Equine Therapies in North America
Exploring Themes in the Literature

by

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Abstract

The field of equine therapy (ET) in Canada and the USA encompasses a range of distinct approaches, such as equine-facilitated therapy, equine-assisted therapy, therapeutic riding, and hippotherapy. Due to issues like inconsistent terminology and lack of standardized practice manuals, there are gaps in the ET knowledge about how these approaches relate or differ from each other. This research reviewed 47 scholarly, peer-reviewed articles about ET approaches and applied thematic analysis to determine key themes that clarify key traits of each approach. Recognizing that children and youth are common participants in equine therapy, this research was motivated by the questions: What type of relational dynamics are modelled for children and youth in ET? How are these horse-human relationships portrayed? Which participants possess their own agency? Findings of this research provide insights about each approach of ET and highlight the therapeutic affects of interspecies relationships between humans and horses. Contradictory viewpoints about mutual agency between species are identified in language that described horses are active, intelligent subjects and/or passive, inanimate objects. This research provides insights about the different forms of ET, highlights important benefits and gaps, and invites the fields of Child and Youth Care and Animal-Assisted Therapy to critically reflect on the relational tensions of employing non-human animals in human therapy.

Keywords: equine therapy, thematic literature review, thematic analysis, children and youth, animal-assisted therapy, child and youth care, interspecies relationships, horse-human relationships, equine-facilitated therapy, equine-assisted therapy, therapeutic riding, hippotherapy, animal agency

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Dedication

I would like to dedicate this work, to the human and more-than-human allies who have inspired, motivated and consoled me throughout this challenging project. First, I would like to thank my mother Chris Mazur and my sister Madeline for their tireless support and faith in me. Thank you to my partner Roy Vizer who has believed in me and supported me, from the very beginning of my academic path. Thank you to my dearest friends, Sydney, Alison, Brittnie, Lynn & Nicole who have always stuck by me and lifted me up. Thank you to my supervisor Sibylle Artz for her dedicated attention, encouragement and patience as we made our way towards completing this project. Thank you to Nevin Harper, for the wise words and thoughtful guidance. Thank you to my mentor Deborah Marshall at Generation Farms for the inspiration, encouragement, and deeper learning that has changed my life in ways that are beyond words. And honouring my dearest more-than-human friends and allies, thank you to Bella, Prince, Spencer, Ivy, Oreo, Annie, Tucker, Odie, Zoe and Tsu, for the multitude of lessons and love that have transformed how I understand myself and my way of being in the world.

Chapter 1: Introduction

Across North America, the practice of Animal Assisted Therapy (AAT) has grown to become a popular therapeutic approach to working with children and youth (Wilkie et al., 2016). Generally speaking, AAT involves the facilitation of structured interactions between clients and animals "to promote a person's mental, physical, social and emotional functioning" (Fields et al., 2018, p. 309). The increasing presence of non-human animals within human therapy reflects our expanding awareness of the diverse benefits that can emerge through human and more-than-human connection. For example, AAT has been shown to reduce client anxiety, increase capacity to regulate emotion and behavior, and strengthen the therapeutic alliance between client and therapist, a well-established predictor of positive outcomes (Gabriels et al., 2015; Wilkie et al., 2016).

Located within the general field of AAT, Equine Therapy (ET) has emerged as a unique approach that incorporates the participation of horses into a number of therapeutic contexts. ET can be generally described as, "the utilization of a horse by a certified professional to reach a therapeutic goal as specified by the needs of the client" (PATH International 2014 as cited in Wilkie et al., 2016, p. 378). While the ET literature reveals a wide range of programs, approaches and clinical issues, a substantial amount of the research has focused on children and youth based on the knowledge that this age demographic often faces barriers limiting their engagement with traditional therapy approaches, such as cognitive capacity, language and verbal abilities, and negative stigmas about therapy (Alfonso, 2015; Gabriels et al., 2015; Wilkie et al., 2016). As such, ET has become an attractive alternative for children and youth, offering unique characteristics and novel experiences that foster greater engagement compared to traditional therapy contexts (Wilkie, et al., 2016).

Recognizing that children and youth are frequent recipients of ET, creates a natural opening for research to explore how this form of animal assisted therapy is relevant to the profession of Child and Youth Care (CYC). Existing research by scholars like Affrica Taylor, Veronica Pacini-Ketchabaw, Mindy Blaise, Sarah Marie Schlote and John Charles Rayment has established important links between CYC, AAT and ET. While the focus of these studies varies, their work reveals that human and more-than-human relations present significant benefits, challenges and potential for the field of CYC. For example, Affrica Taylor and Veronica Pacini-Ketchabaw (2012), argue that predominant child and youth theories most often portray children as autonomous individuals whose development is shaped exclusively by human relations. For these scholars, the dominant theories of child development have failed to recognize how human development is supported and shaped by relations with non-human species (Taylor & Pacini-Ketchabaw, 2015). Furthermore, the agency of these non-human species with whom we co-develop is not considered in our existing knowledge of child development. Recognizing CYC as a field that, "characterizes itself as caring for the relationships children and youth engage in", these authors have challenged CYC to "rethink its all-too-human conceptions of relationships" (Pacini-Ketchabaw, 2014, p. 1).

Following the interests of these scholars, my research aims to explore themes in the existing literature around therapeutic relationships between humans and horses in North America. Responding to the call for CYC to decenter the 'human' in human development, my research also seeks to examine mutual agency within the, "relational and co-shaping learning that occurs when children and animals physically encounter each other" (Taylor & Pacini-Ketchabaw, 2015, p. 508).

In conducting my research, I followed a narrative approach in doing my literature review of the growing field of ET with children and youth in North America, between 2013-2018. While a substantial body of related literature on this topic exists prior to this date range, the rationale for my exclusion criteria will be addressed in following sections.

I chose to explore the literature about ET, for personal and professional reasons. Beginning with the personal, I have been passionate about horses since I was 5 years old when I began taking riding lessons at a local equestrian centre. Over the last 27 years, my passion for horses expanded from the riding world, to the therapy world. I began volunteering at a local therapeutic riding centre where I witnessed the diverse ways that horses were able to help humans with a wide range of change goals. While I cherish these experiences, I found myself drawn away from the 'physical' focus of therapeutic riding, towards the mental health branches of equine therapy. I was in search of an approach that considered mutual regard in human and horse relations, rather than focusing primarily on human experience and benefit. While therapeutic riding has been shown to be beneficial for humans, (e.g., improved balance, verbal communication skills and self-confidence) (Lanning et al., 2017), I found that horses were often not treated as participants with unique perspectives and personalities of their own. More often, I observed what seemed like a one-way relationship, where the agency, voice or emotional intelligence of horses was not recognized in the horse/human relationship. Instead of being active individuals in the therapeutic relationship, horses were effectively considered therapy tools that could be manipulated in service of human needs.

As I became increasingly aware of these relational gaps, I noticed that my own riding practice as well as my work with clients became less about human change goals and more about the therapeutic power of mutual connection between humans and horses. This relational focus

was more in line with my approach to working with children and youth and this shift in perspective led me to discover a practice of equine therapy known as *Equine Facilitated Wellness* (EFW). In my experience with EFW so far, I have witnessed and experienced the incredible healing potential of horse-human relationships informed by mutual values of trust, respect and safety between species.

Regarding professional reasons for this research inquiry, I was motivated by the realization that there is an apparent knowledge gap in the literature and the practice of ET. Notably, there seems to be confusion about the different branches of ET, relating to inconsistent terminology, definitions and descriptions. This means that a great many descriptions, terms and titles that refer to ET are in use and these are often misunderstood, misused, or vague in terms of their specific focus and practical application. As a developing mental health professional, I believe it is important that children, youth and families are given accurate and accessible knowledge when deciding whether ET can meet their specific needs or goals. Furthermore, gaps in knowledge about ET decreases safety, as clients may not be sufficiently informed about the specific benefits and risks of working with horses therapeutically (Merkies et al., 2018). Related to this, there is a lack of empirical evidence that demonstrates which types of ET are appropriate for specific client populations. This lack of specific evidence limits funding approval from health agencies, who require certain levels of established evidence in order to financially support ET services. This means that clients seeking ET are not able to receive financial support, thus creating a significant barrier in accessing these therapeutic services (Lee et al., 2016).

As Rigby and Grandjean (2016) explain:

> Evidence for the efficacy of EAAT [equine assisted activities and therapies], might lead to a more widespread acceptance by healthcare practitioners and therapists. This may

> lead to a greater demand for EAAT to be recognized as beneficial by health insurance providers and ultimately result in EAAT becoming more affordable and accessible for children and youth (p. 22).

Given the gaps outlined above, a central goal of my research is to increase understanding and accessibility by reviewing relevant ET literature, identifying dominant themes and describing key characteristics that distinguish each branch of ET. Another core goal of my research is to consider how the literature describes horses' role in the practice of ET. This inquiry is driven by my understanding of horses as sentient beings, whose welfare, safety, and rights are worthy of human concern. As revealed by my own experience as well as in my academic learning, there appears to be a broad spectrum of beliefs about the role of horses employed in therapy for humans. Therefore, I think it is important for all practitioners engaged with ET, to consider how their way of being and working with horses models particular relational beliefs, values and power dynamics.

To address some of these gaps, I decided it would be useful to conduct a review of the literature about the profession of ET in North America, between 2013-2018, [1] in which there has been significant growth in the field. Essentially, my research aimed to:

- Increase clarity in public and professional knowledge of ET categories by identifying themes that distinguish each of them within the literature.
- Explore how therapeutic relationships between humans and horses are portrayed and understood within the literature.

Foot Notes

[1] This review of the literature was completed in the year 2018. The inclusion criteria of this research was set within a 5 year publication range (2013-2018). As such, this research excludes literature that was published after 2018.

Chapter 2: Research Outline

This chapter outlines my research process including research questions, my perspectives as the researcher and other details that informed the scope of this project.

Research Questions

- What are the common themes in the literature about equine therapy in North America over the last 5 years?
    - *How do they compare/contrast across categories of equine therapy?*

- How are therapeutic relationships between humans and horses conceptualized within the literature reviewed?
    - *Who has voice, agency, rights?... subject vs object?*
    - *How are interspecies relationships portrayed?*

Researcher Position

A researcher's position reflects the beliefs, values and knowledge unique to the individual who sets out to produce this knowledge (Braun & Clarke, 2006). Therefore, I believe that all researchers have a duty to make their beliefs explicit within their research so that readers are aware of any personal bias that may influence the knowledge being presented. In other words, I believe that researcher subjectivity is reflected in their approach to research and that knowledge is understood differently, depending on who is interpreting the information and the context in which it is produced

Social Location

I am a descendant of colonial settlers with Polish, English and Scottish heritage and I have lived on the traditional lands of the Coast Salish people (Vancouver Island) for most of my life. I believe that it is important to acknowledge my inherited colonial privileges, as they have played a role in my access to the education and experience necessary to do this work, both

academically and practically. A central aspect of colonial privilege that fostered my connection to horses, is the access and level of financial resources that my ancestorial family accumulated, which made it possible for my immediate family to pay for my riding lessons from the early age of five. Therefore, the accessibility and understanding of horses that I have enjoyed in my life, can be linked to the resources granted to my settler ancestors that supported their financial welfare.

My knowledge and beliefs about horses also relates to the teachings I received from my family. I was raised with the belief that all animals deserve to be treated with respect by humans and this belief is central to the way that I approach this research project. Specifically, I believe horses are emotionally intelligent beings whose welfare deserves consideration from humans. My knowledge about horses is therefore reflected in my research questions, which examine how the equine therapy (ET) literature positions the horse: as a subject with agency and/or a passive object to be used for human gains in therapeutic relationships.

Beliefs and Values

Where the practice of ET is concerned, I believe horses experience a range of emotions and have the intelligence to communicate and express these emotions, when given the freedom. I came to this belief through years of personal experiences with horses, in which I learned how to be in relationship with them. I learned that like humans, horses foster close relationships through patterned behavior and social conditioning that supports their own expressions of trust, safety and connection. Through repeatedly experiencing their relational dynamics, I observed how horses seek many of the same qualities of connection that humans do. I came to understand that horses have significant agency in developing connection with others, through co-construction of mutual understanding and respect. My belief that horses are emotionally intelligent beings with

their own agency and rights, also aligns with a post-humanist theoretical perspective, which posits that the human race is sustained by critical networks of connection and co-dependency with non-human life forms (Taylor & Pacini-Ketchabaw, 2015).

Knowledge

I believe that knowledge should be shared with people beyond the circles in which it is produced (e.g., the public should have access to knowledge produced by universities) therefore, my research aims to present knowledge that can be accessed and used by anyone who is interested in the topic of ET. One way I hope to accomplish this goal, is to write using plain everyday language and provide summaries that de-mystify academic jargon and clarify meaning. Ideally, my reader audience is not restricted to people within scholarly circles. Rather, it can be accessed, understood and utilized by a wider public audience. I believe the accountable development of ET requires knowledge to be accessible to the people who intend on accessing the services: children, youth and families, who may not find academic language useful.

Research Quality & Accountability

Researchers hold the responsibility of choosing methods that demonstrate features of rigour, such as; transparency, credibility, reliability, comparativeness and reflexivity (Diebel, 2008). In my research, I aimed to demonstrate these aspects of rigour by providing a detailed account of the process I used to investigate the data, identify themes and signify similarities and differences across ET categories. By providing a transparent view of my investigative process and results, I hope to increase public awareness about ET and provide new insights that are helpful to the people and horses involved in these contexts. The specific steps that I undertook to increase the quality of my research, are outlined in Table 1 of the following chapter.

Chapter 3: Methodology & Method

Methodology: Hybrid Narrative Literature Review

A literature review is a research methodology used to generate a "comprehensive overview" of existing research that has been published on a specific topic (Green et al., 2006, p. 102). Researchers employing this methodology search through previously published research to gather information related to their research questions which can then be integrated into a detailed overview about the particular topic under review (Green et al., 2006). According to Green et al. there are three prominent types of literature reviews; narrative literature reviews, qualitative systematic reviews, and quantitative systematic reviews. Although there are differences among these three types, they are united in their intention to synthesize vast amounts of knowledge into one source which can provide readers with an informative account about a particular topic (Green et al., 2006). Literature reviews save the reader the time and trouble involved in reviewing large amounts of information, however they are often prone to bias (distortion) because the process is heavily shaped by the individual researcher's ability to identify, interpret and represent literature in a way that is relevant and reliable (Rhoades, 2011). However, according to Ferarri (2015), "the quality of a narrative review may be improved by borrowing from the systematic review methodologies that are aimed at reducing bias" in the production of research (p. 230). Following this proposition, I conducted a hybrid narrative literature review that integrated guidelines from systematic literature reviews, to improve the scientific rigor or accuracy of my research. The systematic guidelines that were integrated in my literature review, are summarized in Table 1 that follows.

Table 1

Systematic Methods applied to my Narrative Literature Review

Narrative Literature Review	**Systematic Methods Applied**	**Supportive Rationale**
Formulated research questions	Research questions are focused Search for relevant themes Specific time range Specific geographical location	"A detailed search of the literature based upon a focused clinical question or purpose is the hallmark of a systematic review. Since the review is structured around a focused clinical question, it allows the researcher to develop criteria that determine if a research publication should be included or excluded in the final synthesis" (Green et al., 2006, p. 104).
Search for literature about equine therapy	Clearly stated inclusion/exclusion criteria for literature search Multiple electronic databases/search engines Specific search terms Specific publication dates Specific publication locations Specific language (English) Specific to scholarly research	"A variety of databases should be employed if readers are to benefit from a comprehensive review of the literature" (Rhoades, 2011, p. 360). "It is crucial to divulge the databases that were searched in the article. This means that it is important for the author to keep track of the databases searched and the terms used, in order to report them to the readers" (Green et al., 2006, p. 107). "restricting the focus on well-defined issues, establishing clear inclusion and exclusion criteria for literature search, concentrating on a specific set of studies and establishing a relevance criteria of selection would help improve the quality of [narrative reviews]" (Ferrari, 2015, p. 234).
Thematic analysis of literature	Clearly stated the steps taken in conducting my thematic analysis	"While authors developing narrative reviews do not necessarily adhere to all the steps critical for a systematic review, readers will better appreciate any review that involves clearly articulated steps undertaken by authors. Transparency and studious avoidance of bias are critical for any review of the literature" (Rhoades, 2011, p. 361).

My research process began with a focused search of the literature relating to the topic of ET. Scholarly databases (listed below) were engaged using the search terms: ‘equine therapy’, ‘equine-facilitated therapy’, ‘equine-assisted therapy’, ‘equine-guided therapy’, ‘therapeutic riding’ and ‘hippotherapy’. These key terms were entered into the following scholarly search engines on the internet; Summons 2.0 UVic Research Platform, EBSCO Host, UVic Research Search, and Google Scholar Search. This focused search allowed me to gauge the existing amount of ET related literature and then make decisions about my inclusion/exclusion criteria that would be of practical size for my research project (Munn et al., 2018). The search produced approximately 250 articles that included literature about various forms of ET, from around the world, dating back to the 1980s. Although I was pleased to find this substantial body of literature around ET published over the last several decades, I soon realized that this amount of data would be beyond the scope of my research project. While it would be informative to review the extensive historical and global growth of ET, I decided it would be practical to limit the scope of my research to recent ET literature, that connects to the cultural and chronological context of my ET practice with children and youth. After defining the appropriate scope of my project, I included a total of 47 articles that met the following inclusion criteria points:

- peer-reviewed research, conducted within Canada & USA
- published between January 1, 2013 and December 31, 2018
- studies that concern holistic change processes: *not* specific biomedical analysis (e.g., excluded articles about ET changing particular muscle groups in humans)
- written in English language

Method: Thematic Analysis

I employed thematic analysis as a method to analyze the equine therapy literature and produce a descriptive account that is specific to my research inquiry (i.e. analyzing the literature through the identification and interpretation of relevant themes). Thematic analysis (TA) is a common method for identifying implicit and explicit ideas within qualitative data (Guest et al., 2014). With a focus on examining themes that emerge within qualitative data, TA may employ a coding method, whereby patterns of reoccurring key words and phrases are highlighted and coded, prior to interpretation. Once these fragments of data have been organized into codes, they can be grouped into emergent themes and compared by frequencies, theme co-occurrence and/or inter-relationships among themes (Maguire & Delahunt, 2017). Through this identification, organization and comparison of themes, the researcher can then move towards a construction of possible explicit and implicit beliefs embedded in the data (Maguire & Delahunt, 2017). My TA aims to identify, compare and contrast themes within ET literature that relate to my specific research questions, but does not examine possible underlying ideologies embedded in the data.

Following Braun and Clarke's (2006) general framework for doing thematic analysis, I made specific decisions that defined the structure and scope of my analysis. As Braun and Clarke explain, "thematic analysis involves a number of choices which are often not made explicit…but which need explicitly to be considered and discussed" (p. 81-82). These key decisions that shaped the approach I chose are summarized in the following Table 2.

Table 2

Key Decisions in my Thematic Analysis Approach

Decision	Explanation
Identified themes at semantic level	Search for key patterns of text, explicitly written in the literature. Key patterns used to create themes relevant to my specific research questions
Applied theoretical/deductive analysis (top-down approach)	Searched for specific themes that could answer my specific research questions Thematic analysis was motivated/guided by my pre-established, theoretical interests
Applied essentialist/realist method	To report on "experiences, meanings and the reality of participants" only as they are presented through language (Braun & Clarke, 2006, p. 81). Did not seek to investigate underlying socio-cultural factors that may influence language, meaning and experiences

Thematic Analysis Steps

To analyze the literature that my search process yielded, I took the following steps, which are adapted from Braun and Clarke's (2006) framework for conducting thematic analysis:

Organized the articles. The sources that I reviewed in this thematic analysis were organized into distinct categories of equine therapy: "equine *facilitated," "*equine *assisted," "*therapeutic riding," "hippotherapy," and "equine therapy (general)".

Familiarized myself with the literature. Read abstracts of each article included in my review, highlighting main points

Immersed myself in the literature. While reading each article thoroughly, I used a journal to take notes, record interesting pieces of data and identify patterns that were relevant to my research questions.

Coding. I colour coded these key pieces of data related to my research questions and noted their specific article/page locations for future reference.

Review Coded Data & Create Dominant Themes. I reviewed the colour coded data excerpts, considering important patterns and common themes that relate to my specific research questions. I then created dominant themes to represent these key patterns and common themes.

Define Dominant Themes. Using my journal of colour coded notes to cross reference, I located quotes within the articles, that may serve as compelling evidence for the dominant themes that I had created. I organized these supportive quotes into a theme excerpts table (see Appendix A), which displays each ET category, it's identified themes and their corresponding evidence (quotes) from within the literature.

Reporting Findings. Chapter 4 provides a summary description of each ET category, which includes definitions and key characteristics of each category. Chapter 5 presents descriptive reports of the 'unique themes' which were found only in certain ET categories. Chapter 6 presents descriptive reports of the 'dominant themes' which were found across all categories of ET. A core goal of my research was to clarify important differences between categories of ET therefore my reported findings begin with category descriptions followed by unique themes which emphasize distinct traits of each ET category.

Chapter 4: Describing the Literature Categories

The following section describes the different categories of Equine Therapy (ET) literature that were included in my thematic analysis. These include: Equine-Facilitated Therapy, Equine-Assisted Therapy, Therapeutic Riding, Hippotherapy, and Equine Therapy-General. Key characteristics of each category and their related terms are presented in what follows. Each category includes related terms found in my review of the ET literature, which have been absorbed into their relevant categories (e.g., the category of Equine-Facilitated Therapy (EFT) absorbed the related terms of Equine-Facilitated *Psychotherapy and* Equine-Facilitated *Learning*). These related terms were absorbed into the broader categories, because my literature review only found a few articles that included these related terms, therefore I chose to not treat them as their own separate category. This way of organizing the categories also made sense, considering my process of data collection, in which I searched for literature using the category terms of 'Equine-*Assisted Therapy,* Equine-*Facilitated Therapy,* etc. Using these search terms allowed me to capture literature on each category and associated terms relevant to my research topic. Table 3 below shows the distribution of articles across the categories of equine therapy that were included in my research.

Table 3

Distribution of Articles across Categories of Equine Therapy

Category of Equine Therapy	Number of Relevant Articles
Equine-Facilitated Therapy	10
Equine-Assisted Therapy	19
Therapeutic Riding	12
Hippotherapy	3
Equine Therapy-General	3

Category: Equine-Facilitated Therapy

According to my review of the literature, Equine-Facilitated Therapy (EFT) can be understood as an experiential approach to therapy led by professional facilitators such as mental health professionals and equine specialists (Lac, 2016). In EFT, horses are usually portrayed as active participants and co-facilitators, who partner with clients working towards various goals related to social-emotional healing and change (Lac, 2016). Therapeutic change emerges as clients build relationship with horses and experience new ways of being that are transferrable and meaningful to relationships in their daily lives (Schroeder & Stroud, 2017). The category of EFT includes the related terms of Equine-Facilitated *Psychotherapy* (EFP) and Equine-Facilitated *Learning* (EFL), which are described below.

Related Term: Equine-Facilitated Psychotherapy

Equine-Facilitated Psychotherapy (EFP) was described as an animal-assisted therapy involving horses, for people with a variety of mental health challenges and treatment goals (Schroeder & Stroud, 2015). The literature suggests that EFP is an increasingly popular modality because horses possess unique traits which, "enhance a number of therapeutic processes, providing clients with interactive and multisensory experiences not otherwise available in traditional mental health treatment settings" (Schroeder & Stroud, 2015, p. 366). Usually, EFP involves a mental health professional, an equine professional and a horse that is selected and trained for this type of work. However, Schroeder and Stroud also note that in some cases, there is only one facilitator involved who is certified as both a mental health professional and an equine professional. With respect to theoretical frameworks used by facilitators, these authors explain that, "EFP clinicians generally blend evidence-based approaches such as cognitive behavioural, gestalt, and person-centered therapies with a variety of horsemanship exercises, to

support the change process (Brandt, 2013 as cited in Schroeder & Stroud, 2015, p. 368). Facilitators are usually certified through professional associations, the most prominent being The Professional Association for Therapeutic Horsemanship International (PATH) and the Equine-Assisted Growth and Learning Association (EAGALA), however various smaller certifying bodies are said to exist across North America (Lentini & Knox, 2015). The role of facilitators in EFP is to, "provide structure, observe processes, and assist clients with making meaning of the equine experience related to their treatment goals (PATH, 2015)" (Schroeder & Stroud, 2015, p. 368). With regard to the equines' role in therapy, the literature states that EFP, "views the horse as a co-facilitator in the therapeutic encounter and emphasizes the innate wisdom of the horse and the power of an authentic other bearing witness (Rector, 2005) since horses live in the here-and-now and respond authentically to their environment in a naturally embodied way" (Lac et al., 2013 as cited in Lac, 2016, p. 196). With respect to client demographics, the clients who were commonly discussed in the EFP literature were children and youth with a variety of diagnoses (often related to trauma), women with eating disorders, and military veterans. Depending on the specific context, facilitator training and treatment goals, EFP clients engaged with a wide variety of therapeutic activities such as, "observation of equine behavior, grooming, handling, and [sometimes] horseback riding" (Schroeder & Stroud, 2015, p. 368).

Related Term: Equine-Facilitated Learning

According to my review of the literature, Equine-Facilitated Learning (EFL) was defined in only one article involving working with child clients written by Pendry et al., (2014), who wrote that:

> EFL represents a unique set of practices that combine experiential learning and interaction with horses, ponies, miniature horses, donkeys and mules, with counselling-

> based processing skills to increase children's awareness and control of their emotions, cognitions, and behaviors. An integral part of EFL is that its activities are based on our understanding of how horses think and learn, and how to use their natural behavior to interact with humans in a manner that enhances the safety, well-being and development of both horses and humans" (p. 282).

While this example promotes an experiential learning approach, it was still geared towards relational therapeutic outcomes through the application of counseling strategies that support emotional, cognitive and behavioral health (Pendry et al., 2014).

Category: Equine-Assisted Therapy

Within the standard category of Equine-Assisted Therapy (EAT), the terminology used to describe related applications of EAT varies, depending on the specific organization and practice models that facilitators identify with (Matamonasa-Bennett, 2015). The related terms discussed in the EAT literature included equine-assisted *psychotherapy* (EAP), equine-assisted *learning* (EAL) and equine-assisted *activities/therapies* (EAAT).

Within the literature, EAT is often portrayed as an increasingly popular alternative to traditional therapy, due to certain unique characteristics. Frederick et al. (2015) speak to the value of EAT as an effective alternative when they state that "a recurrent theme in the literature seems to indicate that the more difficult a client is to work with in traditional counseling, the more likely it is that that client will do well" in EAT (p. 810). Highlighting possible factors that make EAT an effective alternative, Lee et al. (2016), mention the, "proposed benefit of involving a less stigmatizing setting for providing mental health services" compared to "traditional office-based services" (p. 244). In other research, Meola (2016) adds that EAT programs, "offer

motivation by offering a new environment, an unusual challenge, immediate feedback, and chances to practice skills learned right away" (p. 297).

When it comes to certification and the various authorities that are in charge of certifying facilitators and regulating the standards of practice for EAT services, the literature frequently mentioned the Professional Association of Therapeutic Horsemanship International (PATH) (Hawkins et al., 2014) and the Equine Assisted Growth and Learning Association (EAGALA) (Nurenberg et al., 2015).

With respect to client demographics, the participants most commonly described in the EAT literature were children and youth with mental health and/or developmental disorders like Autism Spectrum Disorder, military veterans with PTSD and senior citizens with various health challenges.

Related Term: Equine-Assisted Psychotherapy

According to the literature, EAP follows the guidelines of the Equine Assisted Growth and Learning Association [EAGALA] which states that EAP aims to create:

> an authentic experience for the learners/clients that is based on their specific needs, requires them to actively take initiative in the process, and is facilitated by professionals who support the participants in a safe environment that is designed around the experience itself rather than accomplishing a task" (Notgrass & Pettinelli, 2015, p. 166).

EAP is often facilitated by a licensed mental health professional and a certified equine specialist who support clients in activities, in which the horse is often viewed as a therapeutic "tool" to enhance the "experiential learning encounter", a process that elicits new awareness for clients (Lac, 2016, p. 196).

Specific goals of EAP highlighted in other EAP studies described "skills for problem solving, communication, relational attachment, confidence and trust, self-control, setting healthy and safe boundaries, and calming the nervous system" (Steele et al. 2018, p. 404).

Related Term: Equine-Assisted Learning

Equine-Assisted Learning (EAL) is defined in the literature as, "an experiential approach to learning with the prime intent being to facilitate personal growth and development of life skills through equine interactions" (Meola, 2016, p. 295). As Meola explains, horses in EAL help to, "reflect the person's actions in the moment and provide instant feedback on how he or she is perceived by others" (p. 295). Based on the EAL model supported by the Professional Association of Therapeutic Riding International (PATH), the facilitator's role in EAL is to, "help the feedback the horse is giving and to prompt the client to think about his or her own habits, styles and preconceived ideas of leadership and communication" (as cited in Meola, 2016, p. 295). According to the literature, the application of EAL offers educational experiences that support participants in their change goals related to personal development and general life skills.

