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Nakita Dziegielewski Trauma-Focused Equine Assisted Psychotherapy TM: A Quantitative Study of Intervention Effectiveness

ABSTRACT

This study uses a quantitative lens to examine if Natural Lifemanship's ® Trauma-Focused Equine Assisted Psychotherapy TM (TF-EAP) model is effective in reducing the psychological, emotional, and/or behavioral problems in youth with a trauma history. Secondary data was collected on behalf of Spirit Reins, the organization that implements Natural Lifemanship's ® TF-EAP TM model, and used to determine the effectiveness of their trauma-informed treatment intervention. Through a pre and post-test research design, data analysis was conducted on 40 youths' Child and Adolescent Functional Assessment Scale (CAFAS) total scores to determine intervention effectiveness. Findings suggest that Natural Lifemanship's ® TF-EAP TM model is effective in reducing the psychological, emotional, and/or behavioral problems in youth with a trauma history.

TRAUMA-FOCUSED EQUINE ASSISTED PSYCHOTHERAPY $^{\text{TM}}$: A QUANTITATIVE STUDY OF INTERVENTION EFFECTIVENESS

A project based upon an independent investigation, submitted in partial fulfillment of the requirement for the degree of Master of Social Work.

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"Yet I am always with you; you hold me by my right hand. You guide me with your counsel, and afterward you will take me into glory. Whom have I in heaven but you? And earth has nothing I desire besides you. My flesh and my heart may fail, but God is the strength of my heart and my portion forever" – Psalm 73:23-26... Thanks be to God Almighty because I know that I would not be where I am today without His love and guidance in my life. His grace is what got me into Smith and his strength is what got me through it. There were several times throughout this Smith and thesis journey that my patience and strength with the "process" was weak, but through prayer and His Word I was given the strength to keep walking in order to get it done.

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CHAPTER I

Introduction

"An animal's eyes have the power to speak a great language."

- Martin Buber

Equine Assisted Psychotherapy (EAP) is a unique, burgeoning therapeutic intervention focused directly on the interactions that manifest within the client-horse relationship. This experientially-based, therapeutic intervention utilizes clients' "actual experiences" with the horse in order to understand and explore their internal world and interpersonal dynamics (Karol, 2007, p. 80). The client-horse relationship is such an important piece of this therapeutic intervention because, through this relationship, the client gains insight into how he or she perceives and interacts with the world. Through identifying and exploring the client's interactions with the horse, the therapist and client can begin to work on the "here and now" psychological, behavioral, emotional, and relational problems currently impacting the client's life.

Over the last 18 years, interest, research, and funding for EAP programs and models has steadily increased. Yet, despite this increase the field still lacks good quality, empirical research attesting to its effectiveness, validity, and theoretical implications (Knapp, 2013; Selby & Smith-Osborne, 2013). There is also little information, literature, and research on how this field could possibly serve as an effective therapeutic intervention for youths who have experienced trauma. In fact, to date, I have yet to find an empirical research study exploring, let alone measuring, how this field could serve as an effective therapeutic intervention for youths who have experienced

trauma. The purpose of this research study is to provide some insight into this area. Through an experimental research design, I quantitatively measured the effectiveness of Natural Lifemanship's ® Trauma-Focused Equine Assisted Psychotherapy (TF-EAP) TM model in an effort to draw some conclusions on whether or not trauma-informed EAP programs and models could serve as an effective therapeutic intervention for youths who have experienced trauma.

While little research and information exists on how this field could possibly serve as an effective therapeutic intervention for youths who have experienced trauma, Chapter II will attempt to bridge this gap by providing a literature review on the field of EAP and trauma-informed practices for youths who have experienced trauma. The first four sections in Chapter II briefly explore the field of EAP in all its complexity by reviewing EAP history, theory, intervention effectiveness, and the role of the horse. The fifth section within Chapter II provides an overview of trauma-informed practices and highlights the central ingredients needed to make a treatment intervention trauma-informed. The sixth section provides information on Spirit Reins and Natural Lifemanship's ® TF-EAP TM model. This section investigates if Spirit Reins, the organization currently implementing Natural Lifemanship's ® TF-EAP TM model, implements a trauma-informed EAP program, and if Natural Lifemanship ® serves as an effective trauma-informed EAP model. The seventh section attempts to merge all of the previous sections in an effort to hypothesize on how EAP programs and models could serve as an effective treatment intervention for youths who have experienced trauma.

CHAPTER II

Literature Review

What is EAP?

For those not familiar with the field of EAP, the term frequently invokes confusion and curiosity. Often times, when talking about EAP programs and models I am asked questions, such as, "So you do therapy with the horse?" Despite people's growing interest in the field over the last 18 years, a majority of individuals are still unaware of what this treatment intervention entails. EAP is a very specific and intentional experientially-based, therapeutic intervention. A typical EAP session includes a licensed mental health professional, equine specialist, client, and horse. Treatment is guided by the client's presenting problem(s), diagnosis, and biopsychosocial history, and just as with any other treatment intervention, these elements serve as the central components in the development of an EAP treatment plan. While there is still skepticism about this alternative therapeutic intervention, EAP is intentional in establishing itself as a reputable, alternative treatment intervention.

As stated earlier, EAP focuses directly on the interactions that manifest within the client-horse relationship because it is through these interactions that the client and therapist become aware of the intrapersonal struggles and maladaptive interpersonal dynamics the client brings into everyday relationships (Frewin & Gardiner, 2005). Knapp (2013) describes humans as "patterned animals" who, for the most part, will not go out of their way to seek new ways or patterns of doing things, even if their patterns do not serve them (p. 164). She asserts, "...

equine-assisted psychotherapy brings these habitual, repeated patterns into focus through the client's interaction with horses" (Knapp, 2013, p. 164). The insight gained from these interactions assist the therapist and client in identifying and exploring the client's intrapersonal struggles and maladaptive interpersonal dynamics. Working through these struggles and dynamics with the horse helps the client establish a new way of doing things.

The field of EAP is very diverse in the programs and models it provides to clients. While there are regulatory organizations that implement standards sanctioning EAP practices, the field has a diverse array of concepts, theories, names, and methods of accomplishing the same task (Lentini & Knox, 2009). Some EAP programs and models focus on riding and vaulting, while other focus on ground work activities (Vidrine, Owen-Smith, & Faulkner, 2002; Selby & Smith-Osborne, 2013; Lentini & Knox, 2009). Regardless of which concepts, theories, and methods are used, the central focus of all EAP programs and models revolve around the interactions that manifest within the client-horse relationship.

EAP History

The field of EAP lacks a consistent and accurate timeline regarding the initial development of EAP practices. Various research studies offer a diverse array of dates citing the origins of equine assisted practices in human civilization. Knapp (2013) referenced the earliest date of equine assisted practices, dating back to 600 B.C. when Greeks used horses to assist people with disabilities and to improve the general health and well-being of their people (p. 55). In the 1800s, European physicians incorporated therapeutic riding into their treatment of physical, neurobiological, and psychological disorders (Knapp, 2013; Frewin & Gardiner, 2005). While the use of horses in therapeutic settings has probably occurred for hundreds of years, the

relevance, research interest, and legitimacy of the practice as a profession has only recently begun.

The field of EAP is still in its infancy. The first association dedicated to the professionalization and standardization of EAP practices, Equine Facilitated Mental Health Association (EFMHA), was not formed until 1996 (Masini, 2010). In 1999, the Equine Assisted Growth and Learning Association (EAGALA) formed to further develop the professionalism and standardization of the field (Frewin & Gardiner, 2005). Despite the field's infancy and uncertain historical timeline, the bond created between humans and animals, and the benefits that have developed from that bond, have existed for thousands of years, prior to recorded history (Circulli, Borgi, Berry, Francia, & Alleva, 2011). This is an important aspect to keep in mind when reviewing the history of EAP. Hopefully, within time, the field of EAP will be able to develop a consistent and accurate historical timeline, and will continue to mature as a profession.

Theories Guiding EAP Practices

The field of EAP gains its theoretical foundation from a diverse array of traditional, therapeutic theories (Shultz, 2005; Selby & Smith-Osborne, 2013; Schultz, Remick-Barlow, & Robbins, 2007; Lentini & Knox, 2009; Karol, 2007; Klontz, Bivens, Leinart, & Klontz, 2007). While the profession primarily grounds itself in experiential theory, other theories such as Gestalt, cognitive behavioral, process-experiential, intersubjective, symbolic interaction, attachment, Kohutian, and psychodynamic theory also influence the field (Karol, 2007; Siporin, 2012, York, Adams, & Coady, 2008; Reichert, 1998; Lentini & Knox, 2009; Brant, 2004; Knapp, 2013; Frewin& Gardiner; 2005; Watson 2006; Masini, 2010). In the following section, I will discuss these diverse theories, explain how they are woven into to the field of EAP, and will provide insight into how they inform the work that takes place between the client and horse.

The main objective of experiential therapy is to foster relationships in which clients can become aware of their subjective reality and how that reality impacts their feelings, perceptions, goals, values, constructs, and interpersonal dynamics (Greenberg, Watson, & Lietaer, 1998, p. 3). As I mentioned earlier, the main objective of EAP is to discover and discuss the interactions that take place between the client and horse. Emphasis is put on clients' interactions with the horse because through those interactions clients can learn about themselves and how they interact with others in relationships (Frewin & Gardiner, 2005). In EAP, horses are seen as the essential tool in this experiential interaction because horses will react and respond to a client's behavior, actions, and internal states in a very honest way (Jobe, Shultz-Jobe, & McFarland, 2013, p. 69).

A horse cannot be fooled in a therapy session. Horses are hyper-vigilant animals whose biological programming necessitates that they be keenly attuned to a human's verbal and non-verbal communication (Frewin & Gardiner, 2005). A benefit to using horses in an experientially-based, therapeutic intervention is that they will engage in relational dynamics with clients. The horse will be aware of and respond to the client's relational wants and needs, as well as communicate its own wants and needs within the relationship. The horse communicates its own wants and needs based upon the intra and interpersonal emotional, behavioral, and relational dynamics the client brings into the session. The didactic process that occurs in the human-horse relationship is not a one way street. Siporin (2012) asserts that the client-horse relationship "... is not one-sided, but demands mutual trust and reciprocal interaction" (p. 460). The client learns that for a relationship to form a give and take needs to happen on both ends.

The experiential relationship that manifests is vastly instrumental to the work that is done in EAP because when the client engages with the horse, the horse supports the experiential

process by "providing the client with a means to see their behavior reflected, to change that behavior in real time, and to experiment with alternatives" (Knapp, 2013, p. 77). Through the interactions that manifest in the experiential client-horse relationship, clients become aware of their subjective reality and relational dynamics, and this newfound awareness assists them in creating a new way of viewing and interacting in relationships (Masini, 2010). The unique, experiential approach that EAP offers is seen as a beneficial aspect to the work that is achieved because it affords the client the opportunity to recreate and learn new ways of interacting with others. Schultz et al. (2007) asserts that the client-horse relationship allows the client to "identify and understand personal emotions, develop empathy, develop a sense of responsibility, learn to problem solve, and to succeed in new undertakings" (p. 266). The exercises that the horse and client engage in also provide the client with an opportunity to experiment with "cognitive, affect, behavioral, and sensory modulation and regulation" (Selby & Smith-Osborne, 2013, p. 419).

The diversity of EAP allows for a distinct array of traditional therapeutic theories to be incorporated into the work. In reviewing EAP research literature, several papers highlighted the relevance of certain psychodynamic theories and concepts as the means by which EAP works. Siporin (2012) provides a very insightful article exploring the effectiveness of EAP through the lenses of self psychology, attachment theory, and intersubjectivity. A common theme woven throughout the research literature discussed the horse's innate ability to create a safe space where a client's transference and projection can manifest itself (Lentini & Knox, 2009; Masini, 2010; Karol, 2007; Klontz et.al, 2007). Lentini & Knox (2009) provide an in-depth description of how a horse serves as "a whole new object that may be projected upon with various transference" (p. 53). Masini (2010) confirmed this statement by asserting, "the horse can serves a safe object for projection of uncomfortable feelings" (p. 31).

