

## **Equine-Assisted Learning in Mental Health Care: A Natural Fit with Recreation Therapy?** *Literature Review*

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### **Abstract**

This integrative literature review is primarily focused on the use of animal-assisted therapy (AAT) and equine-assisted learning (EAL) within health and mental health care settings. The findings of the review provide recreation therapists with specific information related to the current use and benefits experienced by a variety of patient populations participating in AAT and EAL as treatment modalities. While many of the studies realized positive outcomes, limitations to the study outcomes and gaps in the literature are addressed. The findings substantiate both AAT and EAL as promising practices, focused on quality of life (QoL) outcomes within health and mental health care services. The secondary focus of the review explores the possibility of a conceptual link between AAT, EAL, recreation therapy, and psychosocial rehabilitation purpose statements and goals; a shared purpose was found under the goal of improved QoL for patients. With this shared purpose, the discussion proposes recreation therapists as potential EAL facilitators within mental health care settings, and recommends further inclusion and research of AAT and EAL in general. Implications for recreation therapy practice are considered and include the challenges, cautions, and benefits of incorporating EAL certification into practice.

*Keywords: animal-assisted therapy, equine-assisted learning, mental health care, psychosocial rehabilitation, recreation therapy, therapeutic recreation*

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## Equine-Assisted Learning in Mental Health Care: A Natural Fit with Recreation Therapy?

### Introduction

Integrative literature reviews provide an examination of current literature that is reviewed, critiqued, and summarized, thereby creating innovative viewpoints and perceptions regarding specific areas of interest (Torraco, 2005). This integrative literature review is primarily focused on analyzing the current state of literature regarding the global use of *animal-assisted therapy* (AAT) and *equine-assisted learning* (EAL) within health and mental health care settings. AAT is a goal-directed individual or group intervention facilitated by health professionals that involves the use of any animal for providing physical, social, emotional, and/or cognitive therapy to patients in a variety of settings (American Veterinary Medical Association, 2017, para. 5). As a specific therapy modality within AAT, EAL incorporates a range of counselling, education, and personal development approaches, strategies, and techniques used to bring humans and horses together within healing and learning environments (Canadian Therapeutic Riding Association, 2015, para. 1). EAL is also known in the literature as equine-assisted therapy, equine-facilitated learning, and equine-facilitated counselling or wellness; EAL will be used in this review to represent this specialized area of AAT. Both AAT and EAL therapy modalities may be used as an intervention for many patient populations including, but not limited to, persons living with anxiety, depression, affective disorders, dissociative disorders, autism, post-traumatic stress disorder, addiction, dementia, and physical rehabilitation.

The secondary focus of this review is to query the possibility of a conceptual link between *recreation therapy* (RT), AAT, and EAL within mental health care settings where *psychosocial rehabilitation* (PSR) is embedded as the foundational model underlying all treatment modalities. For the purposes of this paper, RT is defined as:

A process that utilizes functional intervention, education, and recreation participation to enable persons with physical, cognitive, emotional, and/or social limitations to acquire and/or maintain the skills, knowledge, and behaviours that will allow them to enjoy their leisure optimally, function independently with the least amount of assistance, and participate as fully as possible in society. (Therapeutic Recreation Ontario, 2017, para. 1)

RT interventions are provided by trained health professionals in clinical and/or community settings that include hospitals, rehabilitation programs, long-term care settings, day programs, mental health centres, and children's treatment centres (Therapeutic Recreation Ontario, 2017, para. 5). Within mental health care settings, PSR promotes personal recovery, resilience, successful community integration, and quality of life for persons who are living with a mental illness (PSR Canada, 2017, para. 1).

According to Ferrans (1996), *quality of life* (QoL) is defined by an individual's self-reported level of satisfaction regarding their health and functioning, psychological and spiritual life, current social and economic influences, and family relationships. As an aspect of QoL, Berget, Ekeberg, Pedersen, and Braastad (2011) attribute decreased social functioning to high

levels of anxiety and depressive symptoms that are usually present following a psychotic episode. These symptoms are traditionally addressed with medication in combination with profession-specific group and individual therapies based on the PSR model. As members of the interdisciplinary team, RTs may provide both group and individual interventions within mental health care hospital settings. Following discharge from hospital, patient recovery and QoL is highly dependent on social interaction, network building, and community integration skills that are key to guarding against depression, anxiety, potential suicide, and re-hospitalization (Corring, Lundbery & Rudnick, 2013; Downes, Dean & Bath-Hextall, 2013; Killaspy et al., 2014).

