status		
Full time in RT/TR	39	76.5
Part time in RT/TR	5	9.8
Part time in RT/TR, full time at agency	1	2.0
Full time educator	1	2.0
Full time not in RT/ TR	1	2.0
Retired	1	2.0
Not Employed	1	2.0
Other	2	3.9

Table 3. *EAAT Information*

EAAT Information	Frequency (n=51)	Percentage (%)
Terminology		
EAAT	11	21.6
EAT	9	17.6
THR	19	37.3
Equine therapy	4	7.8
Other	8	15.7
Certifications		
No EAAT certification	27	52.9
PATH Int.	18	35.3
Other	6	11.7

Table 4. *Reported Outcomes of EAAT*

EAAT Outcomes	Frequency (n=51)	Percentage (%)
Outcomes Achieved		
Definitely yes	40	78.4
Might or might not	6	11.8
Probably yes	5	9.8
Outcomes		
Increased cognitive functioning	37	72.5
Increased social functioning	43	84.3
Increased positive emotion/ behavior	47	92.1
Increased physical functioning	37	72.5
Other	2	3.9
Evaluation of Outcomes		
Determine effectiveness of individualized intervention plan	15	29.4
Revise individualized intervention plan	11	21.5
Evaluate changes in patient/ client outcomes	35	68.62
Determine effectiveness of protocols and programs	11	21.5

APPENDIX SECTION

Appendix A

Quantitative Survey Questions

Provider Demographic Characteristics

1. Please specify your gender.

- Male
- Female
- Other: _____
- Prefer not to answer

2. Please specify your age.

- 18-24 years old
- 25-34 years old
- 35-44 years old
- 45-54 years old
- Over 55 years old
- Prefer not to answer

3. Please specify your ethnicity.

- White (non-Hispanic)
- Hispanic/ Latino
- Black/ African American
- Native American/ Alaskan Native
- Asian/ Pacific Islander
- Multi-racial/ Multi-ethnic
- East Indian
- Other: _____
- Prefer not to answer

4. In what region do you reside?

    - North Central
    - Southeast
    - Northeast
    - Southwest
    - South central
    - Canada
    - Northwest
    - Other: _____
    - Prefer not to answer

5. What is the population of the city (metro area), which you work?

    - 1 million or more
    - 250,000 to 999,999
    - 100,000 to 249,999
    - Less than 100,000
    - Other: _____
    - Prefer not to answer

6. What is the highest degree or level of school you have completed? If currently enrolled, mark the highest degree earned.

    - Bachelor's degree
    - Master's degree
    - Professional degree
    - Doctorate degree
    - Other: _____
    - Prefer not to answer

7. How long have you held the CTRS certification or equivalent license?

- Less than 1 year
- 1-3 years
- 4-6 years
- 7-9 years
- 10 or more years
- Other: _____
- I do not hold a CTRS certification or equivalent license
- Prefer not to answer

8. What is your current employment status in RT/TR?
    - Full time in RT/TR
    - Part time in RT/TR
    - Part time in RT/ TR, full time at agency
    - Full time educator
    - Full time not in RT/ TR
    - Not employed
    - Retired
    - Other: _____
    - Prefer not to answer

9. Which type of employment best describes your current position?
    - Non-government employee
    - Federal Government employee
    - State, provincial or local government employee
    - Consultant/ contractual employee
    - Private Practice/ independently owned agency employee
    - Other: _____
    - Prefer not to answer

10. What is your primary employment Sector?

    - Hospital
    - Skilled Nursing Facility
    - Residential/ transitional
    - Human Services
    - Community Parks & Recreation
    - Correctional
    - Disability Organization
    - School
    - Adult Day Program
    - Outpatient/ day Treatment Center
    - Other: _____
    - Prefer not to answer

EAAT Characteristics

11. How long have you been using equine services as a recreation therapy professional?

    - Less than 1 year
    - 1-3 years
    - 3-6 years
    - 6-9 years
    - 9-12 years
    - Over 12 years
    - Other: _____

