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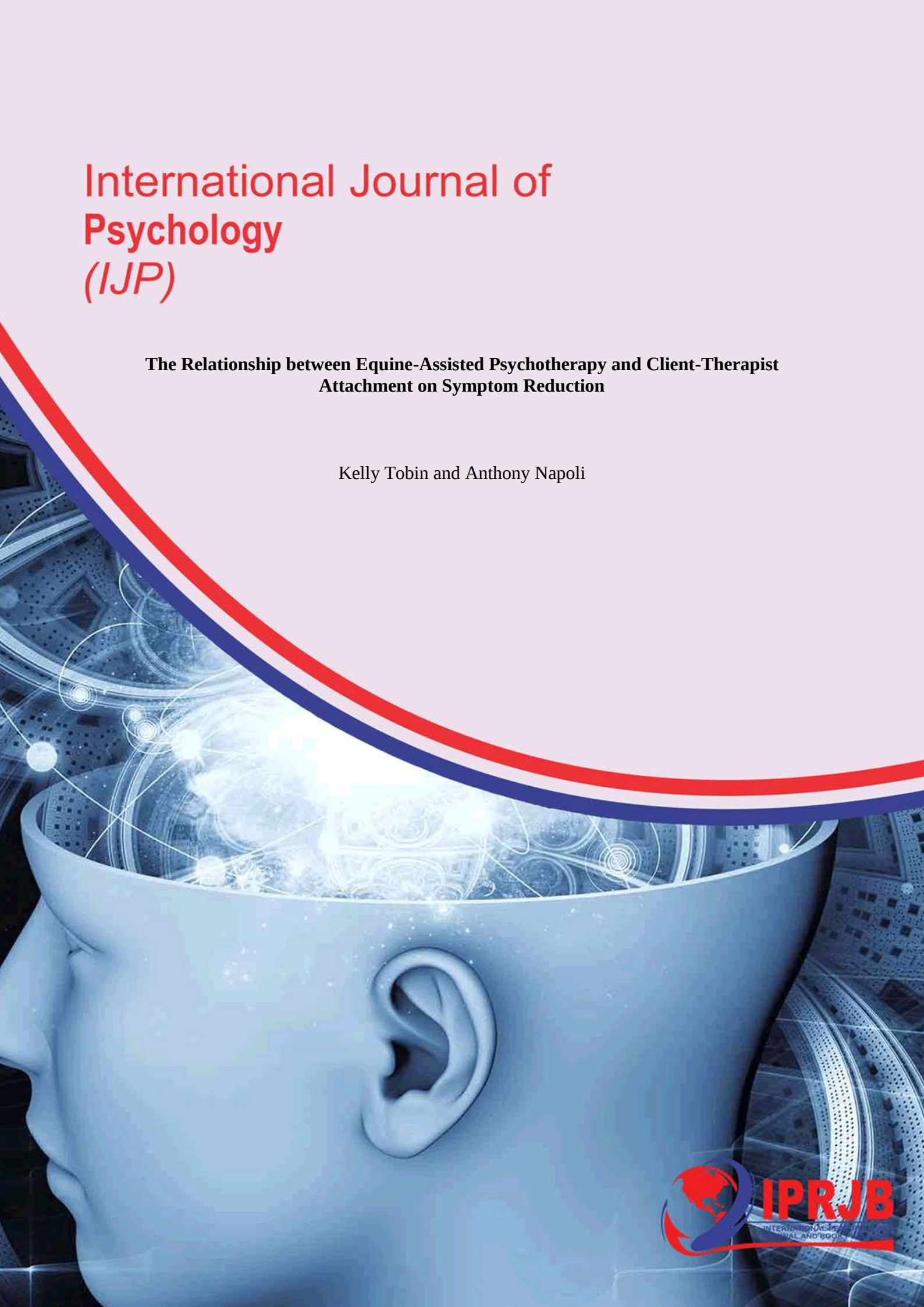

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The Relationship between Equine-Assisted Psychotherapy and Client-Therapist Attachment on Symptom Reduction

Kelly Tobin[1] and Anthony Napoli[2]
[1]Psychology Department, Walden University
[2]State University of New York

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Abstract

Purpose: The current study examines the efficacy of Equine-assisted Psychotherapy (EAP), an alternative form of treatment for individuals who struggle to connect with traditional forms of therapy, with Traditional Psychotherapy (TP).The purpose of this quantitative quasi-experimental study was to determine if attachment to a therapist differs between the method of treatment (EAP v TP) and if the attachment has an impact on levels of anxiety and levels of depression in participants.

Methodology: The study employed a non-randomized Quasi-Experimental two-group design. Participants who received TP (n = 45) or EAP (n = 45) were administered the Client Attachment to Therapist Scale, the Beck Anxiety Inventory, and the Beck Depression Inventory-II. The research questions were tested using a mixed design 2 (treatment group [EAP v PT]) x 2 (Pretest /Post-test) ANOVA.

Findings: The results indicated both of treatment conditions produced significant and beneficial changes in Attachment, Anxiety, and Depression from Pretest to Post-test. In addition, significant Group x Time interactions indicated the EAP group achieved significantly greater symptoms reduction over time.

Keywords: *Equine-Assisted Psychotherapy; Equine-Facilitated Psychotherapy*

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INTRODUCTION

The therapeutic relationship between a client and their therapist has been viewed as the most impactful variable related to psychotherapy outcome (Taylor, Rietzschel, Danquah, & Berry, 2015). Taylor and colleagues argued regardless of the therapeutic approach, the client-therapist relationship is based on three elements: (1) mutual trust and acceptance between both parties; (2) shared goals and outcomes of therapy; and (3) an agreement as to the effort and willingness to engage in therapy to achieve the predetermined goals.

Traditional Psychotherapy

Regardless of the theoretical orientation of the therapist, traditional psychotherapy established change based upon providing a secure foundation to the client, through the therapeutic relationship (Fonagy & Allison, 2014). Mallinckrodt and colleagues (1995) suggested during psychotherapy, the clients early attachments resurfaced, and became part of the therapeutic alliance. As the clients past relationships surfaced, the role of the therapist was to acknowledge those relationships and determine how they influenced the clients current relationships, as well as how they impacted the therapeutic relationship. They also highlighted how the therapists ability to engage the client in conversation regarding the therapeutic relationship, allowed the client to become aware of the impact their early attachments continued to effect current relationships. Lastly, they argued the therapists ability to act as the attentive and nurturing mother, provided the client with the security to process through their anxieties and levels of depression which surfaced during these times of insight, and evoked change.

Taylor and colleagues (2015) suggested the more secure the therapeutic attachment, the greater the degree the client viewed the relationship as a shared experience and trustworthy. The client who developed an insecure attachment to the therapist, possessed a greater risk of hindering the therapeutic process. For the avoidant attachment, they argued the clients negative predisposition to overgeneralize relationships was filled with rejection and untrustworthiness. These negative projections were seen as deterrents to establishing change. Lastly, the preoccupied or ambivalent client struggled with establishing a therapeutic relationship due to fears of rejection, as well as the need to remain close to the therapist, which often created conflicts with boundaries. Therefore, Taylor et al. proposed for each type of attachment, TP's goal was to provide a secure base within a respectful and positive attachment, and to evoke change and alleviate symptoms of anxiety and depression.