The third and last focus of this integrative literature review considers the potential implications for RT practice should RTs pursue EAL certification with the intention of incorporating this treatment modality into their practice in mental health care settings. The challenges, cautions, and benefits to pursuing and practicing EAL within mental health care settings are explored as well. Given that there are limitations within each study outcome, the reviewed studies collectively reveal outcomes that propose a reduction of limiting symptoms related to a variety of diagnoses, with a coinciding increase in the physical, emotional, cognitive, and social skills that positively contribute to an actual or perceived improvement in QoL.

The research articles examined for inclusion in this review were found using computer database searches. Databases included Academic OneFile, Academic Search Complete, Cochrane Database of Systematic Reviews, Cumulative Index for Nursing and Allied Health Literature (CINAHL), CINAHL Plus, PsycINFO, ScienceDirect, and SocINDEX. Search words included animal-assisted therapy, animal-assisted activities, pet therapy, equine therapy, equine-assisted learning, equine-facilitated counselling, and equine-facilitated wellness. To offer current information, articles selected for this review reflect both qualitative and quantitative studies published in peer-reviewed English language journals between 2006 and 2017.

## **Literature Review**

### *Animal-Assisted Therapy in health care settings*

To outline the current use and benefits of AAT in health care settings, papers have been selected to highlight the diversity of AAT delivery, recipient patient populations, and evidenced outcomes. Marcus (2013) focused on the objective (reduced stress hormones, increased endorphin levels) and subjective (self-reported) benefits for pain reduction in a review of studies where AAT with a dog was included within several health care settings (inpatient surgical and rehabilitation units, outpatient chronic pain clinics). Based on the review, Marcus (2013) determined that AAT with a dog is a valuable intervention that assists patients to experience pain relief. Engelman (2013) also looked at pain management in a palliative care patient population in California where the use of AAT with a dog was studied over the course of a year. According to Engelman (2013), pain within a palliative patient population may include physical and emotional pain that is experienced with feelings of loss, fear of death, and spiritual concerns. While both Marcus (2013) and Engelman (2013) found decreased pain in the populations studied, Engelman

(2013) also found that all palliative care patients in the study (n=19) experienced increased QoL while their care staff anecdotally reported reduced stress due to their interactions with the therapy dog.

In Norway, researchers studied the effect of dog-assisted AAT among 42 community-based persons living with dementia who attended day programs (Olsen, Pedersen, Bergland, Enders-Slegers, & Ihlebaek, 2016). Participants received 30-minute AAT sessions twice a week for 12 weeks. Balance and QoL scales were completed pre- and post-intervention. Compared to the control group (n=38), Olsen et al. (2016) found that while there was no effect on QoL, AAT had a statistically significant effect on static and dynamic balance scores; a result that could positively contribute to a reduced risk of falls within this population. Colombo, Buono, Smania, Raviola, and Leo (2006) examined the psychological well-being and QoL among institutionalized elderly patients who participated in unconventional AAT. Set in northern Italy, 48 subjects received a canary, 43 subjects were given a plant, and the third group of 53 subjects received nothing beyond standard care. Following a three-month observation period, Colombo et al. (2006) found that the patients who cared for a canary experienced increased psychological well-being and perceived QoL while also reporting decreased depressive symptoms.

#### *Animal-Assisted Therapy in mental health care settings*

AAT is practiced and has been studied in many countries within mental health care settings. In an investigative review of AAT interventions commonly used in mental health care settings, O'Callaghan and Chandler (2011) determined that mental health professionals frequently include AAT with dogs in their interventions with the primary intent of enhancing patient's social interaction skills and developing their relationship-building capabilities. This frequent use of AAT prompted a Cochrane review (Downes et al., 2013), that is currently in the protocol stage. The goal of the review is to examine AAT and determine if it is an effective approach to increase patient well-being, shorten hospital stays, and reduce the need for medication for patients with serious mental illness (SMI). SMI is characterized by changes in thinking, mood, or behaviour associated with significant distress and impaired functioning, typically diagnosed as mood disorders, major depression and bipolar disorder, schizophrenia, anxiety disorders, personality disorders, eating disorders, problem gambling, and substance dependency (Government of Canada, 2015, para. 1). SMI alters a patient's ability to think, feel, relate to, and interact with others on a daily basis (Downes et al., 2013). Only AAT with dogs and cats are included in the review due to the frequency of AAT with these animals compared to the infrequency and logistics associated with the use of horses and other animals within mental health care settings (Downes et al., 2013).

