

Equine-assisted therapies using horses as healers: A concept analysis

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Abstract

Aims: A concept analysis was conducted to clarify the attributes, antecedents and meaning of equine-assisted therapy and present an operational definition.

Design: Concept analysis.

Methods: Walker and Avant's concept analysis method was used to analyse equine-assisted therapy, using horses as healers by defining and enumerating the attributes, antecedents, consequences and empirical referents. Example cases are presented.

Results: Defining attributes include the following: a human participant with an equine physically present to assist the human participant, a treatment or intervention as a result of the interactions between an equine and a human participant, a purposeful and regulated interaction and a positive health outcome goal from the interaction. Antecedents include a live horse with a human physically able to interact with the horse, a facilitator and accessibility to an equine-assisted therapy (EAT) programme. Consequences include improved balance, well-being, quality of life, trust, spasticity, self-efficacy, self-esteem, nurse presence, pleasure and a sense of accomplishment.

KEYWORDS

concept analysis, equine-assisted therapy, hippotherapy, horses, therapeutic horseback riding

1 | INTRODUCTION

Horses have demonstrated a therapeutic effect that has been supported with experimental intervention research (Aranda-Garcia, Iricibar, Planas, Prat-Subirana, & Angulo-Barroso, 2015; White-Lewis, Russell, Johnson, Cheng, & McClain, 2017). Equine or horse therapy has not yet been conceptually defined in the literature. Also, the taxonomy of equine-assisted therapy (EAT) is confusing (White-Lewis et al., 2017). This concept analysis defines EAT, clarifies its boundaries and therapeutic variations and differentiates between recreational and therapeutic use of horses for clinical practice applications. This article uses Walker and Avant's (2011) method of concept analysis to explain terms and variances in EAT.

2 | BACKGROUND

Horses and domesticated animals have been used as medical treatment since the second century (Granados & Agís, 2011). The trajectory of therapeutic uses for animals and horses in medicine is essential in understanding the concept of equine-assisted therapy. The following historical examples are only a small representation of the many examples of horse therapy. Currently, there are 26 medical uses of horses. These are listed in Table 1.

In 1898, Florence Nightingale, in her *Notes on Nursing*, reported using companion animals—pets that provide health benefits to a person—as the only pleasure of a confined invalid (Nightingale, 1969). Accounts of horses' curative physical, emotional and psychosocial qualities emerged in 5 B.C. and then again in World

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War I veterans early in the 20th century (Bustad & Hines, 1984). Significant scholarly research was conducted on the benefits of animal-assisted therapy by Boris Levinson's use of dogs as co-therapists (Levinson, 1962). He found that children relaxed and communicated with more ease when his dog Jingles was present (Coren, 2013). This led him to produce the first formal presentation of animal-assisted therapy. The University of Arizona School of Medicine used horses in the year 2000 when a neurosurgery professor taught communication skills to healthcare clinicians (Walsh & Blakeney, 2013). Kane (2007), followed with a course titled *Medicine and Horsemanship: Transforming the Doctor-Patient Relationship with Equine-Assisted Learning* at Stanford University School of Medicine. She described increased awareness of the incongruence of intention versus behaviour, confronting fear, mindfulness, focus and assertiveness. Today, EAT as an intervention is

increasing in popularity with significant positive results (White-Lewis et al., 2017).

Currently, there are 4,800 certified instructors and 881 therapeutic riding centres around the world (Professional Association of Therapeutic Horsemanship International [PATH], 2018). The Professional Association of Therapeutic Horsemanship International claims to have helped 66,000 children and adults physically, mentally and emotionally each year (PATH, 2018). The National Center for Complementary and Integrative Health (2015) reported that between 2002 and 2012, 33.2% of US adults used complementary health approaches for physical and psychological therapy (Clarke, Stussman, & Nahin, 2015). The out-of-pocket cost for alternative therapies was \$30.2 billion (Nahin, Barnes, & Stussman, 2016). This demonstrates that people are willing to pay for alternative approaches over traditional medical approaches in order to improve their health. Nurses are currently researching EAT as a viable

