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### Therapeutic Riding: Effects on Emotional Well-Being in Adults

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Therapeutic Riding: Effects on Emotional Well-Being in Adults

by

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DISSERTATION

Submitted in partial fulfillment of the requirements for the degree  
of Doctor of Psychology in the Department of Clinical Psychology  
at Antioch New England Graduate School, 2012

Keene, New Hampshire



Department of Clinical Psychology

**DISSERTATION COMMITTEE PAGE**

The undersigned have examined the dissertation entitled:

**THERAPEUTIC RIDING: EFFECTS ON WELL-BEING IN ADULTS**

presented on July 26, 2012

by

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### Abstract

Therapeutic interventions with horses are increasing and utilized to treat a number of ailments, including psychological ones. Despite the growth of these interventions, there has been little research performed, particularly quantitative, to determine efficacy. One proposed benefit of therapeutic riding, a particular type of intervention involving horses, is that it enhances or improves emotional well-being. This construct has been poorly defined and operationalized in the literature. The current study sought to operationalize and measure emotional well-being using a multidimensional model. Three proposed sub-domains of emotional well-being: positive affect, life satisfaction, and self-esteem were measured in adults prior to and after participation in a 12 week therapeutic horseback riding program. No significant differences were found from pre-test to post-test in any of the three domains. Lack of participation and thus a low sample size of adults contributed to the lack of significance. The findings suggest a need for further studies on the impact of therapeutic riding on emotional well-being, and suggestions are made for evaluation to be an ongoing and inclusive part of therapeutic riding programs.

*Keywords:* therapeutic riding program, hippotherapy, equine therapy, emotional well-being, equine-assisted activities, equine-facilitated psychotherapy, quality of life, positive affect, life satisfaction, self-esteem, adults



## Introduction

Hippocrates was the first to acknowledge the advantage of the horse for therapeutic purposes; he called horseback riding “a universal exercise” (Macauley & Gutierrez, 2004, p. 205), and spoke of the healing rhythm of riding (Scott, 2005). Another ancient Greek sage observed that “the outside of a horse is the best thing for the inside of a man” (Scott, 2005, p. 3). The therapeutic value of horses has had intuitive appeal for some time. Utilizing horseback riding as a structured therapeutic endeavor, however, is relatively new. The North American Riding for the Handicapped Association (NARHA) was established in 1969 and holds that equine assisted activities include all “interaction between special needs individuals and horses, the client either mounted or on the ground” (Scott, 2005, p. xi).

Today, horses are used in a variety of therapeutic endeavors, and this is growing. Equine-Facilitated Psychotherapy (EFP), Therapeutic Horseback Riding, and Hippotherapy (from the Greek word hippos, meaning horse) are used with various populations, including individuals with language learning disabilities (Macauley & Gutierrez, 2004), youths with severe emotional disorders (Ewing, MacDonald, Taylor, & Bowers, 2007), children and adolescents in residential treatment and/or receiving outpatient mental health services (Vidrine, Owen-Smith, & Faulkner, 2002), individuals with eating disorders (Lehrman & Ross, 2000), trauma victims (Yorke, Adams, & Coady, 2008), individuals with psychiatric disabilities (Bizub, Joy, & Davidson, 2003), adults with physical impairments (Farias-Tomaszewski, Jenkins, & Keller, 2001), individuals with cerebral palsy (Liptak, 2005), children and youth with special needs (Gasalberti, 2006), and individuals with traumatic brain injuries (Keren, Reznik, & Groswasser, 2000).

As equine assisted activities and specifically therapeutic riding have grown in popularity,

multiple benefits have been alleged, particularly for physical, psychological, functional (cognitive), and educational health (Scott, 2005). Increasingly, research supports these claims. Perhaps one of the most significant is that therapeutic riding improves and enhances quality of life through combining learned horsemanship skills with physical and emotional stimulation (Scott, 2005). Qualitative studies support the idea that therapeutic riding can improve quality of life (Yorke et al., 2008) and emotional well-being (Garcia, 2010) for riders. The anecdotal information gleaned from riders through this research is very valuable and allows riders to speak to their personal experience with therapeutic riding. There has also been some quantitative research on therapeutic riding and its effects. However, an abundance of statistically significant research that reveals the causal effects of therapeutic riding in the areas of quality of life and emotional well-being is lacking. In addition, clearly operationalized definitions of both quality of life and emotional well-being are lacking. These terms are operationalized, differentiated, and explicated later in this paper.

### **Rationale and Potential Stakeholders**

Using horses in therapy may provide a unique and powerful adjunctive healing element (Ewing et al., 2007). Efficacy for various forms of Equine-Facilitated Psychotherapy (EFP) has been reported for a variety of populations, including individuals who have experienced trauma (Yorke et al., 2008), youth with severe emotional disorders (Ewing et al., 2007), and individuals with eating disorders (Christian, 2005). EFP has been defined by the Equine-Facilitated Mental Health Association (EFMHA) as “an experiential psychotherapy that includes equines. EFP is facilitated by licensed, accredited mental health professionals, working with appropriately accredited equine professionals” (Bachi, Terkel, & Teichman, 2011, p. 299). EFP takes place in

the natural setting of horses, often in and around stables, while focusing on the cognitive, emotional, and social domains of psychotherapy (Bachi et al., 2011).

Although related to EFP, Therapeutic Horse-Back Riding is a distinct equine-assisted activity that consists of individuals learning horsemanship and riding skills in a way that is adapted to the rider's special needs, such as physical, emotional, or cognitive (Bachi et al., 2011). Therapeutic riding "involves the use of equine-oriented activities to positively contribute to the cognitive, physical, emotional, and social well-being of individuals with disabilities" (Anderson, Friend, Evans, & Bushong, 1999, p. 11). This form of therapy has been used for many groups of people with physical and cognitive impairments, such as traumatic brain injury, cerebral palsy, mental retardation, multiple sclerosis, Down's syndrome, and spina bifida (Bizub, Joy, & Davidson, 2003). Perhaps less often is this therapy used for individuals with emotional impairments or disorders. Psychological benefits have been claimed, however, and they include improvements in self-confidence, self-esteem, and self-awareness; increased courage, motivation, and social engagement; and a general improvement in quality of life (Bizub et al., 2003; Farias-Tomaszewski, Jenkins, & Keller, 2001).