In Italy, Stefanini, Martino, Bacci, and Tani (2016) studied the use of AAT with a dog for 20 youth (aged 11-17) who were hospitalized with severe psychiatric diagnoses. AAT interventions consisted of 10 weekly sessions; five group and five individual therapy sessions. When compared to the control group (n=20) who received traditional treatment only, the AAT study group experienced a decrease in internalizing symptoms, a major increase in total

competence, and significant improvements in global functioning (Stefanini et al., 2016). Also within a psychiatric care setting, Nepps, Stewart, and Bruckno (2014) found that 218 inpatients on a short-stay mental health unit (mean stay 7.13 days) experienced decreased depression, anxiety, and pain levels following weekly AAT sessions with a dog. Over the course of the study observation time (one year), the AAT sessions typically drew the most number of participants when compared to all other therapeutic programs offered on the unit (Nepps et al., 2014).

Both Chu, Liu, Sun, and Lin (2009) in Taiwan and Villalta-Gil and colleagues (2009) in Spain studied the inclusion of AAT sessions with a therapy dog for hospitalized participants diagnosed with chronic schizophrenia. Chu et al. (2009) found with weekly AAT sessions studied over the course of two months, the treatment group (n=15) showed improved self-esteem, self-determination, positive psychiatric symptoms, and emotional indicators when compared to the control group (n=15); the study investigators also noted that the patients appeared happier and more engaged during the AAT sessions when compared to their participation in traditional treatment programs. Villalta-Gil et al. (2009) offered AAT sessions within a long-term care setting, twice a week for three months, and found that the AAT group (n=12) demonstrated improved social skills and reported improved QoL when compared to the control group (n=9), who received the same psychosocial intervention without the therapy dog present. Also within a long-term care setting, Moretti et al. (2011) concluded that through participation in weekly AAT sessions with a therapy dog, ten geriatric patients, all diagnosed with a mental illness, experienced decreased depressive symptoms, improved cognitive functioning, and reported better QoL when compared to the control group (n=11). In addition to these findings, 80% of the participants, all with a diagnosis of dementia, depression, or psychosis, sought to continue the AAT experience past the six-week intervention period. While all three studies demonstrated positive outcomes following AAT with a therapy dog, the small sample sizes are a limiting factor when attempting to globalize study findings.

#### *Equine-Assisted Learning in health care settings*

With fewer studies to draw on, specific papers outlining the use and benefits of EAL in health care settings have been chosen to provide an overview of two populations involved in EAL delivery along with their respective study outcomes. Hawkins, Ryan, Cory, and Donaldson (2014) and Llambias, Magill-Evans, Smith, and Warren (2016) engaged children with autism spectrum disorder (ASD) in EAL horseback riding and groundwork interventions (i.e., grooming, feeding, saddling, leading, and horse-related art activities). Hawkins et al. (2014) found that involvement in EAL three times a week for five weeks created moderate to large gains in the areas of body coordination, strength, agility, and overall gross motor skills, as well as a noticeable increase in positive affect while the children (n=2) engaged with the horses. Llambias et al. (2016) assessed levels of task engagement (child's response to requests) during EAL sessions once a week for 9-12 sessions with a follow-up one month post intervention. For young children with ASD (n=7), EAL riding and groundwork sessions appeared to increase their task

engagement levels within adult-directed activities (Llambia et al., 2016). Although the results are promising, limitations from both studies include small sample sizing within each study group.

Highlighting the use of EAL in a different population, Maujean, Kendall, Roquet, Sharp, and Pringle (2013) used EAL in Australia with a group of 16 at-risk youth. The therapy goals were to improve self-esteem and self-efficacy levels, and facilitate the development of life skills. Following ten weekly sessions, benefits of the EAL sessions emerged into five themes based on participant and case manager reporting: enjoyment, psychological and social benefits, engagement, transferrable life skills, and mechanisms of change through the participant/horse connection. Maujean et al. (2013) determined that although their sample size was small, EAL proved to be a viable therapy option for disengaged, at-risk youth who had not responded to traditional treatment interventions.

### *Equine-Assisted Learning in mental health care settings*

The following papers were included as a means of highlighting a variety of patient populations, living in several countries, who engaged in EAL within mental health care settings. With a primary focus on therapeutic horseback riding, Corring et al. (2013) conducted a 10-week study in Canada with six outpatients diagnosed with schizophrenia or schizoaffective disorder. Qualitative findings revealed five themes: having fun, bonding relationship with horse, increased confidence and self-esteem, relationship gains, and the discovery of patients' learning potential by mental health care staff. Although the sample size was small, Corring et al. (2013) reasoned that within a population experiencing SMI, EAL modalities may help increase adaptive social skills that could lead to the development of independent functioning and successful community integration.

