Equine-Assisted Psychotherapy’s Impact on Resilience and Self-Efficacy in Two Diverse Samples

Wanda K. Whittlesey-Jerome, Pamela N. Schultz, Joseph Tomaka, and Karen Longenecker

New Mexico State University
Abstract

Two mixed-methods exploratory studies examined the impact of EAP on psychological indicators of adjustment and well-being. The first assessed the impact of EAP on resilience of at-risk adolescents. The second assessed the impact of EAP on self-efficacy of adult female victims of interpersonal violence. For seven weeks, adolescents in Study 1’s experimental group added a weekly two-hour EAP session to their typical school routine or participated in a comparison group that received psycho-education instead of EAP. For eight weeks, women in Study 2’s experimental group added a weekly two-hour EAP session to their existing agency services or participated in a comparison group that received regular group sessions with the agency. Study 1’s results showed the EAP group testing higher on positive aspects of resilience and lower on the negative at post-test. Study 2’s results showed the EAP group experiencing greater improvement across self-efficacy, depression, and general assessment of functioning. Qualitative data from both studies added additional insight and clearly articulated some of the mechanisms underlying benefits conveyed from the addition of EAP to conventional treatments. This pair of studies contributes to the growing evidence base for the use of equines in treatment with diverse populations.

Keywords: equine-assisted psychotherapy; resilience; adolescents; self-efficacy; women; interpersonal violence; diversity
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Introduction

I like being in the arena with the horses. This is so different from my regular life. I wonder what they think. Do they like when people come and pet them? Are some in a bad mood and don’t want us to walk by them? What do we look like to them? Are we sort of color-coded by our anxiety or whatever emotion we have? Seems they aren’t complicated in their minds – like me. – EAP Study Participant

Since the late 1990’s, an evidence-base for equine-assisted activities and therapies (EAAT) has been developing that focuses on the use of equines for a variety of human health and behavioral health conditions (Equine Assisted Growth and Learning Association, [EAGALA], 2013; Professional Association of Therapeutic Horsemanship, International [PATH Intl.], 2013). Accompanying this growth is an international database containing results of over several hundred research studies on equine-assisted activities (EAA) and a growth in international media that reflect the scientific exploration of a growing number of behavioral and social scientists that are asking, “Why horses? What is it about horses, and why do they have such an impact in treatment?” (Rothman, 2013; Whittlesey-Jerome, 2013). To answer these questions, a small but vital group of non-profit organizations across the country is funding research into the efficacy of therapeutic interventions that involve equines; one example is the Horses and Humans Research Foundation of Chagrin, Ohio (Horses and Humans Research Foundation [HHRF], 2013).

Several well-established fields of equine treatment use the riding of horses as part of the intervention – therapeutic riding, interactive vaulting (PATH Intl., 2013), and hippotherapy (American Hippotherapy Association [AHA], 2013). Equine-assisted learning (EAL) addresses learning goals whereas equine-assisted psychotherapy (EAP) addresses treatment goals. The focus of our research is EAGALA’s EAP model – an experiential, solution-focused approach to behavioral health treatment
that takes place with equines *on-the-ground* with EAGALA-certified professionals facilitating the experience in a treatment team/dyad (EAGALA, 2012).

**Equine-Assisted Psychotherapy**

Although EAP is considered fairly recent in its development, researchers and practitioners have spent the last 15 years studying its therapeutic impact on a variety of populations including children, adolescents, adults, and older adults. Recently, the HHRF has begun a campaign to fund EAP research for intervention in military populations, particularly individuals with post-traumatic stress disorder (PTSD) and traumatic brain injury (TBI).

Importantly, all therapeutic activities take place under the watchful supervision of a team of EAGALA-certified professionals. This team is comprised of a master’s level licensed behavioral health/clinical therapist (MH) and an equine specialist (ES) – an individual who understands and interprets equine behavior, acting partly as a safety valve for the therapeutic setting (EAGALA, 2013).

EAP is *experiential* in nature and focuses on shared experience and meaning applied to real world problems. EAP is embedded in an eco-therapeutic, action-oriented setting. What is distinctive is that the focus of the work is not riding or horsemanship, but rather the developing *relationship* between the human and the horse as more-or-less equals on the ground. In the arena and in the presence of horses, therapists have witnessed important shifts in human behavior and thinking. By negotiating a relationship built on trust, in addition to developing the participant’s problem-solving and interpersonal skills, therapeutic inroads can be made – and, in some cases, made rather swiftly and with encouraging results (EAGALA, 2013).

Our studies examined the impact of EAP on two psychological indicators of adjustment and well-being – resilience and self-efficacy – in adolescents and adult females, respectively. To provide a foundation for our work, we reviewed a recently growing body of evidence concerning the effectiveness of EAAT programs across the human lifespan. Results of these studies of EAAT are
suggestive though not overwhelming, as there appear to be a similar number of studies reporting no differences as there are with significant findings. However, when there are significant differences between groups, those differences tend to favor EAP and related approaches. In such cases, the small sample sizes may be compromising this overall research effort.

**Equines and adolescents.** A cross-sectional study of EAP and its effect on children and at-risk adolescents or youth who had experienced intra-family violence was published by Schultz, Remick-Barlow, and Robbins (2007). They studied children ages 4 to 16 over 18 months receiving EAP weekly on the *Global Assessment of Functioning-Children Scale* every three months. They found significant improvement in GAF-C scores for those with a history of abuse and in those who were also younger (p < .001) as well as female (p < .02), though there was no difference by ethnicity.

Ewing, MacDonald, Taylor, and Bowers (2007) studied cases of children 10 to 13 years of age with learning and behavioral disorders. There were no significant differences across measures. However, clinicians saw improvements in emotional disorders when using equines in therapy, which encouraged the authors to suggest addition of EAP to physical, occupational, and speech therapies.

MacDonald (2004) reported five different studies among at-risk children and youth of differing ages ranging from 11-17 years of age. Of those, two studies were favorable for EAP. The first found significantly higher scores on self-esteem and locus of control measures and the second found significantly lower scores on aggression. Two studies failed to find significant results, and the last found an unexpected, but statistically significant increase in aggression, possibly brought on by issues surrounding termination. In several of these studies, qualitative data from teachers and volunteers supported positive effects for EAP.

Among elementary and mid-high students, Trotter, Chandler, Goodwin-Bond, and Casey (2008) found equine assisted counseling (EAC) to reduce aggressive behaviors as well as conduct
problems relative to a control condition without EAC. Indeed, the EAC group made three times the number of improvements in behavioral areas of concern over the comparison group.

According to Kemp, Signal, Botros, Taylor, and Prentice (2013), positively impacting children and adolescents with child sexual abuse (CSA) through traditional talk therapy is challenging, as such children often have difficulty developing a therapeutic relationship. Kemp et al. conducted a program evaluation study of equine-facilitated treatment (EFT) and functioning of boys and girls (aged 8 – 11 years) and 15 adolescent girls (aged 12 – 17 years) at three points in time. They found significant improvements in functioning between Time 2 and Time 3 assessment across all psychometric measures on psychological distress and for both age groups.

In another study, Bachi, Terkel & Teichman (2012) found, for at-risk adolescents in a residential treatment facility, the equine-facilitated psychotherapy (EFP) group trended toward increased trust, self-control and general life satisfaction over the comparison group. A one-year follow-up found EFP group had used less alcohol and/or drugs and experienced fewer run-ins with the law or legal system than the comparison group. In another study of EFP, Hayden (2003) found, for at-risk youth, thirteen major and three minor themes embedded in the construct of resilience. These reflected protective factors such as self-esteem, mastery, positive relationships with people, and horses. Bowers and MacDonald (2001) found, for at-risk adolescents, a significant decrease in self-reported depression after EFP treatment but no effect on self-worth, empathy, locus of control, or loneliness.

Hauge, Kvalemb, Berget, Enders-Slegers, and Braastada (2013) conducted two studies and found, among adolescents 12 to 15 years of age, no differences in self-esteem and general self-efficacy between the EAA groups and respective comparison groups. A reduction in anxiety was found with adolescents with emotional, behavioral or learning difficulties (Holmes, Goodwin, Redhead, & Goymour, 2012), whereas for children and adolescents who had been sexually abused, improvements
in functioning across gender, age, and indigenous or non-indigenous status were found (Kemp et al., 2013).