Other psychodynamic themes discussed throughout the research literature highlight the importance of preverbal experiences that manifest within the client-horse relationship. Siporin (2012) explores how "communication between client and therapy horse likewise involves primitive, albeit nonverbal, trust-building interactions reminiscent of infant-mother intersubjectivity" (p. 460). Additional preverbal functions the horse generates within the client-horse relationship include touch, comfort, and rhythm (Karol, 2007). Karol (2007) asserts that EAP serves as an "existential theatre for the child's psychodynamic work to be enacted" and, due to this, the therapist is able to "explore the client's intrapersonal and interpersonal worlds on preverbal, nonverbal, and verbal levels of experience" (p. 88). Within this section it is evident that the field of EAP draws upon many theoretical perspectives to assert its effectiveness. While the profession's vast array of theoretical perspectives could definitely serve as a limitation, it is important to note that these varied theoretical frameworks and perspectives have been woven together in a functional way.

EAP Intervention Effectiveness

EAP is a diverse therapeutic intervention. The field works with diverse populations and has used to addressed various psychological, emotional, behavioral, and developmental issues (Selby & Smith-Osborne, 2013; Klontz et al., 2007; Yorke et al., 2008; Bizub, Joy, & Davidson, 2003; Lentini & Knox, 2009; Schultz et al., 2007; Ewing, MacDonald, Taylor, & Bowers, 2007). Selby and Smith-Osborne's (2013) systematic review of therapeutic interventions involving horses provides an extensive list of the psychological, behavioral, and emotional issues that EAP addresses, as well as the diverse population it serves. They write,

Interventions employing equines have been applied across age groups and cultures. It has been applied in work with families and groups, and is not gender-specific. This treatment approach has been used to address terminal illness, comorbid chronic developmental disabilities and health conditions, behavioral

and attentional issues, substance abuse and addiction disorders, eating disorders, depression, anxiety, relationship problems, and posttraumatic stress disorder. It has been applied to populations ranging from at-risk youths to brain-injured and aging veterans and to health care settings such as medical domiciliary care, residential treatment facilities, hospices and hospitals, and prisons. (Selby and Smith-Osborne, 2013, p. 419)

Their systematic review provides ample research on how the field of EAP serves as a diverse therapeutic intervention that successfully address different populations and issues. While the field may pride itself on being a diverse therapeutic intervention, is this diverse treatment intervention effective at what it claims to accomplishe?

Klontz et al. (2007), using an open clinical trial, quantitatively measured the effectiveness of a residential program employing Equine-Assisted Experiential Therapy (EAET). Researchers measured intervention effectiveness through a pre-test, post-test, and follow-up test research design with the use of two measurement tools: Brief Symptom Inventory and Personal Orientation Inventory. Findings from participants' post-test and follow-up test scores showed significant and stable reductions in participants overall psychological distress and reported enhancements in participants psychological well-being (Klontz et al, 2007, p. 263). Limitations within this study included an absent control group and the use of non-random sampling.

Ewing et al. (2007) conducted a three year, mixed methods research study on the effectiveness of an Equine-Facilitated learning program with youths who had moderate to severe behavioral, conduct and/or learning disabilities. The quantitative aspect of their study included a pre and post-test research design with the use of 5 measurement tools: Self-Perceptions Profile for Children, Empathy Questionnaire, Locus of Control Scale, Children's Depression Inventory, and Children's Loneliness Questionnaire. The qualitative aspect of their study included interviews and observations by the program's special education teacher, therapeutic riding instructor, and volunteers. Quantitative findings suggest no statistical significance regarding

program effectiveness, but qualitative findings indicated positive changes in youths who participated in the programming (Ewing et al., 2007, p. 66 & 67). For this study, researchers were able to employ a control group and offered legitimate suggestions on why they found no statistical significance regarding program effectiveness. These two components of the study serves as strengths.

Schultz et al. (2007) conducted an 18-month pilot study testing the effectiveness of EAP with children who had behavioral and mental health issues and a history of intra-family violence. This study measured intervention effectiveness through a quantitative pre-test and post-test research design with the use of one measurement tool: Children's Global Assessment of Functioning (GAF). Findings suggested program effectiveness due to an increase in all participants' GAF scores. A statistically significant correlation was also found between the improvement in GAF scores and the number of sessions given (Schultz et al., 2007, p. 268).

As stated earlier, to date, I have yet to find an empirical research study exploring, let alone measuring, how the field of EAP could serve as an effective therapeutic intervention for youths who have experienced trauma. The one research study I did find on horses and trauma provided a qualitative investigation on the human-horse bond and its possible impacts on individuals' recovery from trauma (York et al., 2008). For this study, no EAP programs or models were examined. The researcher simply talked with individuals who personally owned a horse and asked them how their relationship with their horse impacted their recovery from trauma.

It is evident that the field of EAP has a long way to progress regarding its legitimacy in the research arena; especially as it relates to working with youths who have experienced trauma. Selby and Smith-Osborne's (2013) systematic review could only generate 14 studies meeting

their inclusion criteria. The field needs more methodologically sound research studies to attest to its effectiveness and legitimacy as a profession. Echoing Lentini and Knox (2009), in order for the field to be taken more seriously in the research, medical, and therapeutic community, more research studies need to employ a standardized, controlled, and longitudinal research methodology (p. 56)

Horses as Modulators of Trauma

If one has ever been around a horse, one knows the majestic power and strength it can convey. At first, people may appear to be intimated by the size and strength of a horse, but they soon learn that there is also a gentle, sometimes hidden, aspect to a horse's nature. Unlike companion animals, such as dogs or cats, horses bring a unique set of skills and interactions into the therapy setting. This is mainly due to the fact that they are prey animals; their brains and instinctual hardwiring are completely different from predator animals such as dogs or cats. This unique instinctual hardwiring is also what makes them ideal candidates for working with youths who have experienced trauma.

Horses' instinctual, biological programming causes them to be acutely hyper-vigilant in order to flee from fearful and/or dangerous situations (Frewin & Gardiner, 2005, p. 5). These highly intuitive animals are born with a heightened sense of their surroundings in order to survive. How horses react to their everyday surroundings provides a parallel experience to the fear and traumatic stress reactions found in youths with a trauma history. Knapp (2013) states, "the number one, primary response of a prey animal is flight: run first, ask questions later. If a horse is unable to run, the flight response can morph into a fight or freeze response" (p. 232). Just like youths who experience trauma (Neigh, Gillespie, & Nemeroff, 2009), horses also encounter the fight, flight, freeze responses when experiencing a fearful or traumatic event.

Drawing upon this parallel alone could allow youths who have experienced a traumatic event to join with an object that has the same understanding of what it feels like to live in a world where they always have to be alert, cautious, and/or hyper-vigilant to survive (Vidrine, Owen-Smith, & Faulkner, 2002). Karol (2007) elaborates on this parallel by exploring how "the horse is also a vulnerable creature and so serves as an apt companion for a child overwhelmed by his or her own sense of vulnerability and imperfections" (p. 81).

Knapp (2013) asserts that, "understanding the predator/prey relationship is key to understanding why horses do what they do. Interestingly, it's also part of what makes horses effective as therapy animals; the horse's innate ability to detect incongruency (shifts, changes, conflicting information all constitute a kind of incongruency) makes him or her ideal for recognizing it in the client during session" (p. 19). Due to the horse's natural hyper-vigilant disposition, it reacts and responds to a client's behavior, actions, and internal states in a very honest and sincere way. Those honest and sincere reactions are what assists clients in recognizing the problems they create in the relationship with the horse and others (Jobe, Shultz-Jobe, & McFarland, 2013, p. 69). As stated earlier, a horse cannot be deceived in the therapy session because its biological programming necessitates that it be keenly attuned to a human's verbal and non-verbal communication (Frewin & Gardiner, 2005). The horse's ability to accurately reflect and attune to the client's behaviors, actions, and internal states provides the client with an opportunity to explore and understand what is really going on inside his or her internal world. Brandt (2004) asserts, "horses, too, are thinking, emotional, decision-making beings who, like humans, develop ways to communicate their subjectivity to their human partners" (p. 307). The communication that manifests within the relationship can provide clients with an opportunity to see how their trauma-related symptoms are not only affecting themselves, but another living being. The insight gained from the experiential client-horse relationship allows clients to learn new ways of communicating.

Horses also provide physical touch, rhythm, body-to-body experience, attunement, nonverbal communication, and preverbal/primitive experiences in the EAP session. These are other essential components that may make EAP programs successful with youths who have experienced trauma (Karol, 2007). Norton, Ferriegel, & Norton (2011) state that "trauma experienced during childhood effects brain functioning that is inaccessible to verbal recall. Trauma memories are observed in children's habitual and sporadic body movements. These repeated somatic expressions and affective states activate somatic disorders and traumatic traits" (p. 138). The experiential nature of EAP allows clients' habitual and sporadic body movements associated with their trauma memories to manifest in the session. Since the horse is naturally attuned to the client it will pick up on client's body movements and will react and respond to the client in the same body-based way. Through a wide array of movements, with various parts of their bodies, horses also communicate their wants and needs with their bodies (Brandt, 2004, p. 308). The intersubjective, nonverbal, body-based communication that manifests within the client-horse relationship serves as another possible tool that could provide trauma clients with insight and feedback regarding their traumatic experiences.

Trotter (2012) asserts, "through their body language, equines give immediate feedback to clients on how they are functioning and handling their feelings. This feedback helps clients learn how to pay better attention to the connection between their body and mind so they can inhabit their body in a new way" (p. 41). Since a majority of a horse's communication is through its body, it is acutely attuned to a client's body movements. This attunement brings awareness to clients' repeated somatic expression and affective states that may currently be out of their own

awareness. A child's traumatic memories can be explored and worked through in the EAP session because the horse will always react and respond to the client's habitual and sporadic body movements. The horse's reactions and responses to the client's nonverbal, body-based communication also serves as an effective tool for building a client's insight because "a client's interpretation of a horse's movement, behaviors, and reactions determines the meaning of the metaphor and, as such, provides a portal for the resolution of unfinished business by bringing forth- and addressing – transference reactions in the here-and-now of therapy" (Klontz et al., 2007, p. 259).

Rhythm and touch are additional examples of preverbal, body-based experiences that a horse naturally provides in the EAP session (Karol, 2007, p. 85). Perry (2009) asserts that rhythm and touch are also essential components in the neurobiological recovery of trauma. He states,

An overanxious, impulsive, dysregulated child will have a difficult time participating in, and benefiting from, services targeting social skills, self-esteem, and reading, for example. The field of restorative neurology has for many years emphasized the positive impact of repetitive motor activity in cognitive recovery from stroke. The principle suggests that therapeutic massage, yoga, balancing exercises, and music movement, as well as similar somatosensory interventions that provide pattered, repetitive neural input that would likely diminish anxiety, impulsivity, and other trauma-related symptoms that have their origins in dysregulation of those systems. (Perry, 2009, p. 243)

Horses can provide somatosensory experiences within the EAP session, and can naturally equip the trauma client with patterned, repetitive, rhythmic movements. Karol (2007) asserts, "preverbal experiences are the foundation of a sense of self, and often when an adult or child is suffering from trauma or an extremely stressful situation, he or she will look for tactile and rhythmical comfort so as to keep from feeling further disorganization" (p. 85). Horses can provide this natural tactile and rhythmical comfort to the trauma client through horseback riding

and/or brushing/stroking the horse. This patterned, repetitive, rhythmic movement can comfort the trauma client and can possibly alleviate the internal disorganization the client might feel.

Through touch, rhythm, and mind-body interactions, horses also serve as an attachment object for youths who have experienced trauma (Yorke, 2010, p. 565). Vidrine et al. (2002) assert that touch and rhythm are some of the core components that characterize and develop human-infant relationships and attachments. These components are also what characterize the client-horse relationship. Rhythm is theorized to be one of the first experiences of the developing child, and the use of EAP is suggested by Lentini and Knox (2009) "to build up 'body-identity' and help with correcting pre-verbal dialogue" (p. 53). They go on to state, "horses may interact with the individual in an appropriate and physical way that would not be possible for the therapist" (Lentini & Knox, 2009, p. 53).