TABLE 1 Current medical use of horses

Modality	Health issues	Citations	Intervention
Orthopaedic	Scoliosis Hypermobility syndrome Balance issues	Ihara, Ihara, and Doumura (2012), Rigby and Grandjean (2016) Mosulishvili and Loria (2013) de Araújo et al. (2013)	Hippotherapy, Equine-Assisted Activities
Neurological	Stroke Spinal cord injuries Multiple sclerosis Spina bifida Friedreich's ataxia Fibromyalgia Gross motor dysfunction with intellectual impairment	Beinotti et al. (2013) Knight and Coffey (2016) Muñoz-Lasa et al. (2011) Angoules, Koukoulas, Balakatounis, Kapari, and Matsouki (2015) Gilliland and Knight (2012) Thorson (2012) Giagazoglou, Arabatzi, Dipla, Liga, and Kellis (2012)	Hippotherapy, Therapeutic Horseback Riding
Learning	Nurse presence and centring Leadership	Walsh and Blakeney (2013) Kelly (2014)	Groundwork
Service	Blindness Visitation for hospitals, community centres, rehabilitation institutes and schools and extended care facilities	O'Brien (2012) Beckett (2014)	Guide miniature horses Visitation
Speech	Speech therapy	Koca and Ataseven (2016)	Hippotherapy
Breast cancer	Lymph oedema	Specht (2013)	Extremity exercise with animal's warmth
Exercise/sport	Riding and driving for people with disabilities Trail riding Dressage 3-day eventing Show jumping	Riding for the Disabled (2018), United States Driving for the Disabled (2018) Hara, Webb, Brady, Walker, and Sacra (2015) Welker, Swalve, Stock, and Schöpke (2018) Hall, Robins, Varley, and Crundall (2011) Cravana, Medica, Ragonese, and Fazio (2017)	Recreational and competitive
Psychological	PTSD Autism At-risk adolescents Social interaction improvement ADHD Prisoner behaviour reform Substance abuse treatment	Johnson et al. (2018) Malcolm, Ecks, and Pickersgill (2018) Wilkie, Germain, and Theule (2016) Fine (2015) Jang et al. (2015) Bachi (2013b) Kern-Godal, Brenna, Arnevik, and Ravndal (2016)	Interaction, training, groundwork, therapeutic riding
Empowerment	Abused women	Herd (2018)	Increasing trust by interacting with the horse

intervention (Johnson et al., 2018; Krause-Parello, 2018; Walsh & Blakeney, 2013; White-Lewis et al., 2017). Improved outcomes from medical research include re-establishing neuropathways for children with cerebral palsy (Tseng, Chen, & Tam, 2013), improving balance for older adults (Aranda-Garcia et al., 2015) and improving psychological health for veterans (Johnson et al., 2018) among many other improved outcomes.

3 | DESIGN

Walker and Avant's (2011) framework is used in this manuscript and is the preferred method to define concepts in nursing science (Yazdani, Hosseini, & Ahmady, 2016). Their methodology includes defining the attributes, consequences, antecedents and empirical referents along with presentation of example cases, defining characteristics of EAT, and an operational definition. No human participants participated in this concept analysis, and no ethical review board approval was sought.

4 | METHODS

A literature review was conducted using a search strategy for intervention studies. Thirty-one studies with a total of 601 participants were included. The following electronic databases were used: ProQuest (1872–2018), Cumulative Index to Nursing and Allied Health Literature (CINAHL) (1982–2018), Education Full Text (1944–2015), MEDLINE (1950–2018) and Google Scholar (2008–2018); Educational Resources Information Center (ERIC) (1964–2018); PEDro Database (1929–2018); Directory of Open Access Journals (DOAJ) (2018); Cochrane; PsycINFO (1806–2018); and the Database of Abstracts of Reviews of Effects (DARE) (1993–2018). The search terms were as follows: “equine assisted therapy”; “therapeutic horse riding”; “therapeutic horseback riding”; “hippotherapy”; “equine psychotherapy”; “equine facilitated therapy”; “horse riding for handicapped”; “equus”; “horse therapy”; and “guide horses.” This nebulous taxonomy creates difficulty in using EAT clinically and in research. Archival searching of reference lists was completed. Additionally, a thorough search of textbooks, dissertations, qualitative experimental studies and podium and poster presentations was performed (White-Lewis et al., 2017).