Related Term: Equine-Assisted Activities/Therapies

Within the EAT literature, the term 'equine-assisted activities and therapies' (EAAT) is connected to, "a wide range of activities and therapies that incorporate horses in the treatment of individuals with the goal of improving cognitive, emotional, behavioral, social and equestrian skills" (Alfonso, 2015, p. 461). The EAAT term was referenced briefly in only two studies, in reference to a wide variety of applications, including therapeutic riding and hippotherapy. It therefore appears to hold the same meaning as the prominent standard term: Equine-Assisted Therapy. This example reflects the variable use of terminology in the literature that creates confusing definitions and misinterpretations (Lac, 2016).

It is important to note, according to official organizations like the Professional Association of Therapeutic Horsemanship (PATH), the field of equine-assisted therapy (EAT) includes the branches of Therapeutic Riding (TR) and Hippotherapy (HT). However, within the ET literature, TR and HT were portrayed as separate and distinct professions, therefore I have chosen to treat TR and HT as separate categories for analysis. Specifically, I found that the literature clearly separated TR and HT research, based on differences of definitions, practices, and therapeutic focus, therefore I chose to analyze TR and HT as their own distinct categories.

Category: Therapeutic Riding

Generally speaking, TR is known as, "an equine-assisted activity for the purpose of contributing positively to the cognitive, physical, emotional and social well-being of individuals with special needs (Professional Association of Therapeutic Horsemanship International Organization, 2016, as cited in Lanning et al., 2017, p. 260).

With respect to the facilitation of TR, the level of facilitator training was unclear in the literature. For example, Ward et al. (2013), state that TR is provided by, "a specially trained riding instructor who teaches the rider with a disability" (p. 2190) and Gabriels et al. (2015), state that TR is, "led by a certified THR instructor" (p. 542). However, Rigby and Grandjean (2016) state that TR involves, "teaching specific riding skills to those with a variety of disabilities by non-licensed professionals" (p. 9). This is echoed by Lanning et al. (2017) who say that TR is, "designed to be therapeutic but is not considered 'therapy,' and therefore, does not require the presence of a licensed therapist" (p. 264). After reviewing these contradictory statements, it seems that TR facilitators are certified as therapeutic riding instructors but do not have to be licensed health professionals. While this may be determined through carefully comparing various definitions, the professional standards of TR seem to be poorly defined and

misleading in the existing literature. Addressing this confusion is important, as the practice of TR is steadily increasing, with "more than 850 centres in the United States and around the world" providing TR to people with diverse health challenges, therefore facilitation standards should be clarified so clients are properly informed about the TR facilitators providing services" (Johnson et al. 2017, p. 84).

With regard to client demographics, the TR literature is most often focused on children and youth with Autism Spectrum Disorder (ASD) and military veterans with Post Traumatic Stress Disorder (PTSD) and/or Traumatic Brain Injury (TBI). While these clients were most commonly referenced in the TR literature, Rigby and Grandjean (2016) point out that other populations have been studied in the TR research, including, "those with some form of cerebral palsy, Down syndrome, multiple sclerosis, spinal bifida, spinal cord injury, traumatic brain injury, stroke, autism spectrum disorder, intellectual disabilities, and developmental delay" (p. 9). This suggests that currently, children diagnosed with ASD are the most common clientele involved in TR studies, however research concerning other client populations is available to a lesser degree.

Category: Hippotherapy

Hippotherapy (HT) is defined in the literature as:

> a rehabilitation strategy used in the context of occupational, physical, or speech therapy using the animal's three dimensional movement and/or the affordances in the equine environment as treatment strategies to achieve various therapeutic objectives generally related to neural motor function (American Hippotherapy Association, 2010), but also to vestibular, proprioceptive, tactile and cognitive aspects (Heine, 1997 as cited in Leveille et al., 2017, p. 269).

HT is facilitated by licensed health professionals such as occupational, speech or physical therapists who, "continually [modify] the horse's movement through the session, to address clients' needs as they work toward functional goals (American Hippotherapy Association, 2010 as cited in Ajzenman et al., 2013, p. 654). Generally speaking, the main goal of HT is to improve the neuromuscular abilities of impaired participants, "thereby allowing them to gain motor functions and learn to appropriately maneuver themselves in a variety of environments" (Thompson et al., 2014, p. 68). In other words, within the exercise of riding the horse's bodily movements are manipulated by trained professionals, in ways that target riders' specific motor deficits thereby strengthening participants' ability to control their own bodily movement.

Category: Equine Therapy – General

Equine Therapy-General (ET-G) is an umbrella category/term that I created to represent the literature that did not focus on any particular ET practice. Each of the three articles in this ET-G category, presented broad overviews or systematic reviews of literature about equine-related therapies. These articles mainly offered general information about the field of equine therapy but also included brief definitions of the various branches/categories. Generally speaking, ET-G was defined as, "the utilization of a horse by a certified professional to reach a therapeutic goal as specified by the needs of the client (PATH International, 2014). The range of therapies that utilize horses vary based on the client's needs and intended outcomes" (Wilkie et al., 2016, p. 378). As Lac (2016) explains, the general field of equine therapy, encompasses a range of dynamic "approaches, theories, and practices; some of these are quite distinct from each other, but many of them have shared histories, aims and blurred boundaries" (p. 195). Essentially, literature in the category of equine therapy-general offered a broad view of equine therapy, by referencing the different branches (e.g., equine-facilitated, hippotherapy, etc.), and

acknowledging that they share some similarities as well as distinct differences. To simplify understanding about the aforementioned categories of equine therapy, I have outlined key traits of each category in Table 4 that follows.

Table 4

Equine Therapy Categories: Key Traits

Equine Therapy Category	Key Traits
Equine-Facilitated Therapy	• Experiential, mental health approaches • Facilitated by Mental Health & Equine Professionals • Horse is viewed as an active participant • Focused on the horse-human relationship • Blend of Evidence-Based Counseling Approaches • Grounded work (not riding)
Equine-Assisted Therapy	• Educational &/or Organizational /or Mental Health approaches • Facilitated by Mental Health Professional & Equine Professional • Horse is viewed as active subject or passive participant • Mixed focus on relationship &/or skill development • Grounded work &/or Mounted
Therapeutic Riding	• Treatment for physical and cognitive disabilities • Focused on human physical & cognitive functions • Mounted - Riding activites • Horse viewed as a passive participant • Non-licensed health professionals & Certified Therapeutic Riding Instructors
Hippotherapy	• Physical, rehabilitation therapy • Mounted, riding activities • Licensed Professionals: Occupational, physio, speech/language therapists • Focused on human neuromuscular functions • Horse as a passive participant
Equine Therapy-General	• Umbrella term that encompasses the various branches of equine therapy • Range of activities & therapeutic applications

Chapter 5: Unique Theme Reports

In this chapter I describe the unique themes produced by my analysis of the ET literature (themes that were present in certain ET categories, but absent from others). Each unique theme report begins with a summary explanation about the meaning conveyed by the theme, followed by a detailed description of the theme as it was presented in specific equine therapy categories (i.e., equine-facilitated vs therapeutic riding). At the end of each theme report, I offer my analysis of the theme as it relates to my specific research questions. These unique themes from my analysis can be previewed in Table 5, which follows.

Table 5

Table of Unique Themes

Unique Theme	Categories	Definition
Equine Physiology	Equine Facilitated Therapy Equine-Assisted Therapy	Biological traits and natural behaviors of horse species
Interspecies Learning	Equine Facilitated Therapy Equine Assisted Therapy Equine Therapy – General	Relational process of co-created learning between humans and horses
Trauma	Equine-Facilitated Therapy Equine Assisted Therapy	Clinical Issues relating to Trauma (Symptoms, Treatment, Outcomes)
Experiential & Embodied Horse-Human Encounters	Equine Facilitated Therapy Equine Assisted Therapy	Interactive and multisensory experiences that engage the body or bodies of participant(s)
Movement Therapy	Equine Assisted Therapy Hippotherapy	Process of facilitated movement to engage the body and stimulate physical changes
Equine Welfare	Equine Assisted Therapy Therapeutic Riding	Safety and welfare of horses (emotional and physical)
Horse/Human Relationship	Equine Facilitated Therapy Equine Assisted Therapy Equine Therapy-General	Relational connection between horses and humans

Unique Theme: Equine Physiology

The theme that I entitled Equine Physiology speaks to the literature that focuses on the ways in which the biological characteristics of horses are highlighted in the Equine-Facilitated and Equine-Assisted categories of my analysis. Essentially, within these categories the repeated references to the physiology of horses (the ways that horses' function) were presented as influential mechanisms of change in therapy with humans. These key equine characteristics most often portrayed horses as herd animals, prey species and large, powerful beings. These particular traits of equine physiology were highlighted in order to demonstrate their relevance and unique value in therapeutic relationships with humans. As Schroeder and Stroud (2017) explain, "horses' unique characteristics enhance a number of therapeutic processes, providing clients with interactive and multisensory experiences not otherwise available in traditional mental health treatment settings" (p. 366).

Below, I describe the various ways that equine physiology and its impact on therapeutic relationships between horses and humans are presented in the categories of Equine-Facilitated Therapy and Equine-Assisted Therapy.

Equine Physiology in Equine-Facilitated Therapy

In Equine-Facilitated Therapy (EFT), reference to Equine Physiology (EP) repeatedly highlights the biological description of horses as herd animals and how this plays a role in their capacity to help humans in therapy. As noted by Pendry, et al., (2014), therapeutic change is supported by knowledge of, "how horses think and learn, and how to use their natural behavior to interact with humans in a manner that enhances the safety, wellbeing and development of both horses and humans" (p. 282). The EFT literature emphasizes the knowledge that horses are herd animals (living naturally in organized groups with multiple members) and these biological traits

and social characteristics are expressed as, “curiosity, sociability, and playfulness” (Schroeder & Stroud, 2015, p. 368). As Schroeder and Stroud see it, these various social traits are connected to a wide range of behaviors that inform the way horses experience relationship. In the context of EFT, this “behavioral flexibility”, plays an important role in their “willingness to take direction and leadership from human beings” (p. 368). Schroeder and Stroud explain that the ability of humans to enact leadership roles with horses is made possible because horses are by nature prey animals, meaning they have a biological drive to follow leaders who demonstrate an effort to support their sense of safety. As prey animals, horses also possess acute sensitivity to other beings in their environment, in order to constantly monitor their vulnerability to predators. This self-preserving attention also plays a role in the context of EFT, as horses are able to demonstrate a, “keen awareness of attitudinal and affective changes in human beings” (Schroeder & Stroud, 2015, p. 369). This highly sensitive attunement to others and their environment, requires horses to live fully in the present moment. As horses naturally model this way of being, they provide relational models for humans to develop their own awareness of self, other and environment (Schroeder & Stroud, 2015). As Schroeder and Stroud explain, “working with horses provides clients [with] numerous opportunities to become aware of their own interpersonal communication styles, and practice self-monitoring of emotional and physiological arousal levels, as well as experiment with behavior change” (p. 369).

Another aspect of Equine Physiology that provides opportunities for clients to recognize their own social patterns and practice new ways of being, is horses’ non-judgemental attitude towards emotional expression. In other words, unlike humans, horses do not judge human emotions as ‘good’ or ‘bad’, they are just information that can be expressed through various behaviors (Schroeder & Stroud, 2015). Essentially, horses provide “unique anchoring

experiences," which allow clients to, "engage in self-reflection" and "move beyond experiential avoidance," without the fear of judgement that they may normally anticipate from other humans (Schroeder & Stroud, 2015, p. 370). An example of this in practice, was highlighted in Schroeder and Stroud (2015), where a participant explains:

> …they show you things and they tell you things unlike what a person can do or tell … I allowed myself to go to places that I don't know I would have gone to with people because of being judged or, you know, certain things that I just don't feel I can talk about … I think through the horses I was able to choose to forgive myself.
>
> And to me – that is power for me. It is an option and it feels so much better than just having to sit in that awful place for a long time (p. 370).

These examples from the literature in EFT, highlight the ways that equine physiology can serve as a living relational model that effectively supports human change goals.

Equine Physiology in Equine Assisted Therapy

Similar to EFT, Equine Assisted Therapy **(**EAT) conceptualizes equine physiology as the natural, biological traits of horses and how these traits influence the therapeutic relationship with humans. Again, there is a significant focus on describing horses as prey animals with dynamic social characteristics that foster healing change in the horse-human relationship. For example, Nurenberg et al. (2015) highlight the theme of Equine Physiology when the authors describe the unique effects that EAT offers, as humans engage with animals who could easily use their size and strength to harm these humans, and yet do not. According to Nurenberg et al., as a non-predatory species, horses are said to "mirror rather than direct human responses" and this physiological trait can be helpful in therapeutic relationships with humans who have experienced

interpersonal trauma and may not respond well to other therapy animals that possess predatory traits, such as dogs (p. 85).

Benefits of the non-predatory physiology of horses are also noted by Notgrass and Pettinelli (2015) who point to horses', "keen awareness to non-verbal communication as a means to survive in the wild" (p. 167). This requires them to live their lives with a constant awareness of the present moment, which coincides with their ability to respond to subtle, non-verbal expressions that humans may not even be aware they are projecting. In this way, horses' automatic prey responses can serve as an "instant bio-feedback machine," that can provide humans with valuable information and insights about their own sub-conscious way of being in the world (Notgrass & Pettinelli, 2015, p. 167). In other words, the natural prey responses that horses' exhibit can help humans to recognize how their own behaviors affect others, thus illuminating "cause and effect patterns in action that generate helpful and unhelpful interactions," which can then be integrated with specific therapeutic goals (Notgrass & Pettinelli, 2015, p. 167).

Another example highlighting the role of equine physiology, was presented in Steele, et al., (2018) who explain that, because horses are prey animals, they "respond immediately to sudden shifts in their environment" and these dynamic, behavioral responses can generate meaningful metaphors for clients, "illuminating their way of connecting to others, solving problems, and other challenges of trauma and moral injury" (p. 404). Unfortunately, this claim was not supported by any specific examples that could demonstrate what this may look like in practice. The only other evidence for this that Steele et al., provide, is the statement that according to their observations, horses provide feedback through their behavioral responses to humans that, "encourages thoughtful exploration and resolution" (p. 406). This suggests that

based on their physiology, horses' reactions can translate meaningful information for humans about their ways of relating to self and others.

These examples from the category of EAT further illustrate how the theme of equine physiology is conceptualized in the literature, as it relates to therapeutic relationships between horses and humans.

What does this theme suggest in relation to my research questions?

In both categories of EFT and EAT, the discussion about equine physiology emphasized horses' social and emotional intelligence, offering unique benefits that extend beyond traditional talk therapy (Schroeder & Stroud, 2015). Describing processes of dynamic interaction between the two species (horse/human), the theme of equine physiology recognizes that horses possess their own agency in relationship with others, an agency that is grounded in their biological functions and social-behavioral awareness (e.g., prey instincts and herd relations) and supports their keen attunement to others and their environment (Notgrass & Pettinelli, 2015). Still, while the literature often emphasizes horses' social intelligence and their ability to recognize and act on subtle affect changes in humans, sometimes the language used to describe this also disregards the horse's apparent agency. Thus, although the research that acknowledges the importance of equine physiology often includes descriptions of horses as active and sentient beings the way in which this is described also positions them as passive objects, absent of their own agency. A good example of this paradoxical language is found in the study by Notgrass & Pettinelli (2015), who describes the therapy horse as, "much more than a prop" and "an integral part of the professional team", thus recognizing the need to ensure their "physical and emotional safety" as "participants" (p. 168), but also as describes them as, "instant bio-feedback machine[s]", which suggests they are a simply tool to aid therapy (p. 167).

As my research sought to explore how relationships between humans and horses are portrayed in the literature, the literature that I categorized in terms of the theme entitled equine physiology, does suggest that horses can and do exercise their own agency, in ways that humans have been able to recognize and appreciate. However, the language used to describe the exchange of mutual agency between species, suggests some incongruency does exist, where horses are described as both subjects with impressive awareness and as objects with functions that can be manipulated for human gain. This incongruency in the language may be indicative of conflicting underlying beliefs about horses, where they are seen as both objects for manipulation as well as sentient individuals with the intelligence to act as facilitators for human healing and growth. These paradoxical views raise questions about how we understand and perceive the intelligence and agency of horses and challenges us to consider how language can influence these perceptions.

Unique Theme: Interspecies Learning

In my thematic analysis of the literature, I created the theme Interspecies Learning (ISL) to capture a dynamic process of relational learning that is generated through humans interacting with horses. Essentially, ISL can be understood as new awareness, knowledge and/or skills gained from therapeutic interactions with horses, which are also applicable to human contexts, outside of the therapy setting. For example, in Naste et al. (2018), Interspecies Learning is demonstrated as,"…the client learns how to act around the horse, and in turn learns how to treat humans in similar ways…These new communication skills and resulting attachment can then be generalized to human relationships" (p. 293). As this example points out, the client in ET learns new skills that are transferrable to human relationships beyond the equine therapy context.

The following examples from my analysis of the literature, demonstrate how ISL represents a 'relational' and 'experiential' processes of learning, in which humans and horses establish communication and connection with one-another.

Interspecies Learning in Equine-Facilitated Therapy

In Equine Facilitated Therapy, Interspecies Learning (ISL) is described in various ways, that can be summarized as, a relational, meaning making process, guided by the specific therapeutic needs of clients. As Schroeder and Stroud (2015) state, the main goals of equine therapy are to, "provide structure, observe processes, and assist clients with making meaning of the equine experience related to their treatment goals" (p. 368).

An important element of ISL that showed up repeatedly in the research that I reviewed, was the process of developing effective communication in relationship with self and other. Essentially, in working with horses, clients' abilities to recognize how they are communicating and the impact this has on relationships with others, is developed through interacting with horses. As Schroeder and Strand (2015) explain, "Individuals learn to be present, clear and consistent in order to effectively communicate…[and are provided with] numerous opportunities to become aware of their interpersonal communication styles, and practice self-monitoring of emotional and physiological arousal levels, as well as experiment with behavioral change" (p. 369).

ISL also occurred as human participants gained insight about themselves by learning about certain biological traits that humans and horses have in common. For example, Schroeder and Strout (2015) found that clients witnessed and discussed the importance of the "equine fight/flight/freeze responses" and "the parallels between human and equine fear reactions" (p. 375) which meant that as a result of their working with horses they could integrate their equine experience to better understand their own behavioral reactions and how this impacts relationship

with self and others. Therefore, because horses and humans possess similar nervous system responses that impact their way of being in relationship, the core principles learned through observing and interacting with horses can be generalized for use within human relational contexts.

Finally, within the ISL theme, clients became empowered through new awareness of choice and experiences of leadership. In these examples, horse-human interactions fostered opportunities for clients to "actively and clearly take responsibility and ownership for the choices they make, which can then be translated into their real-world life outside of the therapy context" (Lac, 2016, p. 199). Furthermore, these experiences of embodied leadership within ISL, can be uniquely empowering for humans, as they engage non-human animals that are intimidating in their size and strength (Schroeder & Stroud, 2015).

Interspecies Learning in Equine-Assisted Therapy

Within the literature on Equine-Assisted Therapy, the theme of Interspecies Learning (ISL) involved the development of metaphorical understanding, self-awareness, communication, and other skills that help clients beyond the therapy context. For example, Notgrass and Pettinelli (2015) discussed the role of metaphor in EAT, explaining how horses provide experiences of metaphorical learning in which parallels can be drawn, "between the EAP session and real-life situations to help participants achieve goals and overcome challenges in their day-to-day experience" (p.165). According to Notgrass & Pettinelli (2015), metaphorical learning between horses and humans is made possible due to social similarities between our species. Highlighting some key social similarities between humans and horses, these authors explain that;

> Horses are very much like humans in that they are social animals. They have defined roles in their herds. They would rather be with their peers. They have distinct

> personalities, attitudes, and moods. An approach that seems to work with one horse does not necessarily work with another. At times, they seem stubborn and defiant. They like to have fun. In other words, horses provide vast opportunities for metaphorical learning (p. 167).

Essentially, because there are qualities of 'positive' relationship that both humans and horses identify with, EAT affords opportunities to learn about one's relational patterns with the support of meaningful metaphors that symbolize different ways of relating (Notgrass & Pettinelli, 2015). As these authors explain, this interspecies learning between horses and humans invites, "awareness of limitations and strengths of those interactional patterns" and offers "opportunities for change and for developing new patterns of interaction, both in session and in the real world" (AEE, n.d.; EAGALA, 2012 as cited in Notgrass et al., 2015, p. 168).

Another example pointing to the role of metaphor in ISL, was found in the study by Steele et al., (2018) which involved military veterans. These researchers suggested that horses' behavior within the therapeutic relationship provided healing metaphors for traumatized military veterans, by "illuminating their way of connecting to others, solving problems, and other challenges of trauma and moral injury" (p. 404). However, it is important to note that while my analysis identified frequent reference to the value of metaphors in ISL, the literature rarely included specific practice examples to demonstrate how this metaphorical learning may unfold. In place of specific practice examples, the literature offered general claims about ISL attributed to horses providing, "feedback about participants' experience in a way that encourages thoughtful exploration and resolution", fostering new understanding about, "safety and development of trust, self-esteem, and increased self-efficacy" (Steele et al., 2018, p. 405). This suggests a need for future research to unpack the role of metaphors in EAT and explain its

relevance through ‘real-life’ examples, that demonstrate how metaphors emerge within the therapeutic process.

The Interspecies Learning theme often focused on the development of self-awareness that can be gained with EAT, whereby horses provided humans with relational feedback that revealed new insights about self (Earles et al., 2015). As Earles et al. explain, “Horse responses may provide immediate feedback about a person’s nonverbal behavior (e.g., horses may crowd a person who is hunched and avoiding eye contact or back away from a person who is approaching quickly with prolonged eye contact) helping increase awareness of one's behaviors and emotions” (p. 150). This suggests that horses’ behavioral responses to humans can translate meaningful information about that person’s way of relating: self-awareness that can be integrated to support relationships throughout that person’s life.

The theme of ISL is also highlighted by Meola (2016), who looked at the value of equine-assisted learning (EAL) for leadership and teamwork training in the field of business management. Here, the theme of ISL is linked to “individualized learning opportunities” that “promotes communication flexibility as well as self-awareness” (Meola, 2016, p. 300). Again, the theme of ISL emphasizes that human participants gained valuable insights about themselves, through the experiential process of creating relationship with horses. As Meola (2016) explains, “what the horse is showing the person in the round pen is how that person is actually presenting his or herself in that moment, which is distinct from how that person thinks he or she is presenting” (p. 300). In other words, interacting with horses allowed clients to experience how their own relational patterns generated helpful or unhelpful feedback from their equine partners and reflect on how this new insight may translate to their human relationships.

Another aspect of ISL highlighted in Meola (2016), is the knowledge that can be gleaned by observing how horses naturally interact with one another in their herds. Tying this relational learning to the context of leadership training, she explains, "the way in which horses interact in a herd is similar to the structure of most corporations. Horses rely on a hierarchal form of leadership in their herd for survival…This can be translated into corporate culture and team building" (p. 299). In other words, the experience of observing how horses negotiate relationships within their herds can offer valuable insights for participants to integrate within their own 'herds'. In this example of ISL, interacting with horses challenged participant to learn about their own communication and behavior, fostering new self-awareness that could, "translate easily into workplace situations and relationships" (Meola, 2016, p. 297).

Interspecies Learning in Equine Therapy – General

The theme of Interspecies Learning (ISL) in the Equine Therapy-General (ET-G) literature, was described as metaphorical learning that could be translated into the lives and relationships of the participants. This emphasis on new self-awareness and metaphorical meaning generated through horse-human relationships, was a common focal point in both categories of EAT and ET-G.

However, within ET-G, metaphorical learning often described horses as objects in the process, identifying them as "prompts" and "mirrors" that yield helpful reflections about the behavior and emotions of clients (Wilkie et al., 2016, p. 379).

As Wilkie et al. explains,

> The horse can also serve as a metaphor for the client. Personal experiences, past behavior, or the processing of emotions can be projected onto the horse (Klontz et al., 2007). The desired outcome is the ability to experience, process, and regulate emotion

> and behavior. In return, this personal growth and development can expand outward and be utilized within the client's life (p. 379).

Essentially, the horse-human relationship offers inter-species learning through the creation of meaningful metaphors that represent new ways of relating to self and other. From a developmental perspective, this symbolic form of experiential learning can be more accessible for younger clientele, who may lack the cognitive capacity to process complex emotions and associated behaviors, through more traditional talk-therapy approaches (Wilkie et al., 2016). With younger clients, metaphors allow the therapist to, "reconstruct themes that occur in the child's life and promote understanding" (Wilkie et al., 2016, p. 378). In other words, human-horse interactions offer unique opportunities for people to learn about themselves, as they observe and experience direct and immediate behavioral feedback from horses. This interspecies learning can then be illustrated through meaningful metaphors that aid clients in understanding and integrating therapeutic change (Wilkie et al., 2016). Once again, the literature contained general descriptions of Interspecies Learning through the provision of meaningful metaphors but did not offer specific practice examples for demonstration.

What does this theme suggest in relation to my research questions?

The literature that speaks to Interspecies Learning (ISL), demonstrates how relationships between horses and humans consist of active engagement or input from both species. With respect to my research, this suggests that therapeutic relationships between horses and humans, are established through experiences of mutual awareness, communication and understanding of self and other, as unique and distinct individuals (Notgrass & Pettinelli, 2015). Related to this idea of unique individuals within the horse/human relationship, ISL also shows that humans share similar social attributes as horses (e.g., distinct personalities, attachment styles, trauma

responses, peer relations), which allow for therapeutic change to be integrated and highly transferrable to other relationships outside of therapy (Notgrass & Pettinelli, 2015). This is made possible, in part because horses can provide honest, non-judgemental and non-verbal feedback that is not obscured by human communication style or superficial perception, as is the case when receiving feedback from another human (Meola, 2016). For example, horses do not judge a person's value based on assessments of appearance, social status or language ability, therefore humans may be more open, curious and accepting when receiving behavioral feedback from horses (Meola, 2016). This unique capacity of horses to foster interspecies learning between horses and humans, may be especially relevant for child and youth clients, as cognitive and verbal language capacity is not a pre-requisite for relational growth to occur (Wilkie et al., 2016). In other words, learning how to foster relationship with horses does not require humans to possess specific language skills and/or cognitive abilities, as may be the case with younger clients. Instead, ISL between humans and horses is generated through a felt sense of mutual communication and understanding demonstrated by both species. Essentially, ISL is generated through somatic (bodily) attunement between horses and humans and this embodied communication may be more accessible for clients with limited language and/or cognitive processing skills (Wilkie et al., 2016).

Unique Theme: Trauma

The theme of Trauma was created to capture the multiple references to trauma and post-traumatic stress disorder (PTSD), that my analysis found in the categories of EFT and EAT. In the category of EFT, trauma was commonly described as a "multidimensional" condition that requires alternative treatment strategies (McCullough et al., 2015, p. 159). Here, EFT addressed the complexity of PTSD, through multisensory, embodied experiences with horses, allowing

participants to build self-awareness, change negative beliefs, practice skills to manage physiological triggers, and re-establish a sense of safety and trust in relationships (Schroeder & Stroud, 2017). In the category of EAT, the theme of trauma was primarily connected to traumatized humans (e.g., military veterans) who experienced barriers in accessing traditional therapy. Interestingly, the theme of trauma in the EAT category also addressed the potential impact of traumatized humans on the horses involved in therapy.

Trauma in Equine-Facilitated Therapy

Within the EFT literature, the theme of Trauma was often linked to complex symptoms, which require dynamic treatment approaches due to the diverse ways that trauma affects people. With this in mind, EFT is presented as a unique therapy, capable of meeting the symptom complexity associated with post-traumatic stress disorder (PTSD). For example, in the article by McCullough et al., (2015), exploring equine-facilitated psychotherapy (EFP) for youth with PTSD, the authors argue that, "the multidimensional landscape of PTSD, coupled with the differing treatment needs related to the various stages of the disorder and ages of victims, highlights a need for treatment that will address a wide range of symptoms, ages and experience" (p. 159). Adding to the complexity of PTSD symptomology, these authors recognize that children and youth with PTSD may also face treatment challenges related to their developmental capacity, noting that, "the non-verbal and symbolic language of children", requires a "multimodal" intervention that can meet the "specialized developmental needs of this population" (p. 159). According to these authors, EFT may be uniquely suited to meet these complex developmental needs because it is non-didactic (does not follow a linear process of learning), and somatic (focused on non-verbal, bodily expressions). Without the expectations of verbal communication common to traditional therapy settings, young clients in EFT can learn

how to engage their bodies to effectively communicate, regulate trauma responses and experience felt connection in relationship with horses.