The literature asserts that therapeutic riding can improve quality of life, and at a more specific level, emotional well-being. Improving these two dimensions is also generally a goal of psychotherapy. Therapeutic riding and the research supporting its effectiveness have significant implications for the mental health community. Therapeutic riding could be used adjunctively with psychotherapy, or as a stand-alone treatment for individuals who might be apprehensive about "therapy as usual," and the idea of individual therapy conducted by a professional in his or her office that has the potential of bringing emotionally charged experiences to the fore. Therefore further research in this area and the dissemination of results within the academic and

clinical communities appears indicated. Although various forms of therapy with horses have been used to treat a number of psychological problems, quantitative studies demonstrating the effectiveness of these treatments are scarce (Klontz, Bivens, Leinart, & Klontz, 2007). This may contribute to practitioners hesitating to endorse or utilize these treatments. There appears to be disconnection between the proponents and users of these models, the academic community, and mental health practitioners. With increased studies demonstrating effectiveness and the dissemination of these results to both the academic and clinical community, an avenue can be created between clinicians who may refer and those individuals who are already utilizing therapeutic interventions with horses or are capable of doing so.

### **Introduction of Variables and Research Questions**

Therapeutic riding has the potential to improve the emotional well-being of individuals (Garcia, 2010), but little research has pursued this. The present study sought to determine whether therapeutic riding would enhance and improve the domains believed to make up emotional well-being. Positive findings would mean a great deal for individuals suffering from emotional difficulties, as well as the healthy lay person who wishes to improve quality of life. In addition, positive findings would help breach the divide currently between those who utilize therapeutic riding and believe it to be beneficial and mental health providers that might refer clients to therapeutic riding programs. This section will introduce the concept of emotional well-being and some of its proposed components. These will be further developed later in the paper.

It is quite difficult to find a clearly stated, agreed-upon definition of emotional well-being, also referred to as subjective well-being, in the literature. Over the decades, multiple conceptions have been proposed, and two of the leading formulations focus on the experience of

positive affect and life satisfaction (Ryff & Keyes, 1995). The first formulation focuses on positive affect, as well as the balance between positive and negative affect, in determining emotional well-being. As this formulation has been refined, increasing attention has been paid to the frequency and intensity of positive affect (Ryff & Keyes, 1995). The second formulation posits that life satisfaction is the key component of a person's emotional well-being. This construct is cognitive in nature and involves an individual's appraisal of their overall satisfaction with life (Ryff & Keyes, 1995). These two formulations are in some ways complementary, as they address both affective and cognitive elements of emotional well-being, and suggest the utility of a multidimensional model of emotional well-being. The current study focuses on a multidimensional model of emotional well-being for operationalization and for measurement purposes. In addition to addressing positive affect and life satisfaction, an appraisal of self-esteem as either a positive or negative orientation toward oneself, as well as an overall evaluation of one's worth is also used (Rosenberg, 1989). Positive associations have been revealed between feelings of positive self-worth and subjective well-being, and self-esteem regularly correlates highly with measures of both life satisfaction and subjective well-being (Smedema, Catalano, & Ebener, 2010).

Three main research questions are addressed in this study. They pertain to the three stated sub-domains of emotional well-being:

1. Does positive affect improve and/or increase as a result of involvement in a therapeutic riding program? Specific to this study, is there a significant difference in positive affect scores from pretest to posttest for the riding participants?
2. Does life satisfaction improve as a result of involvement in a therapeutic riding program? Specific to this study, is there a significant difference in satisfaction scores from pretest to posttest for the riding participants?

3. Does self-esteem improve as a result of involvement in a therapeutic riding program? Specific to this study, is there a significant difference in self-esteem scores from pretest to posttest for the riding participants?

## **Literature Review**

### **Animal Assisted Therapy**

People have recognized for hundreds of years that animals can have a positive impact on human functioning, both physical and emotional. Florence Nightingale in the 19th century proposed that a bird in the rooms of people suffering from medical problems was a singular source of pleasure (Nimer & Lundahl, 2007). Today, animals are used with individuals suffering from a variety of difficulties. For example, dogs are regularly brought to nursing homes and hospitals for the enjoyment of the patients. Simply owning a pet is connected with lowered blood pressure, increased exercise, and stronger immunity (Nimer & Lundahl, 2007). In addition, there is growing support for Animal Assisted Therapy (AAT), which is the “deliberate inclusion of an animal in a treatment plan” (Nimer & Lundahl, 2007, p. 225). According to Souter and Miller (2007),

AAT is a goal-directed intervention in which an animal that meets specific criteria is an integral part of the treatment process. AAT is directed and/or delivered by a health/human service provider working within the scope of practice of his/her profession. AAT is designed to promote improvement in human physical, social, emotional, and/or cognitive functioning. (p. 168)

AAT that is used specifically with farm animals has found that “both contact and work with the animals have the potential of giving clients several positive influences; by providing a source of physical contact, promoting a varied lifestyle, and increasing coping ability through daily

routines that include feeding and caring for other living creatures” (Berget, Ekeberg, & Braastad, 2008, p. 576). AAT might be used, for example, in physical therapy, in which a patient might walk or play fetch with a dog or pet or brush a cat in order to increase muscle strength and increase control over fine motor skills (Nimer & Lundahl, 2007).

Using animals in therapeutic capacities may be beneficial for a number of reasons. There may be more client interest in therapy due to animals’ distinctive capacity for being attentive to the client (Nimer & Lundahl, 2007). AAT may also be uniquely beneficial because animals may strongly bond with humans and actively seek affection and interaction with them. The combination of animals’ unique and genuine attention and their ability to bond has the potential to create and enhance a warm, safe, therapeutic environment (Nimer & Lundahl, 2007). With a therapeutic space characterized by genuineness, safety, and warmth, clients may be more willing to trust, and therefore more amenable to treatment interventions. In addition, the general interestingness of including an animal in treatment may increase client interest and engagement in the treatment and in their own mental health.

The attitude toward AAT has been positive for both therapists and animal owners/farmers (Berget et al., 2008). In addition, various studies have assessed the effectiveness of AAT. Qualitative reviews of AAT assert that every study showed positive outcomes (Dashnaw-Stiles, 2001) and that AAT is associated with enhancements in physiological health, social interactions, and happiness (Brodie & Biley, 1999). A quantitative meta-analysis also supported the belief that animals can help in the healing process. Moderately strong positive results were found for AAT in the areas of physical health, behavioral outcomes, and in the reduction of Autism symptoms (Nimer & Lundahl, 2007).