Throughout this section, I have tried to explore the role horses play in the EAP session. I have also tried to explain how horses could serve as modulators of trauma for youths who have experienced trauma. Throughout this section, research has suggested that horses can provide the trauma client with somatosensory, body-based, preverbal experiences that the therapist alone cannot. The more we learn about the neurobiological impacts trauma has on youth, the more we can begin to theorize on how the field of EAP could serve as an effective treatment intervention for youths who have experienced trauma.

What Makes A Treatment Intervention Trauma-Informed?

Before we can begin to discuss trauma-informed practices, I think it is essential to define trauma. Trauma is a single or repeated event that threatens or causes harm to a youth's psychological or physical well-being (Glaser, 2000). Traumatic events can be witnessed or experienced and can occur in a multitude of settings, such as the home, school, and community

(Boxer & Sloan-Power, 2013; Finkelhor, Turner, Ormrod, Hamby, & Kracke, 2009; National Child Traumatic Stress Network [NCTSN], n.d.a). Trauma affects youths on a physiological, psychological, neurodevelopmental, emotional, and behavioral level, and can adversely compromise their short and long-term mental health and developmental functioning (NCTSN, n.d.b; Boxer & Sloan-Power, 2013; Yorke, 2010; Glaser, 2000). While understanding how trauma adversely impacts youth is essential in the development of a trauma-informed treatment intervention, for the purpose of this section and study, I will give a brief overview of trauma-informed therapeutic interventions and practices for youths who have experienced trauma.

In today's age, one cannot fully grasp the impact trauma has on an individual without understanding the neurobiology of trauma. During the 1990s, the field of neuroscience enhanced the world's understanding of how trauma effects the mind and body, and since that time, the majority of trauma-informed interventions that have been developed for youths have incorporated the knowledge that neuroscience has revealed (Steele & Malchiodi, 2012, p. 3). The field of neurobiology has consistently revealed that trauma primarily affects a youth's sensory processes (Perry, 2009; Glaser, 2000). Due to this information, "trauma-informed care must engage children and adolescents in sensory, neurosequential experiences to help restore a sense of safety and bring about a renewed sense of empowerment" (Steele & Malchiodi, 2012, p. xix).

A neurosequential model of therapeutics applies the findings and knowledge associated with the neurobiology of trauma into the clinical work being done (Perry, 2009, p. 248). By applying this unique perspective to the clinical picture, therapists gain a greater understanding of their clients' developmental history and therapeutic needs because they have an understanding of how trauma affects the brain; which will inherently affect clients' functioning. Today, trauma-informed practices are based upon the research and knowledge we now have on the neurobiology

of trauma and how it affects the biological, physiological, neurological, and psychological functioning of the client (Steele & Malchiodi, 2012, p. 19)

Steele & Malchiodi (2012), in their book *Trauma-Informed Practices with Children and Adolescents*, outline 10 best practices that should be included in trauma-informed care. The 10 best practices of trauma-informed care should include the following:

- 1). Restore a sense of safety, empowerment, and self-regulation (Bath, 2008; Briere & Scott, 2006; Perry & Szalavitz, 2006; Greenwald, 2005).
- 2) Apply trauma-informed assessment through an understanding of neurosequential development and sensory-based trauma reactions.
- 3) Capitalize on interventions that address the right hemisphere of the brain (Gil, 2006).
- 4) Develop trauma-informed relationships between child clients and therapists, parents/caretakers, teachers, and other helping professionals and significant adults to establish positive attachment and improve interpersonal skills.
- 5) Create trauma-informed environments that support internal locus of control, positive social interaction, safety, and empowerment.
- 6) Promote trauma integration to help individuals reach a new meaning for trauma event and capability to manage trauma reactions (Steele & Raider, 2001).
- 7) Encourage posttraumatic growth and resiliency (Malchiodi, Steele, & Kuban, 2008) and positive affective enhancement (Cook, Spinazzola, Ford et al. 2005).
- 8) Recognize that no one intervention fits every situation and that in the course of intervention, trauma integration results from the timely and developmentally appropriate application of sensory-based, somatic, cognitive, and behavioral approaches and practices.
- 9) Develop and include interventions that respect and support cultural diversity.
- 10) Empower children and adolescents and their families/caretakers to become active participants in intervention and programming. (p. 19-20)

This list has clearly incorporated the current research and knowledge we now have on the neurobiology of trauma and how it affects the biological, physiological, neurological, and psychological functioning of the client. Today's trauma-informed therapeutic interventions need

to incorporate all of these components if they intend to create an accurate and effective treatment plan that alleviates clients' symptoms associated with their trauma.

Spirit Reins & Natural Lifemanship's ® TF-EAP TM Model

Spirit Reins is an outpatient EAP agency that provides trauma-informed therapeutic services to children and families. They offer a variety of counseling services, but the focus of their work is to serve children who have experienced abuse, neglect, and/or other traumatic events. The agency's mission is to transform the lives of children and families through trauma-informed therapy services, training, and research (Spirit Reins, n.d.b). In 2010, Spirit Reins adopted Natural Lifemanship's ® TF-EAP TM model to better service their population's needs (Spirit Reins, n.d.c). Spirit Reins provides individual, group, and family therapy. Overall, their therapeutic services consist of three main components: Rhythmic Riding TM, Relationship Logic TM, and Strengthening the Family (Spirit Reins, n.d.c). These three components are essential to the work that is done at Spirit Reins and serve as the building blocks that "promote healing, emotion regulation, impulse control, and relationship skills such as building trust, reciprocity, and taking responsibility" (Spirit Reins, n.d.a).

Natural Lifemanship's ® TF-EAP TM model is based on the neuroscience of brain development, and how traumatic events affect the brain and the ability to form healthy relationships (Spirit Reins, n.d.a). On their website, they describe their TF-EAP TM model as one that "utilizes horse physiology to regulate human physiology, and horse psychology to heal human psychology" (Natural Lifemanship, n.d.). Natural Lifemanship ® serves as a trauma-informed therapeutic treatment model because it incorporates current neurobiological and neuropsychiatric research and knowledge into the work being done. The two main components of the model include Rhythmic Riding TM and Relationship Logic TM. These two components

employ somatosensory, body-based, preverbal, neurosequential therapeutic activities and experiences to regulate a child's neurological functioning and decrease his or her maladaptive psychological, emotional, behavioral, and/or relational functioning.

In an effort to accurately convey Natural Lifemanship's ® Rhythmic Riding TM and Relationship Logic TM components, I have included a brief dialogue from Spirit Reins' (n.d.c) Services Overview handout. When describing Rhythmic Riding TM, Spirit Reins asserts,

Rhythmic Riding utilizes horseback riding and music to provide the rhythmic, patterned, repetitive movement required to help gain self-awareness and develop better impulse control. Growing up in an environment of fear, stress and/or chaos causes a child's brain to have an overdeveloped "fight or flight" response to stress which leaves them with the inability to control their impulses, thoughts and behavior enough to function in school and at home. But control is exactly what they need to be successful in riding a horse and in other real life situations. In this program, children learn breathing exercises, exercises to improve focus, progressive muscle relaxation and exercises that help them learn to relax and ease their fears while learning to be more aware of their emotional state. They get to practice each of these new skills in the moment when they feel scared, stressed or frustrated. Once they are able to regain control of themselves, they are able to be successful with the horse. These successes quickly transfer from the arena to their everyday world. (Spirit Reins, n.d.c, para 3)

When describing Relationship Logic TM, Spirit Reins asserts,

In Relationship Logic, clients are given an opportunity to build a relationship with a horse they choose. Children who have experienced trauma learn to build relationships based on fear, control and/or manipulation. Most of our clients will inadvertently choose a horse that will treat them the way they are used to being treated or that they believe they can treat in the same manner they treat other people. Because horses have a unique ability to react to human behavior in much the same way as humans would, they are able to help our clients understand how their behavior affects the relationship. A horse will not give love and acceptance until the client learns to build a relationship that fosters love and acceptance, the same way they must in human relationships. Once clients figure out the changes that they need to make to build a good relationship with the horse, they recognize that these same changes can be applied to relationships with their friends, family, teachers, and others. (Spirit Reins, n.d.c, para 4)

With these program descriptions, it is evident that Spirit Reins and has tried to create a traumainformed EAP agency by implementing Natural Lifemanship's ® TF-EAP TM model. Their work with children, adolescents, and families closely aligns with the current research literature regarding trauma-informed practices for children and adolescents, and they have an understanding of the neurobiology of trauma. Rhythmic Riding TM and Relationship Logic TM incorporate the central ingredients needed to create an effective trauma-informed therapeutic intervention. The two components within Natural Lifemanship's ® TF-EAP TM model incorporate somatosensory, body-based, preverbal, neurosequential therapeutic activities and experiences to regulate a child's neurological functioning and decrease his or her maladaptive psychological, emotional, behavioral, and/or relational functioning. The unique aspect to this trauma-informed treatment approach is that the horse is seen as the foundational piece that transforms and heals the trauma client.

Merging the Gap Between EAP Practices & Trauma-Informed Practices

The field of EAP is diverse and multifaceted. This literature review has tried to explore the field in all its complexity by reviewing EAP history, theory, intervention effectiveness, and the role of the hose. While the field still lacks strong, methodologically sound research studies to legitimize its efficacy, the field is progressing. Throughout this literature review I have also tried to investigate the field of EAP through a trauma-informed lens to see if it is possible for this field to serve as a trauma-informed therapeutic intervention for youths who have experienced trauma. By attempting to connect the dots between EAP and trauma-informed practices I hope readers will gain a greater understanding of how the two could possibly bridge together; merging the gap that currently exists.

While biases are inherent in every research project, I do believe the research literature has effectively conveyed how trauma-informed EAP programs could serve as an effective treatment intervention for youths who have experienced trauma. Horses can provide trauma clients with

somatosensory, body-based, preverbal, neurosequential therapeutic activities and experiences that regulate their neurological functioning and decrease their maladaptive psychological, emotional, behavioral, and/or relational functioning. While horses provide trauma clients with a parallel understanding of what it feels like to always be in a hyper-vigilant state, they also offer trauma clients a transformative opportunity to create healthy, safe, and reciprocal relationships.

Perry (2009) asserts that "... relational interactions with safe and familiar individuals can buffer and heal trauma-related problems..."(p. 248). A horse can provide these safe and familiar relational interactions for the trauma client. Steele & Malchiodi (2012) explain that "practices that address individuals' 'survival brains' through sensory and somatic (body-oriented) experiences, and enhance self-regulation, trauma integration, and healthy relationship and environments are central to trauma-informed care" (p. xix). A horse naturally understand this reality and can provide the trauma client with a visual and physical understanding of what it means to live in "survival brain" mode. Through the client-horse relationship, trauma clients gain insight and understanding on how their own trauma has created their "survival brain" mode.

After this insight and understanding is gained, through the client-horse relationship, they can begin to work on the necessary skills needed for self-regulation, trauma integration, and building healthy relationships and environments.

By combining the knowledge and research we now have on the neurobiology of trauma, we can begin to see that trauma-informed EAP therapeutic interventions are possible. What makes this field unique is that the horse alone may be the sole cause of what makes a trauma-informed EAP model successful and effective. Yorke (2010) has shed some light onto this area by looking at the client-horse relationship through a trauma-informed lens. She hypothesized that the client-horse relationship, and the interactions that manifest within this relationship, may be

the core component to what makes EAP practices an effectively trauma-informed therapeutic intervention for youths who have experienced trauma.

This chapter has attempted to bridge the gap that currently exists between the field of EAP and trauma-informed practices for youths who have experienced trauma. Research literature suggests that the field EAP already incorporates several components that are needed for an effective trauma-informed treatment intervention, and highlights how this treatment intervention might be effective with youths who have experienced trauma. The next chapter within this research study will describe the methods used to measure the effectiveness of Natural Lifemanship's ® TF-EAP TM model. The first two sections within Chapter III reviews the research purpose, method, and design. The third, fourth, and fifth sections provide information on the sampling frame and characteristics, data collection methods, and data analysis. The sixth section highlights research limitations and biases.