5 | RESULTS

The findings section includes categories, definitions, aesthetics and physical and psychosocial effects of the horse–human interaction.

5.1 | Categorization

Confusing terms for *complementary* and *alternative* therapies are used throughout the literature, resulting in difficulty defining an

intervention within these categories such as EAT. The National Center for Complementary and Integrative Health (2018) has defined and delineated the discourse for *complementary*, *alternative* and *integrative* health as follows: *complementary* is an addition to conventional medical treatment, whereas *alternative* is a treatment used in place of the usual medical treatment. Non-mainstream options used jointly with conventional medicine are delineated as *integrative*.

The therapeutic use of horses is categorized as *alternative*, *complementary* or *integrative* therapy by several authors without delineating which term applies (Borgi et al., 2015; Naste et al., 2018). Homnick, Henning, Swain, and Homnick (2013) published a study on therapeutic horseback riding as a *complementary* therapy. Sunwoo et al. (2012) stated that it was a safe and effective *alternative* therapy. Vermöhlen et al. (2018) described using horses as adjunct and complementary therapy, which in context fits the definition of *integrative* therapy.

5.2 | Definitions

5.2.1 | Reference manuals

Defining EAT, therapeutic horsemanship, equine-assisted psychotherapy and hippotherapy led to the following results. In the *Oxford Dictionary* (2019), *hippotherapy* is defined as “The use of horse riding as a therapeutic or rehabilitative treatment, especially as a means of improving coordination, balance, and strength.”

Webster's Unabridged Dictionary defined *hippotherapy* as physical therapy resulting in therapeutic effects from the horse's movement in a lying or sitting position (“Medical Definition of Hippotherapy,” 2019). Neither reference listed the requirement of a physical, occupational or speech therapist, which is necessary for hippotherapy. Other EAT interventions were missing from these dictionaries. Equine-assisted psychotherapy and therapeutic horseback riding have not reached a mature enough state to be recognized by a standard dictionary entry. Filips (2013), in the *Encyclopedia of Special Education*, defined *equine therapy* as “prescribed medical treatment that uses horsemanship to alleviate an extensive array of physical, psychological, cognitive, and social disabilities” (Pilgrim, 2013, para. 1). These are incomplete descriptions that require nurses to turn to organizational definitions.

5.2.2 | Organizational definitions

Thirteen organizational definitions of EAT were found. The Professional Association of Horsemanship International (PATH International) website defines the subconcepts of Equine-assisted Activities, Equine-assisted Therapy, Equine-facilitated Learning, Equine-facilitated Psychotherapy, Hippotherapy, Interactive Vaulting, Therapeutic Driving and Therapeutic Riding (PATH, 2016b). The Horses and Humans Research Foundation (2011) adapted the definitions from PATH International by adding Competition, Vocational Rehabilitation, Tandem Hippotherapy and Equine-Facilitated Mental Health. This organization confuses the role of the

horse by describing it as a tool and not a modality, but then further states that the horse is a sentient being, which conflicts with the definition that the horse is a tool. The Asociacion de Equinoterapia Ismael Pinto (2019) organizes equine-assisted therapies into three categories: hippotherapy, therapeutic riding and riding as a sport administered from four professional fields: medicine, psychology, education and sport. These definitions are inconsistently applied in the literature.

5.2.3 | Definitions found in literature

The following descriptions are specific definitions of particular equine-assisted therapies currently given in the literature. They do not represent the multiple influences of aesthetics, physical and psychosocial effects, and imagery that the horse provides. Frequency of term usage was determined by keyword searches of PubMed, Ovid and CINAHL databases. The most frequently used term is *Hippotherapy* ($N = 540$), which requires a licensed physical therapist, speech therapist or occupational therapist. A passive rider sits astride the horse or lies on the horse, and two side-walkers flank the rider for safety. Interventions of reaching, stretching, riding backwards, lying down and speaking help improve postural balance, core strength and trunk stability (Fine, 2015). This is not a recreational activity (Bronson, Brewerton, Ong, Palanca, & Sullivan, 2010).