The theme of Trauma was also evident in the research by Schroeder and Stroud (2015), which involved women survivors of interpersonal violence. In this example, the authors describe EFT as, "a multifaceted treatment approach beginning to evidence positive outcomes for post-traumatic stress symptom reduction" (p. 365). Here, EFT was considered a valuable approach that provided the women survivor clients with, "interactive and multisensory experiences" not usually available in traditional treatment settings (Schroeder & Stroud, 2015, p. 366). In this study, the participants experienced first-hand, the process of establishing safe and mutually respectful relationships with horses that parallel positive human relationships. As these horse-human relationships developed, trauma symptoms were reduced through practices of, "mindfulness, body awareness, and grounding activities to assist stress, remaining present when experiencing uncomfortable experiences, and calming self when anxious" (Schroeder & Stroud, 2015, p. 371). In summary, the theme of trauma in EFT emphasized multisensory, embodied experiences with horses, where therapeutic change involved a process of building body awareness, practicing skills to manage physiological triggers, and re-establishing a felt sense of safety in relationships (Schroeder & Stroud, 2015).

Trauma in Equine-Assisted Therapy

In the research on Equine-Assisted Therapy (EAT) the theme of Trauma was often portrayed as an effective alternative approach that is especially helpful for traumatized military clients who face specific barriers in accessing therapy such as, "stigma and lack of confidence in treatment services" (Steele et al., 2018, p. 403). In the research by Steele et al. (2018), the authors note that only a small percentage (25-50%) of returning service military members seek

clinical support for their PTSD symptoms. According to these authors, military clients with the highest needs often face the most significant barriers, which include, “difficulty admitting a problem to oneself (self-stigma), fear of being seen as weak by fellow service members and others (social stigma), fear of negative career repercussions such as security clearance (career concerns), and scheduling and location (logistical barriers)” (p. 403). To address these barriers, it is suggested that EAT may offer innovative treatment approaches that are needed to engage resistant military clients. The specific goals of EAT treatment for this population were to, “enhance skills for problem solving, communication, relational attachment, confidence and trust, self-control, setting healthy and safe boundaries, and calming the nervous system – all impacted in the trauma response” (Steele et al., 2018, p. 404). Unfortunately, these authors do not include actual practice examples to illustrate the process of treatment, but they do note that the human-horse relationship that supports therapeutic change is characterized by, “affection, trust, and acceptance” which aids in the development of, “safety and development of trust, self-esteem, and increased self-efficacy” (Steele et al., p. 405). They also briefly mention that horses possess a unique ability to support these change goals, because they provide feedback about participant behavior and emotion, in a non-judgemental way that invites, “thoughtful exploration and resolution” (p. 406).

In another study connecting EAT with PTSD, Earles et al., (2015), found that the key ingredient in healing trauma, was the practice of mindfulness. Echoing the previous examples from the EAT literature, the study by Earles et al., (2015) emphasized how trauma symptoms were approached by way of horses’ immediate feedback to participants about their non-verbal behavior, thereby increasing, “awareness of one’s behavior and emotions” (p. 150). Again, there were no detailed practice examples to demonstrate this process of change, but the authors do

state that trauma symptoms were reduced through the practice of mindfulness and present-focused awareness; skills that also support relational connection with horses (Earles et al., 2015).

The work on Trauma in EAT also included discussion about the impact of traumatized humans on the welfare of horses involved in therapy. In these discussions, authors like Merkies et al. (2018), highlight how the existing equine therapy research, lacks consideration of the equine perspective within horse-human therapeutic relationships. They point out how there is a wealth of literature examining how the therapy profession can pose significant stressors for (human) therapists, as they engage with the trauma that clients bring. Therefore, they assert "it is reasonable to assume that animals placed in similar environments could also experience stress, and that a number of variables influence a horse's response to his human partner" (Merkies et al., p. 62). In addressing this gap, these authors examined the ways that traumatized humans may impact horses, by measuring markers of equine stress such as heart rate variability, cortisol levels and behavioral changes. In their inquiry, Merkies et al. found no significant changes in horses exposed to participants with PTSD when compared to control participants, however they did find that horses' heart rates increased during therapy, suggesting that participants with PTSD may have some impact on horses, however more research is needed to analyze this possibility. Where humans are concerned however, Merkies et al. promote EAT as an effective treatment approach for trauma because, "interactions with horses can provide a feeling of safety and modulate arousal and fear responses in humans" where even "the simple act of grooming a horse can overcome touch avoidance and increase body awareness of the individual suffering from PTSD" (p. 62). In summary, the theme of trauma in EAT was focused primarily on the *human* benefits fostered through horse-human relationships, such as experiences of safe touch, embodied

communication and reduced interference from human judgement in the partnership between human and equine species.

What does this theme suggest in relation to my research questions?

My analysis of the Trauma theme suggests that horse-human relationships are unique in their capacity to address the individuality of trauma symptoms. Here, horses' agency and emotional intelligence equips them to engage each human 'individual', in the co-construction of "communication, relational attachment, confidence and trust, self-control, setting healthy boundaries, and calming the nervous system – all impacted in the trauma response" (Steele et al., 2018, p. 404). Both EFT and EAT point to this link between therapeutic change and collaborative agency between species in the horse/human relationship. The healing benefits of these interspecies relationships were often attributed to horses' non-judgemental feedback, their keen emotional and behavioral awareness, and their desire for felt connection, safety and trust (McCullough et al., 2015; Schroeder & Stroud, 2015; Vernon & Yetz, 2015; Steele et al., 2018). As such, the potential for human healing is tied to the mutual agency or 'voice' of both individuals engaged in building the relationship (human and horse). In other words, human healing is made possible as both species work together, towards mutual attachment, trust, healthy boundaries, affection, acceptance, and the awareness and understanding of emotions and behavior (Schroeder & Stroud, 2015; Steele et al, 2018).

The theme of trauma also reflected an apparent gap in the equine therapy literature, when it comes to studying the experience of these relationships from the horse's perspective. Essentially, there is minimal knowledge about the impact that humans may have on horses in the context of equine therapy (Matamonasa-Bennett, 2015; Merkies et al, 2018, Malinowski et al., 2018). Related to the theme of Trauma, the literature was consistently human centered despite an

awareness that horses' emotional intelligence and individual agency are what enables therapeutic change for the humans. The apparent disregard for the 'equine experience' in the literature, links directly to my research goals and motivation to examine whose voice is included or excluded in descriptions of these horse-human relationships. My analysis of the trauma theme suggests there is slow but growing recognition that it is equine social-emotional intelligence that underpins therapeutic benefits for humans in these relationships. This is important knowledge that should motivate humans to recognize that we benefit from the exploitation of equine agency while also denying its priority in the research.

Unique Theme: Experiential and Embodied Horse-Human Encounters

I created the theme of Experiential and Embodied Horse-Human Encounters (EEHE), to capture the central characteristics of this therapeutic engagement, as described in the literature categories of Equine-Facilitated Therapy (EFT) and Equine-Assisted Therapy (EAT). These therapeutic encounters were conceptualized as "interactive and multisensory experiences," that emphasize bodily involvement and/or physical participation (Schroeder & Stroud, 2015, p. 366). In my theme of EEHE, the term *experiential* refers to knowledge that is gained through direct observation and/or participation, while the term *embodied* refers to the way this knowledge is made "concrete and perceptible" by engaging one's whole body ("Experiential" n.d., "Embodied", n.d.). The following examples demonstrate how the EEHE theme is described in the EFT and EAT literature.

Experiential and Embodied Horse-Human Encounters in Equine-Facilitated Therapy

In the literature about Equine-Facilitated Therapy (EFT), the theme of Experiential and Embodied Horse-Human Encounters (EEHE), was presented as a relational process between horses and humans, informed by "embodied connection, touch and movement" (Ford, 2013 as

cited in Lac, 2017, p. 303). This physical attunement is guided by present-moment awareness, which is considered a natural state for horses who, "live in the here-and-now and respond authentically to their environment in a naturally embodied way" (Lac, 2017, p. 303). This embodied way of being, allows them to notice subtle changes in the body language and emotion of others and respond accordingly (Lac, 2017). In the context of EFT, participants develop present-moment awareness of how their own body language impacts various responses from the horses they are engaging with (Lac, 2017). The relational experience of embodied awareness, "takes clients out of their left-brain thinking, extracting clients from their intrapersonal domain into a more mindful and interpersonal realm with their whole being" (Hamilton, 2011, as cited in Lac, 2017, p. 303). In other words, when clients are distracted with their own internal thoughts, this decreases their ability to be present and to recognize the impact of their body language. By practicing present moment awareness, they are able to notice what their body is sensing (as horses do) and how this non-verbal communication plays a role in relationship with self, others and the environment (Pendry et al., 2014).

Another example of the EEHE theme was identified in the research by Naste et al., (2018), which described the body as the "sole tool" for communication between horses and humans (p. 293). Throughout experiences of interacting with horses, clients learned how moving their bodies in different ways produced changes in the horse's emotional and physical state (Naste et al., 2018). Naste et al. speaks about this experiential process, explaining that, "the client learns how to understand, or attune to, the non-verbal cues given by the horse, as well as how to react to these cues effectively" (p. 293). Practice examples of this, are offered by Schroeder and Stroud (2015), which demonstrate some of the ways EFT incorporates experiential and embodied awareness, into horse-human encounters. In one instance, clients

learned to interpret the body language of horses, such as, “lowered head and stillness suggest comfort, whereas ears pinned back, tail swishing, or frequent movement may indicate discomfort” (Schroeder & Stroud, 2015, p. 377). In another experience, clients practiced mindfulness to recognize how emotions were connected to certain bodily sensations and how to regulate these physiological responses, to remain present and engaged with the horse (Schroeder & Stroud, 2015). In this case, clients were encouraged to “experiment with tuning into their bodily experiences (e.g., muscle tension or racing heart) while they worked with the horses, notice any automatic negative thoughts which accompanied, then practice applying non-judgemental awareness and curiosity to the experience” (p. 377). In another example from Schroeder and Stroud (2015), clients developed mindfulness skills, through the experience of, “placing their hands on the side of their equine partner’s belly, observing the rise and fall, and then breathing along with the horse” (p. 377).

These practice examples illuminate how experiences of embodied awareness between humans and horses, were presented in the EFT literature.

Experiential and Embodied Horse-Human Encounters in Equine-Assisted Therapy

In the Equine-Assisted Therapy (EAT) literature, the theme of Experiential and Embodied Horse-Human Encounters(EEHE), was often expressed through learning principles that informed horse/human encounters. For example, in the research by Notgrass and Pettinelli (2015), the authors looked at an equine-assisted psychotherapy program that incorporated a framework of learning, from the Association for Experiential Education (AEE). Some of the AEE principles that were listed as EAT program elements included, reflection, synthesis, learner initiative, active engagement, experimenting, relationships, uncertainty, exploration, safety, natural consequences, and spontaneous opportunities (Notgrass & Petinelli, 2015). Informed by

the clients' specific needs, this program aimed to create "authentic experiences" that actively engaged clients, "around the experience itself rather than accomplishing a task" (Notgrass & Pettinelli, 2015, p. 166). These authors explain that horse-human relationships require humans to actively engage in an experiential process, "whether mentally or physically or spiritually", which can evoke a variety of emotional responses (p. 167). Drawing from AEE principles, participants are supported to stay present during their emotional experience and reflective processing, which can, "create vast openings to new insights and behavioral change" (AEE, n.d.; EAGALA, 2012; Mandrell, 2006 as cited in (Notgrass & Pettinelli, 2015, p. 167). Essentially, participants experiment with their mind and body while attempting to connect with horses, and through this experiential process, key behaviours, patterns, shifts and discrepancies can be identified, which may relate to their specific change goals (Notgrass & Pettinelli, 2015).

In other research, by Lac (2016), the author considers how the experiential change processes of EAT can integrate tenets from Gestalt theory related to experimenting with embodied ways of being, in relation to self and other. In this example, clients experimented with using their bodies to communicate and connect with horses, while facilitators supported them through a process of direct observation, reflection and integration of these new experiences as they occur in the moment (Lac, 2016). As Lac explains, this experimental process offers clients opportunities to experience and embody, "new ways of being in relationship, to try things out, and feel new feelings" (p. 199). Lac offers a case example to demonstrate how the experience of connecting with a horse in an embodied way, supported the client's ability to self-regulate their nervous system. As Lac points out, the repeated practice of bringing "attention back into her body", through, "sight, sound, smell, taste, and feel", while interacting with horses, became an effective strategy this client could use to self-regulate when experiencing anxiety (p. 203).

These examples from the EAT literature, demonstrate how the EEHE theme was conceptualized in the EAT change process.

What does this theme suggest in relation to my research?

The theme of Experiential and Embodied Horse-Human Encounters (EEHE), points to the agency of horses within a dynamic process of attunement that emerges as two species (horse and human) learn how to 'speak' to each other in a common language. This shared language happens at a bodily level, in which awareness of non-verbal, felt connection informs the relationship between two individuals (Notgrass & Pettinelli, 2015). Similarly, horses and humans are capable of reading body language cues, in order to communicate and choose to establish connection (or not) with others (Lac 2016). For horses, embodied communication is their natural and primary way of being and knowing, and while humans understand the importance of body language, they may lack awareness of how their own non-verbal expressions impact their relationships (Lac 2017). The experiential process of building relationship with horses, provides humans with a 'low pressure' and novel way to recognize their own patterns of relating and experiment with new ways of being that are not hindered by the anticipation of human judgement (Lac 2017). In this experiential and embodied partnership, horses demonstrate their agency as they offer responsive and meaningful feedback about the human's way of being. This form of interspecies feedback can be easier for humans to accept, change and practice, without fear of offending another human who may reject them (Lac, 2017).

In my analysis of EFT and EAT, experiences of embodied connection are at the centre of interspecies relationship between horses and humans. Here, both individuals demonstrate agency through embodied communication and attunement that strengthens the connection for both (Notgrass & Pettinelli, 2015; Lac, 2017; Naste et al., 2018).

Unique Theme: Movement Therapy

The theme of Movement Therapy (MT) was created to capture the multiple references to movement (kinesthetic) sensations, that inform the process of physical change in humans participating in riding activities. Essentially, the movement of a horse's body when being ridden, challenges the rider's body to maintain balance, control, coordination (Hawkins et al., 2014). These physical dynamics between the horse's body and the rider's body can be manipulated, in ways that affect change in support of specific therapeutic goals (e.g., improving core stability) (Hawkins et al., 2014).

To remind readers, EAT is an umbrella term for a field that encompasses distinct practices, including hippotherapy (HT) and therapeutic riding (TR). For the purpose of identifying themes which are unique to these distinct practices, (HT and TR), I have treated them as separate literature categories for my analysis, rather than combining them under the EAT label.

Movement Therapy in Equine Assisted Therapy

In my analysis of the Equine-Assisted Therapy literature, the theme of Movement Therapy (MT) was described in terms of the physical benefits that humans gained while riding horses due to the dynamic stimulation from horses' movement (Wehofer et al., 2013). In other words, the movement of a horse's body during riding activities engages the rider's body in dynamic ways in order to maintain balance, coordination and control (Wehofer et al., 2013). This interaction between the horse's body and the human rider's body serves as the central mechanism of change used to meet therapeutic goals related to physical function (Alfonso, 2015). As Lanning and Krenek (2013) explain, "the movement of the horse provides a passive dynamic challenge to trunk stability, postural comparison, and balance. The constant movement

of the horse and additional sensorimotor experience of riding can aid in the development of both gross and fine motor function" (p. 1905).

In other research, by Hawkins et al., (2014), the MT theme was discussed in a study about the effects of EAT, on the gross motor skills of children with Autism Spectrum Disorder (ASD). In this example, the researchers were interested in the impact of EAT on "body coordination, strength and agility, and overall gross motor skills" for child participants with ASD (Hawkins et al., 2014, p. 137). The bodily impacts were assessed through a variety of physical activities that participants performed while riding such as, "reaching to the side for toys, tossing/catching a ball," "leaning forward to touch the horse's ears, reaching back to touch horse's tail" and "maintaining correct sitting posture throughout session, riding side saddle" (Hawkins et al., 2014, p. 141). These activities are designed to target certain parts of the rider's body based on specific therapeutic goals, with the movement of the horse serving as the mechanism that stimulates change. As Hawkins et al., (2014) explains, "the physical movements and activities implemented during the riding sessions were designed to challenge and improve the participant's gross motor skills (e.g., core stability, upper and lower extremity strength)" (p. 145).

In other research by Wehofer et al., (2013), the study looked at the use of EAT to improve the, "mechanisms of balance, postural sway, fear of falling and participation" in older adults (p. 71). This example further informs the theme of movement therapy (MT), as it describes the way horses' movement elicits beneficial physical development of human riders (e.g., improved muscle strength and coordination). As Wehofer et al., (2013) explain:

> The horse provides a dynamic base of support and challenges these sensorimotor components. The three-dimensional rhythmic reciprocal movements of a walking horse

> generate normalized pelvic movement of the rider that resembled pelvic movements essential for ambulation… Improvement in trunk stability, posture, and pelvic mobility assist in improved gait and balance… (p. 73).

In this example, the rider's ability to walk and maintain physical balance was improved through the kinesthetic (movement sensations) that was generated from the horse's body, during riding. This study's findings also align with the study by Rigby & Grandjean (2016), who found that EAT contributes to:

> …enhanced physical function as the horse elicits passive and active stretching from the rider and allows the rider to facilitate righting and equilibrium reactions while on the horse. The rider, then, reproduces movement patterns that are similar to those of natural human activities, such as walking" (p. 9).

These examples informed the theme of movement therapy (MT), within the category of EAT, and demonstrated how horses' movement can produce therapeutic effects on the physical functionality of human participants.

Movement Therapy in Hippotherapy

In the research on Hippotherapy (HT) that I reviewed**,** the theme of Movement Therapy (MT) was presented as the defining element that informs the practice of this approach. As Thompson et al. (2014) state:

> Hippotherapy, or horse therapy, is an innovative form a physical therapy that involves the use of a horse as a therapeutic tool in order to effectively challenge a rider's core muscles. The rhythm of the horse's gait continuously engages the client's balance and posture, while the supervising physical therapist seeks to improve the client's overall coordination and fine motor skills through various activities (p. 60).

As I found in my review of the literature on Equine Assisted Therapy (EAT), the MT theme in HT focused mainly on the physical benefits connected to the dynamic movement of horses' bodies during riding activities, such as motor and postural control, strength and muscle tone, balance, consolidation of gait pattern and fine motor skills (Leveille et al., 2017). For example, Ajzenman et al., (2013), looked at the impact of HT on the motor control, adaptive behaviors and participation of children with autism. However, in this study the physical benefits were linked to "cognitive-sensorimotor systems", such as "receptive communication and coping" and "participation in self-care, low-demand leisure, and social interactions" (Ajzenman et al., 2013, p. 653). This link between physical and psychological benefits raised the question of whether improving physical function through the therapeutic movement of HT would simultaneously improve one's capacity to engage in daily life activities that involve physical, cognitive and social engagement (Ajzenman et al. 2013). In other words, this created an opening for us to ask, could movement therapy in HT generate physical benefits that also improve other developmental abilities, outside of the therapy context? In this regards, Ajzenman et al. (2013) explains that:

> as children experience improved sensory motor function, they may be more willing to engage in everyday activities that have been challenging in the past. With increased motor abilities, children have increased opportunities to engage in self-care activities such as shoe tying or dressing, participate in leisure activities including cutting or colouring, and socially interact with other children (p. 660)

This study determined that the horse's movement stimulated a stabilizing response in the participants' bodies, which strengthened "automatic postural mechanisms", thereby allowing

greater engagement in physical and social activities in their daily life (Ajzenman et al. 2013, p. 662).

The MT theme was further explored in the study by Thompson, Ketcham and Hall, 2014, who included a link between physical and psychological benefits in their research. In doing this, Thompson et al. highlight the way that increased motor function also increased self-esteem, confidence and overall quality of life, for children with a variety of developmental delays. The emphasis was on MT in this research as the researchers discussed how their study's findings were likely due to, "the continuous movement of the horse, forcing the participants to constantly correct their trunk positions in order to remain upright" (p. 67). Essentially, Thompson et al. found that the horse's movement stimulated postural balance of participants, which translated to increased ability to move and function outside of the therapy context, thereby improving overall quality of life. Thompson et al., give an example of this, explaining that, "a horse's gait closely resembles that of a human's normal walking pattern therefore an individual who is unable to walk independently is able to assimilate this pattern via the gait of the horse" (p. 62).

These examples from the literature categories of EAT and HT show how the theme of Movement Therapy describes the dynamic movement effects between human and horse bodies, that benefit physical and psychological functioning for human participants.

What does this theme suggest in relation to my research questions?

The theme of Movement Therapy (MT) that was identified in the categories of EAT and HT was focused almost exclusively on measuring physical change for human participants. Here, agency was located in human physicality, as riders' bodies responded to the stimulus provided by horses' bodily movement. The central mechanism of change was identified as the horses' bodily movement which engaged human bodies in specific ways that increased physical function

for those humans (Alfonso, 2015). While it is recognized that the movement of horses' bodies in contact with human bodies can improve physical functionality for humans, the agency of horses in these descriptions is virtually non-existent. Reflecting on this finding made me wonder how the concept of agency or the capacity to act, might be recognized in the physical interconnection between horse and human species. While the literature did not consider the horses' bodily input as a form of agency within the change process, my own experiences working in the field of therapeutic riding compels me to wonder about this. In my 3 years serving as an assistant instructor with a local therapeutic riding agency, I learned how to facilitate healing physical engagement between horse and human bodies that supported various client needs. Through these experiences I observed how horses would often adapt and alter their bodily movements in response to the physical expressions of the individuals they carried. The most visible examples of this occurred when riders' physical function affected their ability keep their bodies upright and centered in the saddle while riding. Multiple times, I observed horses respond to this felt imbalance, by adjusting their own posture, pace and gait in ways that prevented those riders from falling over. Furthermore, these observations sometimes informed our planning process of matching riders with horses to accommodate their unique physical abilities. While my observations of equine agency in these examples can only be considered anecdotal evidence, I believe that the physical dynamic between horse and human bodies includes physical expressions of agency from both species. Perhaps these expressions of physical agency between horses and humans engaged in riding activities represent an area for future researchers to explore in the study of equine therapy.

Unique Theme: Equine Welfare

The theme of Equine Welfare (EW) was created to capture the ways that the literature addresses ethical considerations for horses who engage in therapeutic relationships with humans. This theme was present in the literature categories of Equine-Assisted Therapy (EAT) and Therapeutic Riding (TR). Interestingly, EW was less apparent in the literature about Equine Facilitated Therapy (EFT), which only offered brief mentions of equine welfare (Bachi, 2013; Pendry et al., 2014). This finding was surprising because in the EFT literature horses were consistently framed as 'subjects' with agency, so one would assume this would include greater reference to their welfare**.**

Equine Welfare in Equine Assisted Therapy

In the Equine Assisted Therapy (EAT) literature, the theme of Equine Welfare (EW) was informed by the recognition that horses employed in this work may experience negative effects, therefore their welfare deserves greater consideration and protection (Matamonasa-Bennett, (2015). Essentially, the theme of equine welfare suggests there is growing concern about the ways humans in these therapy relationships may impact the horses involved. This consideration about the impacts on equines, was highlighted by Matamonasa-Bennett, (2015) who argues that if horses are being employed as partners and co-facilitators in therapeutic relationships, this requires "major cultural paradigm shifts regarding intelligence and emotion and consideration of the ethical implications for the care and agency of these animals" (p. 23). In other words, if we understand horses as central facilitators of change, with individual personalities, capable of experiencing and expressing emotions, then we must also consider: how are we accountable for ensuring their rights and welfare? Despite these considerations, according to Rigby and Grandjean (2016), the existing literature about equine therapy often overlooks the possibility of

harm to the horses who are employed in human therapy. This was echoed in the research by Merkies et al., (2018) as these authors argue that "there is little research that analyzes these interactions from the viewpoint of the horse. More attention needs to be accorded to the benefits the animals receive in these programs, as there is potential for a therapy animal's welfare to be negatively affected" (p. 61). This attention towards equine welfare is timely, as the literature reports that the field of EAT is rapidly growing along with the growing global concern for animal welfare (Malinowski et al., 2018).

The discussion of Equine Welfare in the EAT literature also highlights a link between the level of safety and the approaches deployed by EAT professionals who are largely informed by existing knowledge about horse behaviors. As Merkies et al., explain, "Understanding the therapy horse's role is fundamental for furthering research, providing suitable training for facilitators, and ensuring appropriate safety measures for all participants while gaining additional insight into the human-animal bond" (p. 62). This suggests that when we understand how to improve and protect the welfare of therapy horses, we also increase the safety and welfare of humans who engage in these therapeutic relationships. Therefore, if equine professionals understand how equine welfare impacts the safety of the services they offer, they are also better equipped to recognize, manage and avoid unsafe equine behaviors that could pose risks to human participants (Merkies et al., 2018).

Equine Welfare in Therapeutic Riding

In the research on Therapeutic Riding (TR) the theme of Equine Welfare (EW) was primarily concerned with how people with significant physical and psychological health challenges may impact the welfare, stress levels and quality of life of the horses involved in these riding programs. As with the research on Equine-Assisted Therapy (EAT), the TR

literature also reveals a lack of existing research about equine welfare and calls for urgency in developing this knowledge, because of the growing popularity of this field. As McKinney et al. (2015) explain, “the popularity of therapeutic riding is growing rapidly. With greater numbers of horses used in this field, it is becoming increasingly important to understand how this work impacts horses’ quality of life” (p. 922).

My review of the literature located two TR studies that analyzed levels of stress in TR horses: one study involved children with a variety of diagnoses (McKinney et al., 2015), the other study involved military veterans with PTSD (Johnson et al., 2017). The first study by McKinney et al., (2015), hypothesized that, “the physical and mental health challenges of individuals participating in therapeutic riding (e.g., decreased mobility and trunk stability, reactive behavior) may result in additional mental or physical stress on the horses” (p. 923). Similarly, the researchers in Johnson et al., (2017), hypothesized that,

> horses being ridden by people with severe physical and mental disabilities (e.g., military veterans affected with PTSD) may be stressed due to the need to continuously adjust their own posture and gait to accommodate rigid and unyielding body posture of the rider. The horses may also be stressed by riders’ high anxiety and anger levels, low tolerance for, and reactivity to unexpected events (p. 78).

In order to test these hypotheses, the researchers in these two studies examined biological and behavioral markers of equine stress such as, cortisol concentrations in saliva, common stress behaviors, and blood concentrations of other chemicals associated with physiological stress responses. Interestingly, both of these studies found no significant increases of stress in the horses involved, however there were significant limitations in these studies related to small sample sizes and lack of generalizability to other populations, which could produce different

results (Johnson et al., 2017; McKinney et al., 2015). In other words, the stress level of horses in TR would likely fluctuate depending on the specific characteristics of the clients (e.g., mental diagnosis like depression versus physical conditions like cerebral palsy). Therefore, the findings from these aforementioned studies can only be generalized to the specific demographic of the study participants (e.g., veterans with PTSD). With consideration of these limitations, overall, the theme of EW in the TR literature indicated a growing concern and desire for knowledge about the welfare and quality of life of horses engaged in these therapeutic contexts.

What does this theme suggest in relation to my research questions?

My research sought to explore how the existing equine therapy literature portrayed the agency of horses, with attention to the ways our language positions them as both active subjects and/or passive objects. The theme of EW suggests there is growing human awareness about the agency of therapy horses and the emerging ethical questions about their welfare. Even as the field of equine therapy continues to grow at a rapid pace, the literature shows that this field also suffers from a significant gap in our knowledge of equine welfare (Matamonasa-Bennett, 2015). As my analysis of theme of EW has revealed, research has begun to recognize the mutual agency between horses and humans as a central mechanism of change in these therapeutic relationships. In the EAT and TR literature, researchers are making the argument that when we recognize the social-emotional intelligence and agency of horses, we are also compelled to address ethical questions about their welfare (Matamonasa-Bennett, 2015). For these researchers, the equine therapy literature has effectively overlooked the perspective of therapy horses, which may be a symptom of underlying contradictory human beliefs about horses as both active subjects and/or passive objects (Matamonasa-Bennett, 2015). The theme of EW highlights an urgency for researchers to investigate the welfare of therapy horses so that our evolving knowledge may

guide our language and our actions (McKinney et al., 2015). This growing desire to explore the equine experience of therapy aligns with the goals of my research by directing attention to the ways that we conceptualize and enact our therapeutic relations with horses. The theme of Equine Welfare challenges humans to reconsider the connection between our knowledge and our actions within interspecies relationships. If we know better, we should do better. Furthermore, as Malinowski et al., (2018) argue, human attention to equine welfare is developing at a key time as advocacy movements for animal welfare are increasing around the world. Some important questions raised by the theme of EW could include the following:

- How do humans accurately represent the equine perspective?
- What do these ethical relationships look like in practice?
- Who decides what is ethical practice and how do we ensure these standards are met?
- Do these ethical obligations extend to horses outside of the therapy context?
- How do cultural beliefs impact our sense of ethical obligation to horses?
- What does our growing awareness of equine agency mean for other therapy animals?
- How do we want to model inter-species relationships for future generations?