CHAPTER III

Methodology

Research Purpose

Over the last eighteen years, numerous research studies have tried to convey the effectiveness of EAP. Yet, despite the increase in scholarly research and investigation, the field still lacks sounds empirical research studies that can prove its validity, generalizability, and effectiveness (Selby & Smith-Osborne, 2013; Vidrine et al., 2002; Schultz et al., 2007). Selby and Smith-Osborne (2013), in their systematic review of therapies and interventions involving horses, reported "... to date no randomized clinical trials, considered the criterion standard in research methodology, have been conducted" within the field of EAP (p. 421). While they did assert that sound, rigorous research evidence has begun to emerge in the last few years, it is evident more work needs to be done to establish and promote the field's credibility, funding, availability, and accessibility (Selby & Smith-Osborne, 2013, p. 421). Thankfully, though, with organizations such as the Horses and Humans Research Foundation, EAP providers and researchers are now given support, promotion, and funding to create scientific research studies that meet the criterion standard in research methodology (Horses & Humans Research Foundation [HHRF], n.d.b).

With this information in mind, we can begin to understand why there is a lack of information, literature, and research on how field could possibly serve as an effective therapeutic intervention for youths who have experienced trauma. This is why this research study is so

experienced trauma need to be evaluated in order to safeguard the population they serve. Youths who have experienced trauma are a very vulnerable population. They need and deserve therapeutic services that address more than just the emotional aspect of their trauma. Through quantitatively measuring the effectiveness of Natural Lifemanship's ® TF-EAP ™ model, I hope to shed some light on how this trauma-informed EAP model, and others like it, could serve as a beneficial, alternative, therapeutic intervention for youths who have experienced trauma. The main purpose of my research study is to measure the effectiveness of a specific trauma-informed EAP model. The second purpose of my research study is to offer insight into how we can bridge the gap that currently exists between EAP, trauma-informed practices, and youths who have a trauma history. Hopefully, the findings in this research study can lay a small foundation to the future evaluation and research that needs to be conducted on the field of EAP and its ability to serve as an effective trauma-informed therapeutic intervention for youths who have experienced trauma.

Research Method & Design

Through a quantitative lens, I measured the effectiveness of Natural Lifemanship's ® TF-EAP TM model by using secondary data collected on behalf of Spirit Reins, the organization currently implementing Natural Lifemanship's ® TF-EAP TM model. With an experimental pre and post-test research design, data analysis was conducted on 40 youths' Child and Adolescent Functional Assessment Scale (CAFAS) total scores to determine if Natural Lifemanship's ® TF-EAP TM model was effective in reducing the psychological, emotional, and/or behavioral problems in youth with a trauma history.

Initially, my research method and design was set up to measure the pre and post-test CAFAS scores of participants who had been enrolled in Spirit Reins programming for three months, but due to the lack of participants who fit the inclusion criteria, I had to expand my inclusion criteria to all participants who were enrolled in Spirit Reins programming and had not been previously used in a past research study. My adjusted sample frame now includes participants who had been enrolled in Spirit Reins programming anywhere from 3 to 15 months.

My use of secondary data in a pre and post-test research design is unique to the quantitative EAP research studies I have read thus far. While this aspect of my research study is unique, it does incorporate key themes from past quantitative research studies measuring EAP effectiveness. First, my use of a pre and post-test research design mimics many of the quantitative studies measuring EAP effectiveness (Ewing et al., 2007; Kaiser, Smith, Heleski, & Spence, 2006; Klontz et al., 2007; Schultz, 2005; Trotter, Chandler, Goodwin-Bond, & Casey, 2008). My use of the CAFAS is another unique aspect to this research study and will hopefully assist in producing a sound piece of methodological research due to the wide use and research of the CAFAS measurement tool. To date, I have yet to find any research literature measuring EAP effectiveness with the CAFAS measurement tool.

The CAFAS is a multidimensional, clinician-completed rating scale that measures and assesses the degree of functional impairment in youths with emotional, behavioral, psychiatric, and/or substance abuse problems. Functional impairment scales are commonly used in assessing the functioning of youths and often assist in the development of a client's treatment plan by monitoring their progress (Bates, Furlong, Green, 2006). Although many articles advocate the use and function of clinician-completed rating scales, these measurement tools have received some scrutiny regarding their psychometric weaknesses, susceptibility to rater bias, and

ambiguity in the rating process (Bates et al., 2006, p. 683). In order to reduce the limitations and biases in previous unidimensional, clinician-completed rating scales, researchers began developing multidimensional rating scales such as the CAFAS. These new, multidimensional scales consist of "multiple prompts within and across several domains of functioning" and "indicate[s] the presence or absence of discrete behaviors and/or observable conditions" (Bates et al., 2006, p. 683). Several studies describe the CAFAS as being a reliable, valid measurement tool (Hodges, n.d.; Hodges, Doucette-Gates, & Liao, 1999). Yet, Bates et al. (2006) argues the CAFAS "employ[s] such a seemingly theoretical incompatible mix of scoring strategies, a practice that appears to, at the least, raise questions about its content and, thus, construct validity" (p. 683). This is important to keep in mind, especially when looking at the limitations of this study, because as Bates et al. (2006) asserts, "a scale's content validity directly affects the validity of clinical inference that can be drawn from what it scores" (p. 684).

Aside from these limitations, though, Hodges et al. (1999) states that "reliability studies have demonstrated satisfactory internal consistency, test-retest reliability, and interrater reliability" of the CAFAS (p. 110). Bates et al. (2006) asserts that numerous studies have provided support for the external validation of the CAFAS and that consistency has been proven in the relationship between CAFAS impairment scores and other indicators of problem behavior and psychopathology (p. 685). Despite possible limitations, the CAFAS is still seen as a "robust, psychometrically sound" measurement tool (Hodges, n.d., p. 1) as evidenced by its continual use in federal and local programs on a local, state, and national level (Bates et al., 2006, p. 684).

In order to generate a sample that had a trauma history I implemented the Adverse Child Experiences (ACE) score. Initially, I had included the ACE score to serve as inclusion criteria to determine which youth had experienced trauma, but due to the limited sample size this inclusion

criteria generated, Spirit Reins' Clinical Director and I determined to remove this inclusion criteria to generate a larger sample. In order to generate a sample of participants who did fit my trauma history inclusion criteria, Spirit Reins' Clinical Director and I determined to include participants who had an ACE score and/or a history of intrauterine trauma. Both the ACE score and history of intrauterine trauma served as the new inclusion criteria for trauma history.

Participants' ACE score was generated from the ACE Score Questionnaire located in Appendix D, and participants' history of intrauterine trauma was self-reported. Both the ACE score and intrauterine trauma history were gathered during participants' initial assessment, which Spirit Reins' Clinical Director has access to.

Although my use of the ACE score changed, it is important to outline why this score is still being included in the study. The ACE score is a measurement tool that evaluates a child's exposure to traumatic stressors such as childhood abuse, neglect, and household dysfunction that could impact a child's life (Center for Disease Control [CDC], 2014). Having this score in the study is still important because it provides readers and future researchers with important demographic information on participants' level of trauma exposure. My use of the self-reported intrauterine trauma history is also important because it is "... widely recognized that the exposure to an adverse fetal environment can have persisting effects on an individual's physiology and mental health..." (Schwarze et al., 2013, p. 1280). By incorporating participants' self-reported history of intrauterine trauma, I will be able to investigate the demographics of my sample and the degree to which my sample has experienced intrauterine trauma.

My research method and design faced several limitations due to the changes that needed to be made in order to generate a sample size that was big enough to perform quantitative statistical tests. The main limitations impacting my research method and design include: the lack

of a control group, the lack of an adequate sample size for quantitative analysis, and the lack of a consistent pre and post-test timeframe. The lack of a control group and adequate sample size decreases the validity, generalizability, and causality assumptions and conclusions I can draw regarding the effectiveness of Natural Lifemanship's ® TF-EAP TM model. Despite these limitations, thought, important findings were made about Natural Lifemanship's ® TF-EAP TM model.

Sample

To generate my sample, I used a nonprobability sampling strategy with purposive and convenience sampling. The use of nonprobability sampling aligned with current research literature on determining intervention effectiveness with a pre and post-test method (Selby & Smith-Osborne, 2013; Schultz et al., 2007; Ewing et al., 2007). Purposive sampling was needed since I was researching the effectiveness of a specific trauma-informed treatment modality and needed a sample reflecting a history of trauma. Convenience sampling was the only method by which I could generate my sample since I was using secondary data provided by Spirit Reins.

Initially, my sample frame included the following characteristics: youths between the ages of 5 and 17, who were ready to enroll, but had yet to receive treatment, in Spirit Reins programming, and who have an ACE score of three and above. Due to lack of participants this sample frame generated, I expanded my sample frame to include the following characteristics: youth between the ages of 5 and 17, who had a pre and post-test CAFAS score, who had either an ACE score of 1 and above or a history of intrauterine trauma, and who had not been used in any previous research studies.

With the adjusted sample frame, Spirit Reins was able to generate 45 participants who matched my sample criteria. During the final stages of data collection 5 participants had to be

removed from the sample because they either stopped attending Spirit Reins programming or did not have a completed CAFAS post-test. Therefore, my final sample consisted of 40 participants.

As for my sample's demographic makeup, 65% of participants were female and 35% were male. Their ages ranged from 5-17 with a mean age of 12. A majority of the participants, 52.5%, identified as Caucasian/White, followed by 22.5% identifying as Hispanic, 15% identifying as African American/Black, 7.5% identifying as Biracial, and 2.5% identifying as Asian. 92.5% of participants had an ACE Score of 1 and above with a mean score of 4, and 62.5% of participants had a history of intrauterine trauma. Participants' involvement in Spirit Reins programming ranged anywhere from a minimum of 3 months to a maximum of 15 months with the mean score of 9 months.

As I stated earlier, the number of participants in my sample frame serves as a limitation, but I do believe my findings highlight the effectiveness of Natural Lifemanship's ® TF-EAP TM model. There are also inherent biases in my sample due to my use of purposive sampling. All of the elements in my intended population were selected and represented in the sampling population. No ethical concerns arose while collecting my study sample. Spirit Reins generated the sample based upon my sample criteria, and I simply performed the data analysis on the secondary data they provided. No youth were harmed in this process. As stated earlier, CAFAS is a clinician-completed rating scale and did not require any participation on behalf of the participants for the CAFAS score to be generated. My use of secondary data did not require me to administer an informed consent form to conduct my research study, but an informed consent form was administered by Spirit Reins and signed by each participant and their legal guardian prior to their participation in Spirit Reins programming. My research project was reviewed and approved by Smith College School for Social Work (SCSW) Human Subjects Review (HSR).

My research project has met all ethical research standards, and has not imposed any harm on behalf of the research participants. You can find my SCSW HSR approval letter in Appendix A.

Data Collection Methods

All of the data used in this study was collected by 6 Spirit Reins clinicians. During each participant's initial assessment with Spirit Reins, several items were collected and generated. Clinicians completed a CAFAS assessment which required them to enter in pre-test CAFAS scores, demographic information, and an anonymous, de-identified primary ID for each participant via their secure, online CAFAS database. They were also responsible for administering the ACE score questionnaire and gathering information on each participant's intrauterine trauma history.

Spirit Reins clinicians were also in charge of completing post-test CAFAS scores on each participant, as well as, determining the sample population given my sample criteria. Once the sample was determined, and the pre and post-test CAFAS scores submitted, I was given a list of participants that fit my sample criteria. I was then given permission on behalf of Spirit Reins to access their secure, online CAFAS database to obtain each participant's demographic information and pre and post-test CAFAS scores for data analysis.