**Equines and adult females.** Porter-Wenzlaff (2007) found, for women who survive trauma, participating in EAP can impact their capacity to confront fears, and strengthen boundaries, self-confidence, and empowerment. In the area of women and additions, Pollack (2009) found that EAP had an influence, though not significant. The EAP group increased in the readiness to change score while the comparison group decreased. Both groups reported a decrease in perceived level of difficulties in relationships to self and others, depression, anxiety, daily living, functioning in a role, addictive, impulsive behavior, and psychosis.

Shambo (2006) found, for adult women with PTSD, significant improvement in depression, dissociation, and life-functioning, based on self-report. The participants had been experiencing moderate to severe levels of depression prior to EFP. Post-test scores placed them in mild depression, and at 4-month follow up they were in normal, non-depressed levels. A statistically significant decrease in depression was found pre- to post and post to follow-up, but not for dissociative experiences. Meinersmann, Bradberry, and Roberts (2008) found, for adult female survivors of abuse in a qualitative Study, that the stories of five women indicated anecdotally that EFP was effective. In a paper presented in 2006, Bradberry, Roberts, and Meinersmann found, through review of taped interviews with seven women who had a shared history of abuse, that EFP was an effective intervention.

Regarding EAAT with adult female victims of abuse, Klontz, Bivens, Leinart and Klontz (2007) found, among adults in a residential program, equine-assisted experiential therapy (EAET) positively impacted guilt and resentment, regret and future fears, and enhanced independence and self-reliance. Though a convenience sample with no comparison group, the authors show a statistically significant decrease from pre-post on diminished general symptom severity (p < .05) with no
significance from post to follow-up, and an increase in enhanced psychological well-being from pre-post (p < .05) with no significant change from post to follow-up.

Cantin and Marshall-Lucette (2011) reviewed five quantitative EAAT research articles and found that EAAT strengthens positive behaviors while reducing negative behaviors in people with mental illness. Duckers (2008) reviewed 21 articles pertaining to the effectiveness of EAAT and found themes suggesting that at-risk adolescents participating in EFP progress more rapidly in therapy and build psychosocial skills faster than those who do not.

Lentini and Knox (2009) conducted a systematic review of 16 qualitative and quantitative articles. They discovered that most participants in these studies had emotional or behavioral problems issuing from abuse and trauma that resulted in behavioral diagnoses. Although the conclusions drawn were varied, most authors indicated EAAT was beneficial for participants who, after EAAT, measured decreases in anger, depression, aggressive behavior, and dissociation. Participants also measured increases in self-confidence, self-esteem, locus of control, and overall functioning (Lentini & Knox, 2009). The authors reinforce the idea of promise in the findings of a number of these studies, in particular the influence of qualitative results (Lentini & Knox, 2009).

As with any developing therapeutic field, the literature on practice outweighs that on theory or research. In fact, today’s EAAT professionals are either willing to try something new – or they are waiting for more evidence to surface. Either way, as the evidence base for EAAT’s efficacy with any particular behavioral or social problem emerges, Lentini and Knox (2009) suggest researchers develop and conduct larger, more comprehensive studies – studies that are controlled and standardized, and preferably longitudinal in design. They also suggest that researchers better define the EAAT language and its terms, the intervention methodology, and the theories that guide the practice; in addition, they recommend standardized language, and they also suggest that any population under study be homogeneous and well-defined. For example, mental health professionals use different words and
acronyms to signify equine use in psychotherapy – whether EAP, EAC, EFT, EFP, EAA, EAAT, or EAET, the major emphasis is on the use of equines in psychotherapeutic treatment. Finally, efforts to use reliable and valid measures for treatment outcomes should be strengthened (Lentini and Knox, 2009).

Whereas early equine research focused on physical and mental issues of persons needing special education, language-learning, occupational and recreational therapy, medical treatments, and in-prison rehabilitation, current equine research is broadening its focus to populations under-served in treatment – minority populations living in poverty. In many of these cases, these same people are people of color who are also under-represented in the scientific literature (Selby & Smith-Osborne, 2013). Thus, we chose to focus our research on EAGALA’s model of equine psychotherapy – EAP, and in Study 1, we focused on adolescents from families living in poverty who were at-risk of dropping out of public school and who were enrolled in a special charter school. In Study 2, we focused on adult females living in poverty who were victims of interpersonal violence (IV). These women were in abusive relationships and currently receiving services that included case management and group counseling from a small non-profit organization. In these studies, we examined the impact of EAP on psychological indicators of adjustment and well-being – resilience in Study 1 and self-efficacy in Study 2.

**At-Risk Youth and Resilience**

Successful transition from adolescence to adulthood depends on many factors. In cases where school-age youth are struggling, they are more likely to disappear from home or school – often without parental consent – for extended periods of time. They may seem beyond the control of their parents or guardians and may endanger themselves and/or others, plus have substance addiction and/or anger control issues (Samuels & Pryce, 2008). According to Ewing et al. (2007), “Severe emotional disorders not curtailed in adolescence often lead to serious psychopathology in adulthood…. Positive and
effective interventions at the crucial adolescent stage are imperative to the emotional growth of adolescents” (p. 59).

Many of today’s youth live in socioeconomically disadvantaged families; of these, 15% or more will have diagnosable mental health disorders (Han, Catron, Weiss, & Marciel, 2005). Howell stated that, in 2004, more than 20% of youth (6 - 17 years of age) living in poverty had mental health issues and over half (57%) lived in households at or below the federal poverty level. Yet, over three-quarters (75 – 80%) of youth in need of such services were not receiving them (Kataoka, Zhang, & Wells, 2002). Early onset (before age 15) of problem behaviors is substantially associated with risk of adult disorders (Hawkins et al., 2005). For individuals in need of such intervention, treatment when they are young remains critical (Klontz et al., 2007).

Resilience is the capacity of a person to recover from adversity. When working with school-age youth, the idea of studying resilience is intriguing. In the literature, resilience is known as the process of “bouncing back” from adversity – of responding to life stress in adaptive ways that are often predicated upon having necessary resources and relationships. Resilience helps people connect to people – to shared interests, and, ultimately, to their lives themselves. Indeed, this “bounce-back ability” to return to health and well-being after experiencing stress or a series of stressors has been studied widely (Benard, 2012).

Consistent, trust-building environments can help strengthen these youth for dealing with their stressful everyday worlds. Such environments assist by helping the youth develop their own internal resources that will be necessary for successful transition into adulthood (Drapeau, Saint-Jaques, Lépine, Bégin, & Bernard, 2007; Samuels & Pryce, 2008; Wexler, Di Fluvio, & Burke, 2009). Though a sense of trust is not easily developed – particularly in these youth, some long-term studies have suggested that between 50% and 70% of youth living in risk-filled environments have gone on to live
successfully as adults, despite earlier exposure to stress (Benard, 2012; Hawkins, Kosterman, Catalano, Hill, & Abbott, 2005).

Resilience, or the lack thereof, may then portend the degree to which they will ultimately become successful as adults (Schultz et al., 2007). Due to these issues, Study 1 examined the ability of EAP to increase resilience and variables related to resilience in at-risk adolescents living in poverty – sense of mastery, sense of relatedness, emotional reactivity, and sense of vulnerability.

**Adult Female Victims of Interpersonal Violence and Self-Efficacy**

Interpersonal violence (IV) exists in many shapes and sizes including, child maltreatment, domestic violence, gang activities, gun violence (random and non-random), intimate partner violence (IPV), older adult maltreatment, sexual assault, and others. IV is a serious, multi-dimensional problem, and current IV research shares the same overarching goal – to decrease violence in society (Kazdin, 2010).

Researchers acknowledge that different kinds of victimization often co-exist or overlap in IV (Rolling & Brosi, 2010), and that social and cultural influences on the relationship between victim and perpetrator should be taken into account by the therapist working with victims of IV (Bryant-Davis, 2010; Kazdin, 2011). Traumatologists know that culture impacts both the IV experience and how one recovers afterwards, and marginalized women are particularly vulnerable. Studies should take cultural context into consideration, understanding that IV is a challenge to treat effectively without an integrated, culturally-informed approach (Bryant-Davis, 2010; Rolling & Brosi, 2010).