12. Did you provide equine services before you held the CTRS certification or equivalent license?

    - Yes
    - No

13. What form of terminology do you use to reference the equine services you provide?

    - Equine assisted activities and therapies (EAAT)

- Equine assisted therapy (EAT)
- Equine assisted activities (EAA)
- Equine therapy
- Therapeutic riding
- Hippotherapy (HPOT)
- Other: _____
- I do not use any form of equine assisted activities and therapies
- Prefer not to answer

14. Please select the equine related certification(s) that you hold, and mark what year you achieved it.
    - Professional Association of Therapeutic Horsemanship International (PATH Int.)
        - Date (year): _____
    - Equine Facilitated Mental Health Association (EFMHA)
        - Date (year): _____
    - Equine Facilitated Psychotherapy & Learning (EFPL)
        - Date (year): _____
    - American Hippotherapy Association Incorporated (AHA Inc.)
        - Date (year): _____
    - Equine Assisted Growth and Learning Association (EAGALA)
        - Date (year): _____
        - Other:_____
        - I do not hold an equine related certification
15. How many hours a week do you provide equine services?
    - Less than 5 hours
    - 5-10
    - 10-15
    - 15-20
    - 20-25

- 25-30
- 30-35
- 35-40
- More than 40 hours
- Other: _____

16. How are clients referred or recommended to you for your equine services? Mark all that apply.
    - Physician referral
    - Rehabilitation specialist (therapist)
    - A current client/ family member of a current client
    - Social media
    - School
    - Residential Provider
    - Insurance company
    - Government Agency
    - Other: _____
    - The referral is not for equine services specifically; based on the assessment, I choose equine services as an intervention for the client
17. What is the typical length of your equine session?
    - 15 minutes
    - 30 minutes
    - 45 minutes
    - 60 minutes
    - Other: _____
18. When you provide equine services, which of the following best describes the therapist makeup of the session? Mark all that apply.
    - Me as the only therapist (alone)
    - Co- treat with another CTRS

- Co- treat with Social Worker
- Co- treat with Speech and Language Pathologist
- Co- treat with Physical Therapist
- Co- treat with Occupational Therapist
- Co- treat with Nurse
- Co- treat with Doctor
- Other: _____

19. How do you receive payment for your service? Mark all that apply
    - Insurance
    - Third party (government agency)
    - Out of pocket pay
    - Other: _____
20. What best represents the assessment process you use during your equine services?
    - Standardized Assessment Tool
        - If you use a standardized assessment tool, please list which one:

          _____
    - Agency developed assessment tool
    - Use assessment information received from referral agency only
    - Other: _____
    - Assessment is not part of our services
21. How do you design your equine sessions? Mark all that apply
    - Develop select protocols
    - Utilize activity/ task analysis
    - Select adaptions/ modifications/ assistive technology
        - If you use adaptions/ modifications/ assistive technology, please give an example:

          _____
    - We use existing agency programming for all clients (the same programming for all clients)

- Other: _____
- Programming is not part of our equine services

22. How do you execute your equine services? Mark all that apply.
    - Implement individual treatment sessions
    - Implement group treatment sessions
    - Other: _____

Reported Outcomes of EAAT

23. Are you achieving desired outcomes through the use of equine assisted activities and therapies?
    - Definitely yes
    - Probably yes
    - Might or might not
    - Probably not
    - Definitely not
24. If you are achieving desired outcomes through the use of equine assisted activities and therapies, which outcomes do you use equine services for? Mark all that apply.
    - Increased physical functioning
    - Increased cognitive functioning
    - Increased social functioning
    - Increase in positive emotion/ behavior
    - Other: _____
    - None of the above
25. How do you evaluate the outcomes of your equine services? Mark all that apply.
    - Evaluate changes in patient/ client functioning
    - Determine effectiveness of individualized intervention plan
    - Revise individualized intervention plan
    - Evaluate for additional/ alternative/ discharge of services