Studies have explored specific psychological benefits from AAT. Some potential benefits

include “empathy, relaxation, improved self-esteem and acceptance, stress and anxiety reduction, reality orientation, nurturing skills, mental stimulation, decreased loneliness, increased positive affect, and opportunities to reminisce about past experiences with pets or life experiences in general” (Souter & Miller, 2007, p. 168). In addition, some have wondered whether AAT might affect diagnosable psychological disorders. Souter and Miller (2007), for example, performed a meta-analysis to explore the effectiveness of AAT for the treatment of depression and depressed mood. They chose depression specifically because it affects such a large amount of people (19 million adults in the U.S.) and because it may exacerbate co-existing medical problems (Souter & Miller, 2007). The results of the meta-analysis revealed that AAT is a valid treatment option and that exposure to AAT results in significant improvements in depression.

### **Therapeutic Interventions with Horses**

A specific form of AAT includes therapy with horses, which is further divided into three therapeutic interventions: Equine-Facilitated Psychotherapy (EFP), Hippotherapy, and Therapeutic Horseback Riding. With each of these interventions, there is a singular opportunity to experience a deeper human-animal bond than is available in other forms of AAT due to the fact that humans can ride horses (Vidrine et al., 2002). One explanation is that “the skin as a media for self-experience and communication is important for building up body-identity and is related to getting into close skin contact to a big and supporting living being in mounted activities” (Vidrine et al., 2002, p. 590).

**Equine-facilitated psychotherapy.** EFP uses hands-on, experiential methods in which the objective is to “instill a sense of order, to create an understanding of boundaries, to improve focus, and to instill trust” (Ewing et al., 2007, p. 60). This approach employs the horse to bring emotional problems to the surface, often through the use of metaphor. For example, horses may



represent aspects of a person's distress, such as shame and perfection, and buckets of horse food might represent important elements of a person's life, such as family and friends. A provocative idea is then introduced and displayed as the horses (shame and perfection) eat away at the buckets of food (family and friends; (Christian, 2005). Vidrine et al. (2002) also cite examples of using the combination of horses, equine activities, symbol, and metaphor within a Jungian psychotherapy framework. In some instances, experiential therapy is combined with detailed equine activities in order to give clients "the opportunity to work through unfinished business, relieve psychological distress, live more fully in the present, and change destructive patterns of behavior" (Klontz et al., 2007, p. 258). Vidrine et al. cite additional examples of using horses in psychotherapy including the integration of horse-related experiences in inpatient psychiatric and substance abuse programs and in individual and group psychotherapy for youth with behavioral problems. Part of the rationale for the inclusion of horses with these populations is that the physical power and size of the horse is used to teach individuals "to send congruent messages with spoken and body language" (p. 590).

Various equine activities such as selecting one's horse, grooming, mounting, walking/trotting, lunging, vaulting, and equine games are combined with therapeutic tools such as role playing, mirroring, role-reversal, and Gestalt techniques (Klontz et al., 2007). With the assistance of props, the client is given goals, rules, and consequences should those rules be broken. The large and powerful horses are a constant reminder of just how difficult the client's disorder can be, and this insight can be used to gain a new point of view of the problem and the need for support (Christian, 2005). The horses often bring forth a range of emotions in people. These emotions can then be utilized for personal awareness and growth as well as for projection and transference (Klontz et al., 2007).

Studies have supported using EFP. After having undergone treatment, participants report significant decreases in psychological symptoms and improvements in psychological well-being (Klontz et al., 2007). One study that specifically targeted at risk adolescents found a significant decrease in depression at the end of an EFP program (Ewing et al., 2007).

**Hippotherapy.** Hippotherapy is the inclusion of horses in physical, occupational, or speech therapy (Vidrine et al., 2002). This form of therapy has been used with a variety of populations, including children with language-learning disabilities (Macauley & Gutierrez, 2004), children with special needs (Gasalberti, 2006), individuals with traumatic brain injury (Keren et al., 2001), and individuals with cerebral palsy (Liptak, 2005). During hippotherapy, “the client sits on the horse’s back and physically accommodates to the three-dimensional movements of the horse’s walk” (Macauley & Gutierrez, 2004, p. 205). Various physical benefits are to be gained from this form of therapy, including “improved muscle symmetry, postural alignment, facilitation of normal movement, improved balance and gait, and improved respiratory and motor control of speech” (Macauley & Gutierrez, 2004, p. 205).

Clients using hippotherapy not only accomplish treatment goals inherent in physical, occupational, or speech therapy, but also gain developmentally and socially (Gasalberti, 2006), showing improvements in self-concept, locus of control, affect, and behavior (Macauley & Gutierrez, 2004). The therapy itself is fun and enjoyable for clients and has revealed positive effects in both controlled and uncontrolled trials (Liptak, 2005).

**Therapeutic riding.** Therapeutic riding consists of riding and horsemanship lessons that are adapted to a specific population (Vidrine et al., 2002). It has been used with clients suffering from physical impairments (Farias-Tomaszewski et al., 2001), clients with psychiatric disabilities (Bizub et al., 2003), individuals recovering from trauma (Yorke et al., 2008), and

individuals with multiple disabilities including visual impairment (Lehrman & Ross, 2000). The psychological benefits resulting from therapeutic riding are purported to include improved self-confidence, courage, motivation, and increased social involvement (Farias-Tomaszewski, 2001). Studies conducted with children and adolescents have revealed increases in positive self-concept, social acceptance, close friendships, and global self-worth, as well as positive changes in behavior (Vidrine et al., 2002).

The most powerful predictive ingredient for positive client outcome in mental health treatment is a good helping relationship distinguished by “mutual liking, respect, rapport, trust, warmth, acceptance, and collaboration” (Yorke et al., 2008, p. 17). These components of a good helping relationship exist within the bond that is created between human and horse in therapeutic riding. This bond may in part be created due to the fact that horses can be ridden, which provides the opportunity for close body-to-body contact. As a result of this close contact, a type of physical communication is created, allowing for deep rapport, intimacy, and reciprocal understanding (Yorke et al., 2008). Horse and rider each feel the movement and presence of the other, and directional motivation is conveyed through the body-to-body contact. The rider directs the horse’s movement through pressure applied to specific areas of the horse’s body, and the horse communicates to the rider through the tension or relaxation of muscles and body parts, such as the ears. One might argue that there is an emotional component to this communication as well. Some assert that horses are particularly attuned and receptive to human emotion (Yorke et al., 2008), and that horse behavior is often predicated on their attunement to the humans they interact with. In addition, inter-rater agreement has been shown in the rating of four horse emotions: submission, excitation, relaxation, and anger (Russell, 2003). Also, some research indicates that people who spend time with and have familiarity with horses become more adept

at perceiving human emotion (Yorke et al., 2008).