Self-efficacy is the extent to which one believes one can manage, and has control over, what happens in his or her life. This sense of command and control is critical to self-image and self-esteem (Benight & Bandura, 2004). IV victims with low self-efficacy also report increased symptoms of PTSD and depression (Lambert, Benight, Wong, & Johnson, 2013). In addition, various forms of self-efficacy have been shown to protect mental health in women victims of IV, including relationship self-
efficacy and coping self-efficacy. (Lambert et al., 2013; Sullivan, McPartland, Price, Cruza-Guet, & Swan, 2013). Recent research suggests that the negative psychological consequences of IV can influence whether or not a victim makes the decision to terminate a violent relationship. On the other hand, increased self-efficacy can positively influence this decision, with commitment to one’s relationship strongly influenced by self-efficacy (Rhatigan, Shorey & Nathanson, 2011).

Interestingly, at-risk adolescents and women suffering from IV share a similar need – deficit – lack – a sense of anomie. In youthful emotional reactivity and vulnerability, as in intimate partner violence, the goal for the victim is to move from a sense of isolation to a sense of connection with a healthy relationship. This can be difficult for both populations, as many at-risk adolescents and IV victims suffer from PTSD, depression, increased shame, and reduced self-efficacy (Rhatigan et al., 2011; Rolling & Brosi, 2010). Due to these issues, Study 2 examined the ability of EAP to increase self-efficacy and variables related to self-efficacy in adult women victims of interpersonal violence living in poverty – depression, anxiety, and global assessment of functioning.

Overview

The overall purpose of the two EAP studies presented below was to further develop an evidence-base for the use of EAP in diverse populations and across the human lifespan. We examined the impact of EAP on psychological indicators of adjustment and well-being – resilience in adolescents and self-efficacy in adult female victims. Our study populations were living in poverty. In Study 1, we measured resilience among troubled adolescents at-risk of school drop-out. In Study 2, we measured self-efficacy among marginalized adult female victims of interpersonal violence.

Both of these populations are under-served in treatment and under-represented in the literature. Each of our studies included a comparison group that received a generally-accepted, established treatment as recommended by their human service agency. Both studies included Hispanic and non-
Hispanic participants, and both studies were conducted in a culturally diverse, semirural community in the southwestern United States.

**Study 1: Impact of EAP on Resilience of At-Risk Youth**

This eight-week study received approval by the Institutional Review Board (IRB) of our university. In addition, a proposal was submitted to the Animal Institutional Council (AIC) – a group of animal sciences faculty who determine the potential risks of research on animals. The horses were to be primarily led with halters and lead ropes in a round pen. The horses would also be groomed. Working along with the participants, the horses negotiated obstacle courses constructed of rubber traffic cones, plastic pipe pieces, buckets, and other safe tools used in EAP. Thus, the AIC found the negative or harmful risks for the horses would be negligible.

**Method**

**Participants**

The convenience sample consisted of twelve boys and girls (\(\bar{x} = 16.85\) years) between the ages of 15 and 19 who attended an alternative charter school. Participants were assigned to one of two groups – an EAP group or a psycho-educational group (PED) for comparison. Participants were identified by school administrators and counselors, and recruited from the school population through a call for volunteers. Parents or guardians were contacted by the assistant principal, and informed consents were obtained. Demographics for Study 1 participants can be found in Table 1.

All students enrolled in this school were at-risk of not completing regular public school successfully, so the learning environment’s foundation was built on active adult mentoring that emphasized acceptance and treatment with respect. Importantly, students whose behaviors would not allow them to leave the school property for group were assigned to the on-campus PED group, whereas those students who could leave the grounds went off-campus to the EAP group. This would be the main difference between the groups and within the sample in general.
Measurement

The Resiliency Scales for Children and Adolescents™ was the pre- and post-test instrument, and scale constructs were embedded in the groups’ curricula. Over the course of seven weeks, the adolescents continued in their studies and individual counseling with their school therapist. The five adolescents in the PED group did not receive EAP, whereas the seven adolescents in the EAP group added a weekly two-hour EAP session to their school work. The RSCA (2007) is comprised of three major scales: mastery, relatedness, and emotional reactivity. Standardized on a sample of 200 males and females ages 15 through 18, strong internal consistency of .93 to .95 was reported with standard error from .90 to 2.45 on all subscales, indicating good reliability. Test-retest reliability of .70 to .92 was reported on all subscales, and strong construct validity was also reported (Prince-Embury, 2007).

Mastery is measured on three (3) subscales: optimism, self efficacy and adaptability. Relatedness is measured on four (4) subscales: trust, support, comfort with others, and tolerance to differences. Emotional Reactivity is measured on three (3) subscales: sensitivity to intense arousal, recovery to normal functioning following a strong emotional reaction, and impairment of functioning due to strong emotional reactions (Prince-Embury, 2007). The scales also provide two additional measures: a Resilience Index and a Vulnerability Index.

All adolescents participating in both the EAP group and the PED group were given new notebooks with pens and stickers at the beginning of the study. They were asked to write about their thoughts and feelings throughout the study, and each was assured by the school counselor that several points of extra credit would be given for participation at the end of the study based on journal completion. All gave permission for their words to be used by the researchers after the study was completed. No identifying information would be shared. The researchers were hopeful that this qualitative data would add depth and breadth to the findings.
Procedures

The study was planned to last eight weeks, with groups meeting weekly, each for a two-hour session. However, due to two unforeseen scheduling conflicts, the number of times the groups met was cut in half, resulting in a total of four sessions over an eight week period. The EAGALA-certified mental health professional (MH) crafted curricula to address the constructs embedded in the data collection instrument. Both groups used the same curriculum throughout the study.

At the beginning of the first session, participants in the EAP and PED groups completed the pre-test. The PED group was then co-facilitated by a researcher and a graduate social work student, and took place on the school grounds in the anteroom to the gymnasium. Participants sat in a circle on a rug, and through the use of recreational therapy props, came up with Group Rules and a process for sharing and discovery that, over time, covered the curriculum. Each group session began with a check-in and ended with debriefing.

The EAP group in Study 1 used the EAGALA Model of EAP. Each session was co-facilitated by the MH who was, in this case, a Licensed Independent Social Worker, or LISW credentialed by EAGALA, in partnership with an equine specialist (ES) who was, in this case, an Occupational Therapist, or OT also credentialed by EAGALA. Several of the horses belonged to the ES and she was an expert in equine behavior, having worked around horses most of her life.

The EAP group took place in a natural setting with horses and props such as halters, lead ropes, grooming supplies, oil drums/barrels, and poly-vinyl chloride pipes of differing lengths, traffic cones, swim noodles of bright colors – and anything else that might be used safely with horses in an arena. All horses were trained especially for the psychotherapeutic work and deemed safe. The same curriculum was followed, though the options for activities increased as a result of the outdoor arena setting. Importantly, a safety plan was in place that covered physical as well as mental or behavioral health circumstances at the barn as well as on the round-trip to and from the school to the agency.
At the end of the last session, participants in both groups completed the post-test in their respective environments, and then celebrated their success with a pizza party on-site that was just for them. Each was given feedback from the professionals and a Certificate of Bounce-Back Ability as well as an opportunity to talk about his or her experience during the study.

Qualitative data were written by the participants in their own environments in their own time and at their own discretion. Qualitative data were based on experiences within the social setting of the facility arena for the EAP group and the school setting for the PED group. All adolescents recruited for the study understood that the information they chose to write in their journals could be used in the final manuscript, and no identifying information would be included. All chose to participate fully.

The context in which the qualitative data were produced varied. One was a charter school where a culture of support and encouragement for the adolescents fostered “trust” as a central focus of all human relationships and interactions. Another was an equine facility where a number of horses lived and worked. Still another was the participants’ own homes and lives. We were curious about the effects EAP or PED might have on the adolescents’ resiliency, and their thoughts and feelings about their experience during the study. Because the study was embedded in a caring and supportive environment, the adolescents felt comfortable expressing their own curiosity about, and participating in, the study.