Using each participant's de-identified, primary ID, I entered in each participant's demographic information, CAFAS total and subscale scores, CAFAS severe impairments number, and months of Spirit Reins programming into an Excel document titled DATA. I was also sent an Excel document on behalf of Spirit Reins that included each participant's ACE score and their exposure to intrauterine trauma. I entered all of this information into the DATA Excel document. Once all of the data was collected, I sent the DATA Excel document to the Smith College School for Social Work Research Analyst for data analysis. All participants' information

in this Excel document was de-identified for research purposes and to safeguard the confidentiality of participants and Spirit Reins.

It is important to note that in order to generate a CAFAS score a clinician has to select items from eight life domains: At School, Home, in the Community, Behavior Towards Others, Moods, Self Harm, Substance Use, and Thinking. The items selected in the CAFAS reflect information that was collected during the initial clinical assessment (pre-test) and follow-up assessment (post-test). The items selected describe the youth's functionality, problematic behaviors, as well as strengths and goals (Hodges, n.d.). I have included a copy of the CAFAS questionnaire in Appendix C.

Data Analysis

Data analysis was conducted by the Smith College School for Social Work Research
Analyst. The school's research analyst imported my DATA Excel document into a Statistical
Package for the Social Sciences (SPSS) file, and then ran frequencies for all variables and
descriptive statistics for ratio level variables. Descriptive statistics were used to explore the
demographic characteristics of my sample population in an effort to explore the diversity of
Spirit Reins' population. Descriptive statistics were also generated because most of the EAP
research studies I have read do not do an adequate job at exploring the demographic
characteristics of their sample. Data analysis of my sample's demographic information was also
useful because I was able to explore if relationships existed between demographic characteristics
and intervention effectiveness.

My use of the following inferential statistics were used to analyze participants' pre and post-test CAFAS total scores, number of CAFAS severe impairments, months of programming, and trauma history: t-test, pearson's r, and oneway analysis of variance. The use of these

Statistics allowed me test my hypothesis regarding the effectiveness of Natural Lifemanship's ® TF-EAP TM model. My hypothesis suggested that Natural Lifemanship's ® TF-EAP TM model would be effective in reducing participants' post-test CAFAS total score. If a reduction in participants' CAFAS total scores occurred, my research study would prove Natural Lifemanship's ® TF-EAP TM model to be effective in reducing the psychological, emotional, and behavioral problems in youth with a trauma history. While the main focus of my research was to measure each participants pre and post-test CAFAS total score, the use of other inferential statistics assisted in determining the effectiveness of Natural Lifemanship's ® TF-EAP TM model.

Limitations & Biases

Throughout this chapter, I have mentioned several limitations within the methodology of my research study. My inability to generate a sample that shared a consistent pre and post-test timeframe impacted my ability to generalize findings. The lack of a control group and adequate sample size limited my study's ability to produce valid findings. There is also an inherent bias in my sample due to my use of purposive sampling. A majority of these limitations were caused by agency and personal restrictions that revolved around financial feasibility and staff availability. If Spirit Reins and I had an increased supply of financial supports and staff availability, then we could have possibly produced a piece of research literature with more valid and generalizable results.

It should also be noted that I am a horse enthusiast and personally believe that trauma-informed EAP programs and models could serve as an effective treatment intervention for youths who have experienced trauma. I have also received training in Natural Lifemanship's ® TF-EAP model. These personal biases, beliefs, and experiences could very well have impacted my

research study regarding the study's literature review, research design and findings. It should also be noted that I am researching an established EAP organization so my findings will have an impact on the organization as well.

Aside from these limitations and biases, though, my findings will be able to educate the field about the effectiveness of trauma-informed EAP programs and models, and can lay a foundation for the future work that needs to be done in the field. Hopefully, these findings will be helpful for future researchers measuring the effectiveness of trauma-informed EAP programs and models. These findings will also be able to attest to the effectiveness of Natural Lifemanship's ® TF-EAP TM model, which has the possibility to influence the future services that Spirit Reins provides. The following chapter will discuss and highlight the findings of this research study. There were several important findings in this study, and Chapter IV will discuss if Natural Lifemanship's ® TF-EAP TM model was effective in reducing the psychological, emotional, and/or behavioral problems in youth with a trauma history.

CHAPTER IV

Findings

The main purpose of this research study was to quantitatively examine if Natural Lifemanship's ® TF-EAP ™ model was effective in reducing the psychological, emotional, and/or behavioral problems in youth with a trauma history. The statistical analysis of pre and post-test CAFAS total scores was used to determine intervention effectiveness. My hypothesis suggested that participants post-test CAFAS total scores would be lower than their pre-test CAFAS total scores, thus, determining Natural Lifemanship's ® TF-EAP ™ model to be effective in reducing the psychological, emotional, and/or behavioral problems in youth with a trauma history. Findings supported this hypothesis.

A paired t-test was used to determine if differences existed between participants' pre and post-test CAFAS total scores. A significant difference was found (t (39)=5.40, p=.000). Participants mean pre-test CAFAS total score was higher (m=89.25) than their mean post-test CAFAS total score (m=53.50). A lower mean post-test CAFAS total score supports the hypothesis that Natural Lifemanship's ® TF-EAP TM model is effective in reducing the psychological, emotional, and/or behavioral problems in youth with a trauma history.

Participants pre-test CAFAS total scores ranged from 30 to 220 with 40% of participants having a CAFAS total score of 90 and above. Participants post-test CAFAS total scores ranged from 0 to 150 with 17.5 % of participants having a CAFAS total score of 90 and above. While analyzing the difference between participants' pre and post-test CAFAS total scores was the

main tool used to determine intervention effectiveness, other information collected on participants (i.e. CAFAS severe impairments number, months enrolled in Spirit Reins programming, and trauma history) proved relevant in evaluating Natural Lifemanship's ® effectiveness.

During the data collection phase, I collected each participant's pre and post-test CAFAS severe impairments number. A CAFAS severe impairment number ranges from 1 to 8. It indicates the number of life domains (out of eight possible domains) in which a youth had the highest score possible. The eight life domains are: School, Home, Community, Behavior Towards Others, Moods/Emotions, Self Harm, Substance Use, and Thinking. A paired t-test was used to determine if differences existed between participants pre and post-test CAFAS severe impairments number and a significant difference was found (t (39)=3.603, p=.001). Participants' mean pre-test CAFAS severe impairments number was higher (m=1.18) than their mean post-test CAFAS severe impairments number (m=.35). A lower mean post-test CAFAS severe impairments number supports the hypothesis that Natural Lifemanship's ® TF-EAP TM model was effective in reducing the psychological, emotional, and/or behavioral problems in youth with a trauma history.

One limitation within the research study was that I could not generate a sample that shared a consistent pre and post-test timeframe. As mentioned earlier, my original study intended to measure the CAFAS total scores of participants who had been enrolled in Spirit Reins programming for 3 months. Due to a lack of participants that fit this inclusion criteria, I had to change my sample characteristics to include participants who had been enrolled in Spirit Reins programming from 3 to 15 months. While changing this aspect of my sample decreased the generalizability of my research findings, it provided the opportunity to examine whether the

length of program enrollment impacted participants' post-test CAFAS total scores. The evaluation of this was approached three different ways.

First, a CAFAS change score was created for each participant. A CAFAS change score measures the change in CAFAS total score for each participant from pre to post-test. Thus, negative change scores indicate a decrease in CAFAS score, which indicates an improvement following the program. The more negative this change score is, the larger the improvement in CAFAS total score. A Pearson Correlation was used to determine if there was a relationship between the number of months enrolled in Spirit Reins programming and participants CAFAS change score. No significant correlation was found. Second, a three category variable for months was created (1=3-6 months, 2= 7-10 months, 3= 11-15 months) and a one-way analysis of variance was used to determine if there was a difference in CAFAS change score by the number of months enrolled in Spirit Reins programming. No significant difference was found. Finally, the third statistical test used the post-test CAFAS total score and the original month variable. A Pearson correlation was used to determine if there was a relationship between the number of months enrolled in Spirit Reins programming and participants' post-test CAFAS total scores. A significant weak negative correlation was found (r=-.336, p=.034). This negative correlation suggests that as months in the program increased participants' post-test CAFAS total score decreased.

Since the focus of my research study revolves around youths who have experienced trauma, I wanted to see if participants' trauma history had an impact on their post-test CAFAS total scores. I used two variables to explore this possible statistical phenomenon. The first was ACE scores and the second was intrauterine trauma history.

When looking at participants' ACE score, I wanted to see if participants with a higher ACE score had the same degree of reduction in their post-test CAFAS total scores as those with a lower ACE score. To determine this, a two category variable was created: ACE score low (0-4) and ACE score high (5-9). Then a t-test was used to determine if differences existed in CAFAS change score by ACE score group (high versus low). No significant difference was found. Then the original ACE score was used and a Pearson Correlation was run to determine if there was a relationship between participants' ACE score and their post-test CAFAS change score. No significant correlation was found.

I also wanted to measure whether there was a difference in CAFAS total score by whether participants has a history of intrauterine trauma. First, a t-test was run to determine if a difference existed between participants' post-test CAFAS total score by intrauterine trauma history. No significant difference was found. Then, a second t-test was run to determine if there was a difference in CAFAS change score by intrauterine trauma history and a significant difference was found (t(17.57)=2.840, p=.011). Participants who had a history of intrauterine trauma had a lower mean CAFAS change score (m=-20.4) than participants without a history of intrauterine trauma (m=-61.33). This suggests that those with a history of intrauterine trauma changes less than those without a history of intrauterine trauma.

Overall, my findings suggest that Natural Lifemanship's ® TF-EAP TM model is effective in reducing the psychological, emotional, and behavioral problems in youth with a trauma history. Participants' post-test CAFAS total scores had a lower mean score than their pre-test CAFAS total scores. There was a decrease in participants' CAFAS severe impairments number, and findings suggest that as months in Spirit Reins programming increased participants' post-test CAFAS total score decreased. While the overall findings suggest that Natural Lifemanship's ®

TF-EAP TM model is an effective trauma-informed therapeutic intervention for youths who have experienced trauma, more research needs to be done due to the limitations regarding valid and generalizable results. The importance of these findings will be discussed in the following chapter. Chapter V provides an overview of the limitations currently existing within the field and within this research study. This chapter will discuss how the research findings impact the field of EAP and social work, and will offer suggestions on future research.

CHAPTER V

Discussion

Limitations in EAP

Over the last eighteen years, interest, research, and funding for EAP programs and models has steadily increased. Despite this increase, the field still lacks good quality, empirical research attesting to its effectiveness, validity, and theoretical implications (Knapp, 2013; Selby & Smith-Osborne, 2013). There is also less information, literature, and research on how this field could possibly serve as an effective therapeutic intervention for youths who have experienced trauma. As stated earlier, I have yet to find a research study exploring, let alone measuring, the effectiveness of a trauma-informed EAP program or model for youths who have experienced trauma. The purpose of this research study was to provide some insight into this area and attempted to bridge the gap that currently exists between EAP, trauma, and youths.

Important Findings

The findings from this research study laid a foundation to the future evaluation and research that needs to happen regarding the effectiveness of trauma-informed EAP programs and models and their ability to effectively impact youths who have experienced trauma. Findings from this research study support my hypothesis regarding Natural Lifemanship's ® effectiveness. The decrease in participant's post-test CAFAS total scores support my hypothesis that Natural Lifemanship's ® TF-EAP TM model is effective in reducing the psychological, emotional, and behavioral problems in youth with a trauma history. Additional findings, such as

the decrease in participants' CAFAS severe impairments number, also confirm Natural Lifemanhip's ® effectiveness. Findings on participants' enrollment in Spirit Reins programming suggest that as months in Spirit Reins programming increased, participants' post-test CAFAS total score decreased.

Research Limitations

Comparing and contrasting my findings from previous research studies is difficult due to the lack of research studies examining and measuring the same variables. This research study is the first of its kind. My incorporation of qualitative data may have been more useful in exploring the effectiveness of Natural Lifemanship's ® TF-EAP TM model, but due to agency and personal limitations, that type of data collection was not possible. Purposive sampling, participants' lack of a consistent pre and post-test timeframe, my study's lack of a control group, and adequate sample size served as a limitation. Personal biases regarding the effectiveness of EAP programs could have also impacted the findings in this study, but aside from these limitations, findings are important because the field lacks information in this area. A major strength in this study is that it has begun the dialogue regarding trauma-informed EAP services and their efficacy with youths who have experienced trauma.