In Norway, Berget, Ekeberg, and Braastad (2008a) and Berget et al. (2011) conducted two similar yet distinct studies that utilized AAT with farm animals for patients with a psychiatric diagnosis. The animals included: cows, sheep, horses, rabbits, chickens, pigs, cats, and dogs. In the initial study, Berget et al. (2008a) looked at the effect of a 12-week AAT intervention on self-efficacy, coping ability, and QoL measures for 60 participants. There was a statistically significant increase in self-efficacy and coping ability within the treatment group from pre-intervention to a six-month follow-up; however, no changes in QoL were noted. Using the same study participants, intervention type, and time frame, Berget et al. (2011) also looked at the effects of AAT with farm animals on anxiety and depression. Following the intervention, anxiety levels were statistically lower at follow-up compared to baseline measures; depression decreased significantly within both the treatment group and control group (n=30). Based on the two studies, Berget et al. (2008a, 2011) concluded that the inclusion of AAT with farm animals may be a beneficial addition to traditional psychiatric treatment within mental health care settings.

Linked to the studies completed in Norway, Hassink, De Bruin, Berget, and Elings (2017) authored a secondary data-analysis of six qualitative studies previously completed (between 2001-2015) with participants (youth with behavioural issues, people with SMI, persons

living with dementia) involved in AAT with farm animals. After completing a literature review and conducting focus groups with farmers (n=60), twelve potential benefits for participants were themed with the social benefits highlighted through their ability to create close bonds with the farm animals and an improved ability to develop relationships with people (Hassink et al. 2017). When assessing attitudes towards AAT with farm animals among health care workers, Berget et al. (2008b) found that mental health therapists considered AAT with farm animals to have the ability to contribute to improved social skills and the potential to be more beneficial than traditional therapy modalities used within mental health care settings. Similarly, in a review of the efficacy of EAL on psychological outcomes, Kendall et al. (2015) evaluated 15 research papers and concluded that EAL should be considered a *promising practice* that may be especially beneficial for mental health patients who had not yet successfully engaged in traditional methods of psychotherapy.

Based on the selected studies, AAT and EAL in health and mental health care settings share common themes. AAT in health care offers a positive therapeutic approach to diverse groups of patients with a variety of symptoms related to pain management, psychological well-being, physical health, and QoL (Columbo et al., 2006, Engelman, 2013; Marcus, 2013; Olsen et al., 2016). The benefits experienced from AAT in mental health care settings include: decreased depression, anxiety, and pain levels as well as improved self-esteem, competence, global functioning, self-determination, social skills, emotional health, and QoL (Chu et al., 2009; Moretti et al., 2011; Nepps et al., 2014; Stefanini et al., 2016; Villalta-Gil et al., 2009). EAL interventions in health care settings provide positive benefits to the physical, psychological, and emotional health of children with ASD and youth at-risk (Hawkins et al., 2014; Llambias et al., 2016; Maujean et al., 2013). While the number of EAL studies in mental health care settings is limited, commonalties exist within findings and echo those found in AAT studies: improved confidence, social skills, self-esteem, self-efficacy, and coping ability coupled with decreased anxiety and depression levels (Berget et al., 2008a; Berget et al., 2011; Corring et al., 2013; Hassink et al., 2017). Additionally, use of EAL in mental health care settings is suggested as an augmentative and potentially an alternative therapy to traditional treatment modalities currently offered to patients (Berget et al., 2008a; Kendall et al., 2015). Both AAT and EAL are relatively new therapeutic modalities within psychiatric care and treatment. Despite this, the body of knowledge in AAT is expanding and contributing to many areas of mental health care (O'Callaghan & Chandler, 2011).

## Discussion

Through the emotional and social relationships developed between animals and humans, the purpose of both AAT and EAL is to provide therapeutic opportunities for people with physical, emotional, cognitive, and mental health issues (American Veterinary Medical Association, 2017, para. 5, Equine Psychotherapy, 2008, para. 5). Both AAT and EAL modalities may include goals for: improving communication, increasing trust and confidence levels, improving interpersonal and social skills, enhancing self-confidence, and increasing