According to Khatri (2023) Equine-assisted therapies are guide clients through activities with horses. The therapy takes place at a horse farm. Typically equine-assisted therapy is a team effort where a psychotherapists works with a horse specialist. Clients interact with specially trained horses and learn about caring for them. The therapy focuses on learning to care for the horses rather than riding them. Caring for horses requires concentration, selflessness, and teamwork. Equine-assisted therapy programs can help people improve self-esteem, self-awareness, confidence, and empathy. Equine therapy programs can help treat: Behavioral problems, Relationship issues, Grief, Anxiety, Depression, Attention-deficit/hyperactivity disorder, Addiction, and Eating disorders.

Therapeutic Value of Horses

Recent studies have identified the positive therapeutic value horses had on overall mental health (Brandt, 2013; Burgon, 2011; Kern-Goldal et al., 2016; Klontz et al., 2007). For example, Brandt (2013) identified EAPs effectiveness was connected to the horses ability to respond to a clients' inconsistent verbal and nonverbal communication. She implied horses

natural social herd mentality enhanced their ability to effectively communicate with their herd and surroundings regarding safety. According to Horseknowledge.Com (2024), herd behavior in horses involves protecting the foals from predators and other herds of horses. They will also help to socialize them and teach them the skills they need to survive. This herd mentality is very strong in horses. When one horse in the herd is threatened or startled, the rest of the herd will usually follow suit.

Therefore, she reported that a client who presented with a disconnect between their verbal and nonverbal communication, when attempting to work with a horse, caused the horse to become confused, even irritated, causing the horse to immediately respond. The horses response to the clients inability to communicate effectively was viewed by the client as the horse being "disobedient". She continued by reflecting on the elicited transference of negative feelings from the client, provided opportunities to process their disconnect between mind and body. Lastly, during the processing of the "disobedience" and projected emotion, the horse became the metaphor for the relationships and behaviors in the clients life that caused similar emotions.

Research suggested horses are communication mediators during therapeutic sessions (Burgon, 2011). Burgon (2011) identified horses as prey animals, who possessed a highly developed ability to read the body language of others beings, as well as the projected emotions of others. She also proposed a horses classification as a prey animal, allowed their instinct to remain in a herd for protection and support as the key to their survival. She noted that individuals who engaged in EAP often connected with the horses desire for safety, became a useful metaphorical tool for therapists to utilize when exploring such connections. In addition, individuals who expressed undesirable emotions, inevitably caused the horse to become uncooperative (Frederick, Ivey-Hatz, & Lanning, 2015). These experiences offered opportunities for individuals to observe and learn how their emotions affected others and their environment (Burgon, 2011; Frederick et al., 2015).

Another example was provided by Klontz et al. (2007) who focused on the use of equine activities to assist clients in working through "unfinished business", psychological distress, here and now issues, and the ability to address maladaptive behaviors.

The use of alternative, non-traditional forms of treatment to address unwanted symptomology has been addressed by researchers such as Kern-Godal et al. (2016). In their recent study, Kern-Godal and colleagues investigated the perceptions of substance abuse clients working with equines, and their perceived overall effectiveness. In their mixed-methods study, 8 participants (selected via purposeful sampling) partook in semi-structured interviews over the course of 10-weeks. The data suggested three themes resonated as significant indicators of perceived benefits of working with equines. The indicators included: (1) relationship with the horse; (2) emotional effect; and (3) mastery (a feeling of control). The researchers drew upon Bowlby's attachment theory to depict the participants experiences related to "relationship with the horse". The researchers suggested for future studies to include long-term data collection, as well as addressing the neuro-biological nature of the human-horse relationship.

Equine-Assisted Psychotherapy

The term equine-assisted psychotherapy (EAP) was established by Greg Kersten in the early 1990s (Kersten, 2014a). Kersten's philosophes regarding EAP stemmed from his decades of observation and working with horses and at-risk youth. Over the course of time, Kersten created a certification program, and training manuals for EAP and Equine-Assisted Learning (EAL), under the heading of The O.K. Corral Series. The O.K. Corral Series focused on

utilizing the natural setting where the horse was present, in conjunction with the observed physical and emotional bond created between the horse and human ("O"observation and "K"knowledge) (Kersten, 2014a). Kersten's (2014a) EAP was strongly rooted in the use of metaphors, to help clients recognize "patterns, strengths, and the nonverbal messages we send*"* (p. 6). Kersten's approach to EAP was experiential in nature, and required a more passive and observational approach from the therapist. He also highlighted a horses ability to act naturally in its setting with the client, provided the therapist with observations of the clients behaviors, which would most likely be missed in a TP setting.

Equine-Assisted Psychotherapy Principles

Pressure and Pain

Kersten (2014a) argued that horses move away from pressure and into pain. He identified this behavior was not only evident for horses who experienced physical pain, but also emotional pain. He highlighted a horse's strongest attribute as being their instinctual nature to respond to their emotional experiences of pressure and pain. Therefore, he argued if a horse walked toward a client, the client was experiencing pain, and if they walked away from a client, the experience was pressure.

Kersten offered an example of the pressure-pain principle while observing a herd of horses during feeding time. When a herd of horses fed together, humans observed certain horses being moved away from the source of food by other horses. The horse(s) who moved away from the feeder as other horse(s) pushed in, were feeling pressure and moved away. He continued by illustrating that if the horse refused to move away and confronted (nipped or kicked or vocalized) toward the other horse, the original horse would move into the pain and address the conflict (instead of avoiding or ignoring it). Kersten argued this type of observation was common in EAP sessions, and often made clients able to internalize what he or she witnessed. He added that the information was then processed in a meaningful manner to represent situations or times the client avoided addressing their pain. Kersten further suggested observing a client's exchange with horses informed the therapist how the client addressed pressure and pain in their lives. Lastly, allowing the client to reflect on what they have observed and learned about their own pressure-pain principle in the arena and how it related to their life outside of sessions was a key component in EAP work.

Kersten (2014a) argued both well-adjusted horses and humans would move toward pain and away from pressure. He provided an example of a client who routinely entered the arena angry and demanded the horse perform for him. Expressing such outward displays of anger (pressure) the horse would walk away from the client, which in turn infuriated the client (G. Kersten, personal communication, April 27, 2017). Over the next several sessions the client would enter the arena and proceed to sit on the floor, refusing to engage with the therapist or the horse (G. Kersten, personal communication, April 27, 2017). As the clients outward display of aggression (pressure) towards the horse changed to an inward display of anger and emotional pain, the horse began to approach the client, or go into the pain (G. Kersten, personal communication, April 27, 2017). Kersten processed the pressure-pain principle with the client, and in turn the emotionally distressed client reflected on how the arena provided a safe base and environment for the non-judgmental horse to mirror the affect of the client. He reflected on how the client expressed the attachments/relationships around him as being abusive and demanding, and those experiences were what he projected at the horse (G. Kersten, personal communication, April 27, 2017).

Bachi (2013) confirmed Kersten's experience in terms of the horses innate ability to observe a client's emotions through their body language (mirror affect). She also identified horses, unlike therapists, react to a client's emotions/behaviors, without the client becoming offended or judged. She continued by addressing how a horse's prey nature and survival techniques (avoid pressure, go into pain), responded to a client's emotions/behaviors consistently. This consistence provided the client with reliable and direct honest feedback. Therefore, she referred to the horse as a giant mirror the client can see themselves in. Lastly, the therapist played a key role in this interaction as the interpreter (metaphorical analyst) for the horse.