Relevance to the Field of Social Work

These finding are also important to the field of social work. The field of prides itself on providing competent and appropriate services to others. Youths who have experienced trauma are a vulnerable population and deserve competent and appropriate services that address their needs. Findings from this report are important to the field because it will increase social workers' knowledge on effective, trauma-informed therapeutic interventions for youths who have a trauma history. The field of social work could greatly benefit from the knowledge gained from this

research study and findings suggest that Natural Lifemanship's ® TF-EAP ™ model serves as an effective trauma-informed treatment intervention for youths who have experienced trauma.

Future Research

Further research in trauma-informed EAP programs and models needs to be conducted for the field to legitimize itself as an effective, trauma-informed therapeutic intervention for youths who have experienced trauma. Future research studies need to implement good quality, methodologically sound research studies that can really attest to the effectiveness, validity, and theoretical implications of the field. Randomized clinical trials need to be incorporated into future research studies to eliminate the serious limitations and biases that currently exist within the research literature thus far. Once these methodology limitations are addressed, I believe the field will be able to establish itself as a legitimate and effective, trauma-informed therapeutic intervention.

Conclusion

Trauma-informed EAP programs and models provide clients with a new understanding of their trauma history and symptoms. Through the client-horse relationship, clients can engage in somatosensory, body-based, preverbal experiences that the therapist alone cannot provide. This unique and alternative treatment modality cultivates a space and opportunity for the trauma client to learn new ways of communicating in order to create a healthy, safe, and reciprocal relationship with the horse and eventually others. The experiential insight that is gained from the client-horse relationship, may be the sole component of what makes trauma-informed EAP programs an effective therapeutic intervention for youths who have experienced trauma.

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APPENDIX A

Smith College School for Social Work Human Subjects Review Approval Letter



School for Social Work Smith College Northampton, Massachusetts 01063 T (413) 585-7950 F (413) 585-7994

January 4, 2014

Nakita Dziegielewski

Dear Nakita,

You did a very nice job on your revisions. Your project is now approved by the Human Subjects Review Committee.

Please note the following requirements:

Consent Forms: All subjects should be given a copy of the consent form.

Maintaining Data: You must retain all data and other documents for at least three (3) years past completion of the research activity.

In addition, these requirements may also be applicable:

Amendments: If you wish to change any aspect of the study (such as design, procedures, consent forms or subject population), please submit these changes to the Committee.

Renewal: You are required to apply for renewal of approval every year for as long as the study is active.

Completion: You are required to notify the Chair of the Human Subjects Review Committee when your study is completed (data collection finished). This requirement is met by completion of the thesis project during the Third Summer.

Congratulations and our best wishes on your interesting study.

Sincerely,

Elaine Kersten, Ed.D.

Co-Chair, Human Subjects Review Committee

CC: Colette Duciaume-Wright, Research Advisor

APPENDIX B

Agency Approval Letter

September 20, 2013

Smith College School for Social Work Lilly Hall Northampton, MA 01063

To Whom It May Concern:

Spirit Reins and Natural Lifemanship gives permission for Nakita Dziegielewski to locate her research in this agency and with this specific therapeutic modality. We do not have a Human Subjects Review Board and, therefore, request that Smith College School for Social Work's (SSW) Human Subject Review Committee (HSR) perform a review of the research proposed by Nakita Dziegielewski. Spirit Reins and Natural Lifemanship will abide by the standards related to the protection of all participants in the research approved by SSW HSR Committee.

Sincerely,

Bettina Shultz-Jobe Natural Lifemanship

Founder

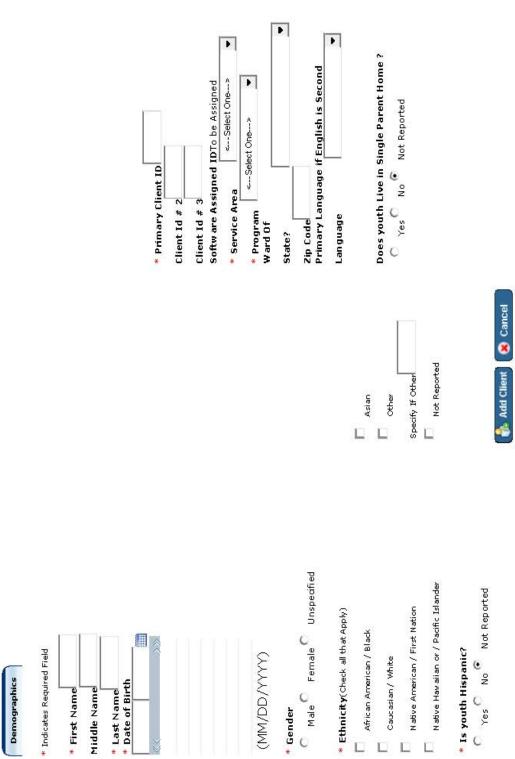
Rhonda Smith Spirit Reins

Founder & Executive Director

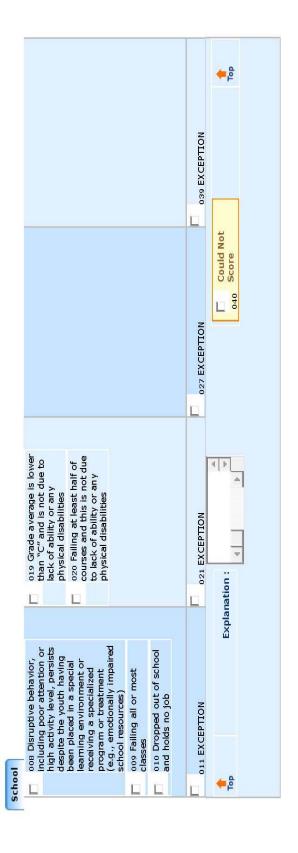
APPENDIX C

Child and Adolescent Functional Assessment Scale (CAFAS) Clinician-Completed Questionnaire

The following pages include the clinician-completed, CAFAS questionnaire. A client's CAFAS total and subscale scores, as well as, their CAFAS severe impairments number is generated by this questionnaire. The demographic information page and caregiver questions are also included.



	2						
	Severe Impairment		Moderate Impairment		Mild Impairment		Minimal Or No Impairment
	due to behavior that		012 Non-compliant behavior which results in	□ 022 beh	022 Non-compliant behavior results in teacher	п	oza Reasonably comfortable and competent
	occurred at school or on job during the rating period during the rating period refuse to attend)		persistent of repeated disruption of group functioning or becomes functioning to authority faures	e d d	or immediate supervisor bringing attention to problems or structuring		in relevant roles 029 Minor problems satisfactorily resolved
П	002 Expelled or equivalent from school due to		other than classroom teacher (e.g., principal)	avo diffi	avoid predictable difficulties, more than other		030 Functions satisfactorily even with distractions
	behavior (e.g., multiple suspensions, removed from		because of severity and/or chronicity	youth	youth 023 Inappropriate behavior		031 School grades are average or above
	community school, placed in an alternative school) oos Judged to be a threat		0.13 Inappropriate behavior which results in persistent or repeated disruption of group functioning or	nimi Drini	results in teacher or immediate supervisor bringing attention to problems or structuring		032 Schoolwork is commensurate with ability and youth is mentally retarded
	aggrees potential (i.e., resulting from youth's actions or statements); monitoring or supervision		becomes known to authority figures other than classroom teacher (e.g., principal) because of	youth's avoid p difficul youth	youth's activities so as to avoid predictable difficulties, more than other youth		033 Schoolwork is commensurate with ability and youth is leaming disabled
	needed 004 Harmed or made		severity and/or chronicity 014 Frequently truant (i.e.,	Sch	024 Occasionally disobeys school rules, with no harm		ost Schoolwork is commensurate with ability
	serious threat to hurt a teacher/peer/co-worker/supervisor		two weeks or for several consecutive days)	MOI	more than other youth		and yourn is a slow learner 035 Schoolwork is commensurate with ability
	oos Unable to meet minimum requirements for behavior in classroom (either in specialized		ous Frequent absences from school (i.e., approximately once every two weeks or for several	incl to p acti	including behaviors related to poor attention or high activity level, are present but are not disruptive to		and youth has a leaming impairment due to maternal alcohol or drug use
	classroom or regular classroom with specialized services in public school or equivalent) without special	L	consecutive days) due to impairing behavior and excluding truancy or physical illness on At work, missed days.	mai clas able satie	the classroom (can be managed in the regular classroom, with the youth able to achieve satisfactorily)		036 In a mostly vocational program and doing satisfactorily 037 Graduated from high
П	006 Chronic truancy resulting in negative		or tardiness results in reprimand or equivalent	7 026 pro	026 School/work productivity is less than		school or received GED 038 Dropped out of school 20d it working at a tob or
	consequences (e.g., loss of course credit, failing courses or tests, parents notified)		o17 Disruptive behavior, including poor attention or high activity level, resulting in individualized program or	exp failt assi	expected for abilities due to failure to execute assignments correctly, complete work, hand in		and is working at a job of is actively looking for a job
	007 Chronic absences, other than truancy, resulting in negative consequences (e.d., loss of		specialized treatment being needed or implemented (e.g., emotionally impaired school resources)	2	א סון נווופי, פנר		
	course credit, failing courses or tests, parents notified)		018 At work, received a reprimand, warning, or equivalent				

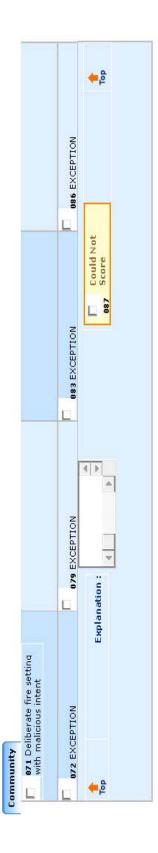


Home

	Severe Impairment		Moderate Impairment	Mild Impairment		Minimal Or No Impairment
L	041 Not in the home due to child's behavior that occurred in the home during the rating period	L	051 Persistent failure to comply with reasonable rules and expectations within the home (e.g.,	os7 Frequently fails to comply with reasonable rules and expectations within the home		062 Typically complies with reasonable rules and expectations within the home
	042 Extensive management by others required in order to be maintained in the home		bedtime, curfew); active defiance much of the time (QR, if youth is not in the home, youth fails to comply	Dos Has to be "watched" or prodded in order to get him/her to do chores or comply with requests	Ц	06.3 Minor problems satisfactorily resolved
	043 Deliberate and serious threats of physical harm to household members 044 Repeated acts of	L	with rules and expectations unless close monitoring/supervision is maintained) 052 Frequent use of	nesists routines, chores, or following instructions, but will comply if caregiver in sists.		
	household members 045 Behavior and activities		profane, vulgar, or curse words to household members	Doo Frequently engages in behaviors which are intentionally frustrating or		
	influence almost all of the time (i.e., serious and repeated violations of expectations and rules.		03 3 Repeated irresponsible behavior in the home is potentially dangerous (e.g., leaves stove on)	annoying to caregiver (e.g., taunting siblings, purposeful dawdling)		
	such as curfew) 046 Behavior and activities have to be constantly monitored in order to	L	054 Run away from home overnight and likely whereabouts are known to caregivers, such as friend's			
L	ensure safety in the home 047 Supervision of youth required, which does or would interfere with	L	nome 055 Deliberate damage to the home			
L	caregiver's ability to work or carry out other roles 048 Run away from home					
	overnight more than once, or once for an extended time, and whereabouts unknown to caregiver					
L	049 Deliberate and severe damage to property in the home (e.g., home structure, grounds, furnishings)					
	050 EXCEPTION		056 EXCEPTION	061 EXCEPTION	L	064 EXCEPTION