### **Quality of Life and Related Constructs**

Quality of life is a term that is heard often when therapeutic interventions with horses are discussed. Specific to therapeutic riding, Yorke et al. (2008) cite research that therapeutic riding can improve the quality of life for individuals with disabilities. Kaiser, Spence, Lavergne, and Vanden Bosch (2004) propose that the overarching endeavor of therapeutic riding is to tailor and adapt the riding experience to the needs of each rider in order to improve that person's quality of life. Despite the claim that therapeutic riding improves quality of life, there is little research showing that this claim is true or measurable, and there is no effort to operationalize the term in the therapeutic riding literature. So what does quality of life entail? Not surprisingly, the term is not easily identified or defined. To complicate matters further, the term quality of life may also be used interchangeably with various other terms, such as subjective quality of life (Bramston, Pretty, & Chipuer, 2002), life satisfaction, and subjective well-being (Veenhoven, 2010).

Harris (2010) writes of the difficulty of defining what he refers to as "human well-being" (p. 181), in part because research on the topic is rudimentary, and knowing what to actually study is seemingly elusive. Perceptions of life satisfaction and happiness can vary greatly across cultures. "A person's conception of what is possible in human life will affect her judgment of whether she has made the best use of her opportunities, met her goals, developed deep friendships, etc." (p. 181). What psychologists have learned about well-being is not surprising and is perhaps even common sense: that people tend to be happier if they have their basic needs met, have positive relationships, and generally feel in control of their lives. On the contrary, feelings of loneliness and helplessness, as well as a lack of needs being met, are detrimental to happiness in life (Harris, 2010). Despite the difficulty in coming to an agreed-upon definition of

quality of life, it is generally understood that the concept is an important one and should be studied. Felce (1997) states,

Although the way it is defined varies, it can serve to bring together developmental change: in individuals and their identities; in the nature of their circumstances, experiences and lifestyles; and in their own perceptions about themselves, their circumstances, experiences and lifestyles. (p. 126)

Borthwick-Duffy (1992) proposes that there are three distinct perspectives on quality of life. The first perspective defines quality of life as the quality of an individual's life conditions. The second perspective defines quality of life as an individual's satisfaction with their life conditions. Finally, the third perspective defines quality of life as the combination of an individual's life conditions and their satisfaction regarding those conditions. Quality of life based on life conditions assumes an objective approach and measures conditions such as physical health, interpersonal relationships, personal situation such as living conditions and wealth, daily activities and pursuits, and broader cultural and societal influences (Felce & Perry, 1995). On the contrary, quality of life based on satisfaction with life is subjective in nature and may include satisfaction with myriad life domains, including "material comforts, health, work, recreation, learning, creative expression, living situation, relations with family, social relations, leisure, work, finances, safety, religion, marriage, family life, friendships, standard of living, neighborhood, city or town of residence, the state of the nation, education, and the self" (Felce & Perry, 1995, p. 56).

Over time, "quality of life has generally come to represent a multidimensional construct including both objective and subjective dimensions, with objective dimensions referring to external criteria that are indicative of success or lack of success in a variety of accepted social

roles, and subjective dimensions consisting of the individual's feelings about his or her well-being in a variety of life areas or life in general" (Smedema et al., 2010, p. 132). Thus, there is increasing agreement that quality of life includes multiple dimensions and that these dimensions are evaluated through both personal and social perspectives. Recent constructions of subjective well-being have a similar bent, although there is disagreement regarding whether this term should be used interchangeably with the term quality of life (Smedema et al., 2010) or be recognized as a fundamental variable in the analysis of overall quality of life (Eid & Diener, 2004). Subjective well-being has been studied across peoples and cultures and is referred to as "multidimensional evaluations of their lives, including cognitive judgments of life satisfaction as well as affective evaluations of moods and emotions" (Eid & Diener, 2004, p. 245). One can easily note the similarity in the two definitions, and the agreement that each evaluation contains multiple dimensions. However, as its name suggests, subjective well-being evaluates just that, the subjective, and does not focus on objective and social dimensions. Thus there is a stronger argument that subjective well-being accounts for one of the dimensions that makes up quality of life.

Felce and Perry (1995) have arguably engaged in some of the most comprehensive review of quality of life research, and state that, "Operational definitions of quality of life are diverse, with variability fueled not only by use of societal or individualistic perspectives but also by the range of applicable theoretical models or academic orientations" (p. 52). Despite the marked disagreement on the definition of quality of life, Felce and Perry (1995) allege that there is some agreement among researchers regarding what domains of quality of life are relevant for assessment. By combining the domains put forth in central quality of life literature sources, Felce and Perry purport that five domains emerge that consist of subsequent additional constructs. The

five domains are physical well-being, material well-being, social well-being, development and activity, and emotional well-being. For the purposes of this study, emotional well-being is the quality of life domain that was used. This focus was due in part to the interests of the author, but primarily due to claims that despite the diverse theories regarding subjective well-being and quality of life, most measures of subjective well-being are highly correlated to a ratio of positive to negative affect over time. This suggests that there is an emotional foundation to overall quality of life (Larsen, 2009).

### **Emotional Well-being**

Goleman (1995) states that the key to emotional well-being is keeping “distressing emotions in check” (p. 56). He explains that people should experience various types of emotions, ups as well as downs, but that there should be a balance. Emotions that are too intense or that last too long disrupt the balance. The ratio of positive to negative emotions determines one’s subjective experience of emotional well-being (Goleman, 1995); thus people with serious depression or experiences of anger can still maintain emotional well-being as long as they are experiencing the appropriate balance of happy and joyful emotions. Zautra’s (2003) work supports the ratio and balance aspects of positive and negative emotions by rejecting the idea that positive and negative emotions are opposites and thus incompatible. He argues that positive and negative affect states are distinct and therefore may even be experienced at the same time (Zautra, 2003). Goleman and Zautra’s explanations of emotional distinction and balance are relevant to the conceptualization of emotional well-being, but they take only the affective component of emotional well-being into account, and research and literature increasingly point to other important domains.

As stated previously, Felce and Perry (1995) reviewed 15 literature sources that they

deem to be significant in operationalizing quality of life. They name various sub-domains from the five broad domains. The domains and sub-domains are not empirically derived but are found in multiple sources. The stated sub-domains of emotional well-being are positive affect, satisfaction, fulfillment, self-esteem, status/respect, and faith/belief. The particular sub-domains of positive affect, satisfaction (specified as life satisfaction), and self-esteem are also noted elsewhere as being important aspects of an individual's emotional well-being (Schutte, Malouff, Simunek, McKenley, & Hollander, 2002). In addition, in a study conducted by Spence, Oades, and Caputi (2004), emotional well-being was conceptualized as a composite of positive and negative affect. For the purposes of this study, the domains of emotional well-being chosen for operationalization and measurement were positive affect, life satisfaction, and self-esteem. These sub-domains are seen repeatedly and increasingly in the literature, and can be measured with relative ease. Affective (positive affect) and cognitive (life satisfaction) components of emotional well-being have been well documented, and support the idea of a multidimensional model (Ryff & Keyes, 1995). It is also the author's belief that they relate strongly to mental health. Felce and Perry's model includes the additional component of self-esteem, which adds the important domain of self-appraisal to the affective and cognitive evaluations. This addition is supported by research, which has revealed positive associations between self-worth and self-esteem and both life satisfaction and subjective well-being (Smedema, Catalano, & Ebener, 2010).