Unique Theme: Horse/Human Relationship

In my analysis, the theme of Horse/Human Relationship (HHR) was identified in the categories of Equine-Facilitated Therapy, Equine-Assisted Therapy and Equine Therapy-General, and highlighted the diverse ways that humans and horses have established meaningful relationships with one another. In some of the literature, the horse-human relationship (HHR) was described in terms of an emotional bond within the therapy context that serves as the foundation for human change (Bachi, 2013). In other instances, the HHR was depicted as a co-evolutionary partnership that can be traced back to ancient contexts (Matamonasa-Bennett,

2015). Essentially, various examples from the literature portray the HHR as a significant force in the lives of humans, which continues to this day.

Horse/Human Relationship in Equine Facilitated Therapy

Within the research on EFT, the theme of Horse/Human Relationship (HHR) was primarily framed as a therapeutic partnership fostered through an emotional bond between humans and horses. For example, in the study by Ford (2013), the HHR is understood as the central element in therapy with humans, because it enhances the depth and breadth of therapeutic connection. As Ford (2013) explains, the HHR can serve as a safer experience of connection for clients with a history of trauma within human relationships, because while therapists can attempt to present themselves as neutral partners, they cannot completely avoid presenting human qualities that may pose challenges in connecting with traumatized clients. For these clients, the HHR may offer greater safety, comfort and connection, due to their non-human way of connecting in relationship (Ford, 2013). Ford also noted that while the HHR may enable safer experiences of emotional connection, horses do present clients with the possibility of physical danger. She also points out that this unique quality of the HHR, where horses provide comfort but also the capacity to cause physical harm, is recognized as an important safety consideration that can also foster the, "conquering of fear and discovery of connection with horses as "empowering" to clients" (p. 104).

Ford (2013) also highlights the way that the HHR increases connection through ethical and supportive experiences of touch and physical contact that horses are in a unique position to offer. In doing this she suggests that, human therapists are, "limited in the amount, type, and location of touch that they can provide to clients," but horses are able to offer clients the benefits of touch in, "safe, appropriate and therapeutic ways" (p. 103). This suggests that the HHR

provides clients with safe opportunities to express, experience and embody qualities of care and love, in ways that are not possible in human therapeutic relationships.

Additionally, Ford (2013) notes that the HHR between therapists and horses is important because it supports the facilitation of safety, understanding and connection for clients who are engaging with horses (Ford, 2013). In her research, Ford states that the therapist's personal relationships with horses served as a relational model for clients who were trying to establish their own HHR. Thus, the therapist's HHR allowed clients to observe what an HHR can look like, before they are expected to participate and also allows therapists to glean more information or meaning to support the client's process of building their own HHR. Essentially, when therapists have their own relational connection with the horse(s), they are better able to interpret and support the HHR between those clients and horses. As Ford explains:

> Knowing the breed, history, and personalities of the horses can help therapists more accurately read and interpret the horses' energy and behavior, and then translate this for the client as needed. It can also help the therapist track (along with the horse handlers) how the horses are doing, and whether any of them are reaching their therapeutic limits for the moment or the day (p. 106).

Ford's research highlights some of the ways the HHR enhances the possibilities for therapeutic change in relationship with humans, including clients and therapists.

Relating the HHR to human relationships, Bachi (2013) describes the way that HHR aligns with core principles of Bowlby's attachment theory (Bretherton, 1992), which are enriched by the participation of horses. Bowlby's attachment theory states that human lives, "revolve around intimate attachments, which are mainly shaped by first relationships with parents or caregivers. Though, in instances of deficiencies in those involvements, later

relationships can offer opportunities for restoring emotional capabilities and healing" (Bachi, 2013, p. 189). Here, the HHR is described as a unique process that supports clients in recognizing and healing their attachment challenges. In this HHR process, the therapist observes how the client relates to the horse in order to identify the client's attachment style/behaviors and establish goals that support therapeutic growth (p. 189). In this way, the HHR provides opportunities for clients to experience the co-creation of "intimate relationships" that, "may foster attachment feelings and behaviors", which can help to, "shift the client's experience towards a more coherent and secure sense of self" (Bachi, 2013, p. 194). For Bachi, the HHR is described as a co-created relational process, offering clients experiences of attachment that support healing and therapeutic change.

In other research, by McCullough et al. (2015), the HHR is compared to successful therapeutic alliances between therapists and clients, which is characterized by elements like, "bonding, empathy, caring, and safety" (p. 160). Furthermore, the therapeutic value of the HHR is compared to positive human peer relations that are, "full of socializing and adventure" (p. 160). This example of the HHR also mentions the emotional and physical connection, which is said to deepen the impact of therapy by promoting the client's sense of independence, self-reliance and competency (McCullough et al., 2015). In these examples, the HHR is portrayed as a meaningful partnership that offers human clients many of the same social qualities that may be experienced in positive human relationships.

Horse/Human Relationship in Equine-Assisted Therapy

In the research on Equine Assisted Therapy (EAT) that I reviewed, the theme of HHR emphasized the co-dependant evolution that humans and horses share and the powerful emotional connection that our two species have developed over time. According to Matamonasa-

Bennett (2015), horses and humans "share a 6,000-year history of co-evolution and horses are credited with being the species that has had the greatest impact on human civilization" (p. 26). Matamonasa-Bennett shows that this historical connection between our species can be traced back to ancient Greece, when humans began to recognize how horses could offer physical therapy and ease suffering from chronic illness. Meola (2016) also speaks to this, pointing out that, as the HHR grew over centuries, horses became prolific human symbols of, "power and leadership", playing critical roles that shaped "the rise and fall of empires for thousands of years" (p. 295).

In other research, Notgrass and Pettinelli (2015) trace the history of the HHR, which shows that medical sciences in 1569, began to study and document the dynamic ways that the HHR could support a variety of mental and physical conditions. Then, in the late 1950s, riding centers for people with disabilities began to grow in Europe, and by 1965, similar riding centers opened in Canada and the USA (Notgrass & Pettinelli, 2015). According to these authors, the HHR has continued to evolve, gaining attention by a growing body of research and accreditation by professional organizations such as the Association of Therapeutic Horsemanship International (PATH) and/or the Equine-Assisted Growth and Learning Association (EAGALA). Furthermore, over the last 20 years, there has been growing curiosity about the "transformational, spiritual experiences" that commonly describe the HHR (Notgrass & Pettinelli, 2015, p. 35).

In relation to this growing interest in the value of HHR, Matamonasa-Bennett (2015), points out that although these concepts may seem new within Western cultural contexts, they are reflected in, "the paradigms from ancient cultures and contemporary indigenous cultures" (p. 35). This author argues that humans increasingly seek therapeutic support from horses, and this "elevates the nature of those relationships and our responsibilities" to the horses we employ for

this work (p. 36). Furthermore, she points out that designating horses as healers and co-therapists, "cannot co-exist with a Western view of dominance that holds them as inferior or allows for their exploitation" (p. 36). This tension of viewing horses as emotionally intelligent beings while also treating them as therapeutic tools, was a reoccurring contradiction across the literature in my review. Specifically, as I analyzed the ET literature (North American/Western context) I found there were contradictory descriptions of horses where they were sometimes portrayed as gifted and intelligent healers, and other times, portrayed as passive, therapeutic objects for human use. Matamonasa-Bennett (2015), also speaks to this pattern, when she explains;

> Those practicing, writing and teaching therapeutic interventions with horses have viewpoints ranging from horses as mere *objects* in which they are called 'tool' in therapy (Halberg 2008), a vehicle for projections (Trotter, 2012), "metaphors" for the client's life (Karol, 2007; Klontz et al., 2007) to being identified as *subjects* (Halberg, 2008), "partners" or "facilitators" in the therapeutic process (PATH, year; Fundamentals 2012; Halberg 2008)"
>
> (p. 35).

These findings in the literature informed the theme of Horse/Human Relationship (HHR) within the research on EAT. The HHR is rooted in a long history of co-evolution between humans and horses which has been shaped by different cultural perspectives about the value of this relationship and presence of horses as sentient subjects and/or unperceptive objects.

Horse/Human Relationship in Equine Therapy-General

The HHR theme in the ET-G literature was only referenced once, in the study by DeBose (2015), but it was the central theme of this one study and was discussed in great detail.

Therefore, it has been included as evidence of the HHR theme in ET-G. DeBose describes the HHR as historical companionship between our species, in which horses are key participants in the development of human economics and health. As DeBose (2015) states, for centuries, humans have utilized horses' "physical power," "stalwart trust and loyalty," to progress human endeavors, such as agriculture and war (p. 353). DeBose (2015) also points out that centuries of co-habitation and companionship fostered a deep emotional connection between horses and humans. She explains that, as the utilitarian roles of horses decreased with the development of technology, this emotional bond with horses, laid way to new perspectives about the value of the HHR. For Debose (2015), as technology advanced, the need for horses in labour roles decreased and the HHR shifted into contexts of recreation, luxury hobby, and sport. In these new recreational roles, the emotional connection between humans and horses continued to evolve, and people began to recognize other ways that horses could benefit human physical and mental health. In the 1960s, horses gained attention from physical and psychological therapists, who were researching the potential ways that horses could assist patients with a variety of health challenges (DeBose, 2015). DeBose argues that during centuries of co-evolution, the emotional bonds of the HHR grew and humans, "developed an inherent attraction to the beauty and power of the horse, demonstrated today by nostalgic imagery of horses pulling plows and carts to carrying knights in armor and cowboys across the plains" (p. 354). Today, horses are employed in therapy contexts around the world, providing meaningful experiences of connection for humans, through their ability to, "bond with multiple people for a reason that is specific to each individual person" (DeBose, 2015, p. 362). These examples from the ET-G literature, demonstrate how the HHR theme was conceptualized as deep connection fostered through centuries of co-evolution, which continues to enhance human welfare in today's modern world.

What does this theme suggest in relation to my research questions?

The theme of horse/human relationship (HHR), demonstrates how throughout time, horses have provided a multitude of benefits for humans, ranging from physical healing, to agricultural development, competitive sporting and aiding humans in war (Matamonasa-Bennett, 2015). More recently, the HHR has grown into a popular alternative approach to various mental health issues. As the literature revealed, horses exercise their keen social agency as they model relationships that foster positive change in human mental health (Ford, 2013). Moving beyond the confines of traditional human-centered therapy, the HHR offers experiences of felt connection between two different species, which has been especially useful for people with trauma who feel fearful in human relationships (Ford, 2013). One of the unique benefits that can emerge in this interspecies relationship, is the experience of safe touch between beings, actions that are limited or forbidden in traditional therapist-client relationships (Ford, 2013). In addition to healing touch that the HHR offers, the literature reveals that horses model certain relational qualities that humans seek, such as empathy, safety, boundaries and mindfulness (McCullough et al., 2018). In this way, humans can experience and heal in relationships informed by mutual awareness and each individual's 'voice' or agency. It is important to note that most of these HHR examples as described in the literature, are focused on the benefits afforded to the humans and do not consider the perspective of the non-human animal in these relationships: horses. Echoing Matamonasa-Bennett (2015), this erasure of the non-human experience in HHRs, may reflect underlying colonial beliefs about non-human animals being inanimate and therefore exploitable by humans.

Chapter 6: Dominant Theme Reports

The following section describes the dominant themes that my analysis identified across *all* categories of ET literature (Equine-Facilitated Therapy, Equine-Assisted Therapy, Therapeutic Riding, Hippotherapy and Equine Therapy-General). Each dominant theme report begins with a summary of the meaning that the theme is meant to capture, followed by a detailed description of the theme as it was presented in each ET category. At the end of each theme report, I provide my analysis of the theme as it relates to my specific research questions. These dominant themes can be previewed in Table 6 below.

Table 6

Table of Dominant Themes

Dominant Theme	Categories	Definition
Equine Agency	All Categories	Horses as subjects (active individuals) Horses as objects (passive objects) OR Both
Gaps	All Categories	Areas of knowledge & practice in ET that lack clarity, understanding, consistency

Dominant Theme: Equine Agency

One of my main research questions concerns the way horses are portrayed in the equine therapy literature and my thematic analysis sought to examine the language used to describe this portrayal. Equine agency (EA) is a theme that I created to capture the way horses are described in the literature either as an active subject or a passive therapeutic object, or both. I designated EA as a dominant theme because within every category of equine therapy, I found that horses held a central role in the change process with human participants, however the language used to describe their role varied. Sometimes the literature described horses as subjects, using language such as, 'partners,' 'teachers,' 'co-facilitators,' while at other times the literature depicted horses as objects through language such as, 'tools,' 'mirrors,' and/or 'metaphors'. In the research that framed horses as subjects, the language suggested that horses are sentient beings (emotionally intelligent), capable of expressing and communicating their emotional worlds to humans that understand how to interpret their equine language/behavior. On the other hand, when horses were framed as therapeutic objects, the language described horses as passive props, without a voice of their own. In these examples, the role of horses was usually simply to provide their bodies as physical objects offering particular movements that can be utilized to benefit humans. In what follows below, I present a detailed description of how EA was described across all the categories of ET.

Equine Agency in Equine Facilitated Therapy

In the articles that describe Equine-Facilitated Therapy (EFT), horses were primarily described as subjects, with the exception of one article, in which the author objectifies horses as, "a metaphor for problems and for life and also as a mirror to reflect back onto the participant, his or her way of being and interacting in the world" (Ferruolo, 2015, p. 55). This was the only

description of horses as therapy *objects*, that I found within the Equine-Facilitated Therapy literature.

In all other EFT literature, horses were frequently described as subjects, who actively engage in the development of connection and communication with humans. For example, Ford (2013) explored how dance/movement therapy can be combined with equine facilitated psychotherapy, positioning horses as co-facilitators in the process. In this study, participants referred to their equine partners as effective therapists, and teachers, emphasizing their "wisdom, intuition, authenticity, present moment focus, level of embodiment, and ability to reflect, hold space, support, challenge, and guide" (p. 101). Ford also highlights how horses demonstrate agency in their ability to offer immediate and authentic feedback, by responding to human body language and behavior. In this way, horses can reflect important information and insights about the way participants relate to themselves and to others. This ability to mirror human behavior, provides clients with honest, immediate and non-judgemental feedback, from which new awareness can be gleaned (Ford, 2013). This new awareness supported behavioral changes in the human participants, which were then, "validated and integrated" through a "satisfying shift" in the horse's behavioral response, such as, "compliance with a requested movement, or increased connection and relationship" (p. 101). The language in this study, highlighted horses' agency, by describing their "authenticity, clarity, reliability, and trustworthiness" as emotionally intelligent co-facilitators, engaged in therapeutic relationship with humans (p. 101).

In the research on EFT, the agency of horses was also portrayed as emotional intelligence and willingness to bond with humans who effectively recognize and respond to the horses' 'voice'. This was the case in the work by Schroeder and Stroud (2015) involving women survivors of interpersonal violence, where the facilitators note that horses were treated as, "non-

verbal, though quite expressive, fellow group members" (p. 379). The authors note that they refer to horses as group members because of their, "knowledge of horses as sentient, emotionally expressive, and social animals, capable of reciprocal communication with humans" (McGreevy & McLean, 2010, as cited in Schroeder & Stroud, 2015, p. 379). Informed by these beliefs about the agency of horses, these facilitators described horses as active participants in the therapeutic relationship, with their own voice worthy of human consideration. This notion of mutual recognition is also taken up by Naste et al. (2018), who showed that in order for these horse-human relationships to evolve, human participants needed to learn about the meaning of equine communication as it informed their partnership. As shown by Naste et al., mutual understanding and connection developed as the human learned how to recognize and respond to, "the emotional world of the horse"..."In turn, the horse begins to focus on the client, respond to the client's interactions and consequently develop trust" (p. 293). These examples highlight EA, by emphasizing how mutual engagement or agency is essential to the development of mutual trust and connection between horses and humans in EFT.

Equine Agency in Equine Assisted Therapy

In my review of the EAT literature, equine agency (EA) was portrayed as a "cross-cultural experience" where horses acted as independent subjects and human participants were "invited to learn the horse's language and build a relationship as horses do with each other" (Cameron & Robey, 2013, p. 95). While this example positioned horses as subjects with agency, the EAT literature also presented contradictory language, where horses were described as objects that have therapeutic use for humans. The issue of contrasting perspectives about the subjecthood of horses, is noted by Matamonasa-Bennett (2015), who argues that, "Those practicing, writing and teaching therapeutic interventions with horses have viewpoints ranging from horses as mere

objects in which they are called "tool" in therapy…a vehicle for… "metaphors" for the client's life…to being identified as *subjects*, "partners" or "facilitators" in the therapeutic process…" (p. 35). Hypothetically, these opposite descriptive portrayals of horses might reflect different ideologies of the authors and/or researchers that influence the language they choose. The use of *horse as object* language could be linked to a view of horses are passive props, as opposed to *horse as subject* language that might suggest a view of horses as emotional helpers.

While there was some incongruency in the descriptive portrayal of horses, most research on EAT depicted horses as active change agents, equipped with valuable skills and emotional intelligence that drives therapeutic change for humans. As Notgrass and Pettinelli (2015) state, this type of therapy is about the horses doing the work of effecting change in people's lives – it is about the relationship between the horse and clients, not the relationship between the facilitators and clients" (p. 168). Here, the relationship between human and horse, is framed as the catalyst of therapeutic change, where the horse subject is endowed with greater agency than the human professional.

Other examples of Equine Agency in EAT looked at key similarities between horses and humans and how these similarities foster opportunities for growth and learning (EAGALA, 2012, as cited it Notgrass & Pettinelli, 2015). Here, the agency and subjecthood of horses is comparable to humans in reference to our individual personalities, emotional intelligence and physiological characteristics. As Notgrass and Pettinelli (2015) explain, horses are considered to be unique individuals with their own, "distinct personalities, attitudes, and moods," which shapes the development of relationship with individual humans, who possess their own unique characteristics (p. 167). There are diverse character traits that are unique to each horse and each human individual, who partner in the therapeutic relationship. This individuality belonging to

both species, allows for meaningful opportunities for humans to establish connection with another agentic, emotional being, in ways that parallel human relations.

Another interesting example of equine agency was found in Lac (2016), who noted that horses live in, “a state of congruence and authentic expression,” that affects human psycho-physiological states, through a phenomenon called co-regulation (p. 201). Lac connects this finding to neuroscience research on co-regulation in human therapeutic relationship, explaining that, “the therapist’s ability to regulate and model regulation of his or her own nervous system and emotional states is the foundation for the clients to learn how to better regulate his or her own” (Dion & Gray, 2014, as cited in Lac, 2016, p. 200). Lac (2016) also points to research from the HeartMath Institute that suggests heart rate variability (heart rhythm patterns), “correlate to emotional states and can be measured as electromagnetic pulses” (p. 200). This research about heart rhythm patterns found evidence that, “the heart’s electromagnetic field is capable of transmitting information between people, allowing people to synchronize heart rhythms from up to 5 feet apart” (Lac, 2016, p. 201). In the EAT context it is recognized that horses are able to provide a stable, coherent and regulated heart rhythm that can help to co-regulate the internal state of human participants. It is thought that the “horses’ ability to remain coherent to their own emotional states allows them to increase the capacity for human beings to regulate their emotions and achieve psychophysiological coherence in themselves” (Lac, 2016, p. 201). This means that when a client is in a state of heightened stress, horses are able to remain coherent and regulated in their own emotional state, which has a calming physiological effect on the humans’ nervous system (Gerkhe, 2010, as cited in Lac, 2016, p. 201).

These examples from the EAT literature demonstrate that the individual traits and social agency of horses play a central role in the therapeutic relationship with humans. Like humans,

horses are seen as being motivated by social learning and connection, which are shaped by their individual personalities, attitudes, moods and attractions. Thus, the expressions unique to each equine individual in relationship with human individuals, provides opportunities for their both to establish connection guided by mutual agency (Cameron & Robey, 2013; Notgrass & Pettinelli, 2015; Lac, 2016).

Equine Agency in Therapeutic Riding

Within the research on therapeutic riding (TR), my analysis found limited descriptions of horses having agency, as they were most often portrayed as passive therapeutic objects, with physical traits (e.g., gait, body size, strength and structure) that benefit human physical function.

For example, the research by Ward et al., (2013), looked at the impact of TR on communication and sensory processing skills for children with autism. Here, children were taught to "control the horse using basic riding skills", emphasizing "control, attention and focus, sensory management, and communication (verbal and non-verbal) (Ward et al., 2013, p. 2190). In this study, horses were positioned as physical objects for humans to control for the sake of humans' benefit. This objectifying portrayal of equine agency is also evident when the authors explain how the horses in this study were selected based on the, "degree of movement generated from the horse's gait, the degree of stability provided by the horse's back structure, general size and width of the horse, and the horse's reactivity to input from riders" (p. 2193). In this regard Ward et al. gave the example of selecting a horse with a steady and slow stride for a fearful child; this suggests that the horses' therapeutic value in this TR study was defined by the degree to which their bodily motion could benefit humans' specific needs. This descriptive language positions the horse as a physical object that can be selected and manipulated for human benefit, thereby disregarding any form of equine agency within the therapeutic relationship.

In another example by Homnick et al., (2015), the authors looked at the impact of TR on the physical balance of humans, aged 65 and older. These researchers analyzed physical changes in human participants during exercises with horses such as grooming, tacking, mounting, riding, and dismounting. Once again, equine agency is reduced to the degree of stimulation that horses' bodies can produce to enhance human bodily functions. This is underscored when Homnick et al. (2015) go on to suggest that the beneficial effects observed in TR may be due to, "displacement of the horse's center of gravity three-dimensionally leading to rhythmical movements similar to a human gait and eliciting neurosensory and neuromuscular responses from underused muscle groups (p. 122). This example supports the configuring of equine agency as a therapeutic utility with the primary function of stimulating therapeutic, physical changes in human participants.

In another example by Johnson, et al., (2017), the authors explain how horses' movement (gait), provides neuromuscular stimulation for human bodies that develops, "greater strength, balance, coordination, and flexibility" (p. 78). While this article was mainly focused on horses supporting changes in human bodily functions, the authors briefly reference the social-emotional affects connected to physical changes, citing "feelings of competence, patience and self-esteem" that developed through the "interaction between horse and rider" (Johnson et al., 2017, p. 78). While it is logical to assume that increased physical strength through riding may also increase confidence, these authors do not provide specific examples to demonstrate *how* this social emotional change occurs in concert with physical changes.

While most articles in the TR literature described equine agency in objectifying terms, there was *one* article by Lanning et al., (2017) where the *relationship* between horse and rider was emphasized. This article looked at military veterans participating in a TR curriculum designed to target physical functions such as, "balance and flexibility, memory, coping

mechanisms, sensory integration, core muscle tone", as well as social functions such as, "trust, respect, and power conflicts" (Lanning et al., 2017, p. 263). Through learning how to ride and interact with horses, Lanning et al. (2017) states these participants were also supported in developing a, "mutually respectful relationship with the horse both on the ground and while riding," however the authors do not explain the details of how this relationship was considered mutually respectful (p. 264). Still, this article hints at equine agency when the authors note that the "social and emotional connection with the horse" fosters an "environment that allows the veteran to focus and connect with his/her surroundings, work through fears and anxiety, and re-engage with others" (Lanning et al., 2017, p. 275). Here, equine agency could be assumed in the emotional connection with humans in the 'mutually respectful relationship,' however this apparent reciprocity did not explicitly recognize horses' active presence.

Equine Agency in Hippotherapy

The theme of Equine Agency in the research on Hippotherapy (HT) mainly focused on the physical affects that moving horse bodies have on bodies of their human riders, rather than a relational focus where horses are positioned as active subjects who form a partnership with human subjects. Language that objectifies equine agency is presented in the study by Thompson et al., (2014), when the authors describes hippotherapy as, "an innovative form of physical therapy that involves the use of a horse as a therapeutic tool in order to effectively challenge a rider's core muscles" (p. 60). To illustrate this, Thompson et al. (2014) note that individuals with cerebral palsy have shown increased motor function through the experience of riding a horse, due to the similarities between horses' gait and the typical human walking pattern, which can be assimilated into the muscle memory of human riders. Once again, equine agency is not really

recognized beyond the passive movement provided by horses' bodies and the way this stimulation creates beneficial changes in the human rider's body.

This depiction of horses as therapeutic tools was also apparent in research by Leveille et al., (2017), where horses were essentially viewed as passive tools, used for treatment of human physical, cognitive and affective development. For example, Leveille et al., (2017) note that the horses' bodily movements were utilized to develop riders' posture, strength and muscle tone, gait pattern and fine motor skills. To manipulate the horses' movements, the riders also used verbal sounds to cue certain responses from the horse, which in turn increased the riders' communication, language skills, and understanding of instructions. The language used in this article reflected the objectification of horses as therapy tools, and while there was one brief mention of relationship, it was solely focused on *human* "shows of affection" towards horses (Leveille et al., 2017, p. 274).

As these examples from the HT literature suggest, the agency of horses is not recognized beyond the therapeutic effects that their bodies can produce, for human gain. While the role of horse-human relationship is briefly hinted at in some studies, it is consistently described as a one-way exchange, where humans demonstrate affection towards horses. In these few examples, the horse-human therapy relationship consistently excludes any mention of equine agency, suggesting it is non-existent or unworthy of human consideration.

Equine Agency in Equine Therapy-General

The theme of equine agency in the literature on Equine Therapy-General (ET-G), portrayed horses as both subjects and objects, reflecting the variability that I found when analysing this theme in the other categories of ET (i.e., Therapeutic Riding and Hippotherapy). In the ET-G literature, one example that described horses with objectifying language, was

Anestis et al., (2014), where authors highlighted the 'utility of horses' in therapy, stating, "the equines are intended to serve as prompts for specific responses and as metaphors through which to understand internal experiences" suggesting that, "the equine serves as a large bio-feedback machine" (p. 1115-6). These objectifying descriptions effectively diminished any agency that horses may have had in these therapeutic encounters, a disregard that was frequently reinforced in the literature through phrases like, "to utilize the horse's movement" or "the use of therapeutic horses" (DeBose, 2015, p. 356), or "the utilization of a horse" (Wilkie et al., 2016, p. 378).

That being said, the theme of equine agency in ET-G also revealed contradictory examples, where horses were described as active subjects who facilitate meaningful change for the humans that partner with them. For example, DeBose (2015) points to the agency of horses when describing their emotional intelligence and ability to create emotional bonds with multiple people, "for a reason that is specific to each individual person" (362). This suggests that both horse and human possess emotional intelligence needed for the co-creation of a relationship that is unique to those two individuals. For DeBose (2015), this ability to emotionally bond with different human individuals is further evidenced by the diverse therapeutic relationships in which horses have been employed:

> from patients that have withdrawn deep into themselves due to any number of reasons, to those that express emotional difficulties or behavioral developmental delays," to "prison rehabilitation programs [that] develop empathy, awareness, and compassion that is necessary for inmates to return as socially responsible members to society (DeBose, 2015, p. 355).

Given the wide range of clinical demographics that have benefitted from horse-human relationships, DeBose (2015) believes that horses have demonstrated their intelligence and

agency, through their ability to form meaningful emotional connections with vastly different human individuals.

Another example from the ET-G literature that included horses as active agents of change, was found in Wilkie et al., (2016), where the authors explain how the experiential approach of equine therapy, "moves away from the traditional dyad of client-therapist and incorporates the horse as a co-therapist" and it is this "reciprocal exchange of interaction between client and horse that facilitates and promotes therapeutic change" (p. 379). Here, the 'reciprocal exchange' and/or mutual agency from both horse and human is presented as the core therapeutic dynamic that generates change.

These examples from the ET-G literature, demonstrate that contradictory descriptions of equine agency exist in the literature, where in some cases the language depicts horses as active, intelligent subjects and in other cases, passive therapy objects.

What does this theme suggest in relation to my research questions?

Across all categories of the equine therapy literature my analysis found contradictory depictions of equine agency, suggesting a range of perspectives about the subjecthood and intelligence of horses. In some studies, therapeutic change promoted the 'utility' of horses, where objectifying language positioned horses as passive tools that can be physically manipulated to serve human needs (Homnick et al., 2015; Thompson et al., 2014; Ward et al., 2013). This was in sharp contrast with other studies, where the central mechanism of change was attributed to the emotional intelligence, individual personality and agency that horses possess; qualities that allow them to establish meaningful connections with diverse human individuals. Interestingly, horses were also depicted as active subjects and passive objects within the very same article (DeBose, 2015; Wilkie et al., 2016). This finding supports the argument made by researchers like

Matamonasa-Bennett, (2015) who pointed out that the variable terminology may reflect contradictory beliefs about the intelligence and agency of horses. Aligning with this idea, my analysis of the equine agency theme demonstrates how the language used to describe horses, influences the way we understand these relationships. Specifically, the language can serve to recognize two emotional beings responsible for the formation of these relationships or it can portray this connection as comprised of one individual who possess active authority over a passive 'other', in which case the other is effectively denied subjecthood and can be exploited for humans' therapeutic purpose. This distinction is important to clarify in the ET literature because as Matamonasa-Bennett (2015) argues, when humans acknowledge the sentience (emotional intelligence) of horses and recognize the value of their agency, then humans must also address the ways that we silence, devalue or diminish their 'voice' in these therapeutic relationships. As my analysis demonstrates, the language used to illustrate therapeutic relationships can reinforce or inhibit 'personhood', and therefore critical attention is needed, if we hope to decenter the 'human' in horse-human relationships.