Therapeutic Riding (TR) or *Therapeutic Horseback Riding (THBR)* ($N = 219$) requires a certified therapeutic riding instructor with incorporation of grooming and caring for the horse. Instructor certification includes safety, competency validation, educational instruction, equine care/training and working with disabilities (PATH, 2016a).

Equine-assisted Activities ($N = 98$) is an intervention for companionship, socialization, reduction in emotional blunting, improvement in attachment issues, personal space/boundary improvement, self-esteem enhancement, reflectivity and meta-cognition (Selby & Smith-Osborne, 2013). Equine Assisted Growth and Learning Organization (EAGALA) trains, regulates and certifies therapists using horses for mental health and personal growth (Equine Assisted Growth & Learning Organization, 2018; Thomas, Lytle, & Dammann, 2016). One example is miniature horses visiting extended care facilities, similar to dog visitations (International Council on Active Aging, 2011).

The terms *Equine-assisted Learning* or *Equine-Facilitated Learning* ($N = 26$) are used interchangeably and include education directed at improving communication skills, self-awareness, confidence building and self-control by interacting with a horse. This is accomplished by grooming, riding and saddling along with non-violent communication, play therapy and mindfulness practice (Burgon, Gammage, & Hebden, 2018). Pendry, Smith, and Roeter (2014) completed an 11-week randomized controlled trial of 131 adolescents to determine what effect equine-facilitated learning would have on participants' cortisol levels. Their intervention used a horse to facilitate teaching safety, respect, trust, leadership, boundaries, confidence and relaxation. They reported a significant decrease in cortisol levels in the experimental group ($p = .017$) (Pendry et al., 2014). This supports the positive effects of interaction with horses.

Therapeutic carriage driving ($N = 1$) allows individuals with disabilities to access the benefits of equine therapy. This modality provides access for people with obesity, lower limb disabilities, spinal cord injuries, back injuries, spina bifida, hemiplegia and amputation. A special carriage allows a wheelchair to roll into the vehicle and lock down, thereby becoming part of the carriage. The driver then picks up the reins and begins driving the horse (United States Driving for the Disabled, 2018). The physical act of driving the horses provides variations of movements and motor-sensory experiences, along with the emotional and social benefits of equine therapy (United States Driving for the Disabled, 2018).

Equine-facilitated Experiential Learning (EFEL) ($N = 2$) is also called *Equine-Facilitated Psychotherapy (EFP)*. The goal is to improve personal confidence and self-esteem during a counselling session with a licensed psychotherapist or psychologist (Wilson, Buultjens, Monfries, & Karimi, 2017). The horse has various responses to the human participant. The trained facilitator then interprets the responses of the horse to provide feedback to the participant. Scharff (2017) contends that this allows the therapist to view the cognitive, behavioural and affective reactions of the person and equate this to human relationships. Horses are very sensitive and immediately react to body language, which allows the facilitator to interpret the human's actions and emotions, resulting in improved self-awareness (Robson, 2018; Smith, Wilson, McComb, & Proops, 2018).

Therapeutic Vaulting ($N = 6$) is acrobatics or gymnastics on a horse, which improves fitness, balance, flexibility and strength (Riding for the Disabled, 2018). Therapeutic vaulting accommodates the individual with attention-deficit disorder or attention-deficit/hyperactivity disorder, mental health challenges, eating disorders or problems with behaviour (Kystosek, 2013).

Equine-assisted Therapy (EAT) ($N = 538$) incorporates all aspects mentioned above and is a broad category which includes the therapeutic use of horse for treatment purposes to improve gross motor, social and self-help skills (Ratliffe & Sanekane, 2009). This description is missing aspects of a true concept analysis with no mention of the horse's unique properties that improve the health and well-being of humans—esthetic qualities. Imagery of horses' strength, power and freedom plays a role in the effect horses have on humans' moods (Shaw, 2018).