**Positive affect.** One definition for positive affect comes from Cohen and Pressman (2006), who state that positive affect consists of feelings that involve pleasing engagement with one's surroundings. Examples include excitement, happiness, joy, contentment, and enthusiasm, and these feelings might be brief or longer lasting. Research has indicated that people possess a characteristic mood made up of state and trait components of positive and negative affect



(Schutte et al., 2002), and that positive affect consists of feelings of enthusiasm and alertness, as well as actions that could be characterized as approach behaviors.

It is assumed that people desire the experience of positive affect, happiness, and joy, and endeavor to sustain those feelings over time. In other words, “people are motivated to feel good, to create and maintain generally pleasant or positive subjective states (Wood, Heimpel, & Michela, 2003, p. 566). Furthermore, research has indicated that experiencing and maintaining positive affect is beneficial to individuals and society as a whole, as it has been shown to “foster creative thinking and efficient problem-solving, to enhance self-regulation, to promote desirable social outcomes such as cooperation, and even to contribute to physical health” (Wood et al., 2003, p. 566).

Positive affect may affect health in a number of ways (Cohen & Pressman, 2006). Higher levels of positive affect have been associated with positive sleep quality, exercise and healthy diet, and lower levels of stress hormones. In addition, research has revealed connections between positive affect and positive immune function and social interactions and attachments. Similarly, confidence and optimism have been shown to predict lower distress in health and well-being, particularly in breast cancer patients during and after diagnosis (Carver et al., 2005).

One might wonder why only positive affect and not negative affect is measured and accounted for, both in the current study and in conceptualizations of emotional well-being. Studies have repeatedly shown that positive and negative affect are relatively independent of one another. Major findings have revealed significantly low correlations between positive and negative affect items and high correlations of items within positive and negative affect categories, respectively. In addition, positive and negative affect categories have correlated differently with external variables (Diener & Emmons, 1985). However, this independence

appears to be affected to some degree by time. Affect can be measured in the form of a state, or the affect someone experiences at a particular moment in time, as well as in the form of a trait, or the general type of affect someone experiences over a long period of time. It seems that positive and negative affect states are related, as a person might experience an inverse correlation of positive and negative affect in a particular moment. However, trait levels of affect, measured over time, appear to be independent (Diener & Emmons, 1985). Thus for the purpose of this study, affect traits will be measured, and only positive affect, independent of negative affect, will be accounted for.

**Life satisfaction.** Life satisfaction is a domain that is found in much of the quality of life literature as well as the emotional well-being literature. It is often related to general happiness and well-being (Veenhoven, 2010). Life satisfaction is a term that has been used as a determinant of, as well as interchangeably with subjective well-being, as it relates to one's subjective enjoyment of life (Veenhoven, 2010) and personal satisfaction with life conditions or lifestyle (Felce, 1997). This appreciative appraisal is internal and unique to each individual. Life satisfaction has also been defined as "the cognitive evaluations of one's life, assessed globally or by specific domains. Life satisfaction may reflect conscious inner pleasant experiences which motivate people to pursue goals. Furthermore, the presence of idiosyncratic personal strivings which organize and integrate an individual's goals is a strong predictor of life satisfaction" (Bailey, Eng, Frisch, & Snyder, 2007, p. 168). Peterson, Ruch, Beermann, Park, and Seligman (2007) have written of life satisfaction in terms of the positive traits or character strengths that are predictive of it. The five positive traits are "love, hope, gratitude, curiosity, and zest" (p. 149), and they correlate highly with various measures of well-being.

The necessity of including the subjective life satisfaction domain in a well-being

construct has been argued in terms of the limitations of a solely objective focus. People may be guaranteed a right to life and to reasonable living conditions, but no one can guarantee an individual satisfaction with those living conditions (Felce, 1997). The reasoning for this is twofold: there is inherent variability in both the standards of decent living and in what individual people enjoy. Different people want different things from life, and have differing opinions about what makes life satisfying and enjoyable. Thus overall well-being must include the evaluative component of life satisfaction. Felce argues that an individual's views about his or her life more sensitively reflect that person's overall quality of life than any objective measure.

Veenhoven (2010) has operationalized life satisfaction and separated it into multiple components to account for its multiple meanings. The components are distinguished based on satisfaction with parts of life and life as a whole as well as state and more trait-like aspects of life satisfaction. According to Veenhoven (2010), the four components of life satisfaction that result from distinguishing it according to the aforementioned features are pleasures, part-satisfactions, peak-experience, and life satisfaction. Pleasures consist of temporary satisfaction with some aspect of life, and might include the enjoyment of a tasty meal. Part-satisfactions consist of more stable and enduring satisfaction with some aspect of life, and might include prolonged satisfaction with one's family life. Peak-experience consists of strong but temporary satisfaction with life as a whole, and is often depicted by the happiness that some poets write about. Finally, life satisfaction consists of lasting and stable satisfaction with life as a whole and is related to overall happiness and appreciation for life. This final trait-like component will be focused on in this study.

**Self-esteem.** Self-esteem is the result of self-evaluation, either positive or negative, that is related to one's beliefs about their worth and value (Schutte et al., 2002). Generally, people

have higher self-esteem when they believe they are performing well and feel good about themselves. Rosenberg (1989) purports that people are motivated to have high self-esteem, and that doing so is not an indication of egotism but rather of positive self-regard. Research has shown that high self-esteem is related to good mental health and that individuals with high self-esteem suffer from “less depression, less anxiety, less loneliness, less social anxiety, and less drug and alcohol abuse” (Schutte et al., 2002, p. 771). These individuals also tend to employ positive thinking in difficult situations.