- Determine effectiveness of protocols/ programs
- Other: _____
- Evaluation is not part of our services

26. What type(s) of documentation do you use during your equine services? Mark all that apply.
    - Progress notes maintained by equine service provider (myself)
    - Progress notes submitted to 3rd party or referral agency
    - Attendance/ participation by patient/ client only
    - Behavioral/outcome of patient/ client observation
    - Occurrences with patient/ client related to risk management
    - Document protocols
    - Document program effectiveness
    - Other: _____
    - Documentation is not part of our services

Patient/ Client Demographic Characteristics

27. For the clients that you use equine services for, approximately what percentage of your treatment time with each client is equine related?
    - 100%
    - 75%
    - 50%
    - 25%
    - 0%
    - Other: _____
28. With what client population do you typically use equine services with? Mark all that apply.
    - Behavioral/ Mental health
    - Developmental Disabilities
    - Geriatrics
    - Physical medicine and rehabilitation/ Physical Disabilities

- Other: _____

29. What is the primary age group you serve using equine services?

    - Children
    - Children/ Adolescent
    - Adolescent
    - Adult
    - Adult/Older Adult
    - Older Adult
    - All Age Groups
    - Other: _____

30. What is the primary level of service in which you provide equine service?

    - Long term care
    - Acute care
    - Rehabilitation care
    - Community
    - Residential care
    - Sub-acute care
    - Education
    - Home health care
    - Other: _____

Appendix B

Texas State University IRB Approval

TEXAS STATE UNIVERSITY

The rising STAR *of Texas*

In future correspondence please refer to 7000

February 12, 2020

Logan Miller
Texas State University
601 University Drive
San Marcos, TX 78666

Dear Logan Miller:

Your IRB application titled "*Examination of the Status of Equine Assisted Activities and Therapies in Recreation Therapy*" was reviewed and approved by the Texas State University IRB. It has been determined that risks to subjects are: (1) minimized and reasonable; and that (2) research procedures are consistent with a sound research design and do not expose the subjects to unnecessary risk. Reviewers determined that: (1) benefits to subjects are considered along with the importance of the topic and that outcomes are reasonable; (2) selection of subjects is equitable; and (3) the purposes of the research and the research setting is amenable to subjects' welfare and producing desired outcomes; that indications of coercion or prejudice are absent, and that participation is clearly voluntary.

1. In addition, the IRB found that you need to orient participants as follows: (1) informed consent is required; (2) Provision is made for collecting, using and storing data in a manner that protects the safety and privacy of the subjects and the confidentiality of the data; (3) Appropriate safeguards are included to protect the rights and welfare of the subjects. (4) Compensation is not provided for participation.

This project is therefore approved at the Exempt Review Level
Category 2 Surveys, Interviews, or Public observation

2. Please note that the institution is not responsible for any actions regarding this protocol before approval. If you expand the project at a later date to use other instruments, please re-apply. Copies of your request for human subjects review, your application, and this approval, are maintained in the Office of Research Integrity and Compliance.

Report any changes to this approved protocol to this office. All **unanticipated events and adverse events are to be reported to the IRB** within 3 days.

Sincerely,

Monica Gonzales
IRB Specialist
Office of Research Integrity and Compliance

CC: Dr. Janet Hodges

OFFICE OF RESEARCH AND SPONSORED PROGRAMS
601 University Drive | JCK #489 | San Marcos, Texas 78666-4616
Phone: 512.245.2314 | *fax:* 512.245.3847 | WWW.TXSTATE.EDU

Appendix C

Platform Permission Letters

CITY OF ALLEN

January 15, 2020

Subject: Permission Letter

To Whom It May Concern:

My name is Tori Thibodeaux, I am the Admin and Founder of the Texas CTRS Network (Facebook Group). I am writing to let you know that I am granting Logan Miller full permission to post her study, "The Examination of the Status of Equine Assisted Activities and Therapies in Recreation Therapy" in the form of a survey to the Texas CTRS Network on Facebook. I understand that by signing this document that our resources will be used for research purposes.