5.3 | Positive aesthetic nature of the horse

The equine-human partnership lies in the history of the horse as a companion (pet), working animal (ploughs, military), transportation animal (riding, carriages) and entertainment (wild west shows, horse racing, television star) (Equine Heritage Institute, 2013; Kelekna, 2009). Non-scholarly sources provide the public view of horses in the media. In Native American cultures, the horse is "specifically identified to have a strong spiritual power" (Dell, Chalmers, Dell, Sauve, & MacKinnon, 2008, p. 88), and the horse is a truth teller who can lead individuals in the right direction (Alchin, 2017). In 1930s America, Seabiscuit represented the common man, uplifting and empowering the masses as he claimed victory over the aristocratic War Admiral

(Hillenbrand, 2002). Seabiscuit became a hero when the United States, experiencing the Great Depression, needed a symbol of hope (Loverro, 2013). Seabiscuit, the underdog, surprised the nation by being named horse of the year in 1938 and the top money-earning horse in the 1940s (National Museum of Racing & Hall of Fame, 2016).

The Lone Ranger television show elevated the horse, Silver, to a symbol of justice and empowerment (Fitzgerald, 2013). The concept of a large, strong animal carrying riders to safety is powerful positive imagery (Kane, 2004). These media representations of horses create a positive visual imagery that empowers humans to overcome disabilities during EAT interventions.

5.4 | Physical effects of the horse

Riding the horse provides broad body-to-body contact (Lucena-Antón, Rosety-Rodríguez, & Moral-Munoz, 2018). A horse's body temperature is 1–2°F hotter than a human's temperature, causing decreased muscle spasticity and hypertonicity (Zadnikar & Kastrin, 2011). Using a saddle pad and not a saddle allows the heat to transmit to the rider's muscles. The horse's girth provides a gentle stretch to adductor muscles of the hips and legs (McGibbon, Benda, Duncan, & Silkwood-Sherer, 2009). Additionally, the tri-rotational movement of the horse provides vector forces similar to walking, thus improving motor function and core strength (Beinotti, Christofolletti, Correia, & Borges, 2013).

5.5 | Psychosocial effects from the horse

The psychosocial effects of EAT include improved self-esteem, self-confidence, empowerment, a sense of self-presence, and feelings of freedom, independence and competency (Tan & Simmonds, 2018). Horses can recognize human emotions and respond in an intentional way (Smith, Proops, Grounds, Wathan, & McComb, 2016). Reports of human participants bonding with the horse are present in qualitative and quantitative research (Carriker, 2013; Johnson et al., 2018). Bachi (2013a) asserts that this bond is similar to a mother–child relationship explained by attachment theory.

5.6 | Operational definition

A definition of equine-assisted therapy needs to synthesize these many facets associated with using horses to therapeutically heal humans. This concept of equine-assisted therapies using horses as healers is best depicted as a horse–human interaction used as a complementary, alternative or integrative intervention incorporating physical and psychosocial experiences facilitating situations, treatments and activities with the goal of a positive health outcome. The following examination of EAT includes a discussion of attributes, antecedents, consequences and empirical referents.

5.7 | Defining attributes and consequences

In reviewing the available literature sources, the following attributes were determined: (a) a human participant with an assisting equine

physically present; (b) treatment or intervention that occurs as a result of the interactions between an equine and a human participant; (c) the interaction is purposeful and regulated; (d) a trained facilitator assists with the intervention; and (e) the goal is a positive health outcome from the interaction.

5.8 | Example cases

To clarify the concept, a model case, borderline case, related case, contrary case and illegitimate case are presented. The model and borderline cases are actual case studies from the literature.

5.8.1 | Model case

Asselin, Ward, Penning, Ramanujam, and Neri (2012) presented a case study of a 44-year-old US Army veteran who sustained a spinal cord injury. This veteran, who was non-ambulatory except for a few steps using an assistive device, engaged in therapeutic horseback riding for 2 years, during which a PATH International certified instructor worked with him. After several weeks, the veteran was able to use his legs to apply pressure to cue the horse. He reported a decrease in spasms, an increase in muscle strength, improvement in core strength, sturdy posture and increased motivation to independently exercise and stretch at home. The emotional benefits included “loving the outdoors” and “feeling the horse's movement under him” (Asselin et al., 2012, p. 275). Unintended outcomes included becoming a spokesperson for the organization *Horses and Heroes* (Horses & Heroes Inc., n.d.) and participating in two Houston Rodeos, culminating in involvement in the US Paralympic programme. This example meets all the criteria for a model case of EAT.