Research performed in western cultures has suggested that self-esteem is a strong predictor of life satisfaction (Diener & Diener, 1995), inviting the question of what relationship exists between these two domains, and if they might be predictive of some larger entity, such as emotional well-being. Both life satisfaction and self-esteem consist of global evaluations; life satisfaction involves an evaluation of an individual’s entire life and self-esteem involves an evaluation or judgment of oneself (Diener & Diener, 1995). The differing foci of evaluation would suggest that these two constructs are discriminable, and research has shown this (Diener & Diener, 1995). Despite their discriminability, self-esteem and life satisfaction also correlate positively with one another. This discriminant yet correlational relationship supports the idea that these two constructs could be predictive of a higher order domain, in this case emotional well-being.

A connection has also been made between affect and self-esteem. Wood et al. (2003) delineated this connection by hypothesizing that some people may savor experiences of joy and excitement, whereas others may mute these experiences, and that this crucial difference is based on the person’s self-esteem. More specifically, individuals with high self-esteem are more likely to embrace and savor experiences of positive affect or high mood, while individuals with low

self-esteem are more likely to dampen or mute their positive moods. Two explanations have been given for this relationship. The first refers to the idea of an emotional set point, or level of mood typical of any particular person (Wood et al., 2003), as well as the idea that people tend to accept a mood that they feel is typical for them. Since it is generally accepted that individuals with high self-esteem are happier than those with low self-esteem, they would have more investment in maintaining positive affect. However, an individual with low self-esteem, though to be generally less happy, might endeavor to return to their normative set point if they are experiencing positive affect (Wood et al., 2003).

The second explanation for this relationship between positive affect and self-esteem deals with expectation and optimism. People with low self-esteem are thought to have expectations that are less optimistic than individuals with high self-esteem, as well as less expectancy to control mood in general (Wood et al., 2003). Thus, if someone with low self-esteem is experiencing a low mood, they have little to no confidence that they will be able to improve their mood, nor confidence that they could maintain positive affect. People with high self-esteem, in contrast, are motivated to maintain positive affect, and are motivated to do so (Wood et al., 2003).

Wood et al. (2003) performed several studies to test the hypothesized relationship between affect and self-esteem, and indeed found that individuals with low self-esteem, relative to those with high self-esteem, are less likely to attempt lifting their mood when they are down or feeling bad and are more likely to dull or stifle their feelings when they are in a good mood. Here we see a clear relationship between positive affect and self-esteem, and thus an argument for measuring both domains to determine one's overall emotional well-being.

## Methodology

### Research Sample and Location

Participants in the study consisted of 6 adults between the ages of 24 and 49. Three of the participants were male and three were female. Four of the participants completed each of the pre and posttest measures. One participant completed only the pretest measures, and one participant completed all of the pretest material but only one of the three posttest measures. At the outset, the desired number of participants for this study was at least 64, as Cohen (1992) states that this is the desired number to see a medium effect between two independent sample means with alpha set at 0.05. This study will not employ an independent-sample design, but rather will use a related-sample design, which Howell (2008) explains requires fewer participants than does an independent-sample design. Therefore, it was determined that 64 participants should be more than adequate to reveal a medium-sized effect. The final number of participants in this study fell far short of what was desired, and is a significant limitation to the study that will be discussed in a later section.

Each of the participants was enrolled in the fall 2011 therapeutic riding classes at High Hopes Therapeutic Riding program in Old Lyme, Connecticut. High Hopes is a premier therapeutic riding center that is accredited by the North American Riding for the Handicapped Association (NARHA). High Hopes is open year-round and serves people with physical, emotional, and developmental disabilities. Participants completed 12 weekly classes that began in September of 2011 and ended in December of 2011. In order to participate in the study, the individuals had to be able to fill out three self-report measures prior to the start of the classes as well as after the classes had ended (Frisch, 1994, Lubin & Zuckerman, 1999; Rosenberg, 1989). Therefore, any individuals with intellectual disabilities that would restrain them in the

completion of the self-report measures were not included in the study.

### **Data Collection**

The determination of eligibility for the study was made by staff members at High Hopes who have personal relationships with the riders and assisted in the recruitment process. I partnered with High Hopes in part due to their size and prestige in the therapeutic riding community. In addition, it was hoped that the High Hopes program would provide a sample of convenience for this research. The staff members at High Hopes were asked to identify riders who met the research criteria (adults with the ability to comprehend and answer the questionnaires). Once the adults were identified, they completed a consent form to participate (see Appendix A). After giving their consent to participate in the research, the adults were asked to complete three pretest questionnaires. This occurred as the fall riding program was beginning. The posttest questionnaires were given to the adults upon completion of the season's therapeutic riding program, approximately 12 weeks later.

### **Instrumentation**

**Quality of life inventory.** A pretest and posttest design was utilized to measure life satisfaction in adults at the beginning of the study and again after a 12-week course of therapeutic riding. The Quality of Life Inventory (QOLI) was chosen to measure life satisfaction. The QOLI was developed as part of an effort to relate the literature on quality of life and subjective well-being to health fields, including clinical psychology, health psychology, and psychiatry, as well as other branches of medicine (Frisch, 1994). The measure has at its root the Quality of Life Theory of life satisfaction, which adheres to a combination of cognition and affect when defining subjective well-being (Frisch, 1994). In other words, this theory assumes that the affective component of well-being (the ratio of positive to negative affect in a person's

life) stems from a cognitively based judgment of overall life satisfaction. According to Frisch, “Life satisfaction is equated with quality of life and refers to a person’s subjective evaluation of the degree to which his or her most important needs, goals, and wishes have been fulfilled” (p. 2).

The QOLI is a readily understandable (sixth-grade reading level) brief measure, containing 32 items and taking approximately five minutes to complete. However, the measure is comprehensive in that yields an overall score of life satisfaction as well as levels of satisfaction and dissatisfaction in 16 aspects of life, including love, work, and health. Respondents rate the 16 areas based on the importance of each to their overall happiness. Each area is then rated according to the respondent’s satisfaction with that particular area (Frisch, 1994). The content and scoring process of the measure clearly relates to the Quality of Life Theory by focusing on both the affective aspect of happiness and the cognitive judgment of overall life satisfaction.

**Multiple affect adjective check list-revised.** A pretest and posttest design was utilized to measure positive affect in adults at the beginning of the study and again after a 12-week course of therapeutic riding. The Multiple Affect Adjective Check List-Revised (MAACL-R) was chosen to measure positive affect. The MAACL-R (Lubin & Zuckerman, 1999) takes approximately 3 minutes to complete and measures affect states and traits on three levels:

- 1) the factored domains: anxiety, depression, hostility, positive affect, and sensation seeking, 2) higher order affects: dysphoria = sum of anxiety, plus depression, plus hostility, and well-being = positive affect plus sensation seeking, and 3) the 12

components or facets of the domains resulting from principle component analyses. (p. 1)

The participants in this study completed the Trait version of the measure only. The Trait form consists of a list of 132 adjectives and participants are asked to mark which of the adjectives are



moods and feelings that they generally feel.