Attachment Theory

Bowlby's (1982) attachment theory was based on the child-parent bond as a means to express the client-therapist relationship. Therapeutic practitioners who subscribe to attachment theory deliver treatment based on the ideology that relationships that are built upon healthy attachments are the vessels of development (Bowlby, 1982). Research on the client-therapist relationship found the type of relationship to be the greatest factor in relation to psychotherapeutic outcome (Taylor et al., 2015). The theory supports the ideology that the type of attachment formed in childhood will resurface during psychotherapy and ultimately play a role in the development of the therapist-client relationship (Mallinckrodt et al., 1995).

Research suggests the more secure the therapeutic attachment, the greater the client viewed the relationship as trustworthy and impactful (Tayler et al., 2015). Therefore, a client who views their therapeutic relationship as anxiety provoking develops an insecure attachment to their therapist (Tayler et al., 2015). The same holds true for clients with avoidant attachment, as they often view the relationship as untrustworthy and fear rejection (Tayler et al., 2015). The client with an ambivalent or preoccupied attachment often remains close to their therapist and most likely creates boundaries issues (Tayler et al., 2015). However, no matter what type of attachment a client presents with, Tayler et al. (2015) stressed the goal of therapy was to provide a secure base that is structured in trust and respect, which would gravitate toward a healthy therapeutic relationship and bring about symptom reduction.

Notably, this study examined attachment types as they related to symptom reduction given the type of therapeutic treatment provided. The results indicated participants who received EAP or TP reported similar levels of secure attachment to their therapist. The results also indicated that EAP participants experienced greater reduction in avoidant and preoccupied attachment types over the course of treatment when compared to TP participants. This study supports the existing literature, for those who received EAP services reported experiencing higher degrees of secure attachment, showed decreases in avoidant and preoccupied attachment, and exhibited decreases in mental health symptoms (Bachi, 2013).

Overall, this study and the existing literature confirmed the connection between a healthy therapeutic relationship and symptom reduction (Kern-Godal et al., 2016). More specifically, this study supported the existing data (Kern-Godal et al, 2016) regarding the significance of the horse-human connection on symptom reduction. The participants in the study reported feeling connected to or drawn to the horse they worked with based on a felt security and the nonjudgmental nature of the horse (Kern-Godal et al., 2016).

The positive impact of the horse-human connection has been observed and documented for over 2,500 years (Siporin, 2012). A review of the literature provided significant qualitative evidence of the benefit of using equines during therapy (Earles et al., 2015; Frederick et al., 2015; Klontz et al., 2007). The literature included discussion of how the emotional connection

clients experienced with the equine provided a secure foundation to process their thoughts and feelings (Karol, 2007). Bachi (2013) emphasized that unlike a therapist, an equine is nonjudgement, passive, and naturally inquisitive. It is through their natural docile presentation that they are able to help facilitate, with the aid of the therapist, Bowlby's (1988) five point model for psychotherapy: (a) provide a secure base to process emotions, (b) provide a holding environment to assess the functioning of the current relationship, (c) assess the functioning of past relationships, (d) assess how the past influenced the present (affect mirroring), and (e) revised and updated internal working models. Bowlby (1988) projected clients and therapists who were able to perform the five points of his model would experience both an increase in secure attachment and symptom reduction. Therefore, the results of this study support the theoretical underpinnings of attachment theory in that EAP participants experienced greater reduction in levels of depression and levels of anxiety and experienced less avoidant and less preoccupied attachment styles with their therapist due to the secure foundation provided through the horse-human connection.

METHODOLOGY

Research Design and Rationale

The study employed a quasi-experimental, retrospective research design. Archival data was collected from male and female adults involved in EAP over a 2-month period and a comparison group of adults who remained in TP. Data was gathered using three questionnaires requiring the participants approximately 10 minutes to complete. The data was not analyzed prior to the present study, and no information regarding the program has been published to date.

Sample

The participants for this study were male or female, ranging in age from 18-70, and of any ethnicity or cultural background. The ages were divided into groups according to Erikson's psychosocial stages: 18-35 years old, 35-60 years old, and 60 and older (Corey, 2001). Participants who engaged in TP or EAP had sought out one of the previously mentioned treatment forms to address levels of anxiety and/or levels of depression. The estimated targeted population size was 42,064 according to PATH Intl. (2016) statistics.

Site

The site of the research was ECS Psychological Services. The organization identified as a therapeutic farm with mental health professionals who received training in EAP from G. Kersten of The O.K Corral Series. The providers of psychotherapy services held certification and licensure to practice in their state, and the EAP therapists and horse handlers were also trained in the O.K. Corral Series philosophy. The TP setting was a second ECS location away from the therapeutic farm. To assure safety of the participants, ECS qualification (O.K. Corral Series certified) was verified, and ECS carried their own liability insurance. They also used their own wavers, and the safety of the participant was the sole responsibility of the service provider.

Sampling and Sampling Procedures

Sampling strategy: The type of sampling strategy selected for this study was convenience sampling. We selected this type of nonprobability sampling due to the participants being in specific areas (EAP settings) and using archival data.

Sampling frame: To represent the target population, the sampling frame consisted of adults

ages 18 to 70 of any gender, race, ethnicity, or socioeconomic status who possessed a minimum 9th grade reading level ,as reading comprehension was required to complete the self-report assessments. The only exclusion criteria was based on age (under 18) and if the participant exhibited a psychotic state. This exclusion was based on previous studies suggesting clients who exhibited a psychotic state may pose a risk for EAP safety due to the clients' potential for unexpected behavior and the horses possible reaction (Bachi, 2013).

Data Collection

The data collected (via BDI-II, BAI, and CATS) was under the auspices of ECS as part of the site's standard operations. ECS shared the data with me for the purpose of secondary analysis in connection with this study. The outcome measured data was continually collected by ECS starting in July of 2018 to the date of the analysis. The clinical database was stored at ECS main location in Saratoga Springs, New York. The sample (participants who sought treatment for stress related symptoms) consisted of clients who met the criteria (male or female, ages 18-70, without active psychosis) and were being seen for TP or EAP. ECS operations called for clients to fill out the CATS in the waiting room, placed it in a sealed envelope and returned it to the office manager for data entry into their automated medical chart. The BDI-II and BAI were completed in the therapist office and entered into the medical chart by the therapist.

Informed consent: Per the American Psychological Association (2010), ethical principles of psychologists and code of conduct, informed consent may be waived when the research is determined to not cause harm, and is in the form of an anonymous questionnaire, or naturalistic observations, for which confidentiality is protected and no risk to participants is projected.

Instrumentation and Operationalization of Constructs

Client Attachment to Therapist Scale. Participants in the study received the Brent Mallinchkrodt, Diana Gantt, and Helen Coble (1995), CATS, prior to participation in the study, and after completion of study. Selecting the Client Attachment to Therapist Scale (CATS) for the current study coincided with the purpose of the research, as the CATS assessed for the level of attachment an individual has to their therapist. Levels of attachment was associated with Mallinchkrodt, Gantt, and Coble's (1995) research which was grounded in Bowlby and Ainsworth's original attachment theory.

The CATS was also selected due to ease of administration and a self-report rating scale consisting of 31 questions, broken into three styles of attachment (or factors): factor 1 – Secure (14 items); factor 2 – Avoidant/fearful (12 items); and factor 3 – Preoccupied/merger (10 items). The test format was easily understood and based on a 6-point Likert-type scale: 1 = strongly disagree; 2 = somewhat disagree; 3 = slightly disagree; 4 = slightly agree; 5 = somewhat agree; and 6 = strongly agree.