physical abilities (Nimer & Lundahl, 2007; Equine Psychotherapy, 2008, para. 5). Similarly, the purpose of RT is “to enable all individuals an opportunity to achieve increased QoL and optimal health through engagement in meaningful recreation and leisure” (Therapeutic Recreation Ontario, 2017, para. 2). Specific RT goals may include: improving physical and cognitive abilities, increasing confidence and self-esteem, reinforcing interpersonal skills and relationships, and improving wellbeing (Therapeutic Recreation Ontario, 2017, para. 4). To facilitate a recovery approach to care, PSR principles are often incorporated into the delivery of mental health care services. The PSR approach promotes personal recovery, successful community integration, and improved QoL for persons who have a mental illness or mental health concern (PSR Canada, 2017, para. 1). Several of the core PSR principles and values that drive patient goals are: striving to help individuals improve the quality of all aspects of their lives; promoting health and wellness; and supporting evidence-based, promising, and emerging best practices that produce outcomes in alignment with patient recovery (PSR Canada, 2017). As the over-arching goal that is fundamental to each of the four therapy modalities, QoL encompasses a reduction of adverse symptoms related to specific diagnoses with increases in physical, emotional, cognitive, occupational, recreational, educational, spiritual, and social skills; all components that contribute to the overall goal of improved QoL (Ferrans, 1996).

### **Implications for Recreation Therapy Practice**

When following the principles and values of PSR, clinicians (including RTs) are obligated to include promising and emerging best practices that have the potential to produce patient outcomes in alignment with patient recovery (PSR Canada, 2017). As a promising and emerging practice, EAL is acknowledged as a beneficial therapy within mental health care services for patients who have not successfully engaged in traditional methods of psychiatric care (Kendall et al., 2015). More specifically, EAL may be a natural fit within mental health care settings when facilitated by RTs who are well-positioned to provide this modality as part of their scope of practice (Hawkins et al., 2014). Along with numerous educational opportunities and certificate programs offered within Canada and the United States for EAL practitioner development (Equine Assisted Growth and Learning Association, 2017; Equine Connection, 2017; Horse Spirit Connections, 2017; OK Corral Series, 2017), the Canadian Therapeutic Riding Association (2015) recognizes RTs as mental health professionals, along with psychology and social work, when outlining their basic certification process for EAL. In addition, as a practising RT in mental health care services, pursuing EAL certification would be an individual choice that has the potential to expand role competencies and overall scope of practice. Acquiring EAL certification as a professional development strategy to upgrade existing skills or expand role competencies has been suggested as a means for overcoming the stress of working in mental health care services (Bernacchio, 2012).

Recognizing that there may be challenges to pursuing EAL certification, barriers may include time and financial constraints, transportation issues, access to agency support and funding, and local access to EAL facilities. To explore EAL possibilities without prior horse

experience, volunteering at an equine centre and/or participating in riding lessons may be the first step in determining when and if EAL certification is timely and feasible. If pursued by RTs in substantial numbers, this collective group could significantly impact the future direction and inclusion of EAL in mental health care settings, while simultaneously contributing to a growing partnership and research base between RT and EAL.

### **Conclusion**

Within the current AAT and EAL literature, gaps are evident as the development of this body of research is in the early stages within health and mental health care settings, particularly within Canada. When considering the use of AAT with therapy dogs or cats in mental health care settings, an extensive and comprehensive review, such as the Cochrane review initiated by Downes et al. (2013), will eventually assist with highlighting current gaps in the literature while further clarifying the benefits and limitations of this therapy modality. As a specialized aspect of AAT, the inclusion of EAL as a therapy modality in mental health services has been critiqued for lacking a firm and consistent theoretical framework and for insufficient research to substantiate therapy outcomes (Bachi, 2013). While an increasing number of professionals and organizations include AAT and EAL as a therapy option, they are currently under-researched therapy modalities with outcome conclusions often based largely on anecdotal data and evidence (Kendall et al., 2015). Although EAL specifically is touted as a promising practice, well-designed, rigorous research studies with robust samples are needed to standardize and document EAL interventions, inform areas of future research, and build a body of evidence to support or refute claims as to the benefits of this therapy modality (Kendall et al., 2015).

This integrative literature review provides an overview of the global use of AAT and EAL within health and mental health care settings to provide RTs with information related to the current use and experienced benefits within these treatment modalities. The findings of the review substantiate AAT and EAL as promising practices within both health and mental health care services. Purpose statements and goals of AAT, EAL, RT, and PSR were defined and found to have both a conceptual link and shared purpose of improved QoL for patients already engaged in traditional therapy modalities. This conceptual link suggests that further exploration and discussion of this innovative perspective is vital to the inclusion and advancement of AAT and EAL within health care settings, and particularly when positioning RTs as potential EAL facilitators within mental health care settings.

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