5.8.2 | Borderline case

A 16-year-old Caucasian girl with cerebral palsy is sent for hippotherapy to treat her spasticity. She attends the hippotherapy sessions for 2 weeks, and after riding for 30 min a day, she is exhausted. She does not continue the programme. No improvement is measured. This borderline case has all the attributes of the model case, but the horse is not a healer because there was no improvement. Without improvement in outcomes, healing does not occur, and the horse as an intervention is not effective.

5.8.3 | Related case

A 62-year-old man with a diagnosis of functional disability associated with cognitive disability was prescribed onotherapy. Onotherapy is similar to equine therapy, in that donkeys are ridden for exercise (Borioni et al., 2012). This case meets the criteria of a related case by substituting a donkey for a horse. The man engaged in therapeutic riding of a donkey for 30 min, three times per week, to improve balance, core strength and self-esteem. The man stated that he experienced an improvement in mobility. There is no mention in the

literature that aesthetically links the donkey to the same images and history of the horse as a healing entity.

5.8.4 | Contrary case

A 22-year-old woman with a cervical spinal cord injury rides a mechanical horse in a hippotherapy programme. No human–animal interaction occurs, which means there is no reciprocal interaction with a live horse. No warmth from the mechanical horse is transmitted, so spasticity is not decreased. There is no experience with the smells, interactions and feelings that accompany a hippotherapy session with a live horse (Debuse, 2009). This is not an actual case but was constructed by the author.

Mechanical horses have been used as a substitute for traditional hippotherapy with a live horse (Sung, Kim, Yu, & Kim, 2013). There is evidence that a mechanical horse has demonstrated improved physical outcomes; however, an exercise ball can accomplish the same physical outcomes (Sung et al., 2013). Mechanical-horse therapy lacks the attributes of the human–animal interaction that using a live horse has demonstrated (Frevel & Mäurer, 2014). This intervention is missing the equine–human interaction, heat and immediate reactive responses that a live horse provides.

5.8.5 | Illegitimate case

A 53-year-old man goes on a trail ride on vacation. He rides purely for enjoyment, and no health concern is present. Although many benefits would occur in this scenario, the horse cannot be a healer because there is no illness or injury to heal. The purpose is not aligned, in this case, with that of a healer, and directed dose, duration, frequency and monitoring of the intervention are absent.

5.9 | Antecedents and consequences

Antecedents are the necessary precursors for a concept to be valid (Walker & Avant, 2011). Prior to horses being used therapeutically, the following conditions must be met: (a) there must be a live horse present; (b) there must be a human client/patient present; (c) a facilitator (psychotherapist, physiotherapist, nurse or certified therapeutic instructor) must be present to direct or interpret the therapy; (d) the participant must be physically able to interact with the horse without harm (e.g. no horse allergies, or if riding, have the ability to abduct the hips to accommodate the girth of the horse); and (e) access to a horse, therapeutic riding stables or EAT programme.

Outcomes of using horses to improve the health of individuals (healing) mean that a physical, psychological or social improvement has occurred. Specific consequences include improved postural balance, mental well-being, and quality of life; trust is conveyed; spasticity is decreased; pleasure is increased by stroking, grooming, and warmth; and improved neurological pathways (Araujo, Silva, Costa, Pereira, & Safons, 2011; Beinotti et al., 2013; Borioni et al., 2012). Small studies have shown increased self-efficacy, self-esteem and nurse presence (concentrating on the patient's needs) (Hessel,

2009), and improved mood and a sense of accomplishment (DeZutti, 2013; Walsh & Blakeney, 2013). Debuse (2009) provided evidence that equine-assisted therapy offered positive attitudes, enjoyment and a catalyst for motor development. Carriker (2013) identified themes including attention, attachment, cognitive gains, encouragement, friendship, happiness, physical gain, learning and socialization.