Dominant Theme: Gaps

I created the Gaps theme to represent important limitations in the knowledge and practice of ET that were referenced across all literature categories (Equine-Facilitated, Equine-Assisted, Therapeutic Riding, Hippotherapy, and Equine Therapy-General). These apparent gaps were often connected to problems in research design, a lack of consensus about appropriate practice methods, and insufficient understanding of how these methods are actually applied in practice (Lee, et al., 2016; Lentini & Knox, 2015; Steele, et al., 2018). Below, I offer detailed descriptions of the Gaps theme, as it was presented by each literature category.

Gaps in Equine-Facilitated Therapy

In the Equine-Facilitated Therapy (EFT) literature, key gaps were connected to a lack of reliable research evidence and confusion around inconsistent methods and terminology. For example, in the article by McCullough et al., (2015), the authors identify EFT as an attractive treatment choice for children with post-traumatic stress disorder (PTSD), but they also note there is minimal research that proves the efficacy of this therapy for this client population. These authors acknowledge that the limitations of their study reflect common flaws in EFT literature such as, small sample size, nonrandomization of participants and lack of a control group. They recognize that by avoiding these gaps they could have increased the validity of their research, thereby qualifying the knowledge for use in the development of EFT programming (McCullough et al., 2015). Another gap that was identified in this research, has to do with inconsistent facilitator experience and the variability of approaches used in EFT programs. McCullough et al., (2015) explain that, EFT programs are shaped by a variety of possible facilitator traits (e.g., level of experience, level and type of training certification); program focus and format (e.g., group size, client demographic, facility location, theoretical frameworks). These inconsistent and influential factors lead to inconsistent research designs that produce inconsistent outcomes (McCullough et al., 2015). This variation and inconsistency found in the research, inhibits the ability to generalize and/or integrate evidence that supports the efficacy of EFT. As McCullough, et al., (2015) explain,

> Multiple interventionists, both experienced and [novice], utilizing a variety of theoretical approaches, representing a range of programs, both large and small, and located in all parts of the country/world, need to be investigated in order to more accurately determine EFP treatment protocol for the population…(p. 169).

These gaps in EFT knowledge and practice, were also found in the literature review by Lentini and Knox (2015), who identified a lack of consensus about practice standards and methods, along with insufficient evidence to confirm EFP as a viable treatment for any specific childhood disorder. To address these gaps, these authors argue there is a need to establish, "clear, operational definitions and common terminology" for each type of EFP intervention (Lentini & Knox, 2015, p. 280). Concerning the apparent lack of consensus around which methods are most appropriate in EFP, Lentini and Knox (2015) also point out that therapy methods are often determined by the specific education and scope of practice of the facilitators. They agree that the range of methods reflects a range of facilitator backgrounds and this inconsistency, obstructs the development of unified guidelines and practice standards (Lentini & Knox, 2015). As such, EFT cannot qualify as a, "uniform, standardized intervention" due to, "a lack of consensus on appropriate methods, including length of treatment, type of intervention, group versus individual, [and the] number and types of facilitators/professionals" (Lentini & Knox, 2015, p. 299).

These examples inform the theme of Gaps in the EFT literature, emphasizing issues related to research flaws, inconsistent terminology, diverse facilitator/program characteristics and lack of unified practice standards.

Gaps in Equine-Assisted Therapy

The Equine-Assisted Therapy (EAT) literature, described similar gaps in knowledge and practice as those identified in Equine-Facilitated Therapy, such as small sample sizes, lack of randomized control groups, inconsistent terminology and diversity of facilitator/program traits. In addition to these common gaps, the literature also highlighted issues related to environmental conditions, practical resources, specific client demographics, theoretical understanding of change and the role of horses in EAT.

Beginning with an example related to weather constraints, the study by Wehofer et al., (2013) was compromised due to winter weather conditions, bringing attention to the fact that EAT often occurs outdoors and is therefore dependant on appropriate weather conditions (Wehofer et al., 2013). For these authors, the impacts of environmental conditions and seasonal weather changes, are important issues that impact EAT, but are often overlooked in the literature.

Another identified gap in the EAT literature, highlighted practical limitations associated with high labour costs and transportation requirements (Nurenberg et al., 2015). According to these authors, EAT often depends on significant resources related to, "construction and maintenance of the physical environment, attention to risk reduction, identification and transport of appropriate therapy horses, and recruitment of trained equine therapists" (Nurenberg et al., 2015, p. 85). While these practical considerations have been known to impact EAT research and the delivery of services, Nurenberg et al., hold that these issues are often overlooked and warrant greater attention in the literature.

In another example, gaps in EAT knowledge and practice were highlighted by Earles et al., (2015), who argued the need for research that determines which particular EAT approaches are effective for specific client populations (e.g., individuals with autism versus depression diagnoses). In other words, there is a gap in research that affirms *which* client populations are positively impacted by EAT and *how* exactly these populations are impacted). This is echoed by Lee et al., (2016), who identify the need for evidence that demonstrates how EAT affects certain populations, with careful attention to how these client populations are defined. For example, sometimes the literature labels study participants as 'at-risk youth', but does not specify what this identity label means, or what type of 'risks' these youth are vulnerable to (Lee et al., 2016).

For Lee et al., (2016), the EAT literature is missing important information about who benefits from EAT, how these clients are identified, and how specific clients are impacted by EAT.

Highlighting gaps in the theoretical understanding of EAT, authors Acri et al., (2016), note that, "there is no unifying theory as to why activities and therapies involving horses are psychologically beneficial" (p. 604). These authors show that in place of a unifying theory, the existing literature relies on related theories about the human-animal bond, such as Wilson's (1984) biophilia theory and Bowlby's (1958) attachment theory. As Acri et al., (2016) explain, the Wilson's biophilia theory posits that humans have an innate tendency to form emotional connections with other beings, while attachment theory aims to explain the formation of mutual connection between beings. Shortcomings in theoretical knowledge of EAT is also echoed by Lee, et al., (2016), who called for "theory building work" to better understand the specific ways that horses impact the therapeutic process and outcomes (p. 244). According to these authors, studying the functional role of horses in EAT is an important piece of the theoretical puzzle that may require a paradigm shift in research, from the dominant anthropocentric perspective (focused on human value), to the biocentric perspective (considers the value of all organisms) (Lee et al., 2016). Furthermore, the lack of unified theories to explain the functional role of horses in EAT, obstructs the ability to analyze how change occurs in EAT and inhibits theoretical congruency in facilitator training and certification (Lee et al., 2016). This is echoed by Merkies et al., (2018) who explain, "there exists no standards for teaching or understanding equine behavior in these certification programs" therefore, "understanding the therapy horses' role is fundamental for furthering research [and] providing suitable training for facilitators" (p. 62). This tells us that because research has not yet determined how exactly horses affect change

in therapy, the training provided to therapy providers is missing a critical component that impacts the therapeutic process.

Gaps in Therapeutic Riding

As with equine-facilitated and equine-assisted therapies, the Therapeutic Riding (TR) literature referenced gaps related to insufficient evidence of TR efficacy for specific populations, missing theoretical frameworks, and ignorance about the effects of TR on the horses involved. Concerning the need to study specific client populations in TR, the literature was primarily focused on TR's lack of evidence-based practice that serves autistic children. Evidence-based practices (EPB) are therapeutic strategies tested by established scientific standards that demonstrate effective results for specific client demographics (Jenkins & Reed, 2013). While there is an existing body of literature attesting to the therapeutic benefits of TR, these studies often lack validity due to commonly cited limitations like small sample sizes, lack of control groups and biased assessments which makes the research findings difficult to generalize (Ward et al., 2013, p. 2191). Jenkins and Reed (2013) also noted the insufficient evidence within TR research, explaining that, "despite the positive benefits reported by these researchers, reviews conducted by several entities (e.g., Association for Science in Autism Treatment, n.d.; National Standards Project, 2009; Umbarger, 2007) indicate that [therapeutic riding] does not meet the criteria for an [evidence-based practice] (p. 722). This identified lack of evidence in TR was further supported by Gabriels et al., (2018), who claim that, despite TR becoming a widely used therapy for children with autism-spectrum disorder (ASD), there is very little evidence-based research that confirms the efficacy of TR for this population.

Gaps in Hippotherapy

In the Hippotherapy (HT) literature, the gaps in knowledge and practice emphasized how inconsistent HT strategies may pose risks to clients' safety and informed consent (right to clearly understand the therapeutic service they are accessing).

For example, in the research by Ajzenman et al., (2013), the authors argue that strategies among different HT settings are inconsistent and unstructured, which can be confusing for clients who are interested in this form of therapy. While this lack of consistent strategies within the field of HT is recognized as a problematic gap, Ajzenman et al., also point out an interesting tension that exists between, "client-focused treatment strategies for therapy and consistent treatment protocols" (p. 661). Essentially, HT approaches are 'custom tailored' to meet the unique needs of each individual client, but this variability is also an obstacle to the development of evidence-based standards that can be applied across different HT contexts. To address this tension, Ajzenman et al. suggest that, "more intensive training and monitoring by researchers may ensure fidelity of treatment with therapists while still allowing therapists to use their judgement within a treatment progression while remaining client centered" (p. 661). Unfortunately, they do not explain this idea any further, to consider specific details about what the process could involve.

In other research, Leveille et al., (2017), connect the lack of standardized HT practice with the management of risk and safety for participants. According to these authors, the existing HT literature often fails to define the risks associated with the activity of horse-riding, which is a central aspect of both therapeutic riding and hippotherapy. Related to this absence of risk assessment in the literature, the potential for harm is further complicated by the fact that caregivers and clients often have, "difficulty correctly distinguishing between the characteristics of each approach (i.e., rehabilitation using hippotherapy as compared to therapeutic riding)"

(Leveille et al., 2017, p. 275). This gap connects to the problem of inconsistent terminology, confusion about the various approaches, and determining which methods are appropriate for particular clients (Leveille et al., 2017). This means that research is needed to parse out the differences among therapeutic approaches including HT, in order for clients to make educated decisions about which approach best meets their specific needs. In response to these concerns, Leveille et al. (2017) note the importance of, "developing a continuum between the different approaches according to the type of client" and, "guidelines to ensure that programs and referrals are safe and tailored to users' needs" (p. 275). These authors also suggest that if these gaps continue to be overlooked, the health and safety of clients remains under threat, (e.g., physical conditions of clients could be made worse through the use of inappropriate approaches) (Leveille, et al., 2017). To ensure safe and effective use of HT, these authors argue for the development of, "educational activities for an informed consent to this type of rehabilitation" (p.269).

These examples reflect the salient gaps that were described in the HT literature, which emphasized the variability of practice approaches and standards, risk management and the issue of informed client consent.

Gaps in Equine Therapy-General

Similar to the gaps outlined in the previous categories, the Equine Therapy-General literature that I reviewed, raised concerns related to inconsistent training, variable methods and terminology, weak evidence-based practice standards, and confusion about which approaches are appropriate for specific client populations (Anestis et al., 2014; DeBose, 2015; Wilkie et al., 2016). For example, the research by Anestis et al., (2014), emphasized the importance of providing clients with a clear understanding how ET programs differ from one another in terms

of program content, evidence-based practices, and facilitator traits (i.e., training, background). Speaking to the importance of clients understanding the services they are consenting to and the lack of empirical evidence supporting ET programs, these authors argue that consumers of ET deserve to have "coherent and comprehensive summaries of the evidence" that demonstrate, "meaningful outcomes for individuals presenting with specific diagnoses" (Anestis et al., 2014, p. 1116). Furthermore, these authors express ethical concerns about the on-going practice of ET, given that the existing research does not meet the standards for evidence-based practice, due to various methodological flaws and the absence of standardized manuals. In other words, the literature suggests that in order for ET to be considered safe and effective, clients must clearly understand the differences among ET programs, so they can make informed choices that meet their unique needs. This will require the profession of ET to clarify the various terminology and develop evidence that demonstrates the efficacy of approaches for specific client demographics (DeBose, 2015).

In other research, Wilkie et al., (2016) further underscore the confusion related to ET terminology, explaining that "a limitation previously noted in the equine literature illuminates the superfluous variation of terms used to identify equine programs" (p. 389). Echoing DeBose (2015), these authors call for standardized manuals that ensure informed consent by providing clients with clearly defined approaches that have proven effective for particular client needs.

These examples demonstrate the gaps in knowledge and practice that were described in the ET-G literature and confirm a pattern of concerns, presented across all of the literature categories such as: research flaws, insufficient theoretical understanding, inconsistent terminology, lack of informed consent and confusion about important differences across equine therapy programs.

What does this theme suggest in relation to my research questions?

A core issue that motivated me to conduct this research, was the awareness of gaps in the knowledge and practice of equine therapy (ET), which have fueled confusion for clients and for professionals in this field. My analysis of the literature confirms what I have observed in the field of ET; there is a dizzying array of terms, practices, and facilitation that make up the field of ET. The problem is not the diversity of options, but rather the confusion about what exactly is involved with each form of ET and how this differs from one to another. Without clear definitions and consistent terminology, the public is ill-equipped to make informed decisions about what type of ET best suits their needs. My analysis revealed that several researchers consider these gaps to be significant obstacles hindering the professional development and the credibility of ET (DeBose, 2015; Lentini and Knox 2015; Lee et al., 2016; McCullough et al., 2015; Wilkie, et al., 2016).

Researchers rely on clear definitions and consistent practices in order to test the efficacy of each ET approach for specific client populations. Furthermore, clients also rely on clear definitions and proven efficacy, in order to give their informed consent in choosing an appropriate form of ET (Ward et al., 2013). Interestingly, this dilemma may partially stem from the tensions of ET being a custom-tailored treatment approach, designed around the unique needs of individual clients. On the one hand, the multi-dimensional, dynamic nature of ET allows it to accommodate diverse human needs, but on the other hand, this adaptable quality may hinder it from qualifying as a standardized, evidence-based practice (Anestis et al., 2014). While the literature recognizes this tension in ET, there is little consensus about how to respond, beyond the call for a “continuum between different approaches according to the type of client” (Leveille

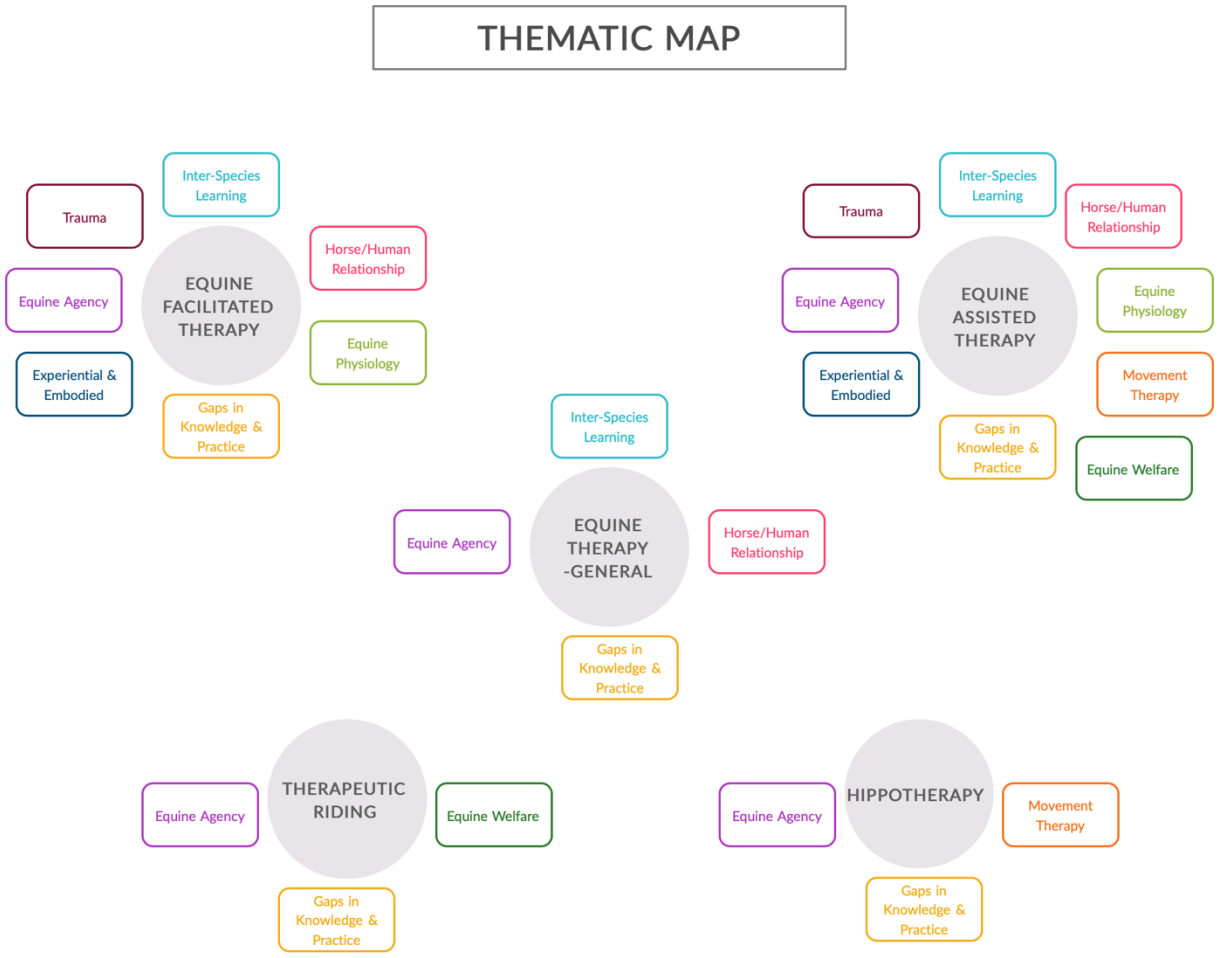
et al., 2017, p. 275). This unresolved and critically important gap continues to demand attention from future researchers.

Adding to the confusion about inconsistent terminology and practice standards, my analysis confirms that ET lacks unified theoretical knowledge about *how* ET affects change for specific clients (Lee et al., 2016. There is often a blend of theories employed that attempt to decipher underlying change processes of ET (e.g., biophilia theory and attachment theory), however researchers remain unable to identify or agree upon a unified framework that can explain the core mechanisms of change in these horse-human relationships (Acri et al., 2016; Lee et al., 2016). In seeking to answer my research questions about equine agency, my analysis revealed a growing interest about the equine experience of ET, as more researchers argue the importance of understanding their functional role. This apparent gap regarding the equine experience may in fact be a significant missing piece of the 'theory puzzle' as the existing knowledge about horse-human relationships is dominated by human-centered perspectives. Furthermore, these theoretical gaps make me wonder whether ET can be appraised using traditional scientific methods, or whether the transformation generated in these interspecies relationships requires us to find different 'ways of knowing' that are less familiar.

To further support readers understanding, I conclude this chapter with an illustration of analysis findings in a thematic map that displays both unique and dominant themes for each ET category, as seen in Figure A that follows.

Figure A

Thematic Map of Analysis Findings



Note. *The grey circles are categories of Equine Therapy, surrounded by unique and dominant themes. The imbalance of themes across categories may be partially linked to the uneven distribution of articles that met my inclusion criteria. For example, the category of equine-assisted therapy yielded the 19 relevant articles in comparison to hippotherapy which yielded only 3.*

Chapter 7: Limitations and Concluding Thoughts

Limitations

In my thematic analysis, I followed a systematic process, outlining specific steps that I took as well as potential areas of bias, in order to increase the transparency and decrease the bias of my research. As Braun & Clarke (2006) state in their thematic analysis framework, "If we do not know how people went about analyzing their data, or what assumptions informed their analysis, it is difficult to evaluate their research, and compare and/or synthesize it with other studies on that topic" (p. 80). In other words, clear analysis steps and reporting bias is important, as thematic analysis is known as a "highly interpretive endeavor" in which the identification and analysis of themes is presented through the subjective lens of the researcher (Guest et al., 2014, p. 13).

Despite my efforts to reduce bias and improve the reliability of my research, limitations remain, which should be made known to readers. For example, my systematic review of the ET literature was restricted to specific inclusion criteria, (e.g., peer-reviewed articles published in English between 2013-2018 in North American locations). While this inclusion criteria provided clear parameters for my literature review, it also meant that I excluded relevant ET articles which could have changed my analysis findings. For example, by including 'grey material' which has not been 'peer reviewed,' my analysis may have identified more/different themes, resulting in different interpretations about the ET literature.

Furthermore, the literature that I included, had to be published in North American locations (Canada and USA), which meant that I excluded literature from other parts of the world, which also may have changed my findings and interpretation. Therefore, the knowledge generated through my analysis of the ET literature, may only be considered relevant or accurate, within the parameters imposed by my specific inclusion criteria. Furthermore, my analysis

sought to identify themes that were relevant to my specific research questions and located directly within the text of existing literature. In other words, my research only considered what was explicitly written in the literature, and my interpretive analysis was guided by my specific research interests. Finally, my research did not assess the scientific quality/reliability of the literature in my review, so the accuracy of the data that my analysis is based on, can only be held to account by the peer-review standards of the source journals. Therefore, the knowledge that my research has produced, should be considered with these specific limitations in mind.

Concluding Thoughts

My thematic analysis of equine therapy (ET) literature provides insights about the existing practices, relationships and knowledge among the different categories and/or forms of equine therapy. In relation to child and youth care, my research may offer greater understanding about the value of more-than-human relationships, as they are enacted in therapy with horses. The importance of ethical practice standards and informed consent highlighted in my research, may promote consideration and curiosity around the welfare of both human and non-human participants in these therapeutic relationships.

With respect to the practices and knowledge that vary among categories of ET, my research identified gaps related to inconsistency, confusion and weak credibility. Corresponding with my personal and professional experiences in ET, this research identified obstacles hindering the development and credibility of ET such as: weak empirical evidence, confusing terminology and inconsistent approaches, the absence of unified theories to explain the underlying change mechanisms of ET, and the paucity of research concerning equine welfare (Acri et al., 2016; Johnson et al., 2017; Lanning et al., 2014; Lentini & Knox, 2015). These gaps are known obstacles to funding approval from health agencies, informed consent (i.e. clients' understanding

of services), as well as the management of risk and safety for all participants (Dakin & McLure, 2016; Leveille et al., 2017; Malinowski, et al., 2018). In summary, my analysis revealed that ET lacks clarity in deciphering the it's categorical approaches which has contributed to inconsistent terminology and the lack of standardized, evidence-based practice.

Relating back to the field of child and youth care (CYC), my research emphasized the therapeutic potential of more-than-human relationships, as they are understood between horses and humans. Following centuries of co-evolution and companionship, the horse-human relationship continues to impact human development, learning, healing (Notgrass & Pettinelli, 2015). The importance of horse-human relationships in ET, was often attributed to the unique abilities and agency of horses, who provide therapeutic relational experiences for humans with a variety of clinical needs (McCullough et al., 2015). Furthermore, these horse-human relationships have been recognized as particularly effective for children and youth with a range of cognitive capacity, due to the non-verbal, multisensory and embodied nature of this interspecies therapy context (Wilkie et al., 2016). With the reduced need for verbal capacity and/or cognitive processing skills, ET offers unique experiential learning opportunities for clients who may struggle with requirements of traditional therapy contexts (Wilkie et al., 2016). In horse/human relationships, clients are able to learn about themselves through co-constructed and embodied communication with horses which often generate meaningful metaphors in the lives of clients (Steele et al., 2018).

CYC scholars who align with 'multi-species' perspectives, emphasize the importance of interspecies relationships and challenge notions of the "autonomous individual child" that are common in Western child development theories (Taylor et al., 2012, p. 81). For these scholars, greater awareness of human and non-human interdependence is urgently needed in the field of

CYC because, children are inheriting a planet that has been destabilized through humans' exploitative relations with other species, whose lives we often dominate, commodify and consume. As Taylor and Giugni (2012) explain, children are "growing up in an era of human-induced climate change, unprecedented numbers of displaced people seeking asylum, steadily increasing geographical disparities of resource harvesting, distribution and consumption, and the multi-faceted legacies of Indigenous dispossession" (p. 117). From this 'post-human' perspective, humans are decentered as the ethics of 'relationships' and 'community' and 'care' are reconceptualized to include relations among all species, whose survival is entangled with our own (Haraway, 2008; Taylor & Giugni, 2012).

Related to these arguments about human/non-human relations, my research revealed growing ethical concerns about the impact of ET on the horses involved. These studies suggested that ideologies underlying equine therapy are slowly shifting away from the dominant 'Anthropocentric' perspective (human species have highest value) towards a 'Biocentric' perspective (recognizing the value of all species) (Lee et al., 2016). Within the ET literature, one author in particular, Arieahn Matamonasa-Bennett, (2015) argues that if we understand therapy animals as subjects with their own agency in relationship with humans, we must also include them in our assessments of 'ethical' care. In the context of ET, Matamonasa-Bennett and other authors (e.g., McKinney et al., 2015; Merkies et al., 2018; Rigby & Grandjean, 2016), point out that there are major gaps in ET research concerning the "ethical implications for the care and agency of these animals" (p. 23). For Matamonasa-Bennett, there is a stark contradiction in acknowledging animals as subjects while also denying them equal consideration in relationships with humans, which she attributes to "the legacy of underlying, post-Christian, Western scientific beliefs about human-animal relationships" (p. 23). From this perspective, modern ET

and the agency of therapy horses has been heavily shaped by the underlying, "Western utilitarian, anthropocentric paradigm in which animals and nature are here to be used as humans see fit" (p. 24). Regarding the notion of equine welfare, my research identified a common theme in the literature that echoes my own observations in the field; humans' primary concern in the context of ET, is "what animals can do for us without questioning the impact of this therapeutic relationship in the lives of animals" (Matamonasa-Bennett, 2015, p. 24). As such, my research sought to examine how these healing relationships may be informed by the expression of mutual agency between both human and horse species. With attention to language that promotes or denotes equine subjecthood in the literature, my analysis revealed that contradictory viewpoints exist across all categories of ET in which horses could be positioned as emotionally intelligent partners and/or inanimate tools for therapeutic service. Regardless of the subject/object descriptions that horses received, the literature was primarily concerned with human centered affairs, with the equine experience of ET neglected in favour of human-centered interests. That being said, some of the ET literature recognized the functional role that horses play in facilitating meaningful change for humans and this growing awareness may spark more 'biocentric' research. Within the field of CYC, there is a growing shift towards the bio-centric perspective that is connected to the growing explorations of multispecies research and the creation of "common world pedagogies" which encompass, "…the relational and co-shaping learning that occurs when children and animals physically encounter each other…" (Taylor & Pacini-Ketchabaw, 2015, p. 508). Established by CYC researchers Africa Taylor and Miriam Giugni, Common World pedagogies aim to challenge, "human-centric assumptions about individual children's significant relations" as well as, "the assumption of human exceptionalism, including the assumption that only humans have the capacity to exercise agency (Plumwood, 2007 as cited

in Taylor & Pacini-Ketchabaw, 2015, p. 508). Essentially, the conceptual framework of 'Common Worlds' holds that the welfare of future human generations is directly connected to the welfare of non-human species, which then raises ethical considerations about the relational practices of CYC. In other words, if the welfare of humans is tied to the welfare of non-humans, this prompts us to ask: "How can CYC develop relational practices that account for these interspecies connections?"

Aligning with Matamonasa-Bennett (2015), I believe that developing interspecies knowledge in ET and CYC, should acknowledge, honour, and learn from Indigenous animal philosophies which have been systematically oppressed by colonial institutions that favour human-centered perspectives. As Matamonasa-Bennett (2015) explains, Indigenous knowledge systems vary greatly but often unite around the interconnections between human and more-than-human species. In line with this author, I believe that animal-assisted therapies such as ET, should seek guidance from Indigenous philosophies of interspecies relations which emphasize, "humility, respect, reciprocity, balance and honoring animals as healers and teachers" (Matamonasa-Bennett, 2015, p. 36).

Considering this challenging proposition, I hope that my research increases awareness about the mutual agency between humans and horses and how this attunement underlies meaningful change for both species. Recognizing the dynamic interplay of agency between horses and humans, Maurstad, et al., (2013) promote the exploration of horse-human relationships in ET as:

> a co-creation of behavior (Birke et al., 2004) with complex modes of attention and attachment, involving somatic modes of attention (Csordas 1994, 2002), as well as cognition

and affect (Despret, 2004). Horses are soul mates, but also body mates to many humans, and the relationship is one that affects and defines both parties (p. 322).