If you have any further questions, please contact me at tthibodeaux@cityofallen.org or 214-509-4822.

Sincerely,

Tori Thibodeaux, BSRA, CTRS

ALLEN CIVIC PLAZA • 305 CENTURY PARKWAY • ALLEN, TEXAS 75013-8042
214.509.4100
EMAIL: coa@cityofallen.org

School of Kinesiology, Applied Health & Recreation

180 Colvin Center Stillwater, Oklahoma 74078
TEL: (405) 744-9337 FAX: (405) 744-6507

January 23, 2020

Subject: Permission Letter

To Whom It May Concern:

My name is Tim Passmore, I am the Professor at Oklahoma State University and manager of the RecreaitonalTherapylistserv.

I am writing to let you know that I am granting Logan Miller full permission to post her study, "The Examination of the Status of Equine Assisted Activities and Therapies in Recreation Therapy" in the form of a survey to platform. I understand that by signing this document that our resources will be used for research purposes.

If you have any further questions, please contact me at tim.passmore@okstate.edu.

Sincerely,

Tim Passmore, Ed.D., CTRS/L, FDRT
Professor
Immediate Past-President, American Therapeutic Recreation Association
Chair Therapeutic Recreation Committee of the Oklahoma Board of Medical Licensure & Supervision
Fellow, Distinguished in Recreational Therapy
Area Coordinator Recreation Management & Recreational Therapy
Graduate Coordinator Leisure Studies
School of Kinesiology, Applied Health, & Recreation
College of Education, Health & Aviation
Oklahoma State University

Appendix D

Invitation Verbiage

*Attention** Seeking CTRSs (or equivalent license) who use horses in recreation therapy services OR know a CTRS who does.

My name is Logan Miller I am a master's student at Texas State University, as part of my thesis project I am conducting a study about how recreation therapists use horses as a therapeutic tool. I am looking for professionals to take this quick survey or share it amongst your friends who meet the above criteria.

Through this study I am hoping to learn how equine therapy is being used in our profession. There is quite a bit of research about equine therapy or the use of horses as a therapeutic modality; however, very little to none of that research is about recreation therapist's practice.

Below is the link to the short survey. I would really appreciate your participation! And, remember if you do not use horses, I welcome your sending this to professionals you know who do. Thank you!

https://txstate.co1.qualtrics.com/jfe/form/SV_eyN3zgJk39ad6bX

Appendix E

Texas State University Approved Consent Form

INFORMED CONSENT

Study Title: Examination of the Status of Equine Assisted Activities and Therapies in Recreation Therapy

Principal Investigator/ Faculty Advisor:

Dr. Jan S. Hodges

Co-Investigator: Logan G. Miller

Dr. Jan S. Hodges

Email: jh223@txstate.edu

Phone: 1-(512)-245-2561

Logan G. Miller

Email: Lgm69@txstate.edu

Phone: 1-(989)-370-2781

This consent form will give you the information you will need to understand why this

research study is being done and why you are being invited to participate. It will also describe what you will need to do to participate as well as any known risks, inconveniences or discomforts that you may have while participating. We encourage you to ask questions at any time. If you decide to participate, you will be asked to sign this form and it will be a record of your agreement to participate. We will provide you a copy of this form to keep per your request.

PURPOSE AND BACKGROUND

You are invited to participate in a research study to learn more about how recreation therapy professionals are using equine assisted activities and therapies. The information gathered will be used to advance the knowledge of recreation therapy professionals on equine assisted activities and therapies as it applies to alternative medicine, evidence-based practice and best practice in the field of recreation therapy. You are being asked to participate because you completed a survey about the status of equine assisted activities and therapies in recreation therapy and have expressed interest in a follow-up interview by sharing your email with us.