In Study 1, there was no EAP session observer. The journals were the only written evidence for insight into the thoughts and feelings of our participants. There were no opportunities for school staff to discuss what they were seeing from the adolescents in class, so we depended heavily on the written comments in the journals – which were kept by the participants until the end of the study. However, there were opportunities for the EAGALA-certified professionals to share their observations and insight with the researchers, and several very interesting stories are presented.
Upon completion of the data analysis, the journals were returned to the school counselor for distribution back to the students. The participants’ journals added qualitative data to our analysis, which required thoughtful definition and description (Drisko, 2005). Because of the brief, time-limited nature of this study’s qualitative data collection, there was no data saturation point; our data collection was terminated prior to reaching any such point. For the purposes of analysis, in order to decrease arbitrariness and increase repeatability, our analytical unit was as small as possible. Within each weekly group session with its handful of separate group tasks, the identified unit of analysis would be a word or phrase included in the participant’s journal entry for that week.

The rule of interpretation was to investigate for evidence of concepts embedded in the RSCA. These concepts would need to be written as thoughts or feelings in the journals, or shared verbally with the EAGALA-certified professionals upon completion of the group during debriefing. The rule of decision was to include anything written in the participants’ journals that reflected feelings or thoughts embedded in the RSCA scale – mastery, relatedness, emotional reactivity, and vulnerability. The COM group’s journals would be reviewed in the same manner, looking for the same units for analysis. As mentioned earlier, EAGALA professionals were on-site in the arena during EAP groups, and the PED facilitators were on-site in the anteroom of the gymnasium at the charter school for that group.

Words and phrases were coded into themes from the data. The stories the EAP participants wrote about became meaningful examples that captured the phenomena experienced in the arena with the horses. The PED participants chose to focus more on their own interpersonal relationships – challenges with parents, guardians, and teachers, including the school counselor. Very few entries in the PED participants’ journals dealt with experiences during that group. In both cases, stories were always first person – written from the adolescent’s point of view, with language that reflected both thoughts and feelings.
Results

Quantitative Data

A series of 2 X 2, Group (EAP vs. PED) by Time (pretest vs. posttest), mixed factorial ANOVAs examined the study hypothesis that participants in the EAP group would show greater improvement than participants in the PED group. Given the small sample size and exploratory nature of this study, alpha was set at .15 to avoid type II errors and as suggested by Hosmer & Lemeshow (2005). Support for the hypothesis would be shown by a significant Group by Time interaction with simple effects tests showing that the EAP group improved whereas the PED group showed no change.

For Mastery, neither main effect nor the interaction was significant (all p > .31). For Relatedness, although neither main effect was significant (both p > .34), the expected Group by Time interaction approached significance, $F(1,10)=3.83$, p = .079. Simple effects tests suggested that the PED group showed little change ($t = .71$, p = .50), whereas the EAP group showed a near significant increase in relatedness ratings ($t = -2.11$, p = .10). For Emotional Reactivity, neither main effect, nor the interaction, was significant (all p > .18). For the Resiliency Index, although neither main effect was significant (both p > .34), the expected Group by Time interaction approached significance, $F(1,10)=3.83$, p = .111. Simple effects tests of the interaction suggested that the PED group showed little change ($t = .42$, p = .69) whereas the EAP group showed a near significant increase in Resilience ratings ($t = -1.96$, p = .12). Finally, for the Vulnerability Index, neither main effect, nor the interaction, was significant (all p > .29). In summary, two of the five measures showed support for the benefits of EAP over PED. Tables 2 and 3 contain the means for these analyses.

Qualitative Results

Qualitative data from the study added insight into the mechanisms underlying the benefits conveyed from the addition of EAP to conventional treatments. Several themes emerged in the analysis of the qualitative data from the adolescent’s journals and the observation notes: cooperation, patience,
sense of pride, leadership. Identified as important, words in the EAP journals included the following: horses, strong, stubborn, angry, pissed, listening, s**t, f***ing, frustrated, embarrassed, leader, and success! These words appeared in short scenarios that reflected tasks, some successfully completed, and some not so, during group experiences. Identified as important, words in the PED journals included the following: school, graduation, good, dumb, angry, boyfriend, BFF, girlfriend, LOL, sick, and grounded. The PED journals were mostly commentary on how group was going, which may have been motivated in part to meet the school’s criteria for writing in the journal consistently in order to gain extra credit upon submission and completion.

The data from the journals captured the essence of the experiences of the adolescents in each group. The presentation of the data was accurate, clear, and as complete as possible. In reflection, asking the adolescents to journal immediately after their group experience might have produced more vivid themes and more consistent detail; however, in this study, the journals were seen as a secondary source of data only. Nevertheless, the observations of the facilitators of the PED group and the therapeutic professionals with the EAP group complemented the journal data.

The facilitators of the PED group noticed that participants were open to experiencing the tasks during each group session. By session three, a sense of trust was identified and discussed, and by the next to last session, group members were expressing sadness at the ensuing end of group experience. Interestingly, some of the more concerning issues facing group members (personal experiences of abuse and neglect, troublesome behaviors of parents and fellow students) came forth only during the last session of the study.

The EAGALA-certified professionals noticed that the EAP participants found cooperating as a member of the group made working with the horses easier. Hoodies came off. Baggy pants were rolled up to make walking easier, and ear buds went into pockets. The female participants seemed more patient with the horses, especially when the horses did not comply with what they wanted them to do.
With the exception of one 15 year old male participant (who was asked to leave the group after flailing his arms, yelling, and running aggressively toward the horses), the male participants seemed to find a balance between their wants and expectations and tested out appropriately assertive behaviors with the horses, and their capacity for patience appeared to increase to the observer.

The following are some actual excerpts from the qualitative data. A debriefing session started with a question from the MH, “So, which horse is most like you, and why?” The first teen to respond was the oldest female. She said,

“The white mare. She really gets the other horses to move – she’s the center of attention – she’s always there. The other horses look up to her – that’s how I can tell she’s the leader.”

“So tell me, how is she like you?”

“Because I’m a leader – the other kids look up to me and watch me and do like me. I’m in charge… in control. Just like her.”

“Did you see how she did that? She didn’t bite or kick the other horses. How did she get them to move?”

“She switched her tail and laid her ears back and looked like she might bite, but she didn’t. Other than that, she was pretty cool. And you could tell the other horses respected her.”

“Respected her?”

“Yeah.”

“What does respect look like?”

“Like when the kids they listen to me and do what I ask them to do – like they trust me.”

“What does the white mare teach you about leadership?”

“Be cool, and don’t bite… look like you could if you had to… but keep it cool. And know they’re watching you – so there’s a responsibility there.”

“So being a leader is being responsible?”
“Yeah, you’re in charge so you’re responsible.”

“Sounds like you have a good handle on what it means to be a responsible leader. Was there anything else about the white mare that made you choose her?”

“Yeah. She was the prettiest horse in the bunch.”

“Yeah.” [smile]

In one adolescent’s journal, the following scenario captures what happened during an EAP exercise in which each participant was to halter and lead a horse of his or her own choosing:

I didn’t figure putting the halter on Sam was going to be hard. I was just going to go up to him and slip it over his head. Well, I got it on after dropping it in the dirt…three times. But I just laid it on his ears and tucked it under his chin. And it fell off. Sam was standing on the lead rope and wouldn’t move his foot. I got frustrated and threw the thing on the ground. Sam just stood there and looked at me like, ‘You jerk – you can’t even put a halter on a horse!’ The other kids were watching me and laughing and I got really mad. The MH said, ‘Try it again, but this time, try a different approach.’ So, I found the latch and unlatched the halter to open it up. I put it around Sam’s nose and attached the lead rope to the snap thing. Then, I latched the halter behind his ears. It was funny and it was weird looking, but he let me lead him around the arena. And I was really proud.