The MAACL-R contains two positive affect scales: the Positive Affect scale and the Sensation Seeking scale. The Positive Affect scale measures passive aspects and the Sensation Seeking scale “measures the more active, energetic aspects of positive affect” (Lubin & Zuckerman, 1999, p. 1).

**Rosenberg self-esteem scale.** A pretest and posttest design was utilized to measure self-esteem in adults at the beginning of the study and again after a 12-week course of therapeutic riding. The Rosenberg Self-Esteem Scale was chosen to measure self-esteem. The Rosenberg Self-Esteem Scale was created by Dr. Morris Rosenberg during his time at the University of Maryland and is one of the most frequently used measures of self-esteem in social science research (Rosenberg, 1989). The measure consists of 10 items that are answered on a 4-point Likert scale ranging from Strongly Agree to Strongly Disagree. Each item is assigned a value, and total scores range from 0-30, with 30 being the highest possible score.

### **Data Analysis Procedure**

After the pre and post-test data were collected, descriptive statistics were used to determine whether an effect occurred in the areas of positive affect, life satisfaction, and self-esteem as a result of therapeutic riding. A related-sample t-test (or paired-samples t-test) was used to determine the significance of the findings. This test was employed to assess the within-subject change over time in each of the variables: positive affect, life satisfaction, and self-esteem as a function of the therapeutic riding program. The related-sample t-test is appropriate because the dependent variables (positive affect, satisfaction, and self-esteem) are continuous, the independent variable (therapeutic riding) with two levels (pre and post intervention) is discrete, and the same sample is providing the data for both levels.

### Summary of Findings

The following section consists of the results of the quantitative analyses, including the effect of therapeutic riding on positive affect, life satisfaction, and self-esteem. In addition, data on the sample of participants is presented. A computer program, Statistical Package for the Social Sciences (SPSS), was used to analyze the results of the three questionnaires given to the participants.

#### Participant Demographics

Six adults participated in the study, three male and three female. The age range of the participants was 24 to 49, and the range of total years of riding was 5 to 19. Of the six participants, four completed all six measures (three pretest and three posttest). One of the participants completed all of the pretest materials but no posttest materials. The final participant completed all of the pretest material and only the self-esteem posttest questionnaire. Therefore, for both the positive affect and life satisfaction analyses, data for four participants was utilized. The data from six participants was utilized for the self-esteem analysis.

#### Positive Affect

The first research question asked if there was a significant difference in positive affect scores in adults from pretest to posttest. A related-sample t-test was used to answer this research question (see Table 1). No statistically significant difference was found between the pretest positive affect scores ( $M = 58.25$ ,  $SD = 5.50$ ) and the posttest positive affect scores ( $M = 55.50$ ,  $SD = 6.81$ ) of adults participating in therapeutic riding,  $t(4) = 1.46$ ,  $p = 0.24$ . Although there was not a statistically significant difference in positive affect scores, the scores did decrease from pretest to posttest.

Table 1

*Difference in Positive Affect Scores from Pretest to Posttest*

Positive affect scores	<u>M</u>	<u>SD</u>
Pretest score	58.25	5.50
Posttest score	55.50	6.81

**Life Satisfaction**

The second research question asked if there was a significant difference in life satisfaction scores in adults from pre-test to post-test. A related-sample t-test was used to answer this research question (see Table 2). No statistically significant difference was found between the pretest life satisfaction scores (M = 54.50, SD = 12.45) and the posttest life satisfaction scores (M = 55.75, SD = 8.46) of adults participating in therapeutic riding,  $t(4) = -0.56$ ,  $p = 0.62$ . Although there was not a statistically significant difference in life satisfaction scores, the scores did increase slightly from pretest to posttest.

Table 2

*Difference in Life Satisfaction Scores from Pretest to Posttest*

Life satisfaction scores	<u>M</u>	<u>SD</u>
Pretest score	54.50	12.45
Posttest score	55.75	8.46

**Self-Esteem**

The third research question asked if there was a significant difference in self-esteem scores in adults from pretest to posttest. A related-sample t-test was used to answer this research question (see Table 3). No statistically significant difference was found between the pretest self-esteem scores ( $\underline{M} = 21.25$ ,  $\underline{SD} = 3.30$ ) and the posttest self-esteem scores ( $\underline{M} = 23.25$ ,  $\underline{SD} = 4.03$ ) of adults participating in therapeutic riding,  $t(6) = -1.02$ ,  $p = 0.38$ . Although there was not a statistically significant difference in self-esteem scores, the scores did increase slightly from pretest to posttest.

Table 3

*Difference in Self-Esteem Scores from Pretest to Posttest*

Self-esteem scores	<u>M</u>	<u>SD</u>
Pretest score	21.25	3.30
Posttest score	23.25	4.03

### **Discussion**

A pretest/posttest research design was used to measure the effect of therapeutic riding on three variables in a group of adults: positive affect, life satisfaction, and self-esteem. These variables are proposed to be important aspects of a person's overall emotional well-being, thus improvement in these areas is thought to improve one's overall emotional well-being. The results of the three data sets did not reveal significant changes from pretest to posttest in any of the three variable areas. The overall mean of the participants rose slightly in the areas of life satisfaction and self-esteem, but these differences were not significant. The overall mean of the participants fell slightly in the area of positive affect, but this difference was also not significant. It is difficult to extrapolate these findings to a larger population of adults, as the sample size of the participants was so low.

The current study contributes to the quantitative research on therapeutic riding in adults, which is quite scarce at this time. Much of the research in the area of therapeutic riding has been qualitative in nature and is often conducted with children. The current literature suggests that therapeutic riding improves quality of life and well-being, but it remains unclear how this occurs.

This study sought to operationalize emotional well-being and suggest a way for measuring it.

The following sections will discuss the limitations of the study that may have led to small sample size and thus a lack of significant findings, as well as proposed direction for future research.

### **Limitations of the Study**

The small sample size of participants was a significant limitation in this study, and resulted in a lack of statistical significance. Despite the availability of what appeared to be a convenience sample at High Hopes, it proved difficult to recruit adults to take part in the study. One possible factor in the recruitment difficulties and the small sample size is my lack of presence at High Hopes and that I did not carry out the recruitment process myself. Partnering with High Hopes and asking the staff to engage in the recruitment process was done in part for convenience and also with the hope that the established relationships between riders and staff would promote participation. However, the potential participants may have been more likely to engage in the study had they met me and thus experienced the tangibility of the study and its purpose and potential benefits. In addition, the completion of the questionnaires required for the study may have been experienced as a hassle for potential participants, and as an added burden to any paperwork that individuals must already complete in order to engage in the therapeutic riding program.