PROCEDURES

If you agree to be in this study, you will participate in the following:

- 30- minute interview
- We will set up a time for you to meet Logan at Texas State University or set up a time complete the interview over the phone.
- You will complete a 30-minute interview about how you use equine assisted activities and therapy as a recreation therapy professional.

RISKS/DISCOMFORTS

The survey will include a section requesting demographic information. Due to the demographic questions listed in the survey, the combined answers of these questions may make an individual person identifiable. We will make every effort to protect participants' confidentiality. However, if you are uncomfortable answering any of these questions, you may leave them blank. At the end of the survey, you will be asked if you voluntarily want to participate in a brief interview. If you consent to the brief interview an email address will be requested. The email addresses will be protected and will remain anonymous.

In the event that some of the survey or interview questions make you uncomfortable or upset, you are always free to decline to answer or to stop your participation at any time. Should you feel discomfort after participating and you are a Texas State University student, you may contact the University Health Services for counseling services at list 1-(512)-245-2208. They are located in the LBJ Student Center on campus.

If you are not a Texas State Student, you may contact the National Counseling center at 1-(281)-305-3067. They are located at 11999 Katy Freeway Suite 150R Houston, Texas 77079.

BENEFITS/ALTERNATIVES

There will be no direct benefit to you from participating in this study. However, the information that you provide help educate and advocate for the future use of equine assisted activities and therapies as a therapeutic intervention in the field of

recreation therapy

EXTENT OF CONFIDENTIALITY

Reasonable efforts will be made to keep the personal information in your research record private and confidential. Any identifiable information obtained in connection with this study will remain confidential and will be disclosed only with your permission or as required by law. The members of the research team, and the Texas State University Office of Research Compliance (ORC) may access the data. The ORC monitors research studies to protect the rights and welfare of research participants.

Your name will not be used in any written reports or publications which result from this research. Data will be kept for three years (per federal regulations) after the study is completed and then destroyed.

PAYMENT/COMPENSATION

You will not be paid for your participation in this study.

PARTICIPATION IS VOLUNTARY

You do not have to be in this study if you do not want to. You may also refuse to answer any questions you do not want to answer. If you volunteer to be in this study, you may withdraw from it at any time without consequences of any kind or loss of benefits to which you are otherwise entitled.

QUESTIONS

If you have any questions or concerns about your participation in this study, you may contact the Co-Investigator, Logan Miller: 1-(989)-370-2781 or Lgm69@txstate.edu

This project was approved by the Texas State IRB on [02/12/2020]. Pertinent questions or concerns about the research, research participants' rights, and/or research-related

injuries to participants should be directed to the IRB Chair, Dr. Denise Gobert 512-716-2652 – (dgobert@txstate.edu) or to Monica Gonzales, IRB Regulatory Manager 512-245-2334 - (meg201@txstate.edu).

DOCUMENTATION OF CONSENT

I have read this form and decided that I will participate in the project described above. Its general purposes, the particulars of involvement and possible risks have been explained to my satisfaction. I understand I can withdraw at any time.

By completing the survey, you are giving your consent to participate in this study. Please click the button below that states, "I do consent" and you will be directed to the survey. Please answer all questions to the best of your ability, remembering that your answers are confidential and anonymous.

☐ I do consent

*However, if you do not consent to participate in this study about the status of equine assisted activities and therapies in recreation therapy, please use the back button to exit the survey.

Your participation in this research project may be recorded using audio recording devices. Recordings will assist with accurately documenting your responses. You have the right to refuse the audio recording. Please select one of the following options:

I consent to audio recording:

Yes☐ No ☐

*However, if you do not consent to participate in this study about the status of equine assisted activities and therapies in recreation therapy, please use the back button to exit the survey.

Thank you for your participation in this study. Your input will contribute to moving the field of TR/RT forward. -Logan Miller

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