At the end of one particular EAP session with adolescents, a male participant shared how powerful it was to just “be.” He felt like he should have been doing something… after all, he was used to being the ‘man’ of the family… and finally he just stopped “doing” and started “being,” and it felt so good to him… he cried. Anecdotal evidence in this short vignette serves to capture the impact of EAP with these adolescents. In the words of the MH:

This therapy works – I’ve seen it, felt it, saw a kid changed for life… in just five minutes. It was mind-blowing – so fast, so immediate, so profound – the learning I mean. Here he is… this
kid with an attitude and pants hanging down to his ankles… and the horse could care less about his purple hair and tattoos … and so this kid gets the halter on the horse but he puts it on upside down and backward! Funny, the horse is cool with it, you know. She is kind of curious about the kid… lets him lead her around. Looks to me like she is kind of warming up to him… and the kid is so proud. And so he starts talking more and more – and we really made a breakthrough. I want to understand, really understand, how it works – and why.

In the last session, the adolescents were asked to sum up what they learned about themselves from their EAP sessions. Words like, “I learned a lot… I used to be afraid of horses… I really liked being out here with the horses” stuck in the minds of the MH and ES. However, the statements written down in the journals that were most memorable were these: “I matter…I have value…I’m not alone.”

**Discussion**

A sense of mastery, relatedness, and emotional reactivity – all three comprise the resilience score overall. A vulnerability index was also calculated. Other than relatedness and resiliency, there were no significant effects for mastery, emotional reactivity, or vulnerability. Although the PED tested higher on positive aspects of resilience and lower on the negative at pre-test, the opposite was mostly true at post-test.

The EAP group did poorer on emotional reactivity at post-test than the PED group. We considered that on familiar turf, the adolescents participating in the PED group may have felt more comfortable and less anxious than the group that ventured out each week to the arena – a new and possibly unsettling place. We nevertheless wondered why, with the exception of emotional reactivity, the PED group’s scores became worse over the course of the Study. We considered that some of the adolescents in the PED group were not allowed to leave campus during school hours, and, for whatever reasons that might have been, circumstances beyond our awareness may have influenced their outcomes.
For a youth that suffers from a lack of resilience, strengthening that resilience is a preferred avenue for treatment (Schultz et al., 2006). One of the important characteristics of EAP that makes it appealing for work with adolescents is that EAP can create a trust-building environment relatively quickly. In a natural setting, in the presence of horses, an adolescent may find talking about thoughts and feelings almost secondary to the primary nature of the work being done – yet, the results of the talking can be profoundly moving and insightful for both participant and behavioral therapist.

**Study 2: Impact of EAP on Self-Efficacy of Adult Female Victims of Interpersonal Violence**

This eight-week study received approval by the IRB of our university. Since the AIC had found the impact would be negligible for the horses in the first study, we were not required to submit another research proposal as the EAGALA Model we were using for intervention in this study was the same.

**Method**

**Participants**

The convenience sample consisted of 14 adult women between the ages of 28 and 64 ($\bar{x} = 43.75$ years). Over the course of eight weeks, two groups of seven women were to participate in on-going individual and group therapy with their agency. The seven women in the comparison group (COM) did not receive EAP, whereas six women (one dropped out early in the study) in the EAP group added a weekly two-hour EAP session to their existing agency services. Both groups were similar on demographic data. Demographics for Study 2 participants can be found in Table 4.

Adult female participants were assigned to one of two groups – the EAP or the COM group. All women receiving services from this organization were in abusive relationships. They were receiving case management and group therapy on a regular basis. Importantly, women were assigned to the EAP group that had access to vehicles, whereas those women who did not continued in their regular on-site agency group as the COM. The women participating in the EAP group received gas cards to help pay
for their gasoline to and from the stables. This would be the main difference between the groups and within the sample in general.

Measurement

The General Self-Efficacy Scale (GESS) is a psychometric scale of 10 items that assess optimistic beliefs about the self necessary to cope with life’s difficulties (Jerusalem & Schwarzer, 1995). The German version of the GESS was developed in 1979 by Jerusalem and Schwarzer, and later revised and adapted to 26 other languages. The GESS has been used successfully internationally for two decades. Initial correlations were calculated on a sample of East German migrants in 1989 and 1991 – 528 males and 380 females in the first wave, and 122 males and 102 females in the second wave. The GESS has shown moderate to moderately strong internal consistency of .76 to .90 indicating good reliability, with the majority in the high .80s. Concurrent and predictive validity were indicated by correlations derived from a sample of 180 university students where all correlations were highly significant (Schwarzer, 2011). In addition, existing agency data on depression (Beck’s Depression Inventory - BDI), anxiety (Burn’s Anxiety Scale - BAS), and global assessment of functioning (Global Assessment of Functioning - GAS) were already being collected by the human service agency.

All women participating in both the EAP group and the COM group were given journals at the beginning of the study. They were asked to write about their thoughts and feelings throughout the study. All gave permission for their words to be used by the researchers after the study was completed. No identifying information would be shared. The researchers were hopeful that this qualitative data would add depth and breadth to the findings.

Procedures

Both groups were measured on the GESS as the pre- and post-test instrument, and scale constructs were embedded in the groups’ curricula. Each group was administered the pre-test just prior to the first session, and the post-test immediately after the last session. Existing agency data on
depression (BDI), anxiety (BAS), and global assessment of functioning (GAS) were collected and analyzed in addition to the GESS data.

The study was planned to last eight weeks, with groups meeting weekly, each for a two-hour session. The study continued for eight weeks in length, with no mitigating factors presenting. The MH and ES crafted curricula to address the constructs embedded in the data collection instrument. Both groups used the same curriculum throughout the study.

For Study 2, an observer was available who took notes from a distance, outside of the arena. Her data was useful as a control throughout the study, and provides support for the qualitative results from the women’s journals and the after-thoughts penned by the MH and ES. In addition, all women participating in the study (both the EAP and COM groups) were given new notebooks at the beginning of the study. They were asked to write about their thoughts and feelings throughout the study. The women in the EAP group were able to journal at the end of each EAP session, which served to add depth and breadth to the results. All gave permission for their words to be used by the researchers after the study was completed. No identifying information would be shared. The researchers were hopeful that this qualitative data would add richness to the findings.

The EAP group in Study 2 also used the EAGALA model of EAP. Each session was co-facilitated by a MH who was, in this study, a Licensed Professional Counselor, or LPC credentialed by EAGALA, in partnership with an ES, also credentialed by EAGALA. All of the horses belonged to the ES and she was an expert in understanding and interpreting their behaviors.

The curriculum topics covered were: safety; boundaries – how to use the body to enforce a boundary, how to protect other people’s boundaries (namely children), and how to know when a boundary has been violated; connection and communication – with the self, with the horses, and with others; self care, body and self-awareness, self-image, and self-esteem; giving and receiving support, and working in a group instead of being isolated; confidence, finding interpersonal strengths, and
competence; taking action instead of being passive, becoming assertive; and being aware of challenges while finding freedom to express emotions. Sessions were focused on empowerment and possibility.

At the beginning of the first session, participants in the EAP and COM groups completed the pre-test. The COM group had well-established Group Rules and a process for sharing and discovery that, over the course of eight weeks, covered the curriculum. This group took place in a natural setting with horses and props such as halters, lead ropes, grooming supplies, poly-vinyl chloride pipes of differing lengths, traffic cones, – and anything else that might be used safely with horses in the arena.

As mentioned earlier, all horses used in this study belonged to the ES, who knew them well. Each was trained especially for the psychotherapeutic work and deemed safe. The same curriculum was followed, though the options for activities increased as a result of the outdoor arena setting. Importantly, a safety plan was in place that covered physical as well as mental or behavioral health circumstances at the barn. The women were on their own in their travels to and from the stables, as each had a vehicle for transportation.

As stated earlier, throughout the study, the women in both groups kept journals. At the end of the last session, participants in both groups completed the post-test in their respective environments, and then celebrated their success with a pizza party on-site that was just for them. Each was given feedback from the professionals and a Certificate of Flourishing as well as an opportunity to talk about her experience during the study.

Qualitative data were gathered within the social setting of the facility and arena for the EAP group and the agency conference room for the COM group. All the women recruited for the study understood that the information they chose to write in their journals could be used in the final manuscript, and no identifying information would be included. All chose to participate fully.