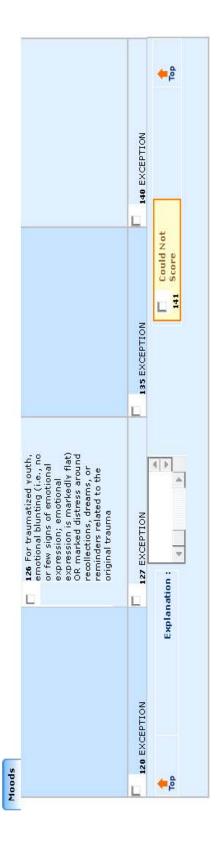
	Minimal Or No Impairment	negatively impact on the community oss Typically able to resolve minor problems	
	Mild Impairment	was Minor legal violations violations, unruly conduct such that complaint was made, thespassing onto neighbor's property, or harassing neighbor) wandalism, shopliffting) wandalism, shopliffting) child is aware of the dangers).	
	Moderate Impairment	or3 Serious and/or repeated delinquent behavior (e.g., stealing without confronting a victim, shopliffing, vandalism, defading property, taking a car for a joyride) Or4 On probation or under court supervision for an offense which occurred during the last 3 months Or5 On probation or under court supervision for an offense which occurred month pend prior to the most recent 3 month pend of confinement because of frequent or serious violations of the law Or7 Currently at risk of confinement because of frequent or serious violations of the law Or7 Currently at risk of confinement because of the welfare of other children who may be around the youth unsupervised Or8 Repeatedly and intentionally plays with fire such that damage to property or person could result	
Community	Severe Impairment	behavior which seriously violated the law (e.g., stealing involving confrontation of a victim, auto theft, robbery, mugging, purse snatching, fraud, dealing or carrying drugs, break-ins, rape, murder, drive-by shooting, prostitution, violation of prostitution, violation of prostitution, violation of prostitution, violation of the law (e.g., stealing involving confrontation of a victim, auto theft, robbery, auto theft, robbery, auto theft, robbery, murder, drive-by shooting, prostitution, violation of probation conditions) of probation conditions, fraud, dealing or carrying drugs, break-ins, rape, murder, drive-by shooting, prostitution, violation of probation conditions) of sassaultive behavior or threatening with a weapon. Os Involvement with the legal system or diversion to mental health or social sassaultive behavior or threatening with a weapon. Os Involvement with the legal system or diversion to mental health or social sassaultive behavior or inappropriate sexual behavior. Or Deliberate and severe danage of graphy outsidethe home (e.g., school, cars,	buildings)
Comi	Ų		ļ

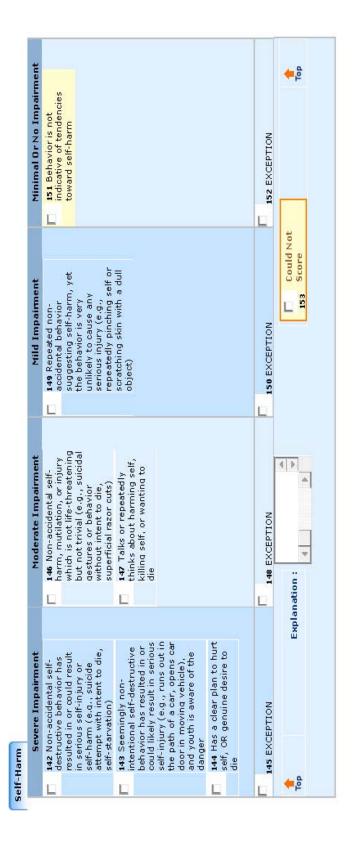


Severe Impairment		Moderate Impairment	Mild Impairment	Minimal Or No Impairment
088 Behavior consistently bizarre or extremely odd	Г	093 Behavior frequently/typically	argumentative, or annoying	T 111 Relates satisfactorily to others
089 Behavior so disruptive		inappropriate and causes	to others	T12 Is able to establish and
or dangerous that harm to		problems for self or others	☐ 104 Poor judgment or	sustain a normal range of
others is likely (e.g., hurts		(e.g., fighting, belligerence, promiscuity)	impulsive behavior that is	age-appropriate
as hitting, biting, throwing	L	094 Inappropriate sexual	causes inconvenience to	Edulation Co.
things at others, using or		behavior in the presence of	others	disagneements are resolved
threatening to use a		others or directed toward	T 105 Upset (e.g., temper	reasonably
object)	L	095 Spiteful and/or	tantrum) if cannot have or do something immediately.	
090 Attempted or		vindictive (e.g., deliberately	if frustrated, or if criticized	
accomplished sexual		and persistently annoying	T 106 Easily annoyed by	
assault or abuse of another		damaging personal	others and responds more	
verbal threats, or, toward		belonging of others)	strongly than other	
younger youth, intimidation	L	096 Poor judament or	Control to to to to to	
or persuasion)		impulsive behavior	twical near recreational	
091 Deliberately and		resulting in dangerous or	activities because of	
severely cruel to animals		risky activities that could	tendency to be ignored or	
		read to injury or narm to others, more than other	rejected by peers	
		youths	108 Difficulties in peer	
	L	097 Frequent display of	Friends due to nonsting	
		anger toward others; angry	behavior (e.g., teasing.	
		outbursts	ridiculing, picking on	
	L	098 Frequently mean to	others)	
		other people or animals	☐ 109 Immature behavior	
		to other in an exploit time	leads to poor relations with	
		or manipulative manner	having friends who are	
		(e.g., uses/cons others)	predominantly younger	
	L	100 Involved in gang-like		
		activities in which others		
		are harassed, bullied,		
		Intimidated, etc		
	Ц	101 Persistent		
		relation to peers due to		
		antagonizing behaviors		
		(e.g., threatens, shoves)		
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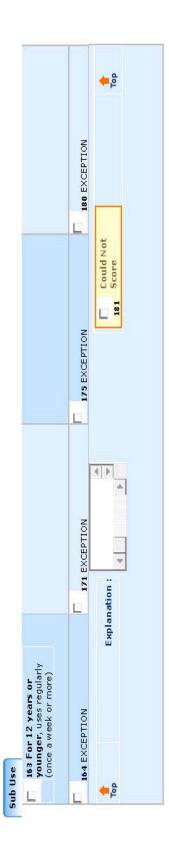


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Mild Impairment	128 Often anxious, fearful, or sad, with some related symptom present (e.g.,	nightmares, stomachaches)	expression of irritability, fear, or wornes	■ 130 Very self-critical, low self-esteem, feelings of worthlessness	131 Easily distressed if makes mistakes	■ 132 Sad, withdrawn, hurt, or anxious if criticized	☐ 133 Sad (or depressed or anhedonic) or anxious in at	least one setting for up to a few days at a time	☐ 134 Notable emotional restriction (e.g., has	difficulty expressing strong emotions such as fear,	hate, love)									
Moderate Impairment	121 Marked changes in moods that are generally intense and abrupt	122 Depressed mood or sadness is persistent (i.e.,	at least half of the time), with disturbance in	functioning in at least one of the following areas: sleeping, eating,	concentration, energy level, or normal activities. <u>OR, irritability or </u>	anhedonia (i.e., marked diminished interest or	pleasure in typical activities) is present, there	snould be disturbance in two or more areas	123 Youth worries excessively (i.e., out of	proportion) and persistently (i.e., at least half of the	functioning manifested by	at least one of the following: sleep problems, tiredness poor	concentration, irritability, muscle tension, or feeling "on edge."	124 Fears, worries, or anxieties result in the	youth expressing marked distress upon being away	from the home or parent figures; however, the youth is able to go to school or	engage in some social activities	125 School-age children require special	accommodations because of worries or anxieties	(e.g., sleeping near parents, calling home)
Severe Impairment	116 Viewed as odd or strange because emotional responses are incongruous	(unreasonable, excessive)	117 Fears, worries, anxieties, or reactions to	trauma result in poor attendance at school (e.g., absent for at least one day	per week on average) OK marked social withdrawal (will not leave the home to	visit with friends)	associated with academic incapacitation (e.g., absent	at least one day a week on average, or if attends	school, does not do work) OR social incapacitation	(i.e., isolates self from friends)	119 Depression is accompanied by suicidal	intent (i.e., really wants to die)								

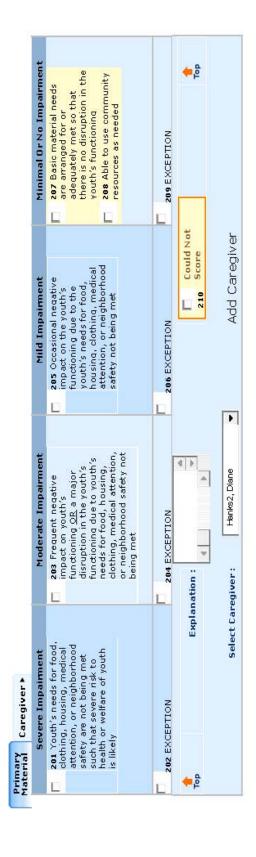




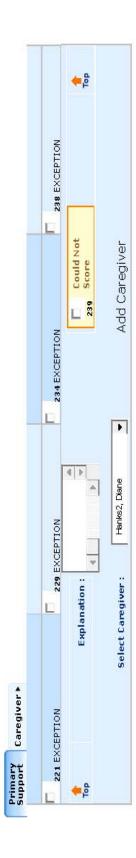
Minimal Or No Impairment	176 No use of substances	T 177 Substance use is	178 Has only "tried" them;	179 Occasional alcohol use	without intoxication or	T.																					
Mild Impairment	172 Infrequent intoxication	only without serious	173 Regular alcohol use without intoxication (e.g.,	once a week)	Volumer has used	substances more than once																					
Moderate Impairment	165 Uses in such a way as	(e.g., job, school, driving) in spite of notential serious	consequences (e.g., traffic violations, work or school	absences or tardiness,	uses on school days or	before work/school)	related to usage (e.g.,	argues, fights with family or friends, trouble with	police, breaks rules, misses	currew)	endangering self or others	is related to usage (e.g.,	vuinerable to injury or date	168 Friendshins change to	mostly substance users	169 Intoxication or	marijuana use once or	TWO For 12 years or	volinger, omasional	alcohol use without	intoxication or any use of other drugs						
	Г					- 1				ı				L		L		1									
Severe Impairment	154 Lifestyle centers on	substances (e.g.,	or urges to use substances; cravings for substances;	uses in the morning)	155 Dependent on continuing substance use to	maintain functioning (e.g.,	withdrawal symptoms such	as feeling sick, headaches, nausea, vomiting, shaking,	stc.,) 156 Failing or expelled from	school related to effects of	substance usage	15/ Fired or lost tob related to effects of substance	usage	158 Frequent intoxication	or marijuana use (e.g., three or more times a	week)	159 Use of substances is	associated with serious	regarde consequences (e.g., injured, in accident.	doing illegal acts, driving	while under the influence, failing classes, experiencing	physical health problems)	tours pregnant or is a parent and is a drug user	161 Is pregnant or is a parent and gets drunk or uses alcohol routinely	162 Has blackouts, cannot control use, does not stop using once started.	discontinuing use would	discomfort, OR consistently drinks alone (or uses other substances alone)
aso one	Ц				L				L					L			L							L			