As the ET research points to the central role of mutual agency, it follows that greater attention and credit should be afforded to the horses in these contexts given how deeply their expressions of agency underpin beneficial change for humans. Both ET and CYC are fields rooted in relational change, therefore CYC professionals involved with ET need to pay attention to how these horse-human relationships are portrayed, researched, and enacted. If we believe mutual respect and agency to be core values in CYC work, shouldn't we include the equine individuals who facilitate therapeutic benefits for their human partners?

As animal assisted therapy continues to grow, I hope that my research encourages professionals in CYC, ET and beyond, to reconsider their relationships with non-human species and explore how these beings express their own relational agency and individuality. As my research about ET suggests, learning how to communicate with non-human beings, on terms that are not dictated by humans can lead to new ways of being that reveal the value and importance of our relations with other species. Thankfully, the field of CYC has several scholars exploring the interdependence between human and more-than-human species. Following the lead of scholars like Africa Taylor, Donna Haraway, and Veronica Pacini-Ketchabaw, I believe CYC holds a unique position and obligation, to appraise the ramifications of including or excluding more-than-human beings, whose welfare is intricately tied to our own. One recent example from the field of CYC, is the book, 'Outdoor Therapies' by Harper and Dobud (2020), which explores more than a dozen interspecies, nature based therapies, such as forest therapy, equine therapy and garden therapy.

Finally, my hope is that this research proves to be accessible and useful for people who want to know more about the defining traits, unique strengths, and current challenges of ET in North America. The themes that my analysis identified in the ET literature may provide useful insights for practitioners, children, youth, and families in finding equine therapy that can best meet their unique goals. Ultimately, I hope that this work raises awareness of inter-species connection and agency within all facets of equine therapy and in the wider realm of (more-than-human) animal-assisted therapy. In contribution to the expanding knowledge of interspecies relations in CYC, this research invites humans to look with new curiosity at the mutual agency that shapes their more-than-human relationships.

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Appendix

Appendix A: Theme Excerpts for Equine Therapy Categories

Equine Facilitated Therapy (EFT) / EF-psychotherapy (EFP) / EF- learning (EFL)	
Descriptors & Themes	**Excerpts from literature (Evidence for Themes)**
Definition(s)	• "…EFP views the horse as a co-facilitator in the therapeutic encounter and emphasizes the innate wisdom of the horse and the power of an authentic other bearing witness (Rector, 2005) since horses live in the here-and-now and respond authentically to their environment in a naturally embodied way (Lac, Marble & Boie, 2013). Sessions may include both a licensed mental health professional and an equine specialist, but the therapist can also be dually credentialed as the equine specialist. The role of the therapist is to interpret what they are witnessing during this process to support the client in reaching a new awareness." (Lac, 2016, p. 196) • "EFL (equine facilitated learning) represents a unique set of practices that combine experiential learning and interaction with horses, ponies, miniature horses, donkeys and mules with counseling-based processing skills to increase children's awareness and control of their emotions, cognitions, and behaviors. An integral part of EFL is that its activities are based on our understanding of how horses think and learn, and how to use their natural behavior to interact with humans in a manner that enhances the safety, well-being and development of both horses and humans." (Pendry et al. 2014, p. 282). • "EFP entails a mental health professional partnering with a credentialed equine specialist and trained therapy horse to address client goals (Professional Association for Therapeutic Horsemanship International [PATH Intl.], 2015). In some instances, the clinician is duly credentialed and serves both roles. EFP clinicians generally blend evidence-based approaches such as cognitive behavioral, gestalt, and person-centred therapies with a variety of horsemanship exercises, to support the change process (Brandt, 2013). These activities fall under the categories of observation of equine behavior, grooming, handling, and may or may not include horseback riding. The key tasks of mental health professionals are to provide structure, observe processes, and assist clients with making meaning of the equine experience related to their

	treatment goals (PATH Intl., 2015)." (Schroeder & Stroud, 2015, p. 368) • "Equine-facilitated psychotherapy (EFP) is a form of animal-assisted therapy used to treat human psychological problems that employs horses in and around the natural surroundings of the stables. It is an interactive process in which a mental health professional, licensed to provide psychotherapy, working with an equine professional, partners with suitable equine(s) to address psychotherapy goals set forth by the mental health professional and the client (PATH Intl. 2013)." (Bachi, 2013, p. 187) • "Equine facilitated psychotherapy (EFP) can be defined as the use of a horse in a therapeutic context involving a registered mental health practitioner who engages the horse to facilitate psychological and social insights." (Naste, et al., 2018, p.291)
UNIQUE THEME **Interspecies Learning**	• "The key tasks of the mental health professional [in equine facilitated psychotherapy] are to provide structure, observe processes, and assist clients with making meaning of the equine experience related to their treatment goals" (Schroeder & Stroud, 2017, p.368). • "Individuals learn to be present, clear, and consistent in order to effectively communicate… numerous opportunities to become aware of their interpersonal communication styles, and practice self-monitoring of emotional and physiological arousal levels, as well as experiment with behavioral change" (Schroeder & Stroud, 2017, p. 369). • "Co-facilitators discussed equine fight/flight/freeze responses and invited members to dialogue about the parallels between human and equine fear reactions" (Schroeder & Stroud, 2017, p. 375). • "…similarities and differences among members' experiences of each horse…then related to ways in which interactions may parallel members' interpersonal experiences outside of the group (e.g., relationship patterns and dynamics)" (Schroeder & Stroud, 2017, p. 377). • "…the client learns how to act around the horse, and in turn learns how to treat humans in similar ways"… "These new communication skills and resulting attachment can then be generalized to human relationships". (Naste et al. 2017, p, 293).

	• "This transfer of knowledge from paddock to life is the ultimate goal of the program." (Ferruolo, 2015, p. 55) • "[Gestalt Equine Psychotherapy] Experiments offer clients choices and allow clients to actively and clearly take responsibility and ownership for the choices they make, which can then be translated into their real-world life outside of the therapy space (Parlett, 2003)" (Lac, 2016, p. 199) • "For clients partnering with horses, the opportunity to embody a leadership role can be especially empowering given a horse's sheer size and strength" (Schroeder & Stroud, 2017, p. 369).
UNIQUE THEME **Equine Physiology**	• "Horses are herd animals, demonstrating attributes such as curiosity, sociability, and playfulness. They also show a great deal of "behavioral flexibility", which plays a significant role in their willingness to take direction and leadership from human beings" (Schroeder & Stroud, 2017, p. 368). • "As a prey species, horses are highly attuned to their environment…This sensitivity also contributes to their keen awareness of attitudinal and affective changes in human beings" (Schroeder & Stroud, 2017, p. 369). • "For clients partnering with horses, the opportunity to embody a leadership role can be especially empowering given a horse's sheer size and strength" (Schroeder & Stroud, 2017, p. 369). • "An integral part of EFL (Equine facilitated learning) is that its activities are based on our understanding of how horses think and learn, and how to use their natural behavior to interact with humans in a manner that enhances the safety, wellbeing and development of both horses and humans." (Pendry et al. 2014, p. 282). • "Proponents of this modality suggest horses' unique characteristics enhance a number of therapeutic processes, providing clients with interactive and multisensory experiences not otherwise available in traditional mental health treatment settings" (Schroeder & Stroud, 2017, p. 366).

	• "Additionally, one particular equine characteristic noted by clients has been their non-judgmental attitude ... In other words, the inclusion of horses and therapy could contribute to clients' engagement and self- reflection and willingness to take risks." (Schroeder & Stroud, 2017, p. 370)
UNIQUE THEME **Horse/Human Relationship**	• "Researchers suggest the human-equine therapeutic relationship is a cornerstone of the work. Through this relationship, horses appear to provide unique anchoring experiences…" (Schroeder & Stroud, 2017, p. 370). • "For clients partnering with horses, the opportunity to embody a leadership role can be especially empowering given a horse's sheer size and strength" (Schroeder & Stroud, 2017, p. 369). • "Once effective communication is established, the client can learn about and attend to the emotional world of the horse. In turn, the horse begins to focus on the client, respond to the client's interactions and consequently develop trust". (Naste et al. 2017, p. 293). • "…the equine role in EFP can be better explained in terms of a partnership…The client's relationship with the horse is comparable to that which a youth might have with peers, full of socializing and adventure." (McCullough, Risley-Curtiss & Rorke, 2015, p.160) • "…a horse's ability to mirror emotions, behaviors and physical elements of a person is one of the central features that provides a basis for the horse-human bond…The horse has the innate tendency to constantly sense, react and respond to emotional expressions of animals or humans in his proximity, which may be framed as affect mirroring." (Bachi, 2013, p. 192)
UNIQUE THEME **Experiential & Embodied**	• "For clients partnering with horses, the opportunity to embody a leadership role can be especially empowering given a horse's sheer size and strength" (Schroeder & Stroud, 2017, p. 369). • "Proponents of this modality suggest horses' unique characteristics enhance a number of therapeutic processes, providing clients with interactive and multisensory experiences not otherwise available in traditional mental health treatment settings" (Schroeder & Stroud, 2017, p. 366).

	• "The use of one's body is the sole tool for communication between humans and horses, and thus *body awareness* is critical in EFT-CT" (Naste et al. 2018, p. 293). • "EFL (equine facilitated learning) represents a unique set of practices that combine experiential learning and interaction with horses, ponies, miniature horses, donkeys and mules with counseling-based processing skills to increase children's awareness and control of their emotions, cognitions, and behaviors." (Pendry et al. 2014, p. 282). • "Within EFP, there is an emphasis on the relational and embodied connection, touch and movement such that, 'greater embodiment seems to be both an outcome of, and a necessity for, working effectively with horses' [Ford, 2013]." (Lac, 2017, p. 303)
UNIQUE THEME **Trauma & PTSD**	• "Post-traumatic stress disorder (PTSD) is characterized by prolonged and persistent re-experiencing and avoidance symptoms, in addition to noticeable alterations in cognitions, moods, and physiological states (American Psychiatric Association, 2013" (Schroeder & Stroud, 2015, p. 365). • "For women experiencing the enduring effects of posttraumatic stress, recovery is a complicated process" (Schroeder & Stroud, 2015, p. 365). "Given symptom complexity and range, treatment can be challenging" (Schroeder & Stroud, 2015, p. 366). • "The multidimensional landscape of PTSD, coupled with the differing treatment needs related to the various stages of the disorder and ages of victims, highlights a need for treatment that will address a wide range of symptoms, ages, and experience"… "The purpose of this pilot study was to explore an animal-assisted intervention which includes these elements – equine facilitated psychotherapy (EFP), an experiential, cognitive-behavioral based intervention – for the treatment of PTSD symptoms in maltreated youth." (McCullough, Risley-Curtiss & Rorke, 2015, p.159) • "Equine-facilitated psychotherapy is a multifaceted treatment approach beginning to evidence positive outcomes for post traumatic symptom reduction" (Schroeder & Stroud, 2015, p. 365).
DOMINANT THEME **Equine Agency**	• "Our intention for referring to [horses] as group members reflected our knowledge of horses as sentient, emotionally expressive, and social animals, capable of reciprocal

	communication with humans…recognized them as participants with a "voice" in the process…to consider and respond to [horses'] feedback…" (Schroeder & Stroud, 2015, p. 379). • "Once effective communication is established, the client can learn about and attend to the emotional world of the horse. In turn, the horse begins to focus on the client, respond to the client's interactions and consequently develop trust". (Naste et al. 2017, p. 293). • "New fields have also opened up in the past two decades, where horses are being utilized as friends, teachers, and therapists – namely, therapeutic riding and equine facilitated psychotherapy/learning". (Ford, 2013, p. 95) • "EFP includes a broad range of psychotherapeutic services in which the horse is considered a "co-facilitator…" * "EAP (equine assisted psychotherapy) on the other hand, is related to adventure-based therapy, and "utilizes the horse as a tool that provides an experience for clients to learn about themselves…" (Ford, 2013, p. 95) • "All [participants] regarded horses as teachers and emphasized their "wisdom, intuition, authenticity, present moment focus, level of embodiment", and ability to "reflect, hold space, support, challenge, and guide" (Ford, 2013, p. 101) • "Through these activities, the horse is used as a metaphor for problems and for life and also as a mirror to reflect back onto the participant, his or her way of being and interacting in the world." (Ferruolo, 2015, p. 55). * HORSE OBJECT (1 article) • "…the equine role in EFP can be better explained in terms of a partnership…The client's relationship with the horse is comparable to that which a youth might have with peers, full of socializing and adventure." (McCullough, Risley-Curtiss & Rorke, 2015, p. 160) • "Equine-facilitated psychotherapy (EFP) views the horse as a cofacilitator in the therapeutic encounter and emphasizes the innate wisdom of the horse and the power of an authentic other bearing witness…" (Lac, 2017, p. 303) • "…a horse's ability to mirror emotions, behaviors and physical elements of a person is one of the central features that provides a basis for the horse-human bond…The horse has the innate tendency to constantly sense, react and respond

	to emotional expressions of animals or humans in his proximity, which may be framed as affect mirroring." (Bachi, 2013, p. 192)
DOMINANT THEME **Gaps**	• "However, little research has been conducted to substantiate the claim that EFP, in the hands of a credentialed psychotherapist working with an accredited equine professional, is an effective therapeutic intervention with children [Lentini & Knox]" (McCullough, Risley-Curtiss & Rorke, 2015, p. 160) • "…a lack of consensus on appropriate methods, including length of treatment, type of intervention, group versus individual, number and types of facilitators/professionals…not sufficient commonalities among study methods…large variety of terms used to describe horse/human interventions…" (Lentini & Knox, 2015, p. 299) • "Despite this progress, there remains little consensus in the field regarding best practices, and EFP has not been established as evidence-based treatment for any disorder of childhood or adolescence." (Lentini & Knox, 2015, p. 278) • "…a recent review on equine assisted interventions (Selby & Smith-Osborne, 2013) demonstrates that 'true' randomized trials investigating the effects of EFL are non-existent." (Pendry, et al. 2014, p. 283) "The studies limitations are related to small sample size (N=11) and nonrandomization of participants, coupled with the failure to secure a control group. These parallel concerns voiced by other authors investigating the efficacy of EFP with at risk populations…" (McCullough, Risley-Curtiss & Rorke, 2015, p. 167). • "Multiple interventionists, both experienced and neophyte utilizing a variety of theoretical approaches, representing a range of programs, both large and small, and located in all parts of the country/world, need to be investigated in order to more accurately determine EFP treatment protocol for the population of traumatized youth exhibiting PTSD symptoms." (McCullough, Risley-Curtis and Rorke, 2015, p. 169) • "…because of a lack of consensus on appropriate methods, including length of treatment, type of intervention, group versus individual, number and types of facilitators/professionals, the review was not able to capture and report about a highly uniform, standardized intervention." (Lentini & Knox, 2015, p. 299).

Theme Excerpts: Equine-Assisted Therapy Category

Equine Assisted Therapy (EAT) / EA-learning (EAL) / EA-psychotherapy (EAP) / EA-activities (EAA)	
Descriptors & Themes	**Excerpts from literature (Evidence for Themes)**
Definition(s)	• "…there is confusion within the literature in terms of definitions and a general misunderstanding of what equine therapy or equine assisted therapy is…" (Lac, 2016, p. 195) • "While EFP (equine facilitated psychotherapy) and EAP (equine assisted psychotherapy) are used within the mental health setting, EAL (equine assisted learning and EAE (equine assisted education) are used within organizational and educational arenas." (Lac, 2016, p. 195) • "EAP [equine assisted psychotherapy] is based on the training model from the Equine Assisted Growth and Learning Association and involves a licensed mental health professional working alongside a certified equine specialist conducting group sessions… All activities are conducted on the ground with no riding or mounted work with the horses. The format for this model views the horse as a tool in the therapy process and activities are presented and set up for the clients to engage in an experiential learning encounter. The experience is then discussed among the participants and new awareness is elicited from the process." (Lac, 2016, p. 196) • "EAL (equine assisted learning) is an experiential approach to learning with the prime intent being to facilitate personal growth and development of life skills through equine interactions…The presence of the horse helps to reflect the person's actions in the moment and provide instant feedback on how he or she is perceived by others. The purpose of the facilitator is to help the feedback the horse is giving and to prompt the client to think about his or her own habits, styles, and preconceived ideas of leadership and communication. (Professional Association of Therapeutic Riding International (PATH)" (Meola, 2016, p.295)

	• "The goals of EAP are to enhance skills for problem solving, communication, relational attachment, confidence and trust, self-control, setting healthy and safe boundaries, and calming the nervous system – all impacted in the trauma response." (Steele, Wood, Usadi & Applegarth, 2018, p.404) • "Equine assisted therapy is a collective term for all types of therapeutic activities in using horses and has as its main goal to use riding as a tool in a therapeutic process (Rothe et al., 2005). Equine assisted therapy entails specially-trained equine instructors providing therapeutic riding instruction and exercises for individuals with disabilities." (Hawkins et al., 2014, p. 136) • *Equine assisted psychotherapy (EAP) within EAGALA model: "…creating an authentic experience for the learners/clients that is based on their specific needs, requires them to actively take initiative in the process, and is facilitated by professionals who support the participants in a safe environment that is designed around the experience itself rather than accomplishing a task…" (Notgrass & Pettinelli, 2015, p. 166) • EAP (Equine assisted psychotherapy): "Unlike other equine assisted experiential education models that focus on riding and horsemanship skills, EAP allows for a horse to act naturally in relation to other horses and humans in the session. While experiential modalities often use props to help the participant engage in a learning activity, the horse is not used as a prop in EAP. They are sentient beings and are seen and talked about as partners in the work (EAGALA, 2012)." (Notgrass & Pettinelli, 2015, p. 166) • "The term equine-assisted activities/therapies refers to a wide range of activities and therapies that incorporate horses in the treatment of individuals with the goal of improving cognitive, emotional, behavioral, social, and equestrian skills. Individuals participating in these types of programs may engage in a variety of different equine-assisted activities such as grooming, handling, riding, lunging, driving, vaulting, and team building." (Alfonso, 2015, p. 461) • "Equine-assisted activities and therapies (EAAT) is a broad term that encompasses therapeutic horseback riding and hippotherapy." (Rigby & Grandjean, 2016, p. 9) • "The incorporation of horses into treatment that addresses mental health concerns varies in terminology depending on the organization or model that practitioners ascribe to…" (Matamonasa-Bennett, 2015, p. 27)
UNIQUE THEME	• (EAP) within EAGALA model: "…creating an authentic experience for the learners/clients that is based on their specific

Experiential / Embodied	needs, requires them to actively take initiative in the process, and is facilitated by professionals who support the participants in a safe environment that is designed around the experience itself rather than accomplishing a task…" (Notgrass & Pettinelli, 2015, p. 166) • "Like any experiential activity, a relationship with a horse requires humans to be active, whether mentally or physically or spiritually, to engage in the learning or therapeutic process…" (Notgrass & Pettinelli, 2015, p. 167) • "EAP is based on the training model from the Equine Assisted Growth and Learning Association and involves a licensed mental health professional working alongside a certified equine specialist conducting group sessions… All activities are conducted on the ground with no riding or mounted work with the horses. The format for this model views the horse as a tool in the therapy process and activities are presented and set up for the clients to engage in an experiential learning encounter. The experience is then discussed among the participants and new awareness is elicited from the process." (Lac, 2016, p. 196) • "EAL (equine assisted learning) is an experiential approach to learning with the prime intent being to facilitate personal growth and development of life skills through equine interactions…The presence of the horse helps to reflect the person's actions in the moment and provide instant feedback on how he or she is perceived by others. The purpose of the facilitator is to help the feedback the horse is giving and to prompt the client to think about his or her own habits, styles, and preconceived ideas of leadership and communication. (Professional Association of Therapeutic Riding International (PATH)", (Meola, 2016, p.295) • "In addition to horseback riding, another way of conducting experiential equine activities is by creating interactions between people and horses that are orchestrated entirely from the ground… EAGALA's model is called E*quine Assisted Psychotherapy* (EAP)… EAP is founded on the principles of the Association for Experiential Education (AEE), but adds horses to make its experiential education modality unique… (Notgrass & Pettinelli, 2015, p. 163)
UNIQUE THEME **Inter-species Learning**	• (EAP) within EAGALA model: "…creating an authentic experience for the learners/clients that is based on their specific needs, requires them to actively take initiative in the process, and is facilitated by professionals who support the participants in a safe environment that is designed around the experience itself rather than accomplishing a task…" (Notgrass & Pettinelli, 2015, p. 166)

	• "The basic premise of such [EAT] programs is that the immediate and direct feedback from the horse allows the participant to gain awareness of his/her own behaviour or mental state. This presumes that horses perceive and respond to emotional changes in the human, and requires an understanding of horse behavior on the part of program facilitators to foster a positive learning environment and guide mutually constructive interactions between horse and human…" (Merkies et al., 2018, p. 61) • "EAP is based on the training model from the Equine Assisted Growth and Learning Association and involves a licensed mental health professional working alongside a certified equine specialist conducting group sessions… All activities are conducted on the ground with no riding or mounted work with the horses. The format for this model views the horse as a tool in the therapy process and activities are presented and set up for the clients to engage in an experiential learning encounter. The experience is then discussed among the participants and new awareness is elicited from the process." (Lac, 2016, p. 196) • "EAP is about the horses doing the work of effecting change in people's lives – it is about the relationship between the horses and clients, not the relationship between the facilitators and clients. The facilitators are there to provide the opportunities and bring consciousness to the lessons being learned (EAGALA, 2012,p.15)." (Notgrass & Pettinelli, 2015, p. 168) • "EAL (equine assisted learning) is an experiential approach to learning with the prime intent being to facilitate personal growth and development of life skills through equine interactions…The presence of the horse helps to reflect the person's actions in the moment and provide instant feedback on how he or she is perceived by others. The purpose of the facilitator is to help the feedback the horse is giving and to prompt the client to think about his or her own habits, styles, and preconceived ideas of leadership and communication. (Professional Association of Therapeutic Riding International (PATH)" (Meola, 2016, p.295) • "Horses share several similarities to humans, and these similarities create many opportunities for growth and learning (EAGALA, 2012): Horses are very much like humans in that they are social animals. They have defined roles in their herds. They would rather be with their peers. They have distinct personalities, attitudes, and moods. An approach that seems to work with one horse does not necessarily work with another. At times, they seem stubborn and defiant. They like to have fun. In other words, horses provide vast opportunities for metaphorical learning." (Notgrass & Pettinelli, 2015, p. 167)

	• "…horses give clients immediate feedback about how the client behaviour influences them …horses can serve as metaphors for aspects of client's lives… …horses' playfulness helps clients relax and decreases distress… …some horses' characteristics are similar to some particular clients' personalities or issues which can facilitate reciprocal healing between clients and horses…" …interacting with horses provides opportunities for clients to project or express their emotions… …horses teach clients boundaries, assertiveness, and leadership" (Lee, Dakin & McLure, 2016, p. 240) • "…horses' ability to remain coherent to their own emotional states allows them to increase the capacity for human beings to regulate their emotions and achieve psychophysiological coherence in themselves." (Lac, 2016, p. 201) • "Based on the characteristics and natural responses of the horses, participants can learn how their behaviors affect the horses and these results are immediate – Participants can see the cause and effect patterns in action that generate helpful and unhelpful interactions…" (Notgrass & Pettinelli, 2015, p. 167) • "Nonpredatory equines, tending to mirror rather than direct human responses, may have a therapeutic advantage for some patients over more predatory species, such as canines and humans… This may be especially relevant to patients with a history of interpersonal trauma…" (Nurenberg et al, 2015, p. 85) • "Horses are prey animals, as opposed to predator species like dogs or humans, and therefore have developed a keen awareness to non-verbal communication as a means to survive in the wild…This coincides with the fact that horses are very oriented to the here-and-now and therefore respond to humans and other horses in the moment...Within an EAP session, the horse's automatic responses give the participant and the facilitating team valuable information, like an instant bio-feedback machine." (Notgrass & Pettinelli, 2015, p. 167) • "Like any experiential activity, a relationship with a horse requires humans to be active, whether mentally or physically or spiritually, to engage in the learning or therapeutic process." (Notgrass & Pettinelli, 2015, p. 167) • "Horse responses may provide immediate feedback about a person's nonverbal behavior (e.g., horses may crowd a person who is hunched and avoiding eye contact or back away from a person who is approaching quickly with prolonged eye contact)

	helping increase awareness of one's behaviors and emotions." (Earles et al., 2015, p. 150) • "Regardless of the reason, the fact is that horses are in tune to our every move, gesture and even the subtlest nuances of meaning in our body language. How we move (our body language) indicates what we think and horses reflect our thoughts back to us in their responses." (Cameron et.al, 2013, p. 88) • "If patients gain insight and mindfulness by interacting with a sensitive horse who responds to their emotional states, a more appropriate term for equine-assisted therapy may be equine-partnered therapy." (Earles et al., 2015, p.151) • "These results indicate that the participant improved in speed and coordination in these tasks, skills that are transferable to climbing stairs, ambulation, avoiding obstacles when walking, and surveying one's surroundings for safety… …indicating improved self-confidence in ability to perform daily activities without falling and decreased FOF (fear of falling)" (Wehofer, Goodson & Shurtleff, 2013, p. 81) • "…horses can serve as metaphors for aspects of client's lives… …horses teach clients boundaries, assertiveness, and leadership" (Lee, Dakin & McLure, 2016, p. 240) • "As prey animals, horses respond immediately to sudden shifts in their environment. Their behavior serves as a metaphor for clients, illuminating their way of connecting to others, solving problems, and other challenges of trauma and moral injury." (Steele, Wood, Usadi & Applegarth, 2018, p.404) • "Employees attending EAL workshops report their experiences in the workshop translate easily to workplace situations and relationships." (Meola, 2016, p.297) • "The way in which horses interact in a herd is similar to the structure of most corporations. Horses rely on a hierarchal form of leadership in their herd for survival…This can be translated into corporate culture and team building." (Meola, 2016, p.299) • "One reason EAL programs offer immediate results and long lasting changes is that people are more accepting of feedback from an animal-human relationship than they are of feedback from a human-human interaction…Horses have no preconceived ideas about what a person is before he or she steps into the round pen to work on forming a partnership with that horse. They also do not judge based on appearance, prior attitude, past accolades, or other surface considerations. What the horse is showing the person in the round pen is how

	that person is actually presenting his or her self in that moment, which is distinct from how that person thinks he or she is presenting...This is a valuable, individualized learning opportunity that promotes communication flexibility as well as self-awareness." (Meola, 2016, p.300) • "Although not directly measured in this study, increasing gross motor skills may translate into increased ability to participate in recreation, leisure, and play activities with peers, a common barrier for children with ASD. Increased participation with peers may promote long-term engagement in social interaction and physical activity which is essential to overall health and well-being." (Hawkins et al., 2014, p. 146) • "EAP (equine-assisted psychotherapy) also incorporates another key aspect of adventure education: the use of metaphor…Metaphors are frequently generated to draw parallels between the EAP session and real-life situations to help participants achieve goals and overcome challenges in their day-to-day experience." (Notgrass & Pettinelli, 2015, p. 165) • "…horses provide vast opportunities for metaphorical learning. Using metaphors, in discussion or activity, is an effective technique when working with even the most challenging individuals and groups." (Notgrass & Pettinelli, 2015, p. 167) * MORE • "Accomplishing tasks as a team, such as moving a horse through an obstacle course with no tools or verbal communication, can be motivating, relationship-building experiences…" (Meola, 2016, p.300) • "EAL teaches the importance of non-verbal communication and teamwork and gives the participant an experience of successful leadership by communicating effectively what he or she wants someone else to do." (Meola, 2016, p.301) • "They learn what skills work for influencing this large, sometimes intimidating, animal to perform a task…Experiencing success in a new, anxiety producing situation has been proven to aid in retention of learned skills…" (Meola, 2016, p.298) • "Learning to anticipate change and adjust in the moment, learning to use personal influence over authority, and increasing awareness of self in relation to others are common skills retained in surveys by participants in EAL workshops…" (Meola, 2016, p.298) • "Participants are taught to ask wholeheartedly for another's commitment to the task at hand by being present and focussed