Qualitative data were written down by the participants immediately after EAP group during a debriefing and journaling session. The context in which the qualitative data were produced was
consistent throughout the study – immediately after EAP group sitting in a circle under a barn awning, and during the week when at home and alone. We were curious about the effects EAP or COM might have on the women’s self-efficacy, depression, anxiety, and general functioning, so we sought to collect their thoughts and feelings about their experience during the study. Because the study was embedded in two very different, but caring and supportive environments – the agency and the facility, the women felt comfortable expressing their own curiosity about, and participating in, the study.

In Study 2, there was a female EAP session observer – a graduate social work student – who sat outside of the arena under a shade tree on a bench and took detailed notes. She added much data to our overall vision of the women’s experiences. In addition, there were opportunities for the MH and ES to share their observations and insight with the researchers, and several very interesting stories are presented.

Upon completion of the data analysis, the journals were returned to the agency’s clinical director for distribution back to the women. The participants’ journals added qualitative data to our analysis, which required thoughtful definition and description (Drisko, 2005). Because of the brief, time-limited nature of this study’s qualitative data collection, there was no data saturation point; our data collection was terminated prior to reaching any such point. For the purposes of analysis, in order to decrease arbitrariness and increase repeatability, an analytical unit was as small as possible. Within each weekly group session with its handful of separate group tasks, the identified unit of analysis would be a word or phrase included in the participant’s journal entry for that week.

The rule of interpretation was to investigate for evidence of concepts embedded in the GSES, BDI, BAS, and GAF. These concepts would need to be written as thoughts or feelings in the journals, or shared verbally with the EAGALA-certified professionals upon completion of the group during debriefing. The rule of decision was to include anything written in the participants’ journals that reflected feelings or thoughts embedded in the scales – self-efficacy, depression, anxiety, and
functioning. The COM group’s journals would be reviewed in the same manner, looking for the same units for analysis. As mentioned earlier, EAGALA professionals were on-site in the facility and arena during EAP groups, and the COM facilitators were on-site in the conference room of the agency for that group.

Words and phrases were coded into themes from the data. The stories the EAP participants wrote about became meaningful examples that captured the phenomena experienced in the arena with the horses. The COM participants chose to focus more on their interpersonal relationships – challenges with spouses, other family members, including children, and/or other friends. Very few entries in the COM participants’ journals dealt with experiences during that group. In both cases, stories were always first person – written from the woman’s point of view, with language that reflected both her thoughts and feelings.

**Results**

**Quantitative Results**

As in Study 1, a series of 2 X 2, Group (EAP vs. COM) by Time (pretest vs. posttest), mixed factorial ANOVAs examined the study hypothesis that participants in the EAP group would show greater improvement than participants in the COM group. Dependent measures included General Self-Efficacy, Depression, Anxiety, and General Functioning (see above). Given the small sample size and exploratory nature of this study, alpha was again set at .15 to avoid type II errors and as suggested by Hosmer & Lemeshow (2005). As above, support for the hypothesis would be shown by a significant Group by Time interaction with simple effects tests showing that the EAP group improved whereas the COM group showed no change.

For General Self-Efficacy, the only significant effect to emerge as a main effect for Time, $F(1,11) = 15.09$, $p = .003$. This effect suggested that both groups showed similar increases in self-efficacy from pretest to posttest. Neither the Group main effect nor the Group by Time interaction was
significant (both p > .15). For Depression, a similar pattern emerged with the main effect for Time being significant, $F(1,11) = 6.49$, $p = .027$, but neither the group by time interaction nor the group main effect was significant (both p > .30). Complimentary to the effect for self-efficacy, both groups showed declines in depression from pretest to posttest. Anxiety also showed a similar pattern with the only significant effect emerging was a main effect for Time, $F(1,11) = 7.01$, $p = .023$. Like the effect for depression, both groups showed declines in anxiety from pretest to posttest. Again, neither the group main effect nor the group by time interaction was significant (both p > .25). Finally, the pattern for General functioning was the same as the other variables with a significant effect for time emerging, $F(1,11) = 4.91$, $p = .049$, and neither the main effect for Group nor the Group by Time interaction reaching significance (both p > .29). Tables 5 and 6 contain the means for these analyses.

For both groups, statistically at least, the changes were in the same direction and at relatively the same magnitude. Similar to self-efficacy, both group showed significant increases in general functioning from pretest to posttest. The difference in anxiety scores was accounted for by one COM participant adding anti-anxiety medication to her treatment plan during the study. Importantly, several women from the EAP group were making big life-changes (leaving their perpetrators) upon completion of the intervention, which may have been reflected in their anxiety levels at post-test.

**Qualitative Results**

Qualitative data from the study added insight into the mechanisms underlying the benefits conveyed from the addition of EAP to conventional treatments. Several themes emerged in the analysis of the qualitative data from the women’s journals and the observation notes: *perception, boundaries, assertiveness, letting go, just being*, and *comfort in the now*. Identified as important, words in the EAP journals included the following: *horses, relationship, strong, change, crying, power, angry, listening, tired, f***ing, frustrated*, and *sad*. These words appeared in a number of lengthy arena-based scenarios that reflected tasks, some successfully completed, and some not so, during group
experiences. Identified as important, words in the COM journals included the following: forgive, angry sad, and power. The COM journals were mostly commentary on how each was doing in her life in general, and what was going on in her agency treatment. The COM women wrote very little in their journals, so they made few contributions to the study data.

The data from the EAP group participants’ journals, however, seemed to capture the essence of their experiences. The presentation of the data was honest, accurate, clear, and as complete as possible. In reflection, asking the women to journal immediately after their group experience produced vivid themes and consistently rich detail. Additionally, the notes from the observer and the observations made by the MH and ES complemented the journal data.

The COM group was an open, on-going women’s group at the agency. The women in that group participated as a regular part of their treatment and services. For most, the regularly scheduled group gave them opportunities to discuss issues facing them in their daily lives as they negotiated challenging interpersonal relationships. The same issues confronted the women who participated in the EAP group. However, their journal entries shed little if any light on their situations or their progress in group during the eight weeks of study.

On the other hand, and importantly, how the horses saw the women in the EAP group was very important to them, as were boundaries between themselves and the horses. The women did not want to make the horses do things they appeared to not want to do; yet, when the women asked assertively, the horses responded – which provided positive feedback. The qualitative data suggest the horses eventually became transitional objects of comfort to the women. When asked to summarize her observations of the women from the EAP sessions, the observer suggested that the messages received by the women during treatment were as follows: “You are strong...You can do this... You can change.”
The following are some excerpts from the qualitative data. After the first session, one woman wrote in her journal, “This is my first group experience and especially for today I am seeing how important it is to have friends to balance you and support you. To make you see you’re not so different from the world.” Near the end of the study, another woman wrote down these thoughts:

I’m sad we only have one more session with these beautiful horses. They’re incredible and you can feel the emotional attachment with them and it’s like you can hear their heartbeat with yours and almost like they’re telling you, ‘It’s okay – tell me – I can handle it.’ This was so moving for me – like wow – this animal doesn’t know me but is letting me in their world and it’s okay to share – so amazing – so scary – to just let go and be that open.

Throughout the study, the women were encouraged to write in their journals – both immediately after each session and throughout the week between sessions. This journal entry came from a woman who had never really cried about her abusive relationship. In her words, she gives a reader a glimpse into her thoughts and feelings:

Today I got to pick my horse. I chose the red one because she was hanging around as if saying ‘I’m here – pick me’ and I felt like she needed attention. Grooming her I felt a sense of happiness and calming relief. I told her about [the abuser]. I felt like crying. Brushing her tail, she seemed happy. Why can’t I be happy… and well I guess not today – it’s just not my time yet. Yuck, why do I feel like crying? Aghh… this sucks having feelings – my heart feels like someone stomped on it then put it back. Aghh… I can’t stop crying. Wow – I feel like a river wants to run out of my eyes. Wow – this sucks. I’m telling a horse my feelings and I want to just cry a lot. I feel so much pain and I don’t know how to stop it. Focus. The horse is looking at me like ‘Hello – I’m here for you. Stop worrying. You can tell me. I’ll listen while you cry.’ Wow – it’s so emotional… this huge horse is letting me tell my feelings, and she just has so much compassion for me – that’s so weird.
At some point during the study, sensing a space between the two worlds – the world of abuse and the world of the horse – a woman wrote:

This is a two-hour island in my week where I am transported to a place where I feel safe… a place that I haven’t experienced before. These other women in the group – we are girls who put other people ahead of ourselves and we wonder if we are ok? Are we nice? I am SO surprised at my level of grief. It feels enormous and I had no idea I harbored so much. It feels almost that I am consumed with it.