Beck Anxiety Inventory

Participants in the study also completed the 21-item Beck Anxiety Inventory (BAI; Beck, Brown, & Steer, 1996) prior to participation in the study, and after completion of study. Selecting the BAI for the current research coincided with the purpose of the study, as the BAI was able to differentiate between anxious and non-anxious individuals between the ages of 17 and 80 (Leyger, Ruberg, & Woodruff-Broden, 2006).

Beck Depression Inventory

Participants in the study also completed the 21-item Beck Depresion Inventory II (BDI-II, Beck, Steer, and Brown, 1996)before participation in the study, and after completion of study.

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Selecting the BDI-II for the current research coincided with the purpose of the study, as the BDI-II was a purposeful tool for assessing levels of depression in individuals 13 years and older (Bringmann, Lemmens, Huibers, Borsboom, and Turelinckx, 2015). The BDI-II was also selected due to its speed (5 minutes) and ease of administration, and the minimal reading level was 4th grade (Jackson-Koku, 2016). Bringmann and colleagues also identified the BDI-II was the most widely used and empirically sound self-report for measuring the severity of depression. They also contended the measure assesses the symptoms of depression according to the DSM-V definition of depression. Permission to utilize the BDI-II was provided by the publisher, NCS Pearson, Inc.

Data Collection

The data utilized was based on secondary data from 90 cases from one outpatient treatment center in Saratoga Springs, New York. Participants who were included in the study engaged in either TP or EAP during an 8-week span. These participants completed the pretest and posttest administrations of the BDI-II, the BAI, and the CATS.

Prior to receiving the secondary data, the outpatient treatment center removed participants' personal identification from the data archive. Data from participants were collected from November of 2018 to August of 2019. A file was created in SPSS and included the participant's treatment group (TP or EAP), pre- and posttest BDI, BAI, and CATS scores, and demographic information (age and gender) for each participant.

RESULTS

Demographic Information

The majority of the participants were between the age range of 18 to 35, 62.2% (n = 56). Participants between the ages of 35 to 60 represented 36.7% of the sample (n = 33), whereas participants ages 60 and above made-up 1% of the sample (n = 1). The participants were asked on each of the inventories (BDI, BAI, CATS) to indicate their age and gender. Participants unanimously responded. As a result, the mean age was determined to be 34.28, with a standard deviation of 11.83. Therefore, the participant age ranges were adequately represented in the sample, as the average individual using EAP for the general population was between the ages of 18 to 50 according to PATH Intl. 2016 statistics. In terms of gender, participants were provided the choice of either male or female. Each participant involved identified their gender, with females representing the majority of the participants with 63.3% of the population (n = 57), whereas the men represented 36.7% of the sample (n = 33).

The independent variable in the study was the type of treatment service the participant received (TP or EAP). The original design of the study received an equal number (n = 45) of participants for each service. Each provider predetermined the length of treatment, with pre- and posttests collected 8 weeks apart.

Results for Depression

Depression level means and standard errors for the two treatment groups over the two recording times are reported in Table 1. The results of a 2 (group, ET v TP) x 2 (Pretest-posttesy) ANOVA produced a significant main effect for treatment type (F (1,88) = 7.77, p = .007) with TP participants (M = 15.84, SE = 1.09) experiencing significantly higher levels of depression than EAP participants (M = 11.57, SE = 1.09) over the two recording periods. And, based on Cohen's criteria (1988), the effect size (partial eta-square) for between group effect was moderate (η^2 = .081).

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Table 1: BDI-II Depression Levels by Treatment Type and Time

Treatment		M	SD	SE	95% CI Lower Est.	95% CI Upper Est.
EAP	Pretest	15.56	9.68	1.44	12.7	18.41
	Posttest	7.58	4.45	0.94	5.7	9.45
TP	Pretest	17.98	9.57	1.44	15.13	20.83
	Posttest	13.71	7.77	0.94	11.84	15.59
Pretest	**Total**	**16.77**	**9.65**	**1.02**	**14.75**	**18.78**
Posttest	**Total**	**10.64**	**7.01**	**0.67**	**9.32**	**12**

DV:BDI-II

The main effect of time was significant (F (1,88) = 63.03, p < .001), with a large effect size (η^2 = .417). This result indicated the average depression level at pretest (M = 16.77, SE = 1.01) was significantly higher than the levels recorded during the posttest time (M = 10.64, SE = .67, p <.001).

Of greater interest, the treatment type x time interaction was significant (F (1, 88) = 5.79, p = .018, with a moderate effect size (η^2 = .062), which indicated treatment groups responded differently during the pretest and posttest periods on the depression measure. Depression treatment type means for the two recording periods are presented in Figure 1 (and reported in Table 1). To test for between treatment type differences at each of the recording periods, We conducted simple effects analyses comparing the two treatment types (EAP vs. TP participants) at each of the recording periods (see Table 1).

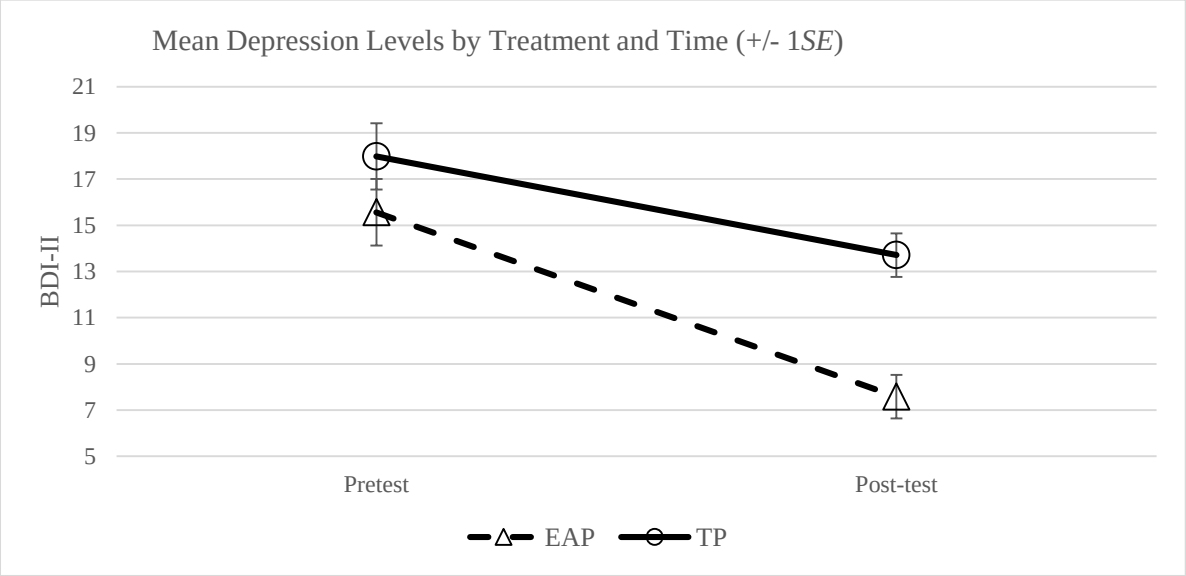

Figure 1: Mean Levels of BDI-II Depression by Treatment Group and Time

The results for the simple effect of treatment for pretest indicated the average depression level at baseline for TP (M = 17.98, SE = 1.43) and EAP (M = 15.56, SE = 1.43) groups were statistically equivalent (F (1,88) = 1.43, p =.236, η^2 = .016). By contrast, during the posttest recording time, the EAP participants (M = 7.58, SE = .94) had a significantly lower level of depression (F (1,88) = 21.11, p <.001, η^2 = .193) than TP group participants (M = 13.71, SE = .94 and represented a large effect size, accounting for approximately 19% of the between group variance.