	on the communication at hand…" (Meola, 2016, p.298) • "…participants expanded their sense of social connections through mutually rewarding interactions with their equine partners and other participants. In a series of equine-assisted activities, they experienced the strength and power of the herd and drew parallels to their own human herd." (Alfonso, 2015, p. 464) • "The creation and building of a mutually need-satisfying horse-human relationship provides a dynamic, living lesson where choice theory skills are the building blocks of healthy life skills. As participants progressed through the program, practicing choice theory skills regularly and experiencing immediate and positive results in themselves and in the horse, they have the opportunity to internalize choice theory." (Cameron et.al, 2013, p. 87) • "Self-reflective exercises were included as take-home activities to reinforce the lessons of the sessions and help participants further understand their feelings and emotions generated through interactions with their equine-partner, each other, facilitators." (Alfonso, 2015, p. 464) • "Putting it together and making the learning last," participants refined the skills gained in the program and discussed strategies for integrating lessons learned into everyday life." (Alfonso, 2015, p. 464) • "Pro-social skills that participants learn through this process and may choose to apply in their relationships with people include: 1) the effectiveness of clear, purposeful communication, 2) the importance of quality world images – how they relate to the basic needs and drive behavior, 3) that effective behavior is driven by thinking and acting rather than feeling and physiology, and 4) the possible untapped potential of giving up external control in favor of controlling one's own behavior to affect another's behavior." (Cameron et.al, 2013, p. 93)
UNIQUE THEME **Equine physiology**	• "As prey animals, horses respond immediately to sudden shifts in their environment. Their behavior serves as a metaphor for clients, illuminating their way of connecting to others, solving problems, and other challenges of trauma and moral injury." (Steele, Wood, Usadi & Applegarth, 2018, p.404) • "Nonpredatory equines, tending to mirror rather than direct human responses, may have a therapeutic advantage for some patients over more predatory species, such as canines and humans… This may be especially relevant to patients with a history of

	interpersonal trauma…" (Nurenberg et al, 2015, p. 85) • "Horses are natural teachers because of their ability to reflect back what is going on around them. This is part of their instinct as a prey animal, to constantly assess the world for changes and new angers and to acclimate immediately to them." (Meola, 2016, p.297) • "Horses are prey animals, as opposed to predator species like dogs or humans, and therefore have developed a keen awareness to non-verbal communication as a means to survive in the wild…This coincides with the fact that horses are very oriented to the here-and-now and therefore respond to humans and other horses in the moment...Within an EAP session, the horse's automatic responses give the participant and the facilitating team valuable information, like an instant bio-feedback machine." (Notgrass & Pettinelli, 2015, p. 167) • "Based on the characteristics and natural responses of the horses, participants can learn how their behaviors affect the horses and these results are immediate – Participants can see the cause and effect patterns in action that generate helpful and unhelpful interactions…" (Notgrass & Pettinelli, 2015, p. 167) • "Unique effects from therapy horses may come from interacting with physically imposing animals that appear quite capable of causing harm but do not." (Nurenberg et al, 2015, p. 85)
UNIQUE THEME **Equine Welfare**	• "The effect of EAAT on the horses is an often overlooked, but important, aspect that may affect changes observed in the rider. Although horses are typically chosen for health, passive and tractable behavior, or quality of gate, it is important to identify horses that are at risk for high levels of stress during the therapy session, leading to health and behavioral problems." (Rigby & Grandjean, 2016, p. 21) • "Utilizing animals as partners in a therapeutic process requires major cultural paradigm shifts regarding intelligence and emotion and consideration of the ethical implications for the care and agency of these animals." (Matamonasa-Bennett, 2015, p. 23) • "…there is little research that analyzes these interactions from the viewpoint of the horse. More attention needs to be accorded to the benefits the animals receive in these programs, as there is potential for a therapy animal's welfare to be negatively affected." (Merkies et al., 2018, p. 61) • "With the increase in the number of horses being used in EAAT programs and with the increasing concern for animal welfare, it

	is important to understand the impact of such interventions on the stress level and quality of life for the horses involved…The physical and psychological health challenges that participants in EAAT have may result in increased psychological or physical stress on the horse." (Malinowski et al, 2018, p. 18) • "The field of animal-human bond represents a continuum of breadth of study, where at one end of the continuum animals are considered *objects* of study (the conventional western view) and at the other end, research is reaching far beyond this view by asserting the construction of animals as *subjects*, with independent selves and all that implies…" (Matamonasa-Bennett, 2015, p. 25) • "Anthropocentric labeling of human-horse interactions, such as "*the horse knows what the human wants"* or that horses are *"willing to please"* assumes that horses will act benevolently to achieve mutual goals (McGreevy et al., 2009). This assumption can lead to miscommunication and compromise welfare for both human and equine participants." (Merkies et al., 2018, p. 62)" • "In equine-assisted therapy, the horse provides benefits to humans experiencing mental or psychological trauma, but it is equally important to understand the horse's needs to ensure the best possible welfare for the horse and safety of the participants while improving therapy outcomes." (Merkies et al., 2018, p. 66) • "Understanding the therapy horse's role is fundamental for furthering research, providing suitable training for facilitators, and ensuring appropriate safety measures for all participants while gaining additional insight into the human-animal bond." (Merkies et al., 2018, p. 62)
UNIQUE THEME **Horse-Human Relationship**	• "Horses and humans share a 6000-year history of co-evolution and horses are credited with being the species that has had the greatest impact on human civilization… The notion of using horses in physical therapy (hippotherapy) and for those suffering from chronic illness can be traced back to Greece where ancient texts speak of the life-affirming relationship between humans and equines." (Matamonasa-Bennett, 2015, p. 26) • "Horses throughout history have been symbols of power and leadership. They have been the deciding factor in the rise and fall of empires for thousands of years. Horses can still be influential today in the business world through EAL programs." (Meola, 2016, p.295) • "The qualities of horses have been quietly utilized for centuries in an effort to heal humans. The early Greeks made use of horseback riding, or horsemanship, in an effort to soothe

	individuals who were suffering from untreatable or incurable maladies…As medical science has developed, horses and horse movements have continued to be utilized in treating various mental and physical conditions." (Notgrass & Pettinelli, 2015, p. 162-3) • "…Native American constructs about animals may provide valuable alternatives to commonly-held western viewpoints creating opportunities for deeper, more authentic relationships, reciprocity and a greater understanding of horse human relationships." (Matamonasa-Bennett, 2015, p. 23) • "EAP is about the horses doing the work of effecting change in people's lives – it is about the relationship between the horses and clients, not the relationship between the facilitators and clients." (Notgrass & Pettinelli, 2015, p. 168) • "The bond between participant and horse can promote "mutual trust, respect, empathy, unconditional acceptance, sense of constancy, security, reliability, love and affection, sense of autonomy and initiative, and self-control" (Grandos & Agis, 2011, p.194)." (Cameron et.al, 2013, p. 87) • "The equine-human relationship is often characterized by affection, trust and acceptance. The development of this relationship and the significant decrease of PTSD symptom severity, depressive symptoms, and moral injury is congruent with multiple research studies…" (Steele, Wood, Usadi & Applegarth, 2018, p.405) • "It is suggested that providers of equine-assisted therapy and recreational therapists can maximize therapeutic effects of equine-assisted therapy for children with ASD by allowing participants to create connections with the horses prior to beginning riding sessions to strengthen the bond between the child and the horse." (Hawkins et al., 2014, p. 146)
DOMINANT THEME **Equine Agency**	• "…horses give clients immediate feedback about how the client behaviour influences them …horses can serve as metaphors for aspects of client's lives… …horses' playfulness helps clients relax and decreases distress… …some horses' characteristics are similar to some particular clients' personalities or issues which can facilitate reciprocal healing between clients and horses…" …interacting with horses provides opportunities for clients to project or express their emotions… …horses teach clients boundaries, assertiveness, and leadership" (Lee, Dakin & McLure, 2016, p. 240) * SUBJECT & OBJECT

	• "…horses' ability to remain coherent to their own emotional states allows them to increase the capacity for human beings to regulate their emotions and achieve psychophysiological coherence in themselves." (Lac, 2016, p. 201) • "Horses have no preconceived ideas about what a person is before he or she steps into the round pen to work on forming a partnership with that horse. They also do not judge based on appearance, prior attitude, past accolades, or other surface considerations…What the horse is showing the person in the round pen is how that person is actually present his or her self in that moment, which is distinct from how that person thinks he or she is presenting... (Meola, 2016, p.300) • "Many practitioners consider the horse itself as the catalyst for therapeutic changes (Kendall et al. 2014). A widely held belief is that the horse can intuit what emotional support the human patient requires and the human is paired with a horse that can fulfill these needs. Anthropocentric labeling of human-horse interactions, such as "*the horse knows what the human wants"* or that horses are *"willing to please"* assumes that horses will act benevolently to achieve mutual goals (McGreevy et al., 2009). This assumption can lead to miscommunication and compromise welfare for both human and equine participants." (Merkies et al., 2018, p. 62) • "While experiential modalities often use props to help the participant engage in a learning activity, the horse is not used as a prop in EAP. They are sentient beings and are seen and talked about as partners in the work (EAGALA, 2012)." (Notgrass & Pettinelli, 2015, p. 166) • "Horses share several similarities to humans, and these similarities create many opportunities for growth and learning (EAGALA, 2012): Horses are very much like humans in that they are social animals. They have defined roles in their herds. They would rather be with their peers. They have distinct personalities, attitudes, and moods. An approach that seems to work with one horse does not necessarily work with another. At times, they seem stubborn and defiant. They like to have fun. In other words, horses provide vast opportunities for metaphorical learning." (Notgrass & Pettinelli, 2015, p. 167) • "EAP is about the horses doing the work of effecting change in people's lives – it is about the relationship between the horses and clients, not the relationship between the facilitators and clients." (Notgrass & Pettinelli, 2015, p. 168) • "…participants learned how to read their horses' body language and adjust their communication style to be in concert with their equine partner's "horsenality"." (Alfonso, 2015, p. 464)

	• "…participants expanded their sense of social connections through mutually rewarding interactions with their equine partners and other participants. In a series of equine-assisted activities, they experienced the strength and power of the herd and drew parallels to their own "human herd"." (Alfonso, 2015, p. 464) • "Those practicing, writing and teaching therapeutic interventions with horses have viewpoints ranging from horses as mere *objects* in which they are called "tool" in therapy…a vehicle for… "metaphors" for the client's life…to being identified as *subjects*, "partners" or "facilitators" in the therapeutic process…" (Matamonasa-Bennett, 2015, p. 35)
UNIQUE THEME **Movement Therapy**	• "EAAT (equine assisted activities and therapies), uses the movement of the horse as a kinesio-therapeutic tool to improve the participant's muscle strength, body awareness, balance, and coordination…" (Wehofer, Goodson & Shurtleff, 2013, p.72) • "The movement of the horse provides a passive dynamic challenge to trunk stability, postural comparison, and balance. The constant movement of the horse and additional sensorimotor experience of riding can aid in the development of both gross and fine motor function." (Lanning et al, 2013, p. 1905) • "It has been purported that the interactions between rider, horse, and therapist combined with the kinesthetic properties of equine-assisted therapy can lead to benefits including improved trust, communication, confidence, self-esteem, muscle tone, strength, flexibility, posture coordination, and balance…" (Hawkins, et al., 2014, p.136) • "EAAT may contribute to enhanced physical function as the horse elicits passive and active stretching from the rider and allows the rider to facilitate righting and equilibrium reactions while on the horse." (Rigby & Grandjean, 2016, p. 9) • "As a treatment package, the kinesthetic properties of the equine-assisted therapy activities, consistency in riding sessions, bond between horse and rider, as well as the recreational, playful, and novel nature of the treatment exercises and activities were beneficial to participants' short-term gains in gross motor functioning." (Hawkins et al., 2014, p. 146) • "The physical movements and activities implemented during the riding sessions were designed to challenge and improve the participant's gross motor skills (e.g., core stability, upper and lower extremity strength) as the majority of the 30-minute equine assisted therapy sessions required the participants to perform physically demanding exercises and activities." (Hawkins et al., 2014, p. 145)

	• "By riding and directing the movement of the horse, these individuals may increase their balance, coordination, trunk control, gross motor functioning, self-confidence, and other physical and neurological functioning." (Alfonso, 2015, p. 461) [Young women .w social anxiety] • "The horse's smooth and rhythmic gait elicits motor responses in the rider that are essential for the movement patterns of a human pelvis while walking." (Rigby & Grandjean, 2016, p. 10) • "This current study reports the effects of equine assisted therapy on body coordination, strength and agility, and overall gross motor skills among two children with ASD." (Hawkins et al., 2014, p. 137) • "The purpose of the equine assisted therapy program is to provide therapeutic riding opportunities for individuals with disabilities to increase physical and psychosocial functioning, improve independent riding skills, and to investigate the efficacy of equine assisted therapy for treating individuals with disabilities." (Hawkins et al., 2014, p. 137) • "The horse provides a dynamic base of support and challenges these sensorimotor components. The three-dimensional rhythmic reciprocal movements of a walking horse generate normalized pelvic movement of the rider that resembled pelvic movements essential for ambulation… Improvement in trunk stability, posture, and pelvic mobility assist in improved gait and balance…" (Wehofer, et al., 2013, p. 73).
UNIQUE THEME **Trauma & PTSD**	• "The goals of EAP are to enhance skills for problem solving, communication, relational attachment, confidence and trust, self-control, setting healthy and safe boundaries, and calming the nervous system – all impacted in the trauma response." (Steele, Wood, Usadi & Applegarth, 2018, p.404) • "The equine-human relationship is often characterized by affection, trust and acceptance. The development of this relationship and the significant decrease of PTSD symptom severity, depressive symptoms, and moral injury is congruent with multiple research studies…" (Steele, Wood, Usadi & Applegarth, 2018, p.405) • "These results may suggest that EAP may help address the symptoms of PTSD, depression, attachment problems, moral injury, and dissociative experiences because horses are able to give feedback about participants experience in a way that encourages thoughtful exploration and resolution." (Steele, Wood, Usadi & Applegarth, 2018, p.406)

	• "Post-traumatic stress disorder is described as a complex pathological reaction to trauma wherein traumatic experiences may compromise feelings of safety in the affected person's own body or environment. Equine assisted therapy is an attractive treatment modality as interactions with horses can provide a feeling of safety and modulate arousal and fear responses in humans. The simple act of grooming a horse can overcome touch avoidance and increase body awareness of the individual suffering from PTSD…" (Merkies et al., 2018, p. 62) • "Reported benefits of equine interventions and programs included enjoyment, developing relationships with others, various perceived physical and mental benefits, increased cognitive abilities, and development of horseback riding skills…" (Hawkins, et al., 2014, p.136) • "…clients develop the ability to work with large animals which raises clients' self-esteem…" (Lee, Dakin & McLure, 2016, p. 240) • "Equine-assisted activities and therapies (EAAT) have gained prominence as a viable therapeutic approach for a range of mental health and developmental problems including anxiety, depressive symptoms, irritability, inattention and distractibility, behavior problems and impaired communication and social skills…" (Acri, Hoagwood, Morrissey & Zhang, 2016, p.603) • "A number of clinical reports, case studies, and non-experimental studies have described the usefulness of EAAT in the treatment of patients with post-traumatic stress disorder (PTSD), depression, attention-deficit/hyperactivity disorder, conduct disorders, dissociative disorders, and other chronic mental illnesses. EAAT has been used to enhance non-verbal communication, creative thinking and problem solving, assertiveness, leadership and teamwork skills, taking responsibility, relationships, confidence, and attitudes in both clinical and non-clinical samples. They have also been utilized to treat a variety of mental health needs such as attention deficit disorder, abuse and behavioral issues, depression, anxiety, eating disorders, interpersonal relationship problems, and communication deficits." (Alfonso, 2015, p. 462)
DOMINANT THEME **Gaps**	• "Although all [certifications] involve treatment with equines, each pulls from slightly different perspectives, and there are nuances in approach that should be considered in order to ensure the type of certification is concordant with the provider's professional orientation and practice objectives…The field has been faulted for lacking standardization in nomenclature…" (Acri et al., 2016, p. 607)

	• "A systematic review of certification standards is timely and needed, given the growing interest in EAATs as an alternative or adjunctive therapy." (Acri et al., 2016, p. 606) • "Currently there is no unifying theory as to why activities and therapies involving horses are psychologically beneficial…several theories that explain the relationship between humans and animals that undergird a range of therapeutic approaches, including biophilia, which is the tendency for humans to connect emotionally to other living things, and attachment, which is defined as a bidirectional connection between humans and animals." (Acri et al., 2016, p. 604) • "Yet there remains some inconsistencies in definition of EAATs and a variety of different certification standards for training in EAATs exist." (Acri et al., 2016, p. 603) • "Although the initial research in EAP supports its clinical value with school-age children and adolescents, the lack of research about other populations raises questions…There is a particular gap in knowledge about EAP in preschool-age children (4 and under) and older adults…" (Lee, Dakin & McLure, 2016, p. 239) • "…there is a need for rigorous experimental and quasi-experimental research designs to help determine the effectiveness of EAP for particular clinical issues and populations…should include randomly assigned treatment and control groups, should not combine multiple interventions given…" (Lee, Dakin & McLure, 2016, p. 243) • "Research in this field needs to clearly define, specify, and operationalise presenting concerns to precisely identify whether and how EAP impacts individuals with these presenting concerns." (Lee, Dakin & McLure, 2016, p. 243) • "There is a need for theory-building work that further explores and delineates the role of horses in the EAP process." (Lee, Dakin & McLure, 2016, p. 244) • "It is also unclear how the treatment components – separately or in combination – contributed to the positive outcomes. Future research should assess the relative effects of each component on therapeutic outcome." [EAP program for veterans] (Steele, Wood, Usadi & Applegarth, 2018, p.406) • Study limitations: Small sample sizes, lack of randomized control trial, bias of parental evaluators, unknown specific mechanisms of change (Lanning et al, 2014, p. 1898)

	• "Despite having a significant body of knowledge in the literature about the value of therapeutic riding on human health, there is limited insight into the impacts such activities have on the stress response and welfare of the horses involved." (Malinowski et al, 2018, p. 18) • "Although the literature states that EAL is cost-effective, there is insufficient research currently on the cost per employee compared to other types of trainings." (Meola, 2016, p.301) • "…there is little research that analyzes these interactions from the viewpoint of the horse. More attention needs to be accorded to the benefits the animals receive in these programs, as there is potential for a therapy animal's welfare to be negatively affected." (Merkies et al., 2018, p. 61) • "Understanding the therapy horse's role is fundamental for furthering research, providing suitable training for facilitators, and ensuring appropriate safety measures for all participants while gaining additional insight into the human-animal bond." (Merkies et al., 2018, p. 62) • "Although all organizations that certify equine assisted therapy practitioners consider the interpretation of horse behaviour critical to program success, there exist no standards for teaching or understanding equine behaviour in these certification programs…" (Merkies et al., 2018, p. 62) • "Although EAT is growing in importance to society, there is still a wide gap between practice and knowledge…the small amount of research that currently exists often has methodological errors, such as lack of control groups, ignoring outliers in the data set, small sample sizes, over-generalized findings, author/researcher bias, and an inconsistency between observations and actual discoveries." (Merkies et al., 2018, p. 66) • "First, due to the small sample size and specific characteristics of participants, generalization of findings across participants is limited…" (Hawkins et al., 2014, p. 147) • "Very little systemic research currently exists to confirm the efficacy of EAP, and the existing research tends to lend more confusion to the field than clarification…one reason for the inadequacy and confusing nature of existent research on EAP is because the research does not include a common language." (Notgrass & Pettinelli, 2015, p. 70-1) • "The equine-assisted growth and learning Association (EAGALA, 2014) includes 600 equine assisted therapy programs. Evidence of the effectiveness of equine assisted therapy, however, is greatly needed ... Most studies on equine-assisted therapy had very few participants and largely

	documented that people enjoy interacting with horses" (Earles et al., 2015, p. 149) • "There is a great need for research to determine the effectiveness of specific equine-assisted therapy techniques for individuals with different psychological disorders." (Earles et al., 2015, p. 149) • "While most studies have focused on the noticeable, physical benefits of EAAT, the literature lacks evidence as to why the benefits occur. Very little evidence exists regarding the physiologic responses to EAAT, which need to be investigated concurrently with functional testing." (Rigby & Grandjean, 2016, p. 21) • "The differences in equine-related programs across facilities pose a major obstacle for establishing generalizable benefits. To promote generalizability in this field, practitioners should be aware of and document how their particular programs and the measurements they obtain to establish efficacy are modified from those described in the literature." (Rigby & Grandjean, 2016, p. 21) • "At present, the primary need is the undertaking of controlled trials to firmly establish the efficacy of EAAT in order to continue the promising results suggested from the limited evidence presented herein. Evidence for the efficacy of EAAT might lead to a more widespread acceptance by health care practitioners and therapists. This may lead to a greater demand for EAAT to be recognized as beneficial by health insurance providers and ultimately result in EAAT becoming more affordable and accessible." (Rigby & Grandjean, 2016, p. 22) • "There is a paucity of literature and very little is known about the impact that therapy has on animals. This study suggests that this blind spot may be the result of the legacy of underlying, post Christian, western scientific beliefs about human animal relationships." (Matamonasa-Bennett, 2015, p. 23) • "Currently, this field needs unifying theoretical models for research, but more importantly, a serious dialogue or discourse about the ways in which contemporary paradigms about animal emotion and intelligence are challenged when we begin to view them as partners in the therapeutic process...The state of the literature seeks to explore what animals can do for us without questioning the impact of this therapeutic relationship in the lives of animals. The literature on the impact of equine-assisted therapies on the horses is almost nonexistent." (Matamonasa-Bennett, 2015, p. 24) • "Despite increasing interest in equine-assisted therapy, the field currently lacks quantitative research and a unified, widely accepted or empirically supported theoretical framework for explaining how and why these types of interventions are

	therapeutic..." (Matamonasa-Bennett, 2015, p. 26) • "A major challenge in the field of equine-assisted therapies is understanding the models and goals of therapy and research as a wide range of philosophes, styles and practices exist. Currently, there is not a shared terminology across the field or across organisations or an agreed-upon model for practice." (Matamonasa-Bennett, 2015, p. 26) • "Due to time constraints and the need to complete AR (adaptive riding) sessions before they would need to be paused for the winter, we were limited in continuing our recruiting efforts…" "…to avoid winter weather conditions and the potential of not completing all ten sessions." (Wehofer, Goodson & Shurtleff, 2013, p. 78) • "Additionally, funding to provide transportation for OA (older adults) who have given up driving could help eliminate a major barrier to participation for many potential participants." (Wehofer, Goodson & Shurtleff, 2013, p. 84) • "Equine assisted therapies can be costly and labor intensive, underscoring the need for studies of efficacy." (Nurenberg et al, 2015, p. 80) • "Equine-assisted group therapy…is resource intensive. It requires construction and maintenance of the physical environment, attention to risk reduction, identification and transport of appropriate therapy horses, recruitment of trained equine therapists…subject to weather related cancellation…" (Nurenberg et al, 2015, p. 85) • "Although EAL programs are growing in popularity, there are certain geographic areas where the costs of sending employees to these trainings would be too high. A resistance to experiential and novel training venues could also be a barrier for some cultures or individuals. Also, some people have aversions or allergies to animals…other programs will be subject to weather conditions for scheduling…There is also a liability risk involved that is usually covered by the EAL provider but may cause companies to choose other learning and development activities." (Meola, 2016, p.301)

Theme Excerpts: Therapeutic Riding Category

Descriptors & Themes	Excerpts from literature (Evidence for Themes)
Definition(s)	• "Therapeutic riding involves teaching individuals with cognitive, emotional, or physical disabilities the skills of horseback riding and is regulated in the United States through the Professional Association of Therapeutic Horsemanship International." (Lac, 2016, p. 195) • "Therapeutic horseback riding includes teaching specific riding skills to those with a variety of disabilities by non-licensed professionals." (Rigby & Grandjean, 2016, p. 9) • "TR is provided by a specially trained riding instructor who teaches the rider with a disability to control the horse using basic riding skills…therapeutic riding emphasizes control, attention and focus, sensory management, and communication (verbal and/or nonverbal) in order to teach riding skills. Furthermore, TR provides a multisensory experience. Contact with animals including horses, stimulates physiological, psychological, and social responses in children and adolescents…" (Ward, et al., 2013, p. 2190) • "THR "is an equine-assisted activity for the purpose of contributing positively to the cognitive, physical, emotional and social well-being of individuals with special needs" (Professional Association of Therapeutic Horsemanship International Organization [PATHIntl.org], 2016)." (Lanning et al., 2017, p. 260) • "THR typically involves riding in small group settings, led by a certified THR instructor teaching horsemanship skills targeting therapeutic goals." (Gabriels et al., 2015, p. 542) • "THR is an equine-assisted activity designed to improve the well-being of individuals with special needs. It is designed to be therapeutic, but is not considered "therapy", and therefore, does not require the presence of a licensed therapist (PATHIntl.org, 2016)." (Lanning et al., 2017, p. 264) • "Therapeutic horseback riding (THR) is a type of AAT that teaches horsemanship skills such as holding a horse's reins

	appropriately, controlling the horse with voice commands, and other basic riding skills... Goals of therapy include improving balance, posture, gross and fine motor skills, and communication…" (Jenkins & Reed, 2013, p. 722) • "For this study, we chose to examine horses involved in therapeutic riding, which includes mounted activities designed to achieve physical, emotional, social, cognitive, behavioral, and educational goals through emphasizing the development of a relationship between the horse and the rider. Therapeutic horseback riding is recommended for a variety of both physical and psychological conditions." (McKinney et al., 2015, p. 922) • "Therapeutic riding involves teaching individuals with cognitive, emotional, or physical disabilities the skills of horseback riding and is regulated in the United States through the Professional Association of Therapeutic Horsemanship International." (Lac, 2016, p. 195) • "Therapeutic horseback riding includes teaching specific riding skills to those with a variety of disabilities by non-licensed professionals." (Rigby & Grandjean, 2016, p. 9)
UNIQUE THEME **Equine Welfare**	• "With continued growth in the number of horses used for therapeutic riding, it is imperative to consider horse stress levels to ensure both health and welfare of animals used." (Johnson et al., 2017, p. 78) • "A few studies have looked at the effect of THR programs on horses. The preceding study indicated that horses working in the program were not more stressed when they were ridden by physically or psychologically handicapped individuals than when they were ridden by recreational riders based on the ethogram of equine behaviors ." (Johnson et al., 2017, p. 78) • "It is plausible that horses being ridden by people with severe physical and mental disabilities (e.g., military veterans affected with PTSD) may be stressed due to the need to continuously adjust their own posture and gait to accommodate rigid and unyielding body posture of the rider. The horses may also be stressed by riders' high anxiety and anger levels, low tolerance for, and reactivity to unexpected events." (Johnson et al., 2017, p. 78) • "The muscle tension, spinal rigidity, and anxiety, with which military veterans are commonly affected, may exacerbate any existing stress that horses working in

	therapeutic riding centres experience." (Johnson et al., 2017, p. 78) • "Military veterans, often affected by physical and psychological conditions, could represent a unique and significant challenge for ridden horses and provoke stress." (Johnson et al., 2017, p. 79) • "Our findings suggested that the horses did not manifest any clinically meaningful physiological stress responses while doing THR work with veterans." (Johnson et al., 2017, p. 83) • "The popularity of therapeutic riding is growing rapidly. With greater numbers of horses used in this field, it is becoming increasingly important to understand how this work impacts horse quality of life." (McKinney et al., 2015, p.922) • "The physical and mental health challenges of individuals participating in therapeutic riding (e.g., decreased mobility and trunk stability, reactive behavior) may result in additional mental or physical stress on the horses." (McKinney et al., 2015, p. 923) • "Beyond measuring salivary cortisol, this research studied equine participants using a behavior ethogram created by Kaiser et al., (2006) which includes behaviors that are well-established markers of stress, irritation, and frustration in the horse. The behaviors used to evaluate horses in this work have been correlated with other physiological signs of stress including increased heart rate and plasma cortisol concentrations." (McKinney et al., 2015, p. 926) • "The lack of increased stress behaviors in the equine subjects during therapeutic riding is consistent with other findings indicating that horses do not experience increased stress during these activities." (McKinney et al., 2015, p. 926) • "The results of this study demonstrated that horses were not stressed by THR work." (Johnson et al., 2017, p. 84) • "…earlier works identified and characterized reliable ethogram of equine behaviors as indicators of stress in horses…Using these behavioral indices, results of a previous study showed that THR was no more stressful for horses when being ridden by physically or psychologically disabled individuals than by recreational riders." (Johnson et al., 2017, p. 78)