Yet another woman, at the end of particularly grueling session wrote:

Yea – she’s moving again, okay – just keep swimming. Just keep swimming – yeah – that works. For the moment. Great. Well, we made it to the fence. Yeah – good job girl you did it. One hurdle down, one million to go, but she made it. Wow that was definitely hard work. Okay I get to actually cry on my way home. I finished the test – barely – but got through it.

One woman wrote in her journal after the fourth session:

Today I felt all alone in the arena with my horse. Like I was stuck in a nightmare where you are screaming for help but nothing comes out. But I knew I had to go in. Then, I got angry at myself. Where have I gone? What happened to my courage? My self-esteem? How did I let someone take my self-worth, my voice, my value away?

According to the observer, the women as a group noticed that, “It looked like one in our group who was having a particularly bad day/week was especially noticed by the horses. They followed her and loved on her as though they knew she was in so much pain. It was amazing to see.” Finally, nearing the end of the study, a woman wrote, “Okay – wow – all of this journaling has led me to the revelation – well no wonder it’s so f---ing difficult to sweep my floors and do my chores – I am shifting my entire being!”
Discussion

Both the EAP and COM group improved on depression, anxiety, global assessment of functioning, and general self-efficacy. Study results showed greater improvement across all measures for the EAP group. On the anxiety scale, scores were possibly influenced by one COM participant adding anti-anxiety medication to her treatment plan during the Study. Also, and importantly, several women from the EAP group were beginning to make big life-changes (leaving their abusers) upon completion of the intervention, which may have been reflected in their anxiety levels at post-test.

The fact that one woman was able to tell her ex-husband she would not speak to him when he was angry and proceeded to address the issues their child needed and set firm boundaries with him inspired the other women. She said she never thought she would be able to stand up for herself in the way she did. This cycle repeated many times during the group; each week was a new struggle for one of the participants and also a new celebration for another participant. The participants all began to strategize problems with each other, support difficult situations and celebrate successes as they were discussed each week.

Upon the conclusion of the group, all of the women stated they had never participated in any kind of group therapy prior to this experience and were hesitant to agree to participate. One woman said that the last thing she wanted to do was meet a bunch of other women who had terrible relationships like herself and sit around and cry and boohoo about how terrible their lives were. She said she didn’t think she needed [the group] and certainly didn’t need new therapy friends. She then stated she felt like the group had really changed something for her, that she wished everyone could have an experience like this one.

Observational data highlighted the women’s similar backgrounds, exposure to a common experience, and ability to move toward change as arguable some of the most powerful components of the EAP group’s experience. Exposure to women similar to themselves seemed to be a catalyst for
insight into the role of isolation in their relationships. Several women thought of themselves as being the only person in their particular situation – how they felt they could never speak about their situation to anyone, including their family members. This shared return from isolation may have contributed to an almost immediate capacity to make positive changes in their lives.

Anecdotal evidence captured the impact of EAP with adult female victims of IV. The observer in Study 2 pointed to the parallels the participants were able to identify in their own lives. “A participant spoke of how the horses accepted her for who she was, how she finally felt accepted as she was and how she just cried at this feeling. Another said, ‘We are so much stronger than we give ourselves credit for.’” The observer also noticed that a number of the women did not display what one would call body awareness. The horses were often in their space, literally in their face in many circumstances. She observed the women learning to be more aware of how they managed the space around them and how they felt confident enough to assert themselves, move on, or redirect the horses. This general awareness came through in many of the stories they told about what was or had happened in their personal lives outside of the arena. The women’s comments were poignant and profound, relevant and applicable.

According to the observer, two main factors were observed to influence the EAP group’s outcomes: being with the horses, and being with each other. The horses provided a safe place where the women could project their own stories, their fears, their feelings, their dreams and their questions. Their journals were proof of how much they perceived the horses to be listening to them. Secondly, because they had felt isolated prior to EAP group, their weekly conversations with each other indicated they felt part of a larger community – one where other people experienced similar situations. Overall, it became apparent to the MH and ES that the EAP group was motivated to change in a relatively short period of time – eight weeks. They did not interfere in the change process, as the women gleaned more
from their interpretation of their own experience than a classic meaning-making process often seen in traditional talk therapy.

**Limitations and Future Research**

Our two EAP studies were exploratory, mixed methods studies. Our samples were small. Our participants were recruited through convenience sampling techniques. Our EAP interventions were offered over relatively short intervention periods. We cannot generalize our quantitative findings and, in the light of our qualitative findings, must consider a number of environmental influences impacting our outcomes, not the least of which is researcher bias. An identified strength of our research was the focus on two samples from populations living in poverty who were under-served in treatment and under-represented in the literature.

To address concerns about costs generally associated with EAP – which is gaining momentum as a brief, solution-focused experiential therapy – providing a clear cost-benefit analysis may motivate managed care organizations and others to fund EAP services. Cost-containment strategies could include, depending on the therapists’ fees and fees for equine and facility use, an increase in the number participating per group, scheduling more groups over the same period of time, and partnering with therapists who are interested in making a contribution to the evidence for EAP effectiveness and are willing to discount fees for such a purpose. Gas vouchers or agency vans can provide needed assistance when the equine facility is located some distance from the clients; however, some creative EAP providers are bringing EAP to-the-clients; that is, horses, therapists, and round-pens are brought to the place of service, and sessions are provided on-site at the agency on its property – if possible, practical, and safe.

In fact, some recommend the use of canines instead of horses as a cost-saving measure. We point to the above-mentioned impacts of EAP and suggest they may be influenced, in part, by the nature of horses. Whereas dogs are predators, horses are prey. Horses’ behaviors reflect high levels of
curiosity but this is primarily due to the instinct of fear. Whereas dogs typically come to us without fear, horses, by nature, do not. Their hyper-vigilance is a means whereby they constantly perceive and respond, and they are keenly aware of the environment as a result. They remain masterful at observing the body language of other horses and potential predators, including us. That is why so much of the EAP literature describes horses as mirrors that reflect back to us our thoughts and feelings – in many cases before we realize what it is we are thinking or feeling (EAGALA, 2013).

These two studies have provided insight into the effect of EAP on adolescent resilience and self-efficacy in adult female victims of IV. In addition, we delved into some of the mechanisms underlying benefits conveyed from the addition of EAP to conventional treatments. In Study 1, we selected at-risk adolescents who were on the verge of dropping out of public school who had been enrolled in a special charter school. We know that today’s environment can differ wildly for school-age youth. These adolescents are bombarded with media messages promoting everything from fast living to fast food to fast violence without consequences. Obesity is sky-rocketing – and we wonder, where is nature in their human system? Might EAP provide at-risk adolescents with a link back to nature, to their physical selves, and the strengths they’ve yet to discover?

In Study 2, we chose to focus on adult female victims of IV who were receiving case management and group therapy from a small non-profit organization. We know that today’s environment is difficult for female victims of abuse who struggle to assimilate into a majority culture different from their own. Even if they access services, statistics indicate they stand a very small chance of making major positive relationship decisions, for most are dependent upon the perpetrator for meeting their basic needs. These women are bombarded with media messages promoting fancy cars, fancy clothes, and fantasy families living the best of the American dream. Depression and anxiety are increasing and hope is dwindling – and we wonder, where is nature in their human system? Might EAP
provide female victims of IV with a link back to nature, to their physical selves, and the strengths they’ve forgotten?

Today’s behavioral and social scientists are observing their clients solving problems more efficiently in shorter periods of time in their equine research, and they see rapid gains in self-esteem and renewed resilience – in effect, an awakening to a deeper sense of self and personal empowerment in their clients (Masini, 2010; Schultz et al., 2007). This awakening to self and to personal power is a reason EAGALA’s EAP model is now being used with our military, and we strongly applaud increases in current research funding for studies of EAP and PTSD/TBI. These studies reflect a behavioral and social imperative – a call to serve those who have served (EAGALA, 2014; HHRF, 2014).

Although we believe EAP shows promise with behavioral and social issues across the human lifespan, existing research has yet to provide a body of significant evidence for its efficacy. We believe that EAP holds promise through more research including larger samples and probability sampling techniques, control groups from waitlisted clients who are next to receive EAP, and longer sessions that include journaling as a form of debriefing to provide qualitative data. Ideally, longitudinal studies that include 30, 60, and 90 day follow-up contacts should be conducted as well. Ultimately, to build a stronger evidence-base for EAP, we need to understand both its short and long-term benefits on a number of the psychological indicators of adjustment and well-being. EAP is often a treatment that is added to an existing treatment regimen, so we should also be able to clearly articulate some of the mechanisms underlying benefits when conveyed from the addition of EAP to conventional treatments.

As an interesting side note, after this study was completed, the therapists from the social service agency asked the EAGALA-certified professionals to create an EAP group for them so they could experience – for themselves – what had made such a positive impact in their clients’ lives. The EAGALA model was implemented and an eight-week EAP group was created and delivered just for the therapists, including the clinical director, of the agency.
References


Whittlesey-Jerome, W.K. (2013, May). *Social work professor combines love of horses with research.* Available at: http://horsetalk.co.nz/2013/05/08/social-work-professor-combines-love-horses-research/#ixzz2VAqHgEwM
Table 1. Study 1 Participant Characteristics

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<th>CHARACTERISTICS</th>
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<td>4 (80%)</td>
<td>Hispanic</td>
<td>4 (57%)</td>
</tr>
<tr>
<td>1 (20%)</td>
<td>Non-Hispanic</td>
<td>3 (43%)</td>
</tr>
<tr>
<td>2 (40%)</td>
<td>9&lt;sup&gt;th&lt;/sup&gt; Grade</td>
<td>0 (00%)</td>
</tr>
<tr>
<td>1 (20%)</td>
<td>10&lt;sup&gt;th&lt;/sup&gt; Grade</td>
<td>4 (57%)</td>
</tr>
<tr>
<td>2 (40%)</td>
<td>11&lt;sup&gt;th&lt;/sup&gt; Grade</td>
<td>1 (14%)</td>
</tr>
<tr>
<td>0 (00%)</td>
<td>12&lt;sup&gt;th&lt;/sup&gt; Grade</td>
<td>2 (29%)</td>
</tr>
</tbody>
</table>
Table 2. Study 1 Pre and Posttest Means for Sense of Mastery, Relatedness, Emotional Reactivity, Resilience Index and Vulnerability Index

<table>
<thead>
<tr>
<th>EAP Group</th>
<th>Compare Means</th>
<th>PED Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Sense of Mastery</strong></td>
<td></td>
</tr>
<tr>
<td>44.0</td>
<td>Pre-test</td>
<td>48.0</td>
</tr>
<tr>
<td>48.0</td>
<td>Post-test</td>
<td>47.4</td>
</tr>
<tr>
<td></td>
<td><strong>Sense of Relatedness</strong></td>
<td></td>
</tr>
<tr>
<td>40.6</td>
<td>Pre-test</td>
<td>45.0</td>
</tr>
<tr>
<td>45.4</td>
<td>Post-test</td>
<td>43.4</td>
</tr>
<tr>
<td></td>
<td>Increase by 12%</td>
<td>% change</td>
</tr>
<tr>
<td></td>
<td><strong>Emotional Reactivity</strong></td>
<td></td>
</tr>
<tr>
<td>47.0</td>
<td>Pre-test</td>
<td>59.4</td>
</tr>
<tr>
<td>49.2</td>
<td>Post-test</td>
<td>54.2</td>
</tr>
<tr>
<td></td>
<td><strong>Resilience Index</strong></td>
<td></td>
</tr>
<tr>
<td>42.8</td>
<td>Pre-test</td>
<td>46.0</td>
</tr>
<tr>
<td>48.2</td>
<td>Post-test</td>
<td>45.0</td>
</tr>
<tr>
<td></td>
<td>Increase by 13%</td>
<td>% change</td>
</tr>
<tr>
<td></td>
<td><strong>Vulnerability Index</strong></td>
<td></td>
</tr>
<tr>
<td>51.8</td>
<td>Pre-test</td>
<td>58.0</td>
</tr>
<tr>
<td>50.6</td>
<td>Post-test</td>
<td>56.0</td>
</tr>
</tbody>
</table>

Table 3. Study 1 General Linear Model on Difscores between Groups on Mastery, Emotional Reactivity, Vulnerability, Resilience and Relatedness

<table>
<thead>
<tr>
<th>General Linear Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mastery Difscore</td>
</tr>
<tr>
<td>$F(1,10) = 1.129; p = .313$</td>
</tr>
<tr>
<td>Emotional Reactivity Difscore</td>
</tr>
<tr>
<td>$F(1,10) = 2.033; p = .184$</td>
</tr>
<tr>
<td>Vulnerability Difscore</td>
</tr>
<tr>
<td>$F(1,10) = .035; p = .856$</td>
</tr>
<tr>
<td>Resilience Difscore</td>
</tr>
<tr>
<td>$F(1,10) = 3.83; p = .079$</td>
</tr>
<tr>
<td>Relatedness Difscore</td>
</tr>
<tr>
<td>$F(1,10) = 3.054; p = .11$</td>
</tr>
</tbody>
</table>
Table 4. Study 2 Participant Characteristics

<table>
<thead>
<tr>
<th>EAP Group</th>
<th>CHARACTERISTICS</th>
<th>COM Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOTAL</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>AGE</td>
<td>40.5 years</td>
</tr>
<tr>
<td>47.0 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 (100%)</td>
<td>GENDER</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>Female</td>
<td>6 (100%)</td>
</tr>
<tr>
<td>3 (43%)</td>
<td>ETHNICITY</td>
<td></td>
</tr>
<tr>
<td>3 (50%)</td>
<td>Non-Hispanic</td>
<td></td>
</tr>
<tr>
<td>4 (57%)</td>
<td>TIME IN SERVICES</td>
<td></td>
</tr>
<tr>
<td>34.4 weeks</td>
<td>Weeks</td>
<td>14.4 weeks</td>
</tr>
</tbody>
</table>
Table 5. Study 2 Pre and Posttest Means for General Self-Efficacy, Depression, Anxiety, and General Functioning

<table>
<thead>
<tr>
<th>EAP Group</th>
<th>Compare Means</th>
<th>COM Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>General Self-Efficacy</td>
<td></td>
</tr>
<tr>
<td>62.43</td>
<td>Pre-test</td>
<td>56.33</td>
</tr>
<tr>
<td>68.57</td>
<td>Post-test</td>
<td>61.67</td>
</tr>
<tr>
<td></td>
<td>Depression</td>
<td></td>
</tr>
<tr>
<td>12.29</td>
<td>Pre-test</td>
<td>17.17</td>
</tr>
<tr>
<td>7.29</td>
<td>Post-test</td>
<td>12.67</td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td></td>
</tr>
<tr>
<td>32.29</td>
<td>Pre-test</td>
<td>40.17</td>
</tr>
<tr>
<td>25.00</td>
<td>Post-test</td>
<td>21.00</td>
</tr>
<tr>
<td></td>
<td>General Functioning</td>
<td></td>
</tr>
<tr>
<td>64.43</td>
<td>Pre-test</td>
<td>64.67</td>
</tr>
<tr>
<td>69.43</td>
<td>Post-test</td>
<td>66.33</td>
</tr>
</tbody>
</table>

Table 6. Study 2 General Linear Model on Difscores between Groups on General Self-Efficacy, Depression, Anxiety, and General Functioning

<table>
<thead>
<tr>
<th>General Linear Model</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GSES Difscore</td>
<td>$F(1,11) = 15.09, p = .003$</td>
</tr>
<tr>
<td>BDI Difscore</td>
<td>$F(1,11) = 6.59, p = .027$</td>
</tr>
<tr>
<td>BAS Difscore</td>
<td>$F(1,11) = 7.01, p = .023$</td>
</tr>
<tr>
<td>GAF Difscore</td>
<td>$F(1,11) = 4.91, p = .049$</td>
</tr>
</tbody>
</table>