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The simple effects analyses of time for treatment type was also examined. The results for the EAP group was statistically significant and the effect size (Eta-square) was large (F (1,88) = 53.51, p <.001, η^2 = .38). This finding, which is shown in Figure 1, indicated that for the EAP participants, the average level of depression at posttest (M = 7.58, SE = .94) was significantly lower than pretest baseline level (M = 15.56, SE = 1.43).

The simple effect of time for the TP participant group was also significant (F (1,88) = 15.31, p <.001, η^2 = .148). This result, which is shown in Figure 1, indicated that for TP participants, their depression level at posttest (M = 13.71, SE = .94) was statistically lower than pretest baseline level (M = 17.98, SE = 1.43).

Overall, both groups showed a significant reduction in depression from pretest to posttest. However, the EAP group experienced a greater decline with a seven point difference, compared to the TP group's four point difference. To a greater degree, the effect size for the EAP group (38%) was significantly larger than the TP group (14%), as depicted in Figure 1.

Results for Anxiety

Anxiety levels means and standard errors for the two treatment groups over the two recording times are reported in Table 2, and plotted in Figure 2. The results of the (2 x 2) ANOVA produced a significant main effect for treatment type (F (1,88) = 18.05, p < .001) with TP participants (M = 18.93, SE = 1.49) experiencing significantly higher levels of anxiety than EAP participants (M = 9.99, SE = 1.49) over the two recording periods; and the effect size was large (η^2 = .170).

Table 2: BAI Anxiety Levels by Treatment Type and Time

					95% CI	
Treatment		**M**	**SD**	**SE**	**Lower Est.**	**Upper Est.**
EAP	Pretest	13.16	10.99	1.64	9.86	16.46
	Posttest	6.82	5.95	0.89	5.03	8.61
TP	Pretest	21.47	15.29	2.28	16.87	26.06
	Posttest	16.40	9.98	2.02	13.40	19.40
Pretest	**Total**	**17.31**	**13.88**	**1.46**	**14.40**	**20.22**
Posttest	**Total**	**11.61**	**9.49**	**1.00**	**9.62**	**13.60**

DV:BAI

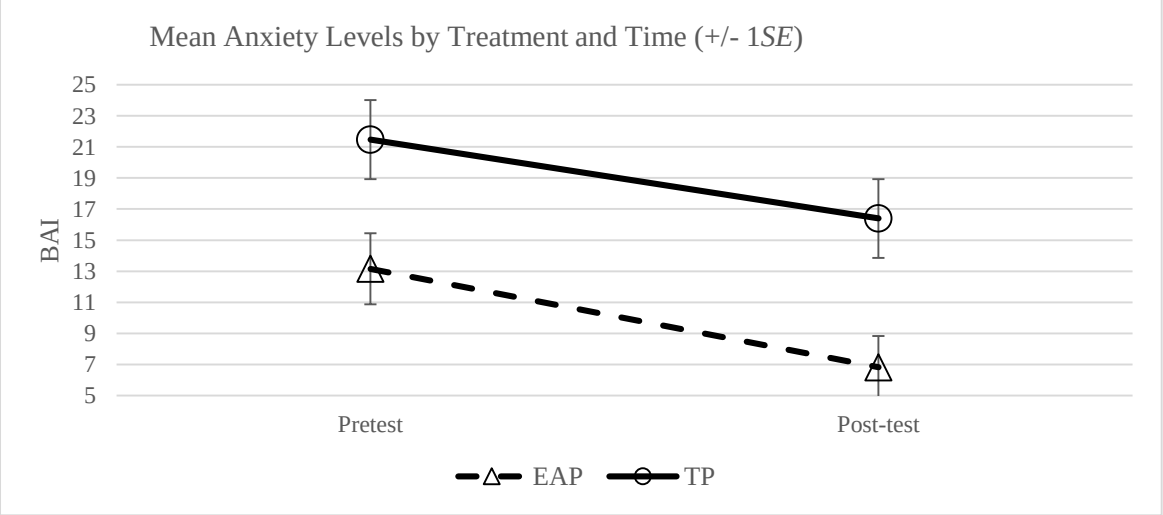

Figure 2: Mean Levels of BAI Anxiety by Treatment Type and Time

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The main effect of time was significant (F (1,88) = 32.26, $p < .001$) with a large effect size ($\eta^2 = .268$)'; and shows that the average anxiety level at pretest (M = 17.31, SE = 1.40) was significantly higher than the levels recorded during the posttest time (M = 11.61, SD = .87), $p < .001$). However, unlike the findings for depression, the group x time interaction was not significant (F (1, 88) = 0.40, p = .530, η^2 = .01), and suggests that the treatment groups responded similarly during the pretest and posttest periods on the anxiety measure. Overall, both groups showed a significant reduction in anxiety from pretest to posttest.

As an additional follow-up and because of the substantial between group differences in BAI scores at pretest, we further examined the anxiety data by conducting an ANCOVA on the Pretest-to-Posttest change scores, using the Pretest scores as the covariate. See Figure 3 for the mean adjusted change scores by treatment group. The results for the ANCOVA indicated that that after controlling for pretest BAI score there was a significant difference in the change scores for each group (F(1, 87) = 21.12, $p < .0001$, η^2 = .196) and the effect size was moderately large accounting for approximately 20% of the variability in BAI change scores. Specifically, the adjusted mean pretest-to-posttest change for the EAP group equaled 8.68-points (SE = .90), whereas the mean change in BAI-scores for the TP group equaled 14.95-points (SE= .90).

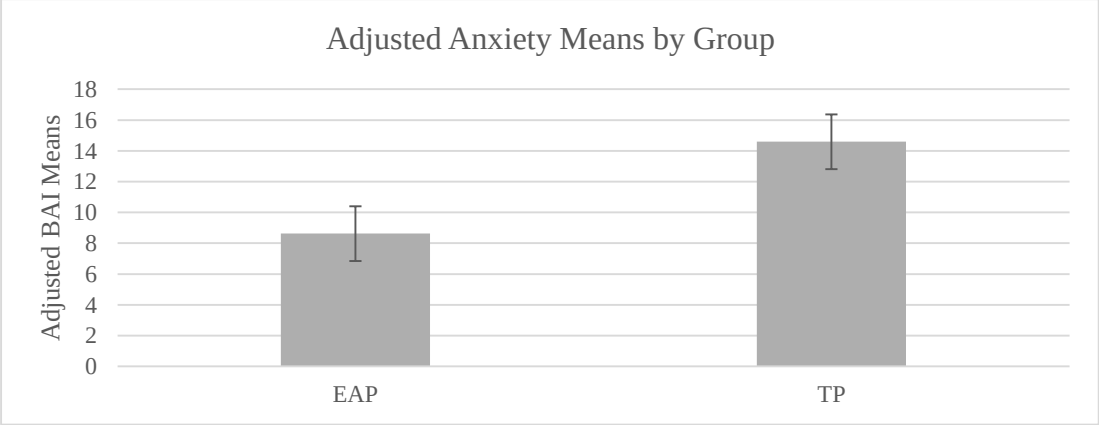

Figure 3: Adjusted BAI Anxiety Means by Group

Results for Secure Attachment to Therapist

The CATS-Secure attachment to Therapist Scale (Secure) means and standard deviations for the two treatment type groups over the two recording times are reported in Table 3. Preliminary analyses were conducted to ensure the assumptions of normality, equal variances, and covariances were met.

Table 3: Mean CATS Secure Attachment Levels by Treatment Type and Time

					95% CI	
Treatment		**M**	**SD**	**SE**	**Lower Est.**	**Upper Est.**
EAP	Pretest	51.20	6.21	0.93	49.33	53.07
	Posttest	55.18	4.18	0.62	53.92	56.43
TP	Pretest	52.67	6.45	0.96	50.73	54.61
	Posttest	55.20	3.79	0.56	54.06	56.34
Pretest	**Total**	**51.93**	**6.34**	**0.67**	**50.61**	**53.26**
Posttest	**Total**	**55.19**	**3.97**	**0.42**	**54.36**	**56.02**

DV: CATS- Secure Attachment to Therapist Scale

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The results of the ANOVA produced a non-significant main effect for treatment group (F (1,88) = 0.59, p = .445, η^2 = .007); and a none significant Group x Time interaction (F(1,88) = 1.72, p = .193, η^2 = .019). The main effect of time was statistically significant (F (1,88) = 35.00, p < .001) with a large effect size (η^2 = .285). This result indicated that for the full sample, the average Secure-Attachment score at pretest (M = 51.93, SD = 6.34) was significantly lower than the levels recorded during the posttest time (M = 55.19, SD = 3.97), and as shown in Figure 4, the significant increase in CATS scores occurred in both the EAP (Δ = 3.98) and TP (Δ = 2.53) groups.

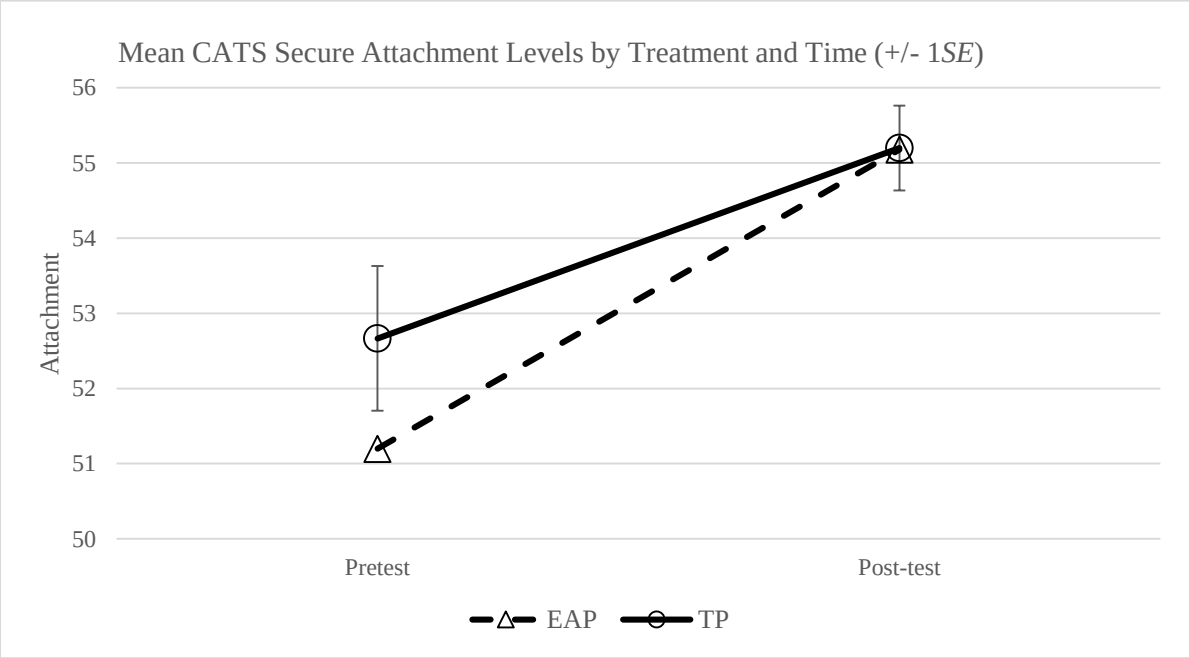

Figure 4: Mean CATS Secure Attachment Score by Group

Results for CATS Avoidant Attachment to Therapist

Avoidant attachment to therapist means and standard deviations for the two treatment type groups over the two recording times are reported in Table 4. Preliminary analyses were conducted to ensure the assumptions of normality, equal variances, and covariances were met.

Table 4: Mean Avoidance Levels by Treatment Type and Time

					95% CI	
Treatment		**M**	**SD**	**SE**	**Lower Est.**	**Upper Est.**
EAP	Pretest	24.58	6.24	0.93	22.70	26.45
	Posttest	19.49	4.90	0.73	18.02	20.96
TP	Pretest	25.09	4.20	0.63	23.83	26.35
	Posttest	21.78	3.72	0.55	20.66	22.89
Pretest	**Total**	**24.83**	**5.29**	**0.56**	**23.72**	**25.94**
Posttest	**Total**	**20.63**	**4.47**	**0.47**	**19.70**	**21.57**

DV: CATS-Avoidance Attachment

The main effect of time was significant (F (1,88) = 104.79, p < .001), with a large effect size (η^2 = .544), indicating that for all cases, the average avoidant attachment to therapist level at pretest (M = 24.83, SD = 5.29) was significantly higher than the levels recorded during the posttest time (M = 20.63, SD = 4.47, p <.001), and the effect dize was large.

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In addition, the group x time interaction was significant (F (1, 88) = 4.69, p = .033, with a small effect size (η^2 = .05), and indicated treatment types responded differently during the pretest and posttest periods on the avoidant attachment to therapist subscale measure. Avoidant attachment to therapist treatment type means for the two recording periods are presented in Figure 5 (and reported in Table 4). To test for between treatment type differences at each of the recording periods, Simple Effect Analyses were conducted comparing the two treatment types (EAP versus TP participants) at each of the recording periods – see Table 4.

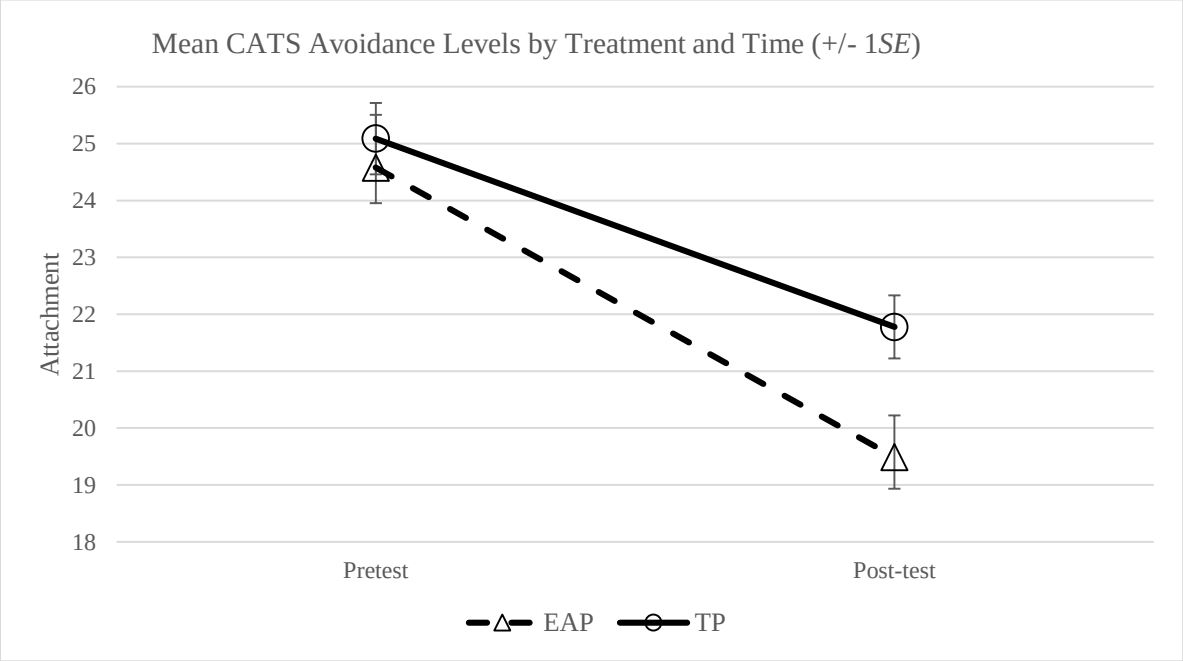

Figure 5: Means Avoidance Attachment Levels by Group

The results for the simple effect of treatment type for pretest indicated the average avoidant attachment to therapist level at baseline for TP (M = 25.09, SD = 4.20) and EAP (M = 24.58, SD = 6.24) groups were statistically equivalent (F (1,88) = 0.21, p =.650, η^2 = .002). By contrast, during the posttest recording time the EAP participants (M = 19.49, SD = 4.90) had a significantly lower level of avoidant attachment to therapist (F (1,88) = 6.24, p = .014, η^2 = .066) than TP group participants (M = 21.78, SD = 3.72), and represented a moderate effect size, accounting for approximately 7% of the between group variance (see Figure 5).

The simple effects analyses of time for treatment type examined the changes in avoidant attachment to therapist levels within each group over time. The results for the EAP participants was statistically significant and the effect size (Eta-square) was large (F (1,88) = 76.92, p <.001, η^2 = .466). This finding, which is shown in Figure 5, indicated for the EAP participants, the average level of avoidant attachment to therapist at posttest (M = 19.49, SD = 4.90) was significantly lower than pretest baseline level (M = 21.78, SD = 3.72).

The simple effect of time for the TP participant group was also significant and the effect was large (F (1,88) = 32.56, p < .001, η^2 = .270). This result, which is shown in Figure 5, indicated for TP participants, their avoidant attachment to therapist level at posttest (M = 21.78, SD = 3.72) was statistically lower than pretest baseline level (M = 25.09, SD = 4.20).

Overall, both groups showed a significant reduction in avoidant attachment from pretest to posttest. However, the TP group experienced a slightly greater decline with a three point

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difference, compared to the EAP groups two point difference. Of greater significance, was the effect size for the EAP group (46%) was significantly larger than the TP group (27%), as depicted in Figure 5.

Results for Preoccupied Attachment to Therapist

Preoccupied attachment to therapist means and standard deviations for the two treatment type groups over the two recording times are reported in Table 5. Preliminary analyses were conducted to ensure the assumptions of normality, equal variances, and covariances were met.

Table 5: Mean Preoccupied Attachment Levels by Treatment Type and Time

					95% CI	
Treatment		**M**	**SD**	**SE**	**Lower Est.**	**Upper Est.**
EAP	Pretest	22.73	8.05	1.20	20.32	25.15
	Posttest	16.22	6.38	0.95	14.31	18.14
TP	Pretest	21.58	6.39	0.95	19.66	23.50
	Posttest	17.62	6.18	0.92	15.77	19.48
Pretest	**Total**	**22.16**	**7.25**	**0.76**	**20.64**	**23.67**
Posttest	**Total**	**16.92**	**6.28**	**0.66**	**15.61**	**18.24**

DV: CATS-Preoccupied Attachment

The results of the ANOVA produced a non-significant main effect for treatment type (F (1,88) = 0.01, p = .927) with TP participants (M = 19.60, SD = 6.28) experiencing similar levels of preoccupied attachment to therapist, when compared to EAP participants (M = 19.48, SD = 7.25) over the two recording periods. And, based on Cohen's criteria (1988), the effect size (partial eta-square) for between group effect was small (η^2 = .001).

The main effect of time was significant (F (1,88) = 106.06, p < .001), with a large effect size (η^2 = .547). This result indicated the average preoccupied attachment to therapist level at pretest (M = 22.16, SD = 7.25) was significantly higher than the levels recorded during the posttest time (M = 16.92, SD = 6.28), p <.001).

Of greater interest, the treatment type x time interaction was not significant (F (1, 88) = 0.57, p = .453, with a small effect size (η^2 = .01), and indicated treatment types responded similarly during the pretest and posttest periods on the preoccupied attachment to therapist subscale measure. Preoccupied attachment to therapist treatment type means for the two recording periods are presented in Figure 6 (and reported in Table 5). To test for between treatment type differences at each of the recording periods, Simple Effect Analyses were conducted comparing the two treatment types (EAP versus TP participants) at each of the recording periods – see Table 5.

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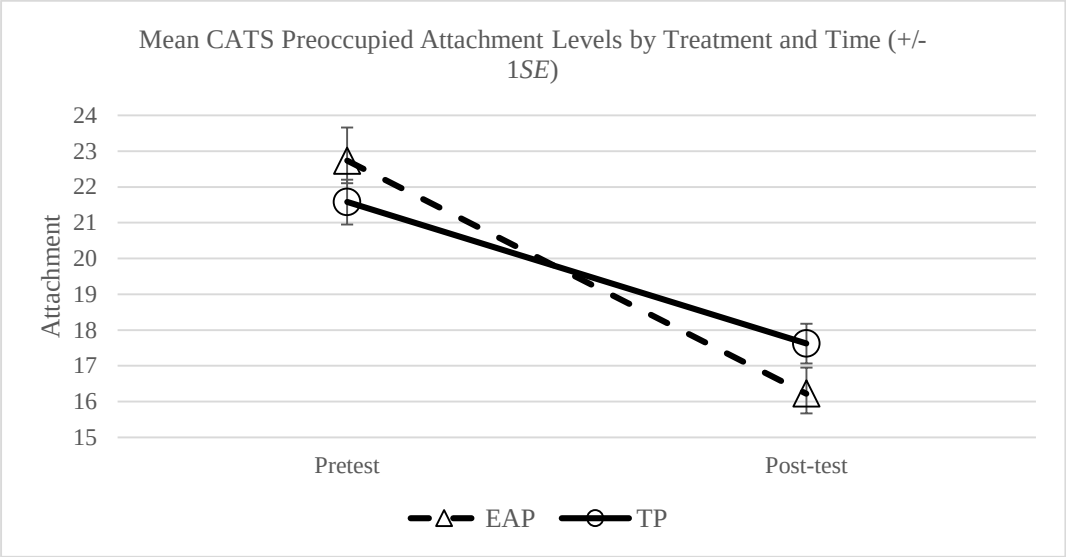

Figure 6: Means Avoidance Attachment Levels by Group

The results for the simple effect of treatment type for pretest indicated the average preoccupied attachment to therapist level at baseline for TP (M = 21.58, SD = 6.39) and EAP (M = 22.73, SD = 8.05) groups were not statistically equivalent (F (1,88) = 30.30, p =.453, η^2 = .006). Similar results were found during the posttest recording time, where the EAP participants (M = 16.22, SD = 6.38) and TP group participants (M = 17.62, SD = 6.18), experienced a similar decrease in preoccupied attachment to therapist (F (1,88) = 1.12, p = .293, η^2 = .013), and represented a small effect size, accounting for approximately 1% of the between group variance. (see Figure 6).

The simple effects analyses of time for treatment type examined the changes in preoccupied attachment to therapist levels within each group over time. The results for the EAP participants was statistically significant and the effect size (Eta-square) was large (F (1,88) = 82.09, p <.001, η^2 = .483). This finding, which is shown in Figure 6, indicated for the EAP participants, the average level of preoccupied attachment to therapist at posttest (M = 16.22, SD = 6.38) was significantly lower than pretest baseline level (M = 22.73, SD = 8.05).

The simple effect of time for the TP participant group was also significant and the effect was large (F (1,88) = 30.30, p < .001, η^2 = .256). This result, which is shown in Figure 6, indicated for TP participants, their preoccupied attachment to therapist level at posttest (M = 17.62, SD = 6.18) was statistically lower than pretest baseline level (M = 21.58, SD = 6.39).

Overall, both groups showed a significant reduction in preoccupied attachment from pretest to posttest. However, the EAP group experienced a greater decline with a six point difference, compared to the TP groups three point difference. To a greater degree, the effect size for the EAP group (48%) was significantly larger than the TP group (25%), as depicted in Figure 6.

Summary

The present study utilized archival data from 90 participants to determine the relationship between treatment type (EAP versus TP) on symptom reduction for depression, and anxiety, along with the type of attachment formed with the therapist at a private practice in Saratoga Springs, New York. The results indicated treatment time (pretest/posttest) had the greatest impact on reduction of symptoms and attachment to therapist. Overall, the EAP participants found greater reduction in both depression and anxiety when compared to the TP group.

Furthermore, participants in both treatment types found increases in secure attachment and decreases in both avoidant and preoccupied attachment, with the EAP participants showing slightly higher levels of secure attachment and more significant lower levels of avoidant and preoccupied attachment when compared to the TP participants. These findings are assessed alongside of the literature, where conclusions and implications are rendered, and recommendations are put forth.

Interpretation of the Findings

The overall results indicated that all participants, regardless of treatment type, experienced symptom reduction. However, those who engaged in EAP treatment obtained significantly lower levels of depression (19% between group variance) and lower levels of anxiety (26% between group variance) when compared to TP participants. Overall, these findings suggested engaging in therapy provides symptom reduction, yet the effect of adding an equine to the delivery of service provided greater symptom reduction over time.

For attachment to therapist, both treatment types showed a slight increase in secure attachment to therapist upon completing eight weeks of treatment. Similar to overall symptom reduction, all participants experienced a reduction in avoidant and preoccupied attachment over the course of treatment. However, EAP participants showed a greater decrease in avoidant and preoccupied attachment styles to their therapists when compared to TP participants. This suggested participants who engaged with an equine during treatment reported less avoidant and preoccupied levels of attachment with their therapist than those who did not have an equine present during treatment. Research has suggested the therapist-client attachment plays an important role in a client's overall symptom reduction (Bachi, 2013). Ultimately, clients who were able to form healthy attachments to their therapist were able to obtain greater benefits of psychotherapy treatment (Fonagy & Allison, 2014).

Studies showed individuals often experienced a difficult time formulating an attachment with their therapist (Waller et al., 2012). The lack of attachment may decrease the level of trust the client has in their provider and negatively impact symptom reduction (Waller et al., 2012). Overall, this study did not indicate a statistically significant difference between attachment to therapist and treatment type. It was able to show how time did have a statistically significant impact on the increase in secure attachment and decrease of both avoidant and preoccupied attachment for both groups. More importantly, the results did support the null hypothesis by providing statistically significant evidence that delivering therapy with the use of an equine greatly reduced levels of depression and levels of anxiety, when compared to traditional therapy without an equine.

Descriptive statistics indicated length of treatment was the most significant factor when controlling for treatment type and overall symptom reduction. The ideology that length of treatment positively impacts symptom reduction is supported throughout the literature (Chatwin et al., 2016; Honyashiki et al., 2014; Watts , 2015). The literature also supports individuals who engage in treatment over time are expected to have a more secure attachment to their therapist and hence, less avoidant and preoccupied attachments (Bachi, 2013). Even though there was not a significant difference in secure attachment, participants who engaged in EAP reported significantly lower levels of avoidant and preoccupied attachment to their therapists. Therefore, this study indicated participants were able to decrease their level of avoidant and preoccupied styles of attachment faster when an equine was involved in treatment.

Limitations of the Study

Even though the study identified some significant findings, the results of the study should be interpreted with caution as potential limitations may have impacted the overall results. Although the study was able to saturate both treatment groups, the data was archival in nature. Granted, archival data has advantages, it also has disadvantages such as, the existing data may not be reliable, or it may not have been collected to the standards of the researcher (Dikolli, Evans, Hales, Matejka, Moser, & Williamson, 2013).

The CATS has not been previously validated for the use with individuals receiving EAP. The survey also relied on the participants' self-report or perception of attachment. The same holds true for both the BDI and BAI, in regard to being categorized as self-report screeners. There are disadvantages to self-report data including response bias, not understanding the rating scales, and honesty or self-image projection (Fan, Miller, Park, Winward, Christensen, Grotevant, & Tai, 2006). Participants may have attempted to place themselves in a more favorable light, or may have experienced difficulty using the rating scale provided for them (Fan et al., 2006).

The setting of treatment may have also impacted the results of the study. Participants' who engaged in TP received treatment in the downtown office located on a busy road. Where participants who received EAP were seen at the therapeutic farm located just on the outskirts of town. The degree to which the findings can be generalizable to populations outside of adults who were not experiencing active psychosis, children, and teens was also impacted in this study. This study also failed to determine how many therapy sessions a participant received during the eight weeks between self-reports. Lastly, the experience level of each therapist who provided treatment was not assessed or taken into consideration, nor was the providers assessment of the therapeutic relationship.

CONCLUSION AND RECOMMENDATION

Conclusion

This study contributes to the literature on the use of EAP in reducing symptoms of depression and anxiety through the attachment of client to therapist. Results indicated significant findings that individuals who engaged in EAP found a greater reduction in both avoidant and preoccupied styles of attachment. Furthermore, this study contributes to the existing literature pertaining to the usefulness of treating depression and anxiety with EAP. The findings were consistent with previous studies, which used attachment theory to describe the fundamentals of EAP. Additionally, this study suggests implications for social change by identifying the need for alternative forms to TP. More importantly, this study suggests the need for social change regarding managed healthcare systems to identify EAP as a valid and reimbursable service.

Recommendations

The study found participants who engaged in EAP reported less avoidant and preoccupied attachment to their therapist and experienced a reduction in depression and anxiety symptoms greater than those who received TP. Although results showed statistical significance in some areas, the reported limitations of the study may have called into question the study's results. Therefore, it is recommended future research focus on expanding the diversity of the treatment setting, utilizing more than one treatment center, and acknowledging or identifying the experience level of the therapists who provided archival data.

Studies (Mallinckrodt et al., 1995) find individuals who are initially seen on a weekly basis for therapy tend to have greater reduction in mental health symptoms, and a higher degree of secure attachment with their therapist. Thus, it would be helpful for future studies to assess the therapist's interpretation of the relationship with the client. Doing so may shed light onto the nature of potential outliers in data, and assess more accurately for avoidant and preoccupied attachment styles.

Future research should also take into consideration the differences in distributing and collecting self-report surveys based on treatment time. More specifically, researchers should call into question when the best time is to assess for treatment outcome, as well as a baseline. This study identified baseline as the first appointment with their therapist, therefore, this may have impacted the participants ability to assess for initial attachment.

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