A staff member at High Hopes was asked to share her thoughts about the difficulty with recruitment in the study. She explained that several adult riders at High Hopes were not cognitively able to complete the necessary questionnaires. In addition, many adults that participate in the riding program do not have the necessary support system that would facilitate completion of the questionnaires. These limitations significantly decreased the pool of potential participants. Of those adults who were cognitively able to complete the questionnaires, the staff

member stated, “a couple of the folks that were asked were mentally not in a good place to take on such a task and declined.” The staff member also spoke of the need for longevity and an established relationship with High Hopes for potential research participants to feel comfortable engaging in and supporting research projects.

Another limitation of the study was a lack of differentiation of participants based on the total amount of time they have been involved in therapeutic riding. Many individuals who take part in therapeutic riding do so for multiple semesters of riding and over the course of months and years. The amount of time the participants in this study had been riding ranged from 5 years to 19 years. The positive affect, life satisfaction, and self-esteem scores of riders are likely influenced by the total amount of time they have been riding. Thus, any change in these areas that has already occurred since the inception of their therapeutic riding is not accounted for, and this could lead to elevated pre-test scores. In addition, it is possible that individuals who have been riding for years come to take it for granted to some degree. This may lead to a lack of enthusiasm for participating in studies on therapeutic riding, as opposed to riders for which the experience and all that is related to it is novel and perhaps exciting.

### **Personal Reflection**

As a rider and horse-lover, I chose this research topic not only out of interest but also out of personal significance. I am one of the many individuals who can speak anecdotally to the unique joy and peace that is experienced through interacting with and riding horses. I have had the great fortune of being around horses to some degree my entire life, and have been riding from a young age. My process of learning about therapeutic riding and what it entails simply confirmed what I had known on an intuitive level my entire life: that horse-back riding is not

simply recreational and fun but also healing. I believe without a doubt that riding and interacting with horses during my formative years and throughout my life contributed to my personal well-being by building confidence, self-awareness, and a sense of responsibility. In addition, it was engaging, enjoyable, and fostered a healthy sense of independence and freedom that is perhaps not easily found elsewhere for a young person.

Given my personal experience, I had hoped to conduct a research project that demonstrated unequivocally what horse-back riding can contribute to a person's well-being. Therefore it was keenly disappointing to have such a limited number of participants and to lack significant causal results. I believe that qualitative research on therapeutic riding is vital and has contributed a great deal to the burgeoning field of equine-assisted activities. Qualitative research has allowed riders to tell their stories and speak to their experience, and this cannot be underestimated. However, I continue to believe in the importance of demonstrating and quantifying the causal effect that therapeutic riding has on participants. Despite my initial disappointment in the results of this study, I am encouraged by the idea that this experience is one of learning and readily offers direction for future studies.

### **Directions for Future Research**

There are a variety of ways that future research on therapeutic riding with adults could be approached and strengthened, particularly in the area of measuring for emotional well-being. It appears that in order for an evaluative study to truly represent the number of adults that participate in therapeutic riding and the many years that they do so, the study would have to be an ongoing and inclusive part of the program at which the therapeutic riding is taking place. Questionnaires and surveys on emotional well-being and its various components could be completed as a regular part of the riding experience, with adults completing this task prior to



beginning riding for the first time, and continuing to do so throughout their riding tenure. The ongoing evaluation could be conducted by a researcher who is committed to a long-term partnership with the riding program, or to the program itself. Once the evaluation process has become fully integrated with the program, it will begin yielding valuable data on therapeutic riding's effects on emotional well-being. An integrated evaluation process also solves the recruitment difficulty and the problem related to the disparity among riders regarding how long they have been riding. With an evaluation procedure built in to the program itself, opting out of participation would hopefully be the exception rather than the norm, and adults would begin being evaluated immediately upon the inception of their therapeutic riding experience.

Future research could also utilize a broader scope in addressing emotional well-being by taking into consideration some additional variables. Felce and Perry (1995), in their analysis of emotional well-being, stated that fulfillment, status/respect, and faith/belief are also important components, in addition to positive affect, satisfaction, and self-esteem. These variables would take into account the social, communal, and spiritual aspects of well-being, providing a more conclusive and complete evaluation of the state of being that is being measured. Future research may also include the development of a single measure that loads on each of the proposed variables of emotional well-being, thus streamlining the process and instituting a single measure of emotional well-being.

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## Appendix A

*Consent Form*

You are invited to participate in a study conducted by Jamie Lucas, M.S., a graduate student at Antioch University New England. The purpose of the study is to examine how Therapeutic Riding affects emotional well-being, measured in terms of positive affect (positive emotions such as joy, excitement), self-esteem, and life satisfaction (overall life enjoyment and satisfaction). You were selected as a possible participant in this study because you are 18 years of age or older and will be participating in the Fall 2011 Therapeutic Riding program at High Hopes.

If you decide to participate, you will complete three measures or questionnaires before beginning the riding program and again after you have completed the program. The purpose of the three questionnaires is to measure positive affect (positive emotions such as joy, excitement), self-esteem, and life satisfaction. The measures each take approximately 5-15 minutes to complete. Little to no risk should be expected to fill out the measures.

If the results of this research suggest that Therapeutic Riding increases emotional well-being, a potential benefit may be that more information will be shared about Therapeutic Riding and its positive qualities. As a result, more and more people may become involved in Therapeutic Riding in the future.

Any information that is obtained in connection with this study and that can be identified with you will remain confidential (will not be shared with others) and will be disclosed only with your permission or as required by law.

Your decision whether or not to participate will not affect your future relations with High Hopes or with Antioch University New England. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without penalty.

**If you have any questions about the study, you may contact Jamie Lucas, principal investigator, at telephone number 603-355-7417 or via email at [jlucas1@antioch.edu](mailto:jlucas1@antioch.edu). If you have any questions about your rights as a research participant, you may contact Dr. Kevin P. Lyness, Chair of the Antioch University New England Human Research Committee, (603) 283-2149, or Katherine Clarke, ANE Vice President for Academic Affairs, (603) 283-2450.**

You will be given a copy of this form to keep.

**YOU ARE MAKING A DECISION WHETHER OR NOT TO PARTICIPATE. YOUR SIGNATURE INDICATES THAT YOU HAVE DECIDED TO PARTICIPATE, HAVING READ THE INFORMATION PROVIDED ABOVE.**