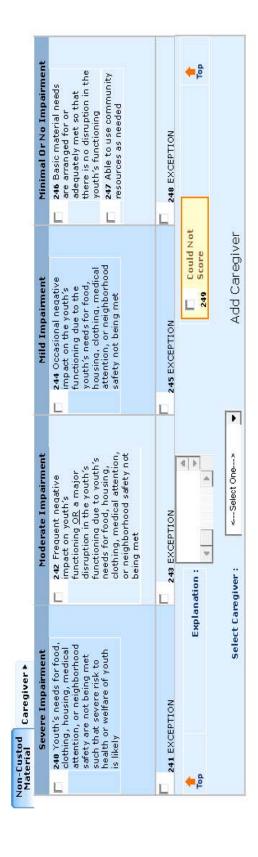


Minimal Or No Impairment	П		199 EXCEPTION	d o
Mild Impairment	OCCASIONAL DIFFICULTY IN COMMUNICATIONS, IN BEHAVIOR, OR IN INTERACTIONS WITH OTHERS DUE TO ANY OF THE FOLLOWING:	193 Eccentine or odd speech (e.g., impoverished, digressive, vague) 194 Thought distortions (e.g., obsessions, suspidons) 195 Expression of odd beliefs or, if older than eight years old, magical thinking 196 Unusual perceptual experiences not qualifying as pathological hallucinations	197 EXCEPTION	200 Score
Moderate Impairment	TION OR	187 Communications do not "flow," are irrelevant, or disorganized (i.e., more than other children of the same age) 188 Frequent distortion of thinking (obsessions, suspicions) 189 Intermittent hallucinations that interfere with normal functioning confusion or evidence of short term memory loss short term memory loss themes	192 EXCEPTION	xplanation:
Severe Impairment	CANNOT ATTEND A NORMAL SCHOOL AGSSROOM DOES NOT HAKE NORMAL REENDSHIPS, AND CANNOT INTERACT ADEQUATELY BY THE COMMUNITY DUE TO ANY OF THE FOLLOWING:	182 Communications which are impossible or extremely difficult to understand due to incoherent thought or language (e.g., loosening of associations, flight of ideas) 183 Speech or nonverbal behavior is extremely odd and is noncommunicative (e.g., echolalia, idiosyncratic language) 184 Strange or bizarre behavior due to frequent and/or disruptive delusions or hall ucinations; can't distinguish fantasy from reality 185 Pattern of short-term memory loss/disorientation to time or place most of the time	186 EXCEPTION	Top Explan

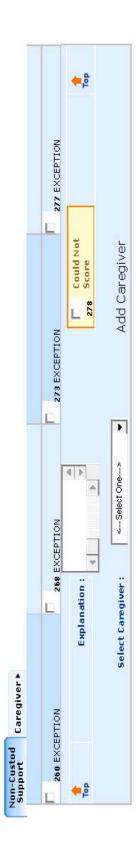


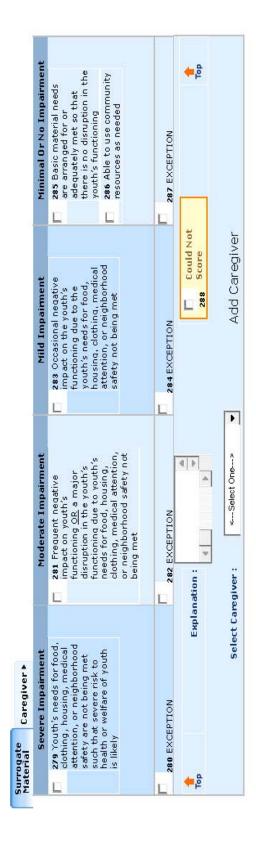
Sup	Support Laregiver	***************************************		o .		
	severe Impairment	Moderate Impairment	Mild Impairment		Minimal Ur No Impairment	
	211 Sociofamilial setting is potentially dangerous to the youth due to lack of family resources required	222 Youth's developmental needs cannot be adequately met because youth's	230 Family not able to provide adequate warmth, security or sensitivity relative to the youth's		235 Family is sufficiently warm, secure, and sensitive to the youth's major needs	
	to meet the youth's needs/demands	needs/developmental demands exceed family	needs, Support from other sources outside the	Ц	236 Parental supervision is adequate	
100	212 Gross impairment in parental judgment or	resources 223 Marked impairment in	immediate family are unable to compensate for	Ц	237 Even though there are temporary problems in	
	functioning (may be related to psychosis, substance	parental judgment or functioning (may be related	this inadequacy 231 Frequent family		providing adequate support to the youth, there is	
	abuse, severe personality disorder, mental	to emotional instability, psychiatric illness,	arguments and/or misunderstandings		compensation from the wider social support system	
	retardation, etc.)	substance use, physical	resulting in bad feelings			
Е	213 Caregiver is frankly hostile, rejecting, or does	or other impairing	232 Family relations are characterized by poor			
	not want youth to return to	condition)	problem solving, poor			
	the home	224 Family conflict is nervasive and continual	communication, or emotional insensitivity			
	sexual abuse in the home	(characterized by hostility,	233 Family not able to			
	by a caregiver	tension, and/or	provide adequate			
177	215 Youth is subjected to	scapegoating, etc.)	supervision, firmness, or			
	physical abuse or neglect in	insensitive, andry and/or	time relative to the vouth's			
١,	the home by a caregiver	resentful to the youth	needs; no other supports			
	out of the home, without	226 Marked lack of parental	compensate for this deficit			
	trying to make other living	supervision or consistency				
	arrangements	in care (e.g., frequently does not brown				
VTT.	217 Youth currently	whereabouts of youth;				
	due to sexual abuse,	does not know youth's friends)				
	physical abuse, or neglect	227 Failure of caregiver to				
	provide an environment	provide emotional support				
	safe from possible abuse to	to youth who has been traumatized or abused				
	a youth previously abused or traumatized	228 Domestic violence, or				
	219 Severe or frequent	senous threat of domestic violence, takes place in the				
	domestic violence takes	youth's home				
	220 Caregiver is openly					
	involved in unlawful					
	behavior or contributes to					
	or approves of youth being involved in potentially					
	unlawful behavior					



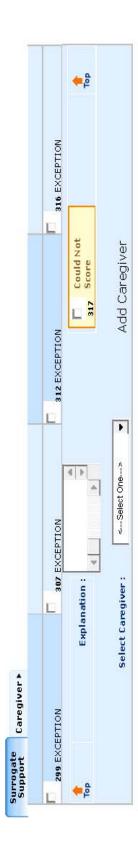


	Severe Impairment		Moderate Impairment	Mild Impairment		Minimal Or No Impairment
10	250 Sociofamilial setting is potentially dangerous to the youth due to lack of family resources required to meet the youth's needs/demands	Z Ser	zei Youth's developmental needs cannot be adequately met because youth needs/developmental demands exceed family	269 Family not able to provide adequate warmth, security or sensitivity relative to the youth's needs. Support from other sources outside the		274 Family is sufficiently warm, secure, and sensitive to the youth's major needs 275 Parental supervision is adequate
	251 Gross impairment in parental judgment or functioning (may be related to psychosis, substance abuse, severe personality disorder, mental retardation, etc.)	7 8 8 9 9 9 9 9 9 9 9 9 9	resources 262 Marked impairment in parental judgment or functioning (may be related to emotion al instability, psychiatric illness, substance use, physical	immediate family are unable to compensate for this inadequacy 270 Frequent family arrguments and/or misunderstandings resulting in bad feelings	ш	276 Even though there are temporary problems in providing adequate support to the youth, there is compensation from the wider social support system
F F	252 Caregiver is frankly hostile, rejecting, or does not want youth to return to the home 253 Youth is subjected to sexual abuse in the home by a caregiver	□ \$\$ & c = }	illness, criminal activities, or other impairing condition) 263 Family conflict is pervasive and continual characterized by hostility, tension, and/or	characterized by poor problem solving, poor communication, or emotional insensitivity 222 Family not able to provide adequate		
10 10	254 Youth is subjected to physical abuse or neglect in the home by a caregiver 255 Caregiver "kicks" youth out of the home, without trying to make other living arrangements.	2	scapegoating, etc.) 264 Family members are insensitive, angry and/or resentful to the youth 265 Marked lack of parental supervision or consistency in care (e.g., frequently	supervision, firmness, or consistency in care over time relative to the vouth's needs; no other supports compensate for this deficit		
10 E	256 Youth currently removed from the home due to sexual abuse, physical abuse, or neglect 257 Failure of caregivers to provide an environment safe from possible abuse to a youth previously abused	T frie & & & & & & & & & & & & & & & & & & &	does not know whereabouts of youth; does not know youth; friends) 266 Failure of caregiver to provide emotion al support to youth who has been traumatized or abused 277 Innest is violence or			
45 15	or traumatized 258 Severe or frequent domestic violence takes place in the home 259 Caregiver is openly involved in unlawful behavior or contributes to or approves of youth being involved in potentially unlawful behavior	\$ \$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	serious threat of domestic violence, takes place in the youth's home			





Minimal Or No Impairment	313 Family is sufficiently warm, secure, and	sensitive to the youth's	major needs	314 Parental supervision is adequate	315 Even though there are	temporary problems in	providing adequate support to the youth, there is	compensation from the	wider social support system																						
Mild Impairment	308 Family not able to provide adequate warmth.	security or sensitivity	relative to the youth's	sources outside the	immediate family are	this inadequacy	309 Frequent family	arguments and/or	resulting in bad feelings	310 Family relations are	problem solving, poor	communication, or	emotional insensitivity	311 Family not able to provide adequate	supervision, firmness, or	consistency in care over	time relative to the youth's needs: no other supports	compensate for this deficit													
Moderate Impairment	300 Youth's developmental	adequately met because	youth's	demands exceed family	resources	301 Marked Impairment in	functioning (may be related	to emotional instability,	substance use, physical	illness, criminal activities, or other impairing	condition)	302 Family conflict is	pervasive and continual	tension, and/or	scapegoating, etc.)	303 Family members are	insensitive, angry and/or resentful to the voiith	304 Marked lack of parental	supervision or consistency	in care (e.g., frequently	whereabouts of youth;	does not know youth's friends)	305 Failure of caregiver to	provide emotional support	to youth who has been traumatized or abused	306 Domestic violence, or	serious threat of domestic	youth's home			
Severe Impairment	289 Sociofamilial setting is Dotentially dengerous to	the youth due to lack of	tamily resources required	to meet the youth's needs/demands	290 Gross impairment in	parental judgment or Einctioning (may be related	to psychosis, substance	abuse, severe personality	retardation, etc.)	291 Caregiver is frankly	not want youth to return to	the home	292 Youth is subjected to	sexual abuse in the home by a caregiver	293 Youth is subjected to	physical abuse or neglect in	the home by a caregiver	294 Caregiver "kicks" youth	trying to make other living	arrangements	295 Youth currently	due to sexual abuse,	physical abuse, or neglect	296 Failure of caregivers to provide an environment	safe from possible abuse to	a youth previously abused or traumatized	297 Severe or frequent	domestic violence takes place in the home	298 Caregiver is openly	involved in unlawful behavior or contributes to	or approves of youth being involved in potentially
	289 (the	Tam.	Deed	290	pare	to ps	abus	retar	291	not v	the	262	sexu by a	293	phys	the	294	tryin	arrar	295	due	phys	296	safe	a you	297	dom	298	invo beha	orap



APPENDIX D

Adverse Childhood Experiences (ACE) Score Questionnaire

Finding Your ACE Score

While you were growing up, during your first 18 years of life:

1. Did a parent or other adult in the household often or very often Swear at you, insult you, put you down, or humiliate you? or	1
Act in a way that made you afraid that you might be physic Yes No	cally hurt? If yes enter 1
2. Did a parent or other adult in the household often or very often Push, grab, slap, or throw something at you? or	1
Ever hit you so hard that you had marks or were injured? Yes No	If yes enter 1
3. Did an adult or person at least 5 years older than you ever Touch or fondle you or have you touch their body in a sexu or	•
Attempt or actually have oral, anal, or vaginal intercourse Yes No	with you? If yes enter 1
4. Did you often or very often feel that No one in your family loved you or thought you were impoor	-
Your family didn't look out for each other, feel close to each Yes No	If yes enter 1
5. Did you often or very often feel that You didn't have enough to eat, had to wear dirty clothes, a or Your parents were too drunk or high to take care of you or	
needed it? Yes No	If yes enter 1

6. Were your parents ever separated or divorced?	
Yes No	If yes enter 1
7. Was your mother or stepmother:	
Often or very often pushed, grabbed, slap	ped, or had something thrown at her?
Sometimes, often, or very often kicked, b hard?	itten, hit with a fist, or hit with something
or	
Ever repeatedly hit at least a few minutes of Yes No	or threatened with a gun or knife? If yes enter 1
8. Did you live with anyone who was a problem dr Yes No	rinker or alcoholic or who used street drugs? If yes enter 1
9. Was a household member depressed or mentally suicide?	vill, or did a household member attempt
Yes No	If yes enter 1
10. Did a household member go to prison?	
Yes No	If yes enter 1
Now add up your "Yes" answers: _	This is your ACE Score.