DOMINANT THEME **Equine Agency**	• "The exact therapeutic benefit of horseback riding is unknown but thought to be due to displacement of the horses centre of gravity three dimensionally leading to rhythmical movements similar to a human gait and eliciting neural sensory and neural muscular responses from underused muscle groups…" (Homnick et al., 2015. P. 122) • "…there were no differences in equine participant stress between traditional hunt seat riding lessons and therapeutic riding, and thus, no evidence for increased transfer of anxiety from the rider to the horse." (McKinney et al., 2015, p.926) • "Beyond measuring salivary cortisol, this research studied equine participants using a behavior ethogram created by Kaiser et al, which includes behaviors that are well established markers of stress, irritation, and frustration in the horse." (McKinney et al., 2015, p.926) • "The first 4 weeks were dedicated to non-riding exercises that included grooming, leading, working with the horse in a round pen, developing a relationship with the horse; and the last 4 weeks consisted of riding and horsemanship exercises. Participants learned basic horse care and riding skills along with communication skills. Emphasis was placed on developing a mutually respectful relationship with the horse both on the ground and while riding." (Lanning et al., 2017, p. 264) • "Therapeutic horseback riding (THR) is a type of AAT that teaches horsemanship skills such as holding horses rains appropriately, controlling the horse with voice commands, and other basic riding skills... Goals of therapy include improving balance, posture, gross and fine motor skills, and communication…" (Jenkins& Reed, 2013, p.722). • "The interaction between horse and rider facilitates and encourages the development of riding skills, as well as feelings of competence, patience, and self-esteem. The equine gate provides neuromuscular stimulation that allows riders to develop greater strength, balance, coordination, and flexibility." (Johnson et al., 2017, p. 78) • "Therapeutic horseback riding centres could therefore serve as reasonable endpoints for unwanted horses or those retired from previous work. Their placement in such centres can serve valuable societal roles." (Johnson et al., 2017, p. 84) • "In making horse assignments, the school group coordinator considered characteristics of the horses, including degree of

	movement generated from the horse's gate, the degree of stability provided by the horse's back structure, general size and width of the horse, and the horse's reactivity to input from riders." (Ward et al., 2013, p. 2191) • "This nonverbal communication between the horse and the rider may include the fact that horses constantly mirror and respond to the rider's body language. Also, this shared attention experience may be enhanced by the enormity of the horse combined with the task demand for the rider of maintaining bilateral control and balance." (Gabriels, et al., 2015, p. 547) • "A second hypothesis is that the human- equine experience (i.e., warmth of the horse's body and rhythmic movement of riding the horse) promotes a relaxing context, which may have a calming effect on children with ASD." (Gabriels, et al., 2015, p. 547)
DOMINANT THEME **Gaps**	• "…there is limited evidence demonstrating stress outcomes of the horses working with military veterans with PTSD and or TBI." (Johnson et al., 2017, p. 78) • "To date, a paucity of studies exists assessing the stress levels of horses being ridden in THR centres, and no outcomes have been studied when horses working in THR centres are ridden by military veterans with PTSD." (Johnson et al., 2017, p. 79) • "Although the aforementioned studies contribute to the growing body of evidence that supports the effectiveness of TR on the behaviors of children with ASD, they included caregivers' ratings of the participants' behaviors. Consequently, the generalization of the benefits of TR to important settings away from the riding centre, like school, has not been established." (Ward et al., 2013, p. 2191) • "It is unclear how TR leads to changes in the behavior of children with ASD. Researchers have speculated a number of potential causes including the nature of horseback riding such as the presence of the horse (Bass et al., 2009), or the motion of riding (Bass et al., 2009; Gabriels et al., 2012)." (Ward et al., 2013, p. 2197) • "Although THR appears to be a widespread practice that has become popular for individuals with ASD, few studies have systematically validated the effects of THR for individuals with ASD following recommended guidelines for ASD research of therapeutic interventions. Such a practice is necessary to guide consumers' AAI treatment choice making and third-party payers' interest in funding evidence-

	based AAI." (Gabriels et al., 2018, p. 2) • "Despite the positive benefits reported by these researchers, reviews conducted by several entities (e.g., Association for Science in Autism Treatment, n.d.; National Standards Project, 2009; Umbarger, 2007) indicate that THR does not meet the criteria for an EBP [evidence-based practice]." (Jenkins & Reed, 2013, p. 722) • "The various procedures used and opportunities to practice different skills may influence skill acquisition and/or behavior change; however, there is no research thus far to suggest that a specific set of lessons plans for THR is superior to, or more affective, than another." (Jenkins & Reed, 2013, p. 738) • "Research documenting the benefits of therapeutic riding for human participants is increasing, but the impact on horses has not been thoroughly investigated." (McKinney et al., 2015, p. 922) • "Further studies with larger population sizes are needed to more fully understand the potential impact of equine-assisted therapy on horses. Such research should include assessment of different types of equine-assisted activities, and the role of management practices and individual horse characteristics in moderating stress levels." (McKinney et al., 2015, p. 928) • "Future study should consider using a larger sample of horses from several centres and repeated observations over several years in order to obtain a long-term view of stress and horses working in this environment." (Johnson et al., 2017, p. 84)

Theme Excerpts: Hippotherapy Category

Descriptors & Themes	Excerpts from literature (Evidence for Themes)
Definition(s)	• "Hippotherapy is the inclusion of the use of horses by physical or occupational therapists and utilizes the movement of the horse for the benefit of the patient.." (Lac, 2016, p. 195) • "Hippotherapy is conducted by physical, occupational, and speech therapists. Hippotherapy interventions use the rhythmic movement of the horse to include a variety of activities on horseback that are designed to improve functional abilities and quality of life of individuals with neuromuscular impairments." (Rigby & Grandjean, 2016, p. 9) • "Hippotherapy typically refers to therapeutic riding to address physical concerns with the premise that the horse's movement is healing." (Matamonasa-Bennett, 2015, p. 27) • "Hippotherapy is led by an occupational, speech, or physical therapist, and intervention activities use the movement of the horse to target functional outcomes." (Gabriels et al., 2015, p. 542) • "Hippotherapy is defined as a rehabilitation strategy used in the context of occupational, physical, or speech therapy using the animal's three dimensional movement and/or the affordances in the equine environment as treatment strategies to achieve various therapeutic objectives generally related to neural motor function (American Hippotherapy Association, 2010), but also to vestibular, proprioceptive, tactile and cognitive aspects (Heine, 1997)." (Leveille et al., 2017, p. 269) • "Hippotherapy, or horse therapy, is an innovative form of physical therapy that involves the use of a horse as a therapeutic tool in order to effectively challenge a rider's core muscles. The rhythm of the horse's gait continuously engages the client's balance and posture, while the supervising physical therapist seeks to improve the client's overall coordination and fine motor skills through various activities." (Thompson et al., 2014, p. 60) • "The ultimate goal of a hippotherapy program is to improve the initial motor deficits in the individuals, thereby allowing

	them to gain motor functions and learn to appropriately maneuver themselves in a variety of environments…" (Thompson et al., 2014, p. 68) • "Hippotherapy HPOT is a treatment strategy that uses the horse's movement as a tool to affect functional outcomes. In HPOT, an occupational therapist, physical therapist, or speech language pathologist continually modifies the horse's movement throughout the session to address clients' needs as they work toward functional goals (American Hippotherapy Association, 2010)." (Ajzenman et al., 2013, p. 654) • "Hippotherapy is a physical, occupational and speech-language therapeutic approach that utilizes the horse's movements to achieve treatment outcomes." (Lee, Dakin & McLure, 2016, p. 225)
DOMINANT THEME **Equine Agency**	• "Using horses poses a variety of risks. In any therapy treatment using equines, there is always a risk of falling, which needs to be considered for informed decision-making since even well-trained horses can be unpredictable." (Leveille et al., 2017, p. 270) • "Hippotherapy, or horse therapy, is an innovative form of physical therapy that involves the use of a horse as a therapeutic tool in order to effectively challenge a rider's core muscles. The rhythm of the horse's gait continuously engages the client's balance and posture, while the supervising physical therapist seeks to improve the client's overall coordination and fine motor skills through various activities." (Thompson et al., 2014, p. 60) • "With respect to the cognitive dimension…the occupational therapist adopted to her child's abilities by using sounds to tell the horse to move forward, which facilitated the development of communication and language skills, especially in an environment conducive to communication. Understanding of instructions and learning were also facilitated." (Leveille et al., 2017, p. 272-4) • "These results indicate that hippotherapy sessions are a very effective way to improve physical function, specifically postural control, strength, and coordination in children who have been diagnosed with any type of developmental delay or disorder. Additionally, children showed improvements in confidence, self-esteem, and quality of life as observed by their therapist and measured by the parent questionnaires, which may be directly related to the interaction with the horse and therapists or indirectly related to the improvements in motor function." (Thompson et al., 2014, p. 60)

	• "Along with improvements in motor and postural control, hippotherapy research also suggests that the social and emotional interactions can result in increases in quality of life and self-esteem… Thus, this rehabilitative strategy is ideal for various special populations that would benefit from strengthening their postural control as well as building social interactions in an unconventional way." (Thompson, et al., 2014, p. 61) • "One specific population, individuals with cerebral palsy, has been shown to have consistent positive motor outcomes following hippotherapy interventions…Hippotherapy patients typically show improvements in motor outcomes because a horse's gait closely resembles that of a human's normal walking pattern therefore an individual who is unable to walk independently is able to assimilate this pattern via the gait of the horse." (Thompson, et al., 2014, p. 62) • "Because each step of the horse is a challenge to stability, HPOT provides a unique opportunity to challenge and improve postural control…As a result, children must repeatedly respond to the variability in the horse's movement to maintain stability…" (Ajzenman et al., 2013, p. 654) • "Because the horse's movement continually challenged stability, they may have developed automatic postural mechanisms to better engage in therapeutic and functional activities, suggesting that HPOT may have affected very basic skills fundamental to the development of more complex motor skills." (Ajzenman et al., 2013, p. 662)
UNIQUE THEME **Movement Therapy**	• "Concerning benefits, motor, and postural control was the main theme emerging for the physical dimension...Two participants raised benefits with respect to strength and muscle tone. Balance was another theme mentioned by several participants, and it had a significant impact in daily life…development or consolidation of gait pattern was another theme reported…Finally, two participants mentioned benefits with respect to fine motor skills." (Leveille et al., 2017, p. 272) • "Hippotherapy, or horse therapy, is an innovative form of physical therapy that involves the use of a horse as a therapeutic tool in order to effectively challenge a rider's core muscles. The rhythm of the horse's gait continuously engages the client's balance and posture, while the supervising physical therapist seeks to improve the client's overall coordination and fine motor skills through various

	activities." (Thompson et al., 2014, p. 60) • "Hippotherapy can be used with a variety of clients with neuromusculoskeletal disorders including cerebral palsy (CP), autism spectrum disorders, developmental delay, genetic syndromes, learning difficulties, sensory integration disorders, language deficits, head trauma, and stroke (American Hippotherapy Association, 2010)." (Leveille et al., 2017, p. 269) • "With respect to the cognitive dimension…the occupational therapist adopted to her child's abilities by using sounds to tell the horse to move forward, which facilitated the development of communication and language skills, especially in an environment conducive to communication. Understanding of instructions and learning were also facilitated." (Leveille et al., 2017, p. 272-4) • "As in the present case, the main effects of rehabilitation using hippotherapy reported by the participants included normalization of muscle tone, improved trunk control and improved walking skills (gait pattern)." (Leveille et al., 2017, p. 274) • "These results indicate that hippotherapy sessions are a very effective way to improve physical function, specifically postural control, strength, and coordination in children who have been diagnosed with any type of developmental delay or disorder. Additionally, children showed improvements in confidence, self-esteem, and quality of life as observed by their therapist and measured by the parent questionnaires, which may be directly related to the interaction with the horse and therapists or indirectly related to the improvements in motor function." (Thompson et al., 2014, p. 60) • "Along with improvements in motor and postural control, hippotherapy research also suggests that the social and emotional interactions can result in increases in quality of life and self-esteem… Thus, this rehabilitative strategy is ideal for various special populations that would benefit from strengthening their postural control as well as building social interactions in an unconventional way." (Thompson, et al., 2014, p. 61) • "One specific population, individuals with cerebral palsy, has been shown to have consistent positive motor outcomes following hippotherapy interventions…Hippotherapy patients typically show improvements in motor outcomes because a horse's gait closely resembles that of a human's normal walking pattern therefore an individual who is unable to walk independently is able to assimilate this pattern via

	the gait of the horse." (Thompson, et al., 2014, p. 62) • "Children with neurological disabilities can have reduced postural control during functional tasks, theorized as an improper interaction among somatosensory, visual, and vestibular systems. Motor control and sensory processing theories suggest that children with ASD have decreased ability to regulate degree, intensity, and type of responses to sensory information, resulting in limited abilities to habituate and adapt during daily activities." (Ajzenman et al., 2013, p. 654) • "HPOT is a unique treatment strategy for children with disabilities because it considers the context of the therapy session while offering support necessary to challenge the cognitive-sensorimotor systems". (Ajzenman et al., 2013, p. 654) • "Because each step of the horse is a challenge to stability, HPOT provides a unique opportunity to challenge and improve postural control…As a result, children must repeatedly respond to the variability in the horse's movement to maintain stability…" (Ajzenman et al., 2013, p. 654) • "In children with cerebral palsy, improvements in reaching were observed after HPOT and ascribed to improved stabilization of the trunk and reduced use of upper extremity support, freeing the hands for everyday functional activities…" (Ajzenman et al., 2013, p. 654) • "…performance of goal-oriented motor and imitation activities in children with ASD is typically more meaningful in purposeful situations, promoting willingness to engage in motor-based activities with peers (Baranek, 2002). HPOT has been suggested to have similar effects, where increased motivation during therapy activities influenced by the horse's movement can affect the generalization of newly acquired motor skills to other daily activities." (Ajzenman et al., 2013, p. 654) • "As children experience improved sensorimotor function, they may be more willing to engage in everyday activities that have been challenging in the past. With increased motor abilities, children have increased opportunities to engage in self-care activities such as shoe tying or dressing, participate in leisure activities including cutting or colouring, and socially interact with other children..." (Ajzenman et al., 2013, p. 660) • "The social opportunities provided in the HPOT setting could enhance receptive communication, because participants practiced attending, comprehending, and

	completing instructions provided by their therapists during turn taking, planning, and sequencing activities." (Ajzenman et al., 2013, p. 660) • "With increased postural stability and practice in listening, understanding, and completing multistep directions, children with ASD may begin to engage in many tasks requiring these skills outside of the HPOT setting. " (Ajzenman et al., 2013, p. 661) • "Because the horse's movement continually challenged stability, they may have developed automatic postural mechanisms to better engage in therapeutic and functional activities, suggesting that HPOT may have affected very basic skills fundamental to the development of more complex motor skills." (Ajzenman et al., 2013, p. 662)
DOMINANT THEME **Gaps**	• "The scientific literature contains very little documentation concerning the risks associated with therapeutic riding approaches in general…In addition to this lack of knowledge of the risks associated with using a horse and rehabilitation, they [parents of clients] had difficulty correctly distinguishing between the characteristics of each approach (i.e., rehabilitation using hippotherapy as compared to therapeutic riding...This lack of knowledge could accentuate the risks in each of these approaches." (Leveille et al., 2017, p. 275) • "These authors also mentioned confusion in the terminology between the different therapeutic riding approaches. This confusion appears to be present in users, referring agencies and sometimes even in the professionals/instructors offering therapeutic riding services." (Leveille et al., 2017, p. 275) • "Indeed, as hippotherapy is not yet, in most countries, a reserved act by rehabilitation professionals, equine instructors could advertise their services without making a clear distinction between these approaches. This limited knowledge may increase risks of injuries as the supervision is different, as are the aims and thus the targeted clientele. An example of clinical issues which could arise from this unclear distinction is an aggravation or maintenance of the physical dimensions if the inappropriate approach is offered by the inappropriate professionals/instructors." (Leveille et al., 2017, p. 275) • "…much of the issue stems probably from insufficient education among clients and from unclear or misleading marketing, websites, and explanations given by professionals/instructors. These risks have still not yet been documented with evidence-based data, which justifies the

	need to develop guidelines to ensure that programs and referrals are safe and tailored to users' needs." (Leveille et al., 2017, p. 275) • "… Mainville and colleagues notice noted the importance of developing a continuum between the different approaches according to the type of client. It should be noted as well that training certification and licensure of the professional providing the various types of service involving equines and how they differ fundamentally from each other should be addressed." (Leveille et al., 2017, p. 275) • "…another priority is the transfer of knowledge to the general public, service users, referring agencies, and health professionals/instructors to ensure effective and appropriate application of knowledge." (Leveille et al., 2017, p. 275) • "Hippotherapy is a new therapeutic tool that is not often covered by insurance policies due to the lack of data on the efficacy and feasibility of this treatment." (Thompson et al., 2014, p. 68) • "The length and intensity of HPOT should be investigated to determine its potential impact on participation and performance of daily activities." (Ajzenman et al., 2013, p. 661) • "An important note is that consistent structured treatment strategies across clients are not the norm in most HPOT (or any therapy) settings. This inconsistency presents a dilemma because a trade-off and tension exists between unique client-focused treatment strategies for therapy and consistent treatment protocols for research. For future studies, more intensive training and monitoring by researchers may ensure fidelity of treatment with therapists while still allowing therapists to use their judgment within a treatment progression while remaining client centered." (Ajzenman et al., 2013, p. 661)

Theme Excerpts: Equine Therapy-General Category

Descriptors & Themes	Excerpts from Literature (Evidence for Themes)
Definition(s)	• "Equine therapy is an umbrella term that has been used to cover a host of different types of programs that involve the participation of horses for human benefit…There are four categories within this: Mental Health, Education, Organizational and Therapeutic

	Riding. Within these categories lies a milieu of approaches, theories, and practices; some of these are quite distinct from each other, but many of them have shared histories, aims and blurred boundaries…" (Lac, 2016, p 195) • "Equine therapy is the utilization of a horse by a certified professional to reach a therapeutic goal as specified by the needs of the client (PATH International, 2014). The range of therapies that utilizes horses vary based on the client's needs and intended outcome." (Wilkie et al., 2016, p. 378) • "As the use of horses in therapeutic work has expanded considerably since its early beginnings, there are several terms that are now used to describe their incorporation into therapy programs including: * Therapeutic Riding * Equine-assisted therapy * Equine-Facilitated psychotherapy and equine-facilitated learning (EFP, EFL, sometimes combined to EFPL) * Equine-assisted psychotherapy (EAP) and equine-assisted learning (EAL) * Equine-assisted activities and therapies (EAAT) * Hippotherapy ." (DeBose, 2015, p. 356) • "PATH international, an organization that promotes safety and positive outcomes by upholding high standards through certification, accreditation, and specific guidelines as outlined the many variations of using horses therapeutically. More specifically, these include: * Equine-assisted activities (EAA): Planned activity involving equines. EAA does not require a therapeutic practitioner to facilitate the activity. This may include: riding, grooming, and other equine-related activities meant to promote wellbeing. * Equine-assisted therapy (EAT): Treatment program that meets the needs of a client within the scope of the instructor's standards of practice. * Equine-facilitated psychotherapy (EFP): Treatment program that specifically focuses on improving mental health. Interaction is geared toward the client's treatment plan and identified goals, which is facilitated by a mental health practitioner within the scope of

	his/her practice. * Equine-facilitated learning (EFL): Program that incorporates educational activities that promote development and personal growth. Activity is planned and facilitated by a credentialed practitioner. * Hippotherapy: Program that utilizes movement of the horse to improve motor functioning, postural balance, gait, and sensorimotor functioning. Activity is planned and facilitated by a credentialed practitioner. (PATH International, 2014) ". (Wilkie et al., 2016, p. 378-9)
UNIQUE THEME **Horse/Human Relationship**	• "From agriculture to war, man has harnessed and utilized the horse's power to expand his own mastery of the world around him...in addition to the actual physical power horses provided, man had long come to understand that, through horses' stalwart trust and loyalty, mankind was able to achieve far more than would otherwise have been possible. This servitude provided the foundations of an emotional connection to develop between man and horse which enabled a unique change to occur in their partnership. As the need for the horse to be used as a utilitarian working animal diminished, rather than being phased out of a man's world forever, horses moved into a new realm; luxury item." (DeBose, 2015, p. 353) • "Additionally, horses demonstrated an uncanny ability to connect with people from all walks of life, ranging from those that had been around horses all their lives to those that had only seen pictures of horses and books." (DeBose, 2015, p. 353) • "During the 1960s, both physical and psychological therapists began to recognize these attributes and set upon determining if the horse could play a role in assisting their patients through a variety of therapeutic support options (Spink, 1993; Trotter, 2012)". (DeBose, 2015, p. 353) • "One of the early areas of exploration toward using horses as a physical therapeutic alternative to other conventional methods was based on the actual movement of the horse at its various gaits (Engel, 2007; Spink, 1993).

	• "It is primarily through these two natural gates that physical therapists began to utilize the horses movement to develop and strengthen weak or nonexistent muscles of the patient…Therapist started experimenting with having their patients ride backwards, sideways, and even standing on the horses back and discovered that the movements of the horse could stimulate other muscles, depending on the rider's unorthodox position (Engel, 1997b; McCowan, 1972; Spink, 1993)." (DeBose, 2015, p. 354) • "Through centuries of companionship, humans developed an inherent attraction to the beauty and power of the horse, demonstrated today by nostalgic imagery of horses pulling plows and carts to carrying knights in armor and cowboys across the plains. Part of this idealized nostalgia stems from the horses' innate ability to create emotional bonds with humans." (DeBose, 2015, p. 354)
DOMINANT THEME **Equine Agency**	• "It is primarily through these two natural gates that physical therapists began to utilize the horse's movement to develop and strengthen weak or nonexistent muscles of the patient…" (DeBose, 2015, p. 354) • "Equine therapy is an umbrella term that has been used to cover a host of different types of programs that involve the participation of horses for human benefit…" (Lac, 2016, p 195) • "As the use of horses in therapeutic work has expanded considerably since its early beginnings, there are several terms that are now used to describe their incorporation into therapy programs…" (DeBose, 2015, p. 356) • "Equine therapy is the utilization of a horse by a certified professional to reach a therapeutic goal as specified by the needs of the client (PATH International, 2014). The range of therapies that utilizes horses vary based on the client's needs and intended outcome." (Wilkie et al., 2016, p. 378) • "It is the ability of the horse to bond with multiple people for a reason that is specific to

	each individual person that makes a good therapy horse a great one." (DeBose, 2015, p. 362) • "It is primarily through the horses' ability to create emotional bonds that horses have been successfully utilized in other therapy programs." (DeBose, 2015, p. 355) • "These bonds have been noted to promote motivation: Therapists have observed that patients will often try harder to accomplish a movement when they are on a horse than when they are in a room with just the therapist and a ball to assist with the movement (Bauer, 1972; Engel, 1997a, 1997b; McCowan, 1972; Spink, 1993). This may be due to a number of reasons but it leaves one to wonder if it is because patients feel a sentient being beneath him, patiently encouraging them to try, yet also not judging them if they are not able to complete the task they were asked to conduct." (DeBose, 2015, p. 354-5) • "From patients that have withdrawn deep into themselves due to any number of reasons to those that expressed emotional difficulties or behavioral developmental delays, horses have been implemented to reconnect these patients to the world around them." (DeBose, 2015, p. 355) • "Wild mustangs have been successfully used in prison rehabilitation programs to develop the empathy, awareness, and compassion that is necessary for inmates to return as socially responsible members to society (Hoglund, 2006)." (DeBose, 2015, p. 355) • "Just as people can become irritated by working long, repetitive hours, overworked horses will also display signs of displeasure and unhappiness that may turn into bad or unacceptable behavior during a therapy session. However, by properly balancing workloads and providing an environment with excellent husbandry practices, a therapy horse can live well into its 30s, providing a high level of service for many of those years." (DeBose, 2015, p. 359)

	• "Just as not every person has the patience or disposition to become a kindergarten teacher, not all horses have the disposition or patience to be employed as a therapy horse…Horses that demonstrate a sense of curiosity, willingness to learn new things, and a calm demeanor toward different stimuli are the types of horses that possess attributes that lend to an acceptance and high level of trainability for a plethora of different tasks that may be implemented by the instructor of the therapy session…" (DeBose, 2015, p. 360) • "The experiential approach adapted to equine therapy moves away from the traditional dyad of client-therapist and incorporates the horse as a co-therapist...It is this reciprocal exchange of interaction between client and horse that facilitates and promotes therapeutic change. The therapist encourages clients to use the horse as a mirror for insight into their own emotions and behavior (Brandt, 2013). The horse can also serve as a metaphor for the client. Personal experiences past behavior, or the processing of emotions can be projected onto the horse (Klontz et al., 2007)." (Wilkie et al., 2016, p. 379) *SUBJECT&OBJECT • "... The equines are intended to serve as prompts for specific responses and as metaphors through which to understand internal experiences. Furthermore, the equine is theorized to provide feedback regarding subtle changes in mood, with some authors positing that the equine serves as a "large biofeedback machine" (Professional Association of Therapeutic Horsemanship [PATH] International, 2013a." (Anestis et al., 2014, p. 1115-6)
UNIQUE THEME **Interspecies Learning**	• "Where children have the capacity to think abstractly is with the use of metaphors, which can be used to reconstruct themes that occur in the child's life and promote understanding. This is a useful tool and can be used in many activity- based therapies..." (Wilkie et al., 2016, p. 378)

	• "The desired outcome is the ability to experience, process, and regulate emotion and behavior. In return, this personal growth and development can expand outward and be utilized within the client's life." (Wilkie et al., 2016, p. 379) • "... The equines are intended to serve as prompts for specific responses and as metaphors through which to understand internal experiences. Furthermore, the equine is theorized to provide feedback regarding subtle changes in mood, with some authors positing that the equine serves as a "large biofeedback machine" (Professional Association of Therapeutic Horsemanship [PATH] International, 2013a." (Anestis et al., 2014, p. 1115-6) • "The therapist encourages clients to use the horse as a mirror for insight into their own emotions and behavior (Brandt, 2013). The horse can also serve as a metaphor for the client. Personal experiences past behavior, or the processing of emotions can be projected onto the horse (Klontz et al., 2007)." (Wilkie et al., 2016, p. 379)
DOMINANT THEME **Gaps**	• "These variances in education and training may cause confusion when determining what type of equine-assisted therapy should be employed. It is imperative that the patient and/or patient's family have goals set up to determine which equine therapy option is going to be the most successful in addressing those goals." (DeBose, 2015, p. 356) • "There was also a paucity of follow-up measures assessing the stability of change overtime. This is clearly an important facet to providing strong evidence of program effectiveness temporally. Anestis at al. (2014) made a critical assertion stressing the importance of using follow-up measures to eliminate confounds such as novelty effects." (Wilkie et al., 2016, p. 389) • "A third limitation considers the content of the equine therapy program. The equine program that was implemented within each study varied. A limitation previously noted in the equine literature illuminates the superfluous variation of terms used to identify equine

	programs." (Wilkie et al., 2016, p. 389) • "In order to improve how results are interpreted clinically, it is strongly suggested that standardized manuals be implemented and utilized across all equine-related therapies. This ensures that a critical criterion is met; clients must understand the empirical evidence of the treatment they are consenting to." (Wilkie et al., 2016, p. 389) • "…a treatment must earn its position in the marketplace through a stepwise process whereby multiple independent research teams establish that the intervention yields consistent and clinically meaningful improvements that are commensurate with the costs associated with the intervention. One novel but widely administered set of interventions that has been subjected only to minimal empirical investigation is equine-related treatment (ERT), a category that includes both equine-assisted psychotherapy (EAP) and therapeutic horseback riding (THR)." (Anestis et al., 2014, p. 1115) • "…it remains unclear how ERT is theorized to provide an effect that extends beyond those of either common factors (e.g., placebo effects, regression to the mean) or other treatments if ERTs are utilized as adjuncts." (Anestis et al., 2014, p. 1116) • "When considered an aggregate, findings from studies on ERT provide inconsistent and less than compelling support for its efficacy in the treatment of any mental disorder …Given the lack of consistent follow-up data, the absence of treatment manualization or integrity checks, and several consistent threats to validity… the results fall well short of the standards set forth for establishing empirical support for treatments." (Anestis et al., 2014, p. 1127) • "The empirical literature on equine-related treatments for mental illness is limited in scope, the studies that exist are compromised by multiple methodological flaws, and there is no consistent evidence that the treatments afford benefits beyond those offered by the passage of time. Given the time and expense associated with ERT (and the dissemination of

	any new treatment), there appears to be scant justification at present for its use as a standalone or adjunctive treatment for any mental disorder...Therefore, we have serious scientific and ethical concerns regarding the continued use and marketing of EAP and THR for mental illness or psychological maladjustment more broadly. ” (Anestis et al., 2014, p. 1127) • “There are many directions for future research in equine therapy. One such direction should focus on identifying the optimal duration of an equine program in order to maximize gains in a reasonable amount of time … Understanding what the critical minimum amount of programming is required for therapeutic change is of paramount importance, given the expense of these types of programs, as well as developing strong grant applications to obtain such funding… Another practical area of exploration concerns program clinician. The present study identified people with a range of educational backgrounds implementing the equine programs. It would be sensible to examine the effectiveness of equine therapy when utilizing less specialized and more economically feasible resources such as bachelor-degree graduates… A final area of research future research to investigate concerns the age of participants… Evaluating the effectiveness of equine therapy on younger populations would be a fruitful area of exploration.” (Wilkie et al., 2016, p. 390) • “Given the increasing popularity, promotion, and accessibility of these treatments (e.g., PATH International, 2013b), it is paramount to determine the degree to which ERT has been reliably shown to produce clinically meaningful outcomes for individuals presenting with specific diagnoses…it is imperative that consumers be provided with coherent and comprehensive summaries of the evidence for treatments available in the marketplace.” (Anestis et al., 2014, p. 1116)