5.10 | Empirical referents

Empirical referents are categories demonstrating occurrence of the concept (Walker & Avant, 2011). Measuring both the physical and psychosocial effects of equine therapy supports the positive effects of this intervention (White-Lewis et al., 2017). Tools that have measured outcomes after hippotherapy or therapeutic horseback riding include the following: Timed Up and Go test (de Araújo et al., 2013); Berg Balance Scale (Lee, Kim, & Yong, 2014); Outcome Measures 36, measuring physical, social and emotional pain and health (Beinotti et al., 2013); Hamburg Quality of Life in Multiple Sclerosis (Frevel & Mäurer, 2014); and the Coping Self-Efficacy Scale (Johnson et al., 2018). Qualitative enquiries discovered positive statements such as “wonderful,” “amazing,” “enormous,” “incredible” (Debuse, 2009, p. 186) and repetitive themes of confidence, physical gain, happiness and acceptance (Carriker, 2013). These empirical referents are measurable with outcomes supporting improvement in psychosocial and physical attributes, solidifying the concept of a horse as a healer.

6 | DISCUSSION

The correct and clear use of the terminology for EAT is important for clinicians and researchers. Hippotherapy requires a licensed professional, and the goals are specific to that professional's domain. The cost includes the professional's fees. This increased cost may limit accessibility for low-income patients. Likewise, the use of a certified therapeutic instructor assures safety and knowledge due to oversight from the certifying organizations. Standard references only define hippotherapy without mention of the associated roles of professionals. In the United States, third-party payers are not currently reimbursing for hippotherapy or therapeutic riding, which places the onus on the patient or patient's family, in the case of a minor. Blue Cross Blue Shield considers this intervention investigational (Blue Cross Blue Shield, 2016). Reimbursement legislation is improving. The House of Representatives has recognized the benefit and impact of EAT. On June 8, 2018, they approved an amendment to fund equine programmes for post-traumatic stress disorder (PTSD) (American Horse Council, 2018). It is unclear if this bill includes all EAT modalities.

New research studies with significant results are increasing in frequency and rigour (White-Lewis et al., 2017). As this field grows, a standardized language is essential for clarity. A nurse clinician's desire to implement EAT will need a thorough literature review to understand the differences in clinical applications and outcomes. This

manuscript clarifies, categorizes and explains the therapies for use in clinical settings.

7 | IMPLICATIONS FOR NURSING KNOWLEDGE

Nursing clinicians focus on interventions that are caring, natural and therapeutic. Equine-assisted therapy has been credited with all these aspects in the human–equine relationship (Krause-Parello, 2018). Research informs nursing practice (Yates, 2015), and with the positive results found in the literature, the practice of using horses to heal physical, emotional and psychological challenges is just beginning. This intervention has reached the highest level of research, meta-analysis (Stergiou et al., 2017; Trzmiel, Purandare, Michalak, Zasadzka, & Pawlaczyk, 2019), and nurse clinicians will begin to choose this as an intervention. Nurse presence, human–animal bond research, nursing intervention research for veterans, spinal cord injury treatment and nurses treating abuse survivors are all reporting positive results in the literature (Johnson et al., 2018; Krause-Parello, 2018; Walsh & Blakeney, 2013). Antecedents, consequences and empirical referents will guide future nurse clinicians in the methodologies necessary to implement EAT as an intervention.

8 | CONCLUSION

Horses have a rich aesthetic influence on humans who interact with them, creating visual imagery of power and beauty. The physical qualities of tri-rotational movement, warmth and gait differ from those of mechanical horses. Empirical referents measure communications of pleasure, smiles, improved gait and improved functioning. Antecedents include the presence of a horse, a human who is capable of interaction with the horse without illness or injury, a facilitator for direction and interpretation, and a goal of a positive health outcome. Consequences include improved mobility, decreased spasticity, improved psychological presence and improved self-esteem, resulting in improved quality of life. New research into the effects of horses as a healing intervention needs to be conducted to expand the knowledge about this concept and its uses. The nurse is positioned perfectly to treat more than a specific disability by viewing the patient as a whole. This newly researched intervention has promise in assisting the nurse to provide physical and psychological positive outcomes.

9 | RELEVANCE TO CLINICAL PRACTICE

Nurse clinicians who use EAT as an intervention to improve physical or psychosocial outcomes must have a clear understanding of the goals of the intervention. When using hippotherapy, the goals are physical improvement. If psychological outcome improvement, growth or learning is the goal, then equine-assisted activities are the

concepts to be referenced. The different definitions, concepts, organizations and certifications are condensed in this manuscript to provide direction to the nurse clinician.

CONFLICT OF INTEREST

There are no conflicts of interest to declare associated with this manuscript.

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