

Running head: EQUINE ASSISTED PSYCHOTHERAPY WITH AT-RISK
ADOLESCENTS

The Effects of Equine-Assisted Psychotherapy on the Psychosocial

Functioning of At-Risk Adolescents ages 12-18

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Counseling Thesis

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ABSTRACT

The increased need for effective interventions and the difficulty of working with at-risk adolescents have resulted in the design of many non-traditional approaches to therapy for at-risk youth. Equine-assisted psychotherapy (EAP) combines traditional therapeutic interventions with a more innovative component involving relationships and activities with horses. The purpose of this study is to fill a research gap by examining the therapeutic outcomes of EAP in treating at-risk adolescents ages 12-18. The findings suggest that at-risk adolescents who participate in an EAP program experience greater positive therapeutic progress in psychosocial functioning than those who do not participate in an EAP program.

TABLE OF CONTENTS

CHAPTER I: INTRODUCTION AND LITERATURE REVIEW

Statement of the Problem.....	7
Purpose of the Study.....	8
Definition of At-Risk.....	9
Definition of Psychosocial Functioning.....	10
Therapy with Horses.....	11
Recreational and Adventure-Based Therapy.....	13
Animal-Assisted Therapy.....	15
Rationale for use of Horses in Therapy.....	17
Theoretical Psychological Foundations of EAP.....	19
Effective Therapeutic Approaches in Working with At-Risk Youth.....	29
Biblical Integration.....	32

CHAPTER II: METHODS

Sample.....	38
Measuring Instruments.....	40
Procedure.....	41
Means of Analyzing Data.....	42

CHAPTER III: RESULTS

Total Score on Y-OQ.....	44
Total Score on Y-OQ-SR.....	45
Intrapersonal Distress on Y-OQ.....	46
Intrapersonal Distress on Y-OQ-SR.....	47

Somatic on Y-OQ.....	47
Somatic on Y-OQ-SR.....	47
Interpersonal Relations on Y-OQ.....	48
Interpersonal Relations on Y-OQ-SR.....	48
Critical Items on Y-OQ.....	49
Critical Items on Y-OQ-SR.....	50
Social Problems on Y-OQ.....	50
Social Problems on Y-OQ-SR.....	51
Behavioral Dysfunction on Y-OQ.....	51
Behavioral Dysfunction on Y-OQ-SR.....	52
CHAPTER IV: DISCUSSION	
Clinical Implications.....	60
Limitations of the Study.....	62
Suggestions for Future Research.....	65
References.....	67
Appendixes.....	75

CHAPTER I

INTRODUCTION AND LITERATURE REVIEW

This section will make use of the existing literature to define at-risk, psychosocial functioning, and Equine Assisted Psychotherapy (EAP). Due to the pronounced lack of research in EAP, the similarities between EAP and recreational, adventure-based, animal-assisted, brief, Gestalt, reality, and rational emotive therapies will be highlighted to make a case for the effectiveness of EAP based upon the merit of research done in these areas and upon the wide acceptance of these types of therapy in the field of counseling. Lastly, a comparison of effective therapeutic approaches in working with at-risk adolescents will be compared to EAP to justify the hypothesis.

Statement of the Problem

Mental health professionals and researchers are constantly searching for effective interventions to address the problems of adolescents. The increased need for effective interventions and the difficulty of working with this population have resulted in the design of many non-traditional approaches to therapy for at-risk youth, such as various experiential therapies, animal-assisted therapy, various expressive therapies, wilderness therapy, and adventure-based therapy. EAP is an emerging therapeutic intervention used in a variety of mental health settings, particularly in the treatment of adolescents. EAP is a type of recreational therapy loosely related to animal-assisted therapy. It combines traditional therapeutic interventions with a more innovative component involving relationships and activities with horses. Gestalt, reality, solution-oriented brief therapy,

and rational-emotive theories form the psychological foundations of EAP. Through aspects of these therapies and components unique to EAP, youths can address and alter maladaptive coping strategies and behaviors in a new and challenging environment. However, currently there is a pronounced lack of quantitative research to substantiate the effectiveness of EAP. The research studies whether participation in an EAP program affects the psychosocial functioning of at-risk adolescents between the ages of 12-18.

Purpose of the Study

The purpose of this study is to fill the research gap by examining the therapeutic outcomes of EAP in treating at-risk youth. Twenty-nine adolescents (15 in the treatment group and 14 in the control group) participated in the study. Clients were given the Youth Outcome Questionnaire Self-Report (Y-OQ-SR) before and after EAP to assess therapeutic outcomes in the areas of behavioral and emotional change. The client's current primary caregiver was given the Youth Outcome Questionnaire (Y-OQ) before and after treatment to obtain additional information and another perspective on changes in psychosocial functioning of the teens. At-risk adolescents living in a residential basic care facility or enrolled in outpatient treatment participated in either group or individual EAP. In individual EAP, the client, at least one horse, a horse specialist, and a therapist were present during each session. Group EAP consisted of four to five clients, at least one horse, a horse specialist, and a therapist. The results of those participating in an EAP program were compared to a control group not receiving any EAP.

The hypothesis was that at-risk adolescents who participated in an EAP program would experience greater positive therapeutic progress in psychosocial functioning than those who did not participate in an EAP program. EAP is an eclectic form of counseling

that combines various aspects of well-researched theories and types of therapy. Based upon the effectiveness of the various types of therapy that inform EAP, this prediction was justifiable. Research has shown that the whole of eclectic therapy is more effective than the sum of its parts (Small & Supple, 2001). Moreover, traditional talk therapy poses certain limitations, which will be discussed later, in working with adolescents that recreational therapies, including EAP, are able to overcome, which suggests that an outcome study will yield positive results.

Definition of At-Risk

According to the office of Justice and Juvenile Detention, a population increase of eight percent in the juvenile detention centers can be expected between 1995 and 2015. (Snyder & Sickmund, 1999, as cited by Autry, 2001). It is possible than an increase in the number of children subjected to various risk factors could provide an explanation for this estimation (Autry, 2001). Certain factors place children at risk of failing to succeed in life. Typically, success is exhibited by the ability to self-support as an adult and the capacity to engage in rewarding relationships with others (Rak & Patterson, 1996). In general, the risk factors hindering success have been defined as, “individual or environmental markers that are related to an increased likelihood that a negative outcome will occur” (Small & Memmo, 2004, pg. 6). Autry delineates the following as risk factors: poverty, physical or learning disabilities, being a victim of crime, abuse and neglect, or having parents who abuse substances (Autry, 2001). In a landmark study of resiliency in which 200 at-risk children were followed for 32 years, Werner and Smith (1992) defined *at-risk*, for the purposes of the study, by the following factors: poverty, perinatal distress, divorce, parental alcoholism, and parental mental illness. According to

a resiliency study by Carl Rak and Lewis Patterson (1996), any of the following place a child *at-risk* of failing to succeed in life: poverty, family discord and disorganization, violence and abuse, substance abuse, congenital defects, low birth weight, perinatal stress, divorce, parental alcoholism, more than four siblings living in the home, parental mental illness, and parents with minimal education. These risk factors were determined through a comprehensive review of researchers' functional definition of *at-risk*, and through an analysis of the research which supports each of these as constituting a circumstance which places a child *at-risk* (Rak & Patterson, 1996). Werner and Smith (1982) found that the type of risk factors are less significant than the number of risk factors present in the life of a child. When the aforementioned risk factors accumulate in the life of a child, there is a tendency towards negative outcomes, such as school failure, psychiatric illness, criminal involvement, vocational instability, and poor social relationship later in life, regardless of which specific risk factors are operative. The damaging effects of multiple risk factors apply across gender, race, culture, and disability category. Werner and Smith (1982) found that four or more risk factors are indicative of high-risk. For the purposes of this study, an adolescent exhibiting three or more of the 12 risk factors set forth by Rak and Patterson were considered at-risk. Three risk factors were chosen to include adolescents who are moderately at-risk, thereby allowing the results of this study to generalize to a larger portion of the adolescent at-risk population.

Definition of Psychosocial Functioning

In this study the definition put forward by the Y-OQ for psychosocial functioning will be utilized. The Y-OQ measures the therapeutic progress of adolescents receiving mental health intervention. The total score is used for the assessment of overall

“psychosocial functioning.” *Psychosocial functioning* is best defined by the six subscales of psychosocial functioning of the Y-OQ and Y-OQ-SR, because they are used in the calculation of a total Y-OQ score. The six subscales are: 1) Intra-personal distress, such as anxiety, depression, and hopelessness, 2) somatic or physical complaints, 3) interpersonal relations, such as aggressiveness, arguing, and defiance, 4) social problems, such as truancy or substance abuse, 5) behavioral dysfunctions, such as concentration or ability to handle frustrations, and 6) critical items or clinical factors, such as paranoia, obsessive compulsive disorder, suicide, or eating disorders. The Y-OQ-SR was normed on youths aged 12-18 (Burlingame, et al., 2001). Therefore, only subjects in this study that were within this age range participated. This study assessed the level at which each client was able to function within all six domains, and the combination of each area determined the overall level of psychosocial functioning.

Therapy with Horses (EAP)

In this study, *EAP program* encompasses both individual and group EAP, but only studies EAP and not any other type of therapy in which horses are used. Equine-Assisted Psychotherapy is often equated with Equine-Facilitated Psychotherapy (EFP). The two are similar in many ways, but they are quite different in practice and theoretical psychological foundations. EFP and EAP are both experiential psychotherapies done with either groups or individuals and involve horses. Both include handling, lunging, grooming, and some riding (Kersten & Thomas, 2004; NARHA, 2003). However, EFP often includes vaulting, the “art of dance/gymnastics on the back of a moving horse” (Coburn as quoted in Vidrine, 2002, p. 588). It also relies more heavily on riding than does EAP (NARHA, 2003). EAP does primarily “ground work” with horses, because

EAP practitioners believe that “ground activities with the horses provide better opportunities for growth and learning” (Kersten & Thomas, 2004). “Ground work” involves any activity in which the client is not riding the horse. The assumption is that with ground-based activities clients are better able to formulate solutions, because the horse is merely an instrument for this process, rather than the primary focus. Riding necessitates more emphasis on the counselor’s instruction and direction. Moreover, relationship issues and client issues become more apparent on the ground because the client is not as mentally occupied as when on the horse’s back (Kersten & Thomas, 2004).

The centrality of riding in EFP results in a philosophy of change that is quite different from that of EAP. Schultz (1999) speaks of the fundamental connection between movement and human development in an article that describes a form of mounted activity closely resembling vaulting. Schultz argues that mounted experience provides a feeling of security and predictability in the child’s world. EAP believes activities with horses are often intimidating and frustrating, and within this context issues surface, allowing for changes to occur. According to EAP, change does not primarily occur because of a feeling of security and predictability, but because, generally, people are uncomfortable around horses due to a horse’s size and unpredictability (Kersten & Thomas, 2004). EFP and EAP are not synonymous, and, therefore, research on EFP cannot be generalized to EAP.

EAP should not be confused with hippotherapy either, which is physical, occupational, or speech therapy using a horse, and it utilizes the rhythmic properties of

horseback riding in working with the physical limitations of clients (NARHA, 2003).

Again, research on hippotherapy cannot be applied to EAP.

EAP is guided by treatment plans and diagnoses, and is facilitated by a licensed mental health professional and a qualified equine professional. The horse professional is primarily responsible for safety and for observing the behavior of the horse, because the horse's reaction to the client is as powerful as the client's response to the horse. The mental health professional is primarily responsible for the therapeutic aspects of the session, although it should be noted that in practice it is quite common for these two roles to overlap (Kersten & Thomas, 2004).

Tim Jobe, one of the board members of EAGALA (the EAP certification organization), says that EAP is not horsemanship, it is "lifemanship" (personal communication, June 3, 2005). Horse knowledge is not the goal of EAP. The focus is on the *process* of participating in an activity with horses, and the client's behavior and response is central. The experiential aspect of EAP allows a client's behaviors and emotions to surface in a way that traditional talk therapy does not allow (Kimberl, 2002). Mayberry (1978, as cited in Greenwald 2000) believes that interventions involving activities with horses can help at-risk youth traverse chaotic life circumstances and give them a paradigm for success and positive peer interactions.

Recreational and Adventure-Based Therapy

As the number of at-risk adolescents continues to increase in the United States, the increased need for effective interventions has led to the development of recreational therapies that may be defined as, "professional therapy programs featuring adventure and/or outdoor activities and utilizing carefully planned assessments and interventions

that can be used for both the amelioration of a disability or limitation, as well as for the optimization of overall functioning and improved health” (Ewert, McCormick, & Voight, 2001, p. 108). Adventure-based counseling uses a carefully sequenced and processed series of experiential activities to elicit behavior change (Autry, 2001). EAP combines adventure-based and recreational therapy. While the outdoor environment or activities with horses may have inherent therapeutic value, this alone does not create a therapy program. Assessment of the current needs and functioning of the client, appropriate diagnosis of the issues, the creation of treatment goals and a treatment plan, and then subsequent interventions are the major distinctions between an outdoor experiential program and recreational or adventure-based therapy (Davis-Berman & Berman, 1995). Likewise, the same characteristics distinguish a horsemanship or horseback riding program from an EAP program.

Recreational and adventure therapies may overcome some of the limitations of traditional therapy in counseling adolescents. Most traditional therapies rely almost exclusively on language as a medium for change, which may not be the most effective way to facilitate change in all clients. Some clients’ verbal skills may not be fully developed, or a diagnosis such as attention hyperactivity disorder may make focusing on or responding to verbal interactions a less effective intervention. In addition, verbal approaches to therapy may also be ineffective with clients who are highly verbal and over-rationalize or intellectualize as a result (Davis-Berman & Berman, 1995). Furthermore, the confines of an office may be intimidating or constraining for some clients. Recreational therapy such as EAP is an intervention that may address some of the limitations of talk therapy in an effective and engaging manner.

Empirical investigation of adventure therapy has been limited and difficult to achieve due to the variability in adventure programming and its employment in multiple settings (Caldwell, 2001). Nonetheless, some insightful studies have been performed. In a review of the existing literature, the NIDRR project documented the effective use of therapeutic recreation with children and adults with schizophrenia, depression, bipolar disorder, substance abuse, developmental delays, trauma experiences, eating disorders, physical disabilities, and anxiety disorders (ATRA, 2004). Research to date also suggests effectiveness in enhancing self-concept, self-esteem, and an internal locus of control in at-risk adolescents (Hayden, 2005). EAP as a type of recreational and adventure-based therapy is likely to produce similar therapeutic outcomes in work with at-risk adolescents.

Animal-Assisted Therapy

The psychological, social, and physical benefits of animal companionship have been reported for various populations (Mallon, 1992). The media, popular publications, and professional literature “indicate that companion animals can improve the physical and emotional health of people, as well as provide companionship, reduce isolation, and possibly contribute to the development of responsible independent behavior” (Mallon, 1992). As early as 1699 John Locke advocated, “giving children dogs, squirrels, birds, or any such thing as to look after as a means of encouraging them to develop tender feelings and a sense of responsibility for others” (as cited in Parshall, 2003, p. 47). The earliest documentation of animals used as adjuncts to therapy was in the late 1700’s at the York retreat for the mentally ill (Heimlich, 2001). Boris Levinson was the first to empirically

investigate the use of animals in therapy and increase the awareness of the potential benefits of animals as co-facilitators in therapy (Heimlich, 2001).

Heimlich (2001) summarized the numerous physical benefits of human-animal interactions. The most significant application for counseling relates to the social benefits that result from this interaction. Heimlich (2001) states that interface with animals seems to foster socialization, increase responsiveness, facilitate mental alertness, and enhance an outward focus on the environment. While these benefits are realized in the absence of therapy, they also inform the animal-assisted therapeutic process. When animals are used as “co-therapists” the benefits are even more profound.

Animal assisted therapy (AAT) has been effective in reducing the symptoms of youths with attention deficit disorder (Hayden, 2005). A qualitative study done at Colorado State University showed that two emotionally disturbed boys (ages 11 and 12) who had not responded successfully to traditional therapy and who participated in AAT with a dog showed growth in several areas. At the end of the study they demonstrated more confidence, greater ability to pay attention in class, less hyperactivity, an increase in social skills, and less oppositional behavior than they had before the sessions (Kogan, Granger, Fitchett, Helmer, & Young, 1999).

AAT has been used effectively in counseling children who were crack babies (Burke, 1992). It is effective with residential children who have significant behavioral, emotional, and academic difficulties (Mallon, 1992). AAT has had positive results with the depression of college students (Folse, Minder, Aycock, & Santana, 1994) and women in prison (Walsh & Mertin, 1994). It has also produced statistically significant reductions in anxiety scores for patients with psychotic or mood disorders (Barker & Dawson,

1998). AAT has also been highly effective in reducing emotional and behavioral anger in adolescents who were subjected to some form of parental brutality (Hanselman, 2001).

It has been proposed that AAT is effective primarily because pets provide “the bridge to decrease the initial shock incidental to encountering a therapist or beginning a new group therapeutic process” (Mallon, 1992, p. 54). The animals in AAT are thought to provide unconditional positive regard and warmth which the client then attaches to the therapist by virtue of the therapist’s relationship with the animal. While it is likely that these benefits could also be seen when the animal used as co-therapist is a horse, none of these studies involved horses. Much of the research done on AAT can be applied to EAP because horses are indeed animals, but the use of horses carries with it many therapeutic benefits that cannot be compared to therapy with pets such as dogs and cats.

Rationale for Use of Horses in Therapy

Horses provide many therapeutic benefits in addition to those seen from other animals. The most obvious difference between horses and other animals typically used in therapy is their size, which is between 800 and 2,000 pounds. The size and power of horses naturally intimidate clients and provide an opportunity to overcome fear and develop confidence. They provide poignant metaphors when dealing with intimidating and challenging life circumstances (Kersten & Thomas, 2004).

Horses are like people in that they are social animals. “They have defined roles within their herds. They would rather be with their peers. They have distinct personalities, attitudes, and moods. An approach that seems to work with one horse, does not necessarily work with another. At times, they seem stubborn and defiant. They also

like to play and enjoy themselves (Kersten & Thomas, 2004). Through the use of horses an enormous amount of metaphorical learning can be achieved.

Horses also provide a wonderful metaphor for human relationships. Youths are often forced to change their behavior in order to change the behavior of the horse, thereby taking responsibility for their own behaviors. Relationship with horses teaches the fine line between aggression and assertion. Clients can learn the basics of respect, problem-ownership, and maintaining healthy relationships through their interaction with horses (Kersten & Thomas, 2004).

Caring for and working with horses requires effort. Horses can help youths learn the rewards of hard work and delayed gratification. Youths learn that success follows physical and mental engagement, which is a valuable life lesson (Kersten & Thomas, 2004).

Most importantly, horses have the ability to mirror human body language. They “read the client’s non-verbal communication and react to it” (Kersten & Thomas, 2004, p. 13). Horses may teach humans to send congruent messages with both spoken and body language (Rector, 1992). McCormick and McCormick (1997) believe that through the relationship with horses, people are able to lower their defenses and habitual reactivity and become more receptive to new ideas and behaviors. Clients must abandon verbal communication, which allows for an acute awareness of their own body and intentions. Horses are able to *show* clients their behavior in a manner that could be taken as mockery if the therapist were to mirror the client in the same way. Horses foster change and provide healing by responding to sensory and somatic experiences in a way therapists

cannot. Quite simply, because a horse's communication is non-verbal, humans are encouraged to confront and effect change in a powerful and non-threatening way.

Theoretical Psychological Foundations of EAP

The basic theoretical, psychological foundations of EAP are brief therapy, Gestalt therapy, reality therapy, and rational emotive therapy (Kersten & Thomas, 2004). Due to the lack of research on EAP, the similarities between EAP and each of these forms of therapy will be highlighted to make a case for the effectiveness of EAP based upon the merit of research done in these areas and upon the wide acceptance of these types of therapy in the field of counseling.

EAP is essentially a form of integrated brief therapy. The prominent forms of brief therapy are: problem-focused, solution-focused, and strategic solution focused (integrated) brief therapy. EAP has grown out of each of these widely used and accepted forms of brief therapy.

The definition of *at-risk* for the purposes of this research was obtained through resilience studies. The focus of these studies is *salutogenesis* – the origins of health. They have identified several factors that seem to protect at-risk children from the detrimental effects of their environment and biological predispositions. An understanding of these factors allows counselors to help at-risk children, their families, and other school personnel to capitalize upon their strengths. Moreover, it has led to the development of effective interventions for children at risk, and subsequent research on these interventions. Based on this research, Rak and Patterson (1996) suggest that the most important perspective counselors can adopt in working with at-risk children is one

of salutogenesis. Moreover, they suggest that counselors utilize an integrated solution-focused brief therapy strategy in order to operationalize a salutogenesis perspective.

Brief therapy began at the Mental Research Institute and was called problem-focused brief therapy (MRI). As the title implies, it is a problem-solving model. Problems are defined as “unsuccessful attempts to resolve difficulties.” A primary assumption is that problems are sustained when clients continue to carry out solutions that do not work. The counseling process focuses on “doing something different and minor” in an effort to interrupt the client’s harmful solutions in a search for an adaptive solution (Fisch, Weakland, & Segal, 1982).

MRI clearly defines the problem, and then begins to work on solutions. Solution-focused brief therapy (SFBT) grew out of this model, but it focuses on the solution rather than the problem. In its purest form, the counselor needs no information on the client’s problem. Solution-focused therapy has developed some very practical techniques, such as eliciting exceptions, scaling questions, and the miracle question (Walter & Peller, 1992). Research has shown that a solution-focused approach prepares clients to cope with new problems in their lives (deShazer et al., 1986). This is imperative in working with children who have been placed at-risk for whatever reason.

Strategic, solution-focused therapy was developed by Ellen Quick and integrates MRI and SFBT in a way that makes the practical application seem much more natural. Not only does it use the techniques from SFBT to amplify the solution, but it also clarifies and defines the problem. Moreover, this theory offers several homework ideas that would be highly effective with adolescents (Quick, 1996).

Research has found integrated brief therapy to be more effective than the specific use of solution-focused brief therapy. Studies have shown an integrated model to be effective in working with conduct disorders, sexually abused children, habit cough, separation anxiety, adjustment problems, attention deficit hyperactivity disorders, posttraumatic stress disorders, excessive aggression, substance abuse, disturbances of emotions specific to childhood, relationship problems with parents, grief issues, a variety of marriage and family issues, and major depression in adolescents (Bloom, 2002). In the American Psychological Association Task Force on Psychological Intervention Guidelines (1994), cognitive behavioral therapy was the most empirically validated therapeutic procedure for a wide range of clinical problems. MRI, SFBT, and integrated models of brief therapy are based upon cognitive behavioral theory and learning-theory (Weakland, Fisch, Watzlawick, & Bodin, 1974; Walter & Peller, 1992). The two basic notions that underlie most forms of brief therapy are: 1) the focus on observable behavioral interactions and 2) the use of deliberate interventions to alter the observed pattern of the undesirable behavior (Fisch, Weakland, & Segal, 1982; Walter & Peller, 1992). These are also the basic foundations of EAP (Kersten & Thomas, 2004).

The client's interaction with a horse is observed by the therapist and horse specialist. It is assumed that behaviors that don't elicit a positive response from the horse are causing similar problems in other areas of the client's life. It is the role of the horse specialist to help the client change the undesirable behavior in an effort to elicit a more positive response from the horse. It is then the role of the therapist to help the client transfer this learning to other relationships.

Many of the philosophical assumptions of brief therapy are also shared with EAP. One of these principles is that change develops by learning through new actions rather than insight. This principle is imperative in counseling with children and adolescents because their ability for insight is in its initial development and typically immature. Children grow intellectually and emotionally through feedback from their environment (Vidrine, Owen-Smith, & Faulkner, 2002). In both EAP and the problem-solving model of change, the important factors are *participation* by the client in new experiences and the use of therapeutic metaphors by the client and therapist. The accomplishment of a task involving a horse, despite fear and feelings of intimidation, provides profound metaphors for dealing with other threatening and challenging situations in life. EAP strongly asserts that “the most effective change occurs when people discover their own solutions through experiential learning” (Kersten & Thomas, 2004, p. 12). Educators have known for many years that experience-based educational programs can have a significant positive impact on the social, psychological, and intellectual development of adolescents (Conrad & Hedin, 1982). Likewise, it could be postulated that experiential *counseling* will have similar positive effects on adolescents.

Moreover, the counselor and the horse can provide valuable “feedback from the environment” that is necessary for growth and change in children and adolescents. In a 1994 study of brief therapy, videotapes of family members interacting with each other proved to be a highly effective way to improve the relationship between child and parent (Bloom, 2002). EAP and brief therapy simply provide more subtle “videos” of the client’s life. Horses have the uncanny ability to mirror exactly what a human’s body language tells them. Of particular significance is the honest yet subtle and non-

threatening way in which the horse is able to provide feedback. For instance, if a person is feeling anxious or nervous, it is highly likely that the horse will begin to exhibit anxious or nervous behaviors. The horse will relax only when the client is able to gain control of his or her anxiety. It is through the skills, education, character, and experience of the counselor as facilitator that the relationship with the horse can have a profound impact on the client's life. Through the experiential aspects of EAP and the witness that horses and counselors provide, clients can begin to truly see themselves and make changes in their lives.

Brief therapy focuses extensively on engaging the client's conscious mind in an effort to make use of resources of which the client may be unaware (Fisch, Weakland, & Segal, 1982; Quick, 1996; Walter & Peller, 1992). The goal is to not only help the client solve the problem at hand, but also to help him or her discover a process of problem-solving applicable in future dilemmas. EAP provides a medium through which clients can realize this process and then specifically apply it to their lives. For instance, during an EAP session a client may become frustrated and want to quit, become aggressive, or continue trying the same thing repetitively when it is not working. The therapist would then help the client explore other times when they react similarly to problems and difficulties. The client may then deal with the particular issue that is keeping them from finding solutions in session, and then the therapist can help them understand how the same principal can be applied in other difficult situations.

Brief therapy strives to depathologize the client and build upon the behaviors and beliefs that are part of the client's strengths (Fisch, Weakland, & Segal, 1982; Walter & Peller, 1992). This is one of the fundamental values of EAP and is important when

counseling adolescents and children, because it empowers them to self-manage and cope with problems and stressors.

Brief therapy is strategic. The therapist actively creates a context in which change may occur. In EAP the therapist is responsible for deciding upon or creating an activity with therapeutic goals in mind. The creation of a context conducive to change is one of the foundations of problem solving therapy (Fisch, Weakland, & Segal, 1982). In this context clients can realize how much they already know and use these abilities in a directed fashion to move toward health.

The philosophy of problem-solving therapy is as follows: 1) If it ain't broke, don't fix it. 2) If it doesn't work, don't do it again: do something different. 3) Once you know what works, do more of it. This philosophy carries over to the other forms of brief therapy, but in solution-focused therapy, steps two and three are switched (Walter & Peller, 1992; Fisch, Weakland, & Segal, 1982). EAP also emphasizes "doing what works." EAP therapists believe there is not merely one right way to work with horses or people, and they continually ask their clients whether techniques are right, wrong, or just different. Horses act as a metaphor for relationships by allowing the opportunity to examine what works and what doesn't. If a behavior isn't working in relationship with the horse, it is probably not working in the client's other relationships either.

In the problem solving model, "problems are unsuccessful attempts to solve other problems," and the ultimate goal is to "understand and change the attempted solutions" (Fisch, Weakland, & Segal, 1982). EAP provides an "object lesson" for this. The activities of EAP can be rather difficult and require creativity of the client. Through EAP activities, therapists can help clients explore the themes of those things they have tried,

and develop new themes that will help solve the “problem” produced by the activity with the horse. The client is then asked if they have noticed a similar problem occurring in their personal lives and if they can see a way in which the solution “that worked” with the horse may work outside of counseling.

Brief therapy is focused in the “here-and-now” (Fisch, Weakland, & Segal, 1982; Walter & Peller, 1992). This aspect of EAP and brief therapy has been borrowed from Gestalt therapy, another one of the theoretical underpinnings of EAP. Gestalt therapists believe that change is brought about through a process of discovery that produces an awareness of the problem. Therefore, the therapeutic work focuses on increasing awareness in order to identify and resolve the emerging need (Wagner-Moore, 2004). Gestalt therapists use the terminology “figure-background” for the Gestalt counseling process. The counseling process seeks to “prioritize” problems by working on those in the “foreground,” and assumes that when the problem has been resolved it will take its place in the “background” (Wagner-Moore, 2004). EAP helps clients identify issues through the learning situations created by activities with horses. This is highly effective for adolescents who are often unaware of the ultimate problem. In this way, Gestalt therapy and therefore EAP, are useful because they help clients determine *what* exactly the problem is and *why* it is a problem (Fisch, Weakland, & Segal, 1982). Therefore, EAP is an effective way of helping adolescents personally identify the core problem, and seek solutions.

Research has shown Gestalt therapy to be impactful in conflict-resolution situations, indecision reduction, resolving marital conflict and unfinished business, and improving intimacy, depression, and chronic pain (Wagner-Moore, 2004). It is also

effective in dealing with conflict splits, which usually involve an inconsistency between an individual's principles and fundamental emotional needs and wants (Greenberg & Rice, 1981). The two-chair technique is the most widely used and researched of the Gestalt techniques. This technique involves setting up a dialogue between the client and some significant person in his or her life, assuming the identity of another person in this dialogue, or carrying on a dialogue between two conflicting aspects within the client (Corey, 2001). The greatest advances in both theory and research for Gestalt therapy have come from the work of Leslie Greenberg and colleagues who suggest that the more active components of gestalt work are responsible for its noted effectiveness (Wagner-Moore, 2004). Similar to Gestalt therapy, the active components of EAP and the powerful *dialogue* that occurs between the client and horse is partially responsible for its usefulness in therapy with at-risk youth.

EAP also relies heavily on reality therapy. Reality therapy is built upon choice theory: we "choose what we do or what we do not do" (Glasser, 2004, p. 340). It is unnecessary for a person to understand all that has happened in the past or to shift the blame away from one's self. Healthy people take responsibility for their own actions and choose behaviors that move them closer to others rather than further away (Dettrick, 2004). Reality therapists believe that people come to counseling because they are unhappy, and the underlying cause of every client's unhappiness is universal. Their current relationships with the important people in their lives are not satisfying, and therefore they are not as mentally healthy as they would like to be. This therapy consists primarily of teaching clients to make more effective choices as they deal with the needed people in their lives (Glasser, 2004). Reality therapists believe that there are only two

kinds of pleasure: pleasure we obtain when we get along with people, and the intense pleasure apart from people called addiction. Reality therapy focuses on what the client *can* control in his or her relationships (Corey, 2001). Clients are constantly being asked if what they are choose is bringing them closer to the people they need or getting them in touch with new people.

During an EAP session, the relationship between the horse and client is paramount. Throughout the activity with a horse, the client must change his or her own behavior in order to change the behavior of the horse. The client must learn to self examine behaviors, choose what will elicit a more positive response from the horse, and accept responsibility for his or her decisions and the resulting outcome. Each person possesses a unique way of interacting with others, and this becomes evident during the interchange between horse and client. If a certain behavior is ineffective with or detrimental to the horse, it is most likely not effective in other relationships. Clients are asked to draw the analogy between their relationship with the horse and other significant relationships in their lives. The hope is that after EAP, clients can use what was learned from the horse and therapist outside of counseling, and continue to maintain or improve their own mental health.

Rational-emotive therapy (RET), a type of cognitive-behavioral therapy, was also utilized in the development of EAP. The core idea of RET is that people's beliefs about a situation must be changed in order to reduce or eliminate psychological disturbances. People are not disturbed by events themselves, but by the beliefs they hold about those events. Therefore, undesirable emotional consequences are the results of irrational beliefs (Jones & Butman, 1991). The therapy's ABC theory of human disturbance holds

that people experience undesirable activating events (A) and that they have rational and irrational beliefs (B) about these stimuli. Their beliefs create either appropriate emotional and behavioral consequences (aC) or inappropriate and dysfunctional consequences (iC) (Ellis, 1993). RET therapists are active-directive in teaching people problem solving, skill training, and social change methods, so that they can modify the environment and the system in which they live (Ellis, 1991). Empirical evidence has convincingly demonstrated RET's efficacy compared to wait-list controls (Di Giuseppe & Kassino, 1976; DiGiuseppe, Miller & Trexler, 1977; Miller & Kassino, 1978; Trexler & Karst, 1972). Also, a meta-analysis of 28 controlled, quantitative studies on the efficacy of RET show it to be superior to placebo and no treatment (Engels, Garnefski, & Diekstra, 1993). It was shown to be equally effective in comparison with other types of treatment such as combination therapies and systematic desensitization (Engels, Garnefski, & Diekstra, 1993).

EAP therapists are active-directive in the planning of activities to help clients discard irrational beliefs. They also directly participate in the development of healthy beliefs, feelings, and behaviors for their clients. During an EAP session it is common for the client to project their thoughts, feelings, and behaviors onto the horse. This provides an opportunity for the therapist to confront the irrational thoughts and feelings of "the horse" (i.e. the client). In a situation where clients may have trouble verbalizing their feelings, this allows a poignant opportunity for catharsis, and a non-confrontational way to give clients' insight into their flawed belief systems. Moreover, EAP affords a unique medium in which clients strive to change their beliefs and behaviors through interactions

with a horse, and with the help of the therapist, apply what was learned to other areas of life.

In recent years there has been a trend toward psychotherapy integration because many professionals recognize that no single theory is comprehensive enough to account for the complexities of human behavior. Therefore, more effective treatments are developed when the best of differing orientations can be combined to create more comprehensive theoretical models (Goldfried & Castonguay, 1992). Many therapists agree that it is necessary to be integrative in their approach since there is no one best method, and literature contains documentation of effective approaches emerging from other theories (Smith, 1985; Kelly, 1991; Lambert, 1992). Corey (2001) argues that effective integration occurs when certain features of each therapy are combined in an effort to address all three dimensions of human experience: cognitive, feeling, and behavioral. EAP has integrated aspects of brief, gestalt, reality, and rational-emotive therapy in an effort to form a type of counseling which works well with a range of clients and a variety of problems.

Effective Therapeutic Approaches in Working with At-Risk Youth

In recent years there has been an attempt to create a therapeutic approach to adolescent therapy that would aid in youth development and problem prevention. In a 2004 article, Small and Memmo provide an overview of the three main categories of theoretical frameworks: resilience approach, prevention approaches, and positive youth development approaches. They critically examine strengths and weaknesses of these approaches and suggest that an integrated model that would be the most effective in

improving the life chances of young people (Small & Memmo, 2004). EAP incorporates the strengths of each theoretical framework into its work with youth.

The first model is the resilience approach. Resiliency in children is “the capacity of those who are exposed to identifiable risk factors to overcome those risks and avoid negative outcomes such as delinquency and behavioral problems, psychological maladjustment, academic difficulties, and physical complications” (Rak & Patterson, 1996). Resilience approaches emphasize the identification of stable characteristics in a child or environment (protective factors) that serve to either aid an individual in surviving stressful situations or allow the individual to recover or adapt after a period of disorganization (Small & Memmo, 2004). The primary strength of the approach is the belief that severe stress and adversity do not automatically result in negative consequences. EAP takes this one step further in its philosophy, proposing that stress and adversity actually allow people to grow and change. In essence, challenging circumstances do not necessitate negative outcomes, but facilitate growth (Kersten & Thomas, 2004). EAP is sensitive to the negative impact that severe environmental stressors can have on the strongest of individuals, but it operates out of the hope that positive change is possible and even likely when people are challenged through life circumstances or through the process of EAP.

Prevention approaches seek to reduce or eliminate risk factors and increase or promote protective factors (Durlak, 1997). This approach typically involves enhancing the strengths, skills, or competencies of youths so that they are better able to cope with the stress and challenges of life (Small & Memmo, 2004). EAP has a strong behavioral underpinning because of its solution-oriented approach, in which strengths, skills, and

competencies are of major importance (Kersten & Thomas, 2004). It is imperative in working with at-risk adolescents to teach and model behaviors that bolster a client's capacity to self-manage and cope with difficult life situations (Rak & Patterson, 1996). In EAP both the counselor and the horse play a part in teaching and modeling these behaviors.

The approach that has most strongly influenced EAP is the positive youth development approach. The following definition of *positive youth development approach* is one of the core beliefs of EAP: "A unifying philosophy characterized by a positive, asset-building orientation that builds on strengths rather than categorizing youth according to their deficits" (Small & Memmo, 2004, p. 7). Rak and Patterson (1996) argue that counselors working with at-risk youth must have a firm commitment to salutogenesis – looking for strengths rather than weaknesses. Moreover, this approach argues that youths need three critical assets: safe places, challenging experiences, and caring people" (Zeldin, Kimball, & Price, 1995). While most counselors claim to be *caring* and seek to provide a *safe place* for their clients, few actually offer *challenging experiences*. EAP sessions are centered upon a challenging task involving a horse, which contributes to positive development. Most importantly, EAP does indeed have a strong commitment to salutogenesis.

Small and Memmo (2004) argue that a limited degree of success should be expected when therapy utilizes only one approach. Several recent authors have argued that therapy is the most effective when it incorporates a variety of strategies (Connell & Kubisch, 2001; Eccles & Gootman, 2002). Any therapeutic approach should include strengths of each strategy while avoiding the learned weaknesses, because such an

approach is more apt to address the needs of a wide range of youth (Small & Memmo, 2004). A comprehensive approach is likely to contribute to synergistic effects, resulting in benefits which exceed the sum of the parts (Small & Supple, 2001). EAP draws upon the strengths of the three major contemporary models of youth development and therefore is likely to be an effective intervention in work with at-risk adolescents.

Biblical Integration

The primary purpose of all of creation is to exhibit the glory of God, to bring forth praise of God's glory. Revelation 4:11 says, "You are worthy, our Lord and God, to receive glory and honor and power, for you created all things, and by your will they were created and have their being." Romans 11:36, says, "For from him and through him and to him are all things. To him be the glory forever!" Creation exhibits God's glory when it carries out his will. Psalm 19:1 says, "The heavens declare the glory of God; the skies proclaim the work of his hands." We reflect our creator when we do what he created us to do, just as the rest of creation glorifies God when it exists within its purpose.

Inanimate objects fulfill God's purposes mechanically when they obey natural laws that govern the world. God is glorified when water flows, rain falls, and the sun shines. Animate creation glorifies God instinctively by responding to internal impulses. God is glorified when birds migrate, bears hibernate, and horses respond in relationship to other horses and human beings. Human beings glorify God when they act according to his purpose. However, unlike the rest of creation, humanity can choose what to do. They glorify God with forethought and free-will (Dr. David Buschart, personal communication, October 12, 2004).

Therapists and counselors enable creation to glorify God. In EAP horses are allowed to be themselves, thereby allowing God to speak through his creation. The horse acts as a mirror for the client, and when the reflection is clear, the truth of God's word is *heard* and *seen*. When God speaks, change and transformation occurs (Genesis 1). However, therapy should not stop here. The belief of EAP is that insight does not automatically result in change. As an active change agent, it is the therapist's responsibility to allow clients to discover the mirrored truth that counseling reveals, and then intentionally strive to apply what was learned to real life. Therapists taking part in God's redemptive plan must help their clients to act on what they have heard and seen. The experiential part of EAP occurs in the reflection of the client that the horse provides and the behavioral aspect, similar to that of James 1:22-25, occurs in the processing component of EAP. James 1:22-25 says, "Do not merely listen to the word and so deceive yourselves. Do what it says. Anyone who listens to the word but does not do what it says is like a man who looks at his face in a mirror and after looking at himself, goes away and immediately forgets what he looks like. But the man who looks intently into the perfect law that gives freedom, and continues to do this, not forgetting what he has heard, but doing it – he will be blessed in what he does." Therapists enable their clients to glorify God, firstly, when they provide a mirror in which clients can accurately and realistically see themselves, and secondly when they help to modify any detrimental behaviors the mirror reveals.

The EAP therapy teams participating in this study often used basic horse training techniques in session. Tim Jobe, a horse trainer and board member of the Equine Assisted Growth and Learning Association works as a horse specialist in EAP sessions.

Jobe believes a horse's natural tendency is to resist pressure and escape pain (Tim Jobe, personal communication, December 4, 2006). Before a horse can be ridden, saddled, or taught how to reign, it must first be taught to move into pressure and pain. This is fundamental in the horse training process. In Jobe's experience, the presence of a person is often the pressure from which the horse wants to escape. However, a horse can be taught to fix both eyes on the trainer, turn its body, and voluntarily walk toward the trainer. When the trainer begins to put pressure on the horse, the horse may ignore it. The trainer will add more pressure and cause the horse to run. Both ignoring and running from pressure are paths of resistance. When the trainer puts pressure on the horse, he/she is essentially saying, "Follow me. Turn around. Fix both eyes on me, not just one, but both eyes. Change the direction you've been going, and follow me. Trust me. Listen to me. Follow me." The trainer asks this of the horse until it chooses to follow. The trainer does not force the horse to follow, but gives the horse the chance to choose the path that requires trust and leads to relationship. This is the beginning of a learning relationship that is based on trust, respect, and submission. This choice is fundamental to the relationship between horse and person, and fundamental to the work done with clients in EAP.

In an EAP session, an adolescent takes the role of the trainer, and is taught how to build this type of relationship with his or her horse. Once the relationship between horse and client is established, the metaphor for other relationships begins, offering the client a fresh perspective. For example, an adolescent's parents continually apply pressure by expecting their teen to abide by rules and boundaries. Teenagers can continue to resist this pressure, or they can move into the pressure, submit to it, and begin to learn. They

can move toward the pressure and toward healthy relationships and begin to learn essential life skills or they can continue to fight the pressure and run toward broken relationships and many of the negative outcomes that are often seen in our youths. Oftentimes, an adolescent cannot understand the consequences of resisting positive pressure. For this reason, the adolescent takes on the parent role and the horse plays the part of the resistant adolescent.

The relationship between horse and person is also a poignant metaphor for our relationship with Christ. Christ is asking each of us to follow Him. He is saying, "Follow me. Turn around. Change the direction you are going. Fix both eyes on me, not just one, but both eyes, and walk toward me. Listen to me. Trust me. Follow me." He does not force us to follow Him. He gives us the choice. When we choose to submit, fix both eyes on him, and follow, we enter relationship with the one who longs to teach us, and wants desperately to be in relationship with us. We enter relationship with the only one who can heal and restore us to the person He created. When we acknowledge His presence and walk towards the pressure, we begin the process of true healing and restoration.

As humans, our most natural existence is found when we live in accordance with the perfect will of God, demonstrated by Jesus' path of the cross. We are the most human when we "follow Him." To be like Christ means to move toward and through pain. "I have been crucified with Christ; and it is no longer I who live, but Christ lives in me; And the life which I now live in the flesh I live by faith in the Son of God, who loved me and gave Himself up for me" (Galatians 2:20). When we try to escape pain and avoid the suffering of the cross, we live in a state of discontent and harm ourselves.

When a horse has stepped into barbed wire, the initial movement very seldom causes the damage. When the horse tries to pull away from the pain, serious injury occurs. A horse can be taught to move into pain, although, like people, this is not a natural reaction. A well trained horse will wait until its master comes and releases his foot. We are called to move into our pain, instead of trying to run from it. The counseling process helps people address their pain and move through it towards healing. Jesus endured the ultimate suffering and pain in order to bring healing and restoration to a fallen world. We, in our daily struggles are called to suffer well so that we too may experience true healing. The true healing of the resurrection could not occur until Jesus had suffered and died. Christian counselors must temper the desire to provide people a way to avoid the suffering with the realization that sometimes movement directly toward the pain is a necessary precursor to the true healing of God through Jesus Christ. The dynamic relationship between a horse and client demonstrates this need to move into pain, which is how EAP reveals the path towards true freedom.

Lastly and most importantly, a healthy theology of children necessitates this type of research. According to Chad Meyers (2005) in his article *As a Child: Jesus' Solidarity with the Least of the Least*, Jesus insisted that children be taken from the margins of society and placed at the center. L'Engle (1972) claimed that we must become humble and unselfconscious, in other words childlike, if we are to enter the Kingdom of God. The way we teach children is very important (Deut 4:9; Prov. 22:6). It is so important that Jesus said, "If anyone causes one of these little ones who believes in me to sin, it would be better for him to be thrown into the sea with a large millstone around his neck" (Mark 9:42). Proverbs speaks of the rod of discipline with regards to children (13:24;

22:15; 23:13; 29:15). The same word for rod is used in Psalm 23:4 – “Even though I walk through the valley of the shadow of death, I will fear no evil, for you are with me; your rod and your staff, they comfort me.” The word rod implies protection, direction, and the act of “reigning back in.” Therapy for children and adolescents must teach, guide, and protect, thus allowing them to glorify their creator. The counseling of adolescents must be taken seriously, and it matters greatly that we know how to be most effective in our work with God’s children.

CHAPTER II

METHODS

This chapter reviews the specifics of how this study was conducted. It describes the sample in detail. It explains the measuring instruments used to gather data about psychosocial functioning, describes how the data was gathered, and the statistical methods used to evaluate the data.

Sample

The subjects for this study were adolescents ages 12-18 who fit the criteria for *at-risk*, as defined in Chapter One. A convenience sample was used, which consisted of two groups: those who received EAP (treatment) and those who did not (control). Within each group there were two types of youth: those who lived in a residential basic care facility and those who did not. Both groups were used so that the results of this study can be better generalized to all at-risk adolescents. Balancing was used to control for extraneous variables. For instance, there were 3 EAP adolescents in outpatient treatment, and there were 3 adolescents in the control group who were not living in any type of treatment facility. Twelve of the EAP participants lived in a residential basic care facility, and nine of those were receiving traditional talk therapy in addition to EAP. Therefore, there were 9 participants in the control group who lived in a residential basic care facility and were receiving traditional talk therapy, and there were 3 participants in the control group who lived in a residential basic care facility and were not participating in any type of counseling. Both groups were assessed before session one and then after

six, eight, or ten weekly sessions. Since one EAP client was assessed after six sessions, one person in the control group was given the post-test after six weeks. Five people in the treatment group were assessed after eight sessions, and five people in the control group were assessed after eight weeks. Nine people in the treatment group took the post-test after ten sessions, and eight in the control group filled out the second questionnaire ten weeks after the first.

Participants in each group fit the criteria for *at-risk*. All participants had at least 3 of the risk factors on the checklist (See Appendix C). Six clients in the treatment group and 4 clients in the control group came from a family whose income was below the poverty line. Three in the treatment group and two in the control group had a physical or learning disability. Eight in the treatment group and three in the control group had been a victim of a crime. Fifteen in the treatment group and 11 in the control group had been a victim of violence, abuse, or neglect. Nine in the treatment group and 9 in the control group had parents who were alcoholics and/or substance abusers. Fourteen in the treatment group and 14 in the control group had parents who were divorced, separated, or never married. Three in the treatment group and 2 in the control group had one or two parents with a mental illness. Two in the treatment group reported that their mother experienced significant physical difficulties during pregnancy with them. None of the participants in the control group reported this. Thirteen in the treatment group and eleven in the control group experience discord and disorganization in their family. Two in the treatment group and 1 in the control group were low birth weight infants. Two in the treatment group and three in the control group had more than four siblings living in the home. Eight in the treatment group and 5 in the control group had one or more parent

who did not finish high school. None of the participants in this study suffer from a defect they've had since birth.

Clients participating in either group or individual EAP were assessed. Five clients participated in individual EAP, and ten participated in group EAP. There were eight males in the treatment group and nine in the control group. There were seven females in the treatment group and five in the control group.

Measuring Instruments

To measure the therapeutic change in psychosocial functioning elicited by EAP, an instrument called the Youth Outcome Questionnaire (Y-OQ) (Appendix D) and the self-report version of the Youth Outcome Questionnaire (Y-OQ-SR) (Appendix E) were selected. The Y-OQ is a parent-reported measure of a wide range of troublesome behaviors, situations, and moods which commonly apply to adolescents. It was specifically developed to assess the occurrence of observed behavior change. Parents or others with reasonably extensive interaction with the client complete the questionnaire (Burlingame et al., 2003). The Youth Outcome Questionnaire-Self Report (Y-OQ-SR) measures the same criteria, but is taken by the adolescent. The instruments can be easily administered and take approximately ten minutes for clients and parents to fill out. Both tests have demonstrated validity and reliability and have shown high clinical sensitivity and specificity (Wells, Burlingame, Lambert, Hoag, & Hope, 1996).

Each test consists of six subscales: Intrapersonal Distress, Somatic, Interpersonal Relations, Critical Items, Social Problems, and Behavior Dysfunction. The total score is a summation of items from all six scales. The reliability of the Y-OQ was tested using the Cronbach's alpha across three samples (N=1182). The total score on the Y-OQ had a

high internal consistency estimate of .97 across all three samples. The Critical Item and Somatic Subscales had the lowest internal consistency estimates of the six (Burlingame, et al., 2003). The reliability of the Y-OQ-SR was also tested using the Chronbach's alpha with a large sample of adolescents (N=1334). The total score had a high internal consistency estimate of .96 across three groups. Again, Somatic was the lowest estimate found. This suggests greater item heterogeneity because this scale covers the broad content area of diverse somatic complaints. Overall, high reliability estimates for the Y-OQ and Y-OQ-SR suggest a strong factor underlying the several subscales of the questionnaires (Wells, Burlingame, & Rose, 2003).

The Y-OQ and Y-OQ-SR are currently used in a variety of therapy settings. They have been used to measure the efficacy of wilderness therapy programs (Aldana, 2004; Hagan, 2003; Russell, 2003). They have also been used in partial day-treatment programs (Robinson, 2000), and in in-home family treatment (Mosier, et al., 2001). Moreover, the instruments have been normed on inpatient and outpatient populations. These two instruments assess the psychological, symptomatic, and social functioning of adolescents, which was the purpose of this study. They are well-normed and easily administered outcome measures with good internal consistency and test-re-test reliability (Wells, Burlingame, Lambert, Hoag, & Hope, 1996).

Procedure

Clients and the primary care-givers took the Y-OQ-SR and Y-OQ, respectively, prior to the first EAP session. Those in the control group filled out the questionnaires as well. The primary care giver and the youth's legal guardian or managing conservator (if different from the primary care giver) in the treatment group signed a consent form

(Appendix A). Those in the control group also signed a consent form (Appendix B). Either the therapist or the parent filled out the checklist (Appendix C). Those in the treatment group then participated in 6, 8, or 10 individual or group EAP sessions, and the Y-OQ and Y-OQ-SR were administered again. The control group filled out the questionnaires again after 6, 8, or 10 weeks. EAP was conducted by five different therapists and five different horse specialists.

Means of Analyzing the Data

A t-test for independent samples was performed to look for any differences that exist between those who received EAP as opposed to those who did not receive EAP. The primary focus was on the total Y-OQ and Y-OQ-SR scores, but an analysis of the six subscales of each test was also performed to determine which areas showed the most and least change.

An independent samples t-test will yield accurate p values when a sample size of 15 cases per group is used. This study had 15 in one group and 14 in the other. Two of the three assumptions underlying the independent-samples t test were met. Assumption one, “the test variable is normally distributed in each of the two populations (as defined by the Grouping Variable),” was met (Salkind & Green, 2005, p. 168). Assumption two, “The variances of the normally distributed test variable for the populations are equal,” was not met (Salkind & Green, 2005, p. 168). Levene’s test was done to evaluate the variances. Since the test was significant for the Y-OQ and Y-OQ-SR, the equality-of-variance was violated. However, SPSS is able to compute an approximate t test that does not assume that the population variances are equal. Therefore, the t value for unequal variances was utilized to counteract the homogeneity-of-variance assumption (Salkind &

Green, 2005). The third assumption was met because the cases in this study “represent a random sample from the population, and the scores on the test variable are independent of each other” (Salkind & Green, 2005, p. 168). For the purposes of the test of significance, the selection of subjects was random. The researcher did not choose the participants directly and was not aware of the participants until the time of the experiments. Participants were not selected based on any inherent characteristics, but those who were available filled out the paperwork.

CHAPTER III

RESULTS

This section reports the results of the statistical analyses of data gathered on the Y-OQ and Y-OQ-SR. The changes in the total scores as well as the changes in scores on each subtest are conveyed.

Total Score on Y-OQ

The Y-OQ®2.0 was administered to adults with extensive interaction with the adolescent at intake to establish a severity baseline. The total score (TOT) is a summation of items from all six subscales. It reflects total distress in the youth's life, and the higher the number, the greater the distress. The test was then administered again after 6, 8, or 10 sessions and/or weeks. This value is the "best index to track global change and has the highest reliability and validity" (Burlingame et al., 1996, p. 3) when compared to the individual subscales.

The total score on the post-test was subtracted from the total score on the pre-test to reveal the total change (TOTch). An independent-samples *t* test was conducted to evaluate the hypothesis that at-risk adolescents who participate in an EAP program will experience greater positive therapeutic progress in psychosocial functioning than those who do not participate in an EAP program. This procedure was also used to analyze each of the subscales. The test for the total changes was significant, $t(17.65) = 6.17, p < .01$, which supports the research hypothesis. Adolescents who received EAP ($M = 24.87, SD = 14.13$) on the average experienced greater total therapeutic change in psychosocial

functioning than those who did not receive EAP ($M = .93$, $SD = 4.98$) (See Figure 1).

The 95% confidence interval for the difference in means was 15.77 – 32.11.

Total Score on Y-OQ-SR

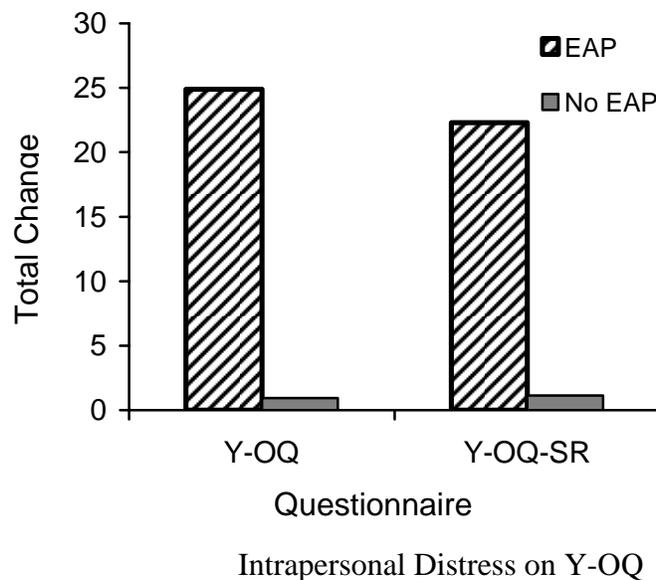
Each of the subscales on the Youth Outcome Questionnaire Self-Report (Y-OQ-SR) measures the same symptoms and behaviors that the respective subscales measure on the Y-OQ. The change seen is indicative of how the clients themselves perceive it as opposed to the views of their primary caregivers.

The Y-OQ-SR is a self-report measure of treatment progress for adolescents ages 12-18 receiving mental health treatment. It was developed to measure the outcomes of therapy and to measure behavior change as perceived by the adolescent clients. It is not an equivalent form of, or interchangeable with, the Y-OQ (Wells, Burlingame, & Rose, 1999). The adolescent completed the questionnaire at intake to establish a severity baseline, and then again after 6, 8, or 10 sessions and/or weeks.

The total score is a summation of items from all six subscales. It reflects total distress in the youth's life, and the higher the number, the greater the distress. This value is the "best index to track global change and has the highest reliability and validity when compared to the scales individually" (Wells, Burlingame, & Rose, 2003, p. 4). The total score on the post-test was subtracted from the total score on the pre-test to reveal the total change (TOTSRch). An independent-samples *t* test was performed to evaluate the hypothesis that adolescents who participate in an EAP program will experience greater positive therapeutic progress in psychosocial functioning than those who do not participate in an EAP program. This procedure was also used to analyze each of the subscales.

The test was significant, $t(22.95) = 2.46, p < .01$, which supports the research hypothesis. Adolescents receiving EAP ($M = 22.29, SD = 18.91$) on average experienced greater total therapeutic change in psychosocial functioning than those who did not receive EAP ($M = 1.14, SD = 12.90$) (See Figure 1). The 95% confidence interval for the difference in means was 8.49 – 33.80.

Figure 1. Treated vs. Control, Total Change

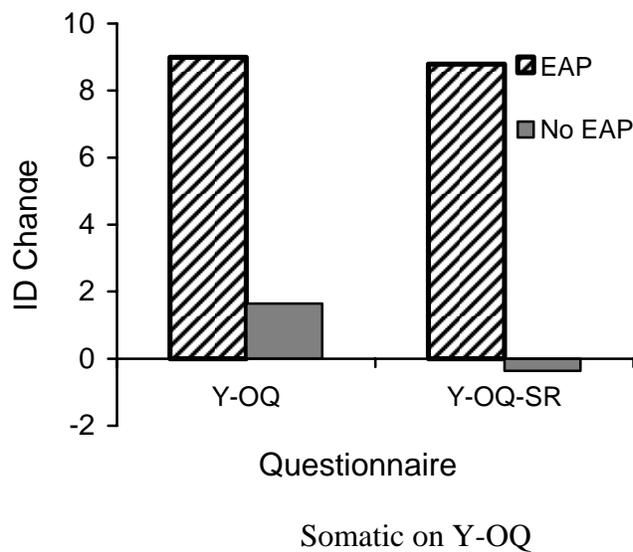


This scale measures the amount of emotional distress in the adolescent. Anxiety, depression, fearfulness, hopelessness, and self-harm are some of the problems this scale measures (Burlingame et al., 1996). The test was significant, $t(18.65) = 3.28, p < .01$. Adolescents who received EAP ($M = 9.00, SD = 8.04$) on the average experienced greater change in intrapersonal distress than those who did not receive EAP ($M = 1.64, SD = 3.23$) (See Figure 2). The 95% confidence interval for the difference in means was 2.65 – 12.07.

Intrapersonal Distress on Y-OQ-SR

This test was significant, $t(17.49) = 3.02, p < .01$. Adolescents participating in EAP ($M = 8.79, SD = 10.45$) on average experienced greater intrapersonal distress change than those not participating in EAP ($M = -.36, SD = 4.41$) (See Figure 2). The 95% confidence interval for the difference in means was 2.76 – 15.53.

Figure 2. Treated vs. Control, Intrapersonal Distress Subscale (ID) Change



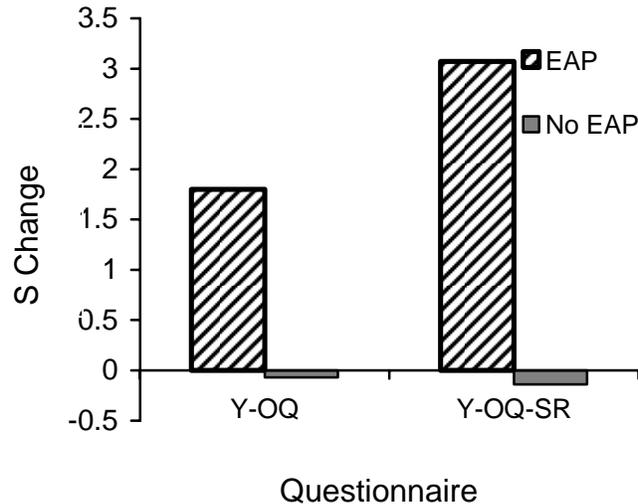
This scale assesses somatic distress such as headaches, dizziness, stomachaches, nausea, bowel difficulties, and pain or weakness in joints (Burlingame et al., 1996). The test was not significant. Adolescents who received EAP ($M = 1.80, SD = 3.73$) on average did not experience somatic change significantly different from those who did not receive EAP ($M = -.07, SD = 1.27$) (See Figure 3).

Somatic on Y-OQ-SR

This test was significant, $t(25.22) = 3.16, p < .01$. Adolescents participating in EAP ($M = 3.07, SD = 2.92$) on average experienced greater somatic change than those not

participating in EAP ($M = -.14$, $SD = 2.45$) (See Figure 3). The 95% confidence interval for the difference in means was 1.12 – 5.31.

Figure 3. Treated vs. Control, Somatic Subscale (S) Change



Interpersonal Relations on Y-OQ

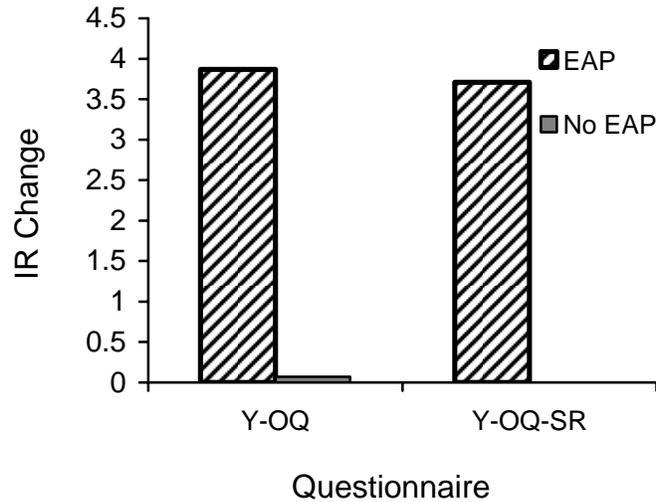
This scale addresses issues relevant to the youth's relationship with peers, parents, and other adults. Aspects measured by this scale are attitudes towards others, communication and interaction with friends, cooperativeness, aggressiveness, arguing, and defiance (Burlingame et al., 1996). The test was significant, $t(18.64) = 3.00$, $p < .01$. Adolescents who received EAP ($M = 3.87$, $SD = 4.53$) on average experienced greater positive change in interpersonal relations than those who did not receive EAP ($M = .07$, $SD = 1.82$) (See Figure 4). The 95% confidence interval for the difference in means was 1.14 – 6.45.

Interpersonal Relations on Y-OQ-SR

This test was significant, $t(25.83) = 2.65$, $p < .01$. Adolescents participating in EAP ($M = 3.71$, $SD = 3.85$) on average experienced greater interpersonal relations change

than those not participating in EAP ($M=.00$, $SD=3.55$) (See Figure 4). The 95% confidence interval for the difference in means was $.84 - 6.59$.

Figure 4. Treated vs. Control, Interpersonal Relations Subscale (IR) Change



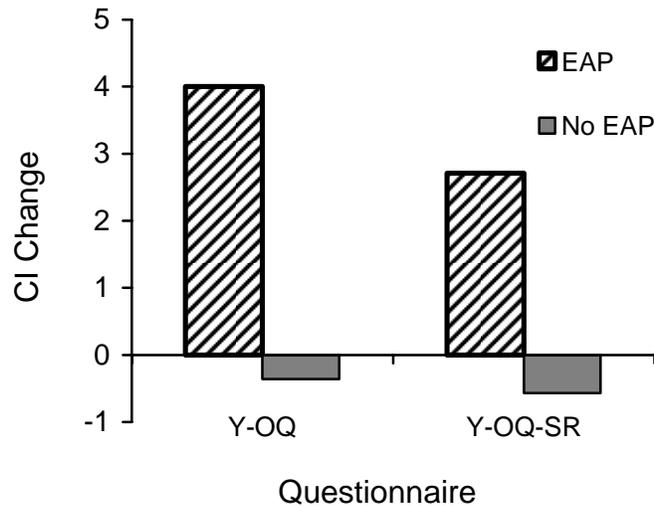
Critical Items on Y-OQ

This scale addresses features of adolescents often found in inpatient services where short-term stabilization is the primary goal. It measures change in paranoia, hallucinations, delusions, suicide, mania, eating disorders, and obsessive-compulsive behaviors (Burlingame et al., 1996). The average critical items change (CIch) for the treatment group was 4.00 with a standard deviation of 4.19, and for the control group it was $-.36$ with a standard deviation of 1.65. The test was significant, $t(18.46) = 3.73$, $p < .01$. Adolescents who received EAP ($M = 4.00$, $SD = 4.19$) on average experienced greater positive change in critical items than those who did not receive EAP ($M = -.36$, $SD = 1.65$) (See Figure 5). The 95% confidence interval for the difference in means was $.91 - 6.81$.

Critical Items on Y-OQ-SR

This test was not significant. Those participating in EAP ($M=2.71$, $SD=5.97$) on average did not experience critical items change different from those not participating in EAP ($M=-.57$, $SD=2.59$) (See Figure 5).

Figure 5. Treated vs. Control, Critical Items Subscale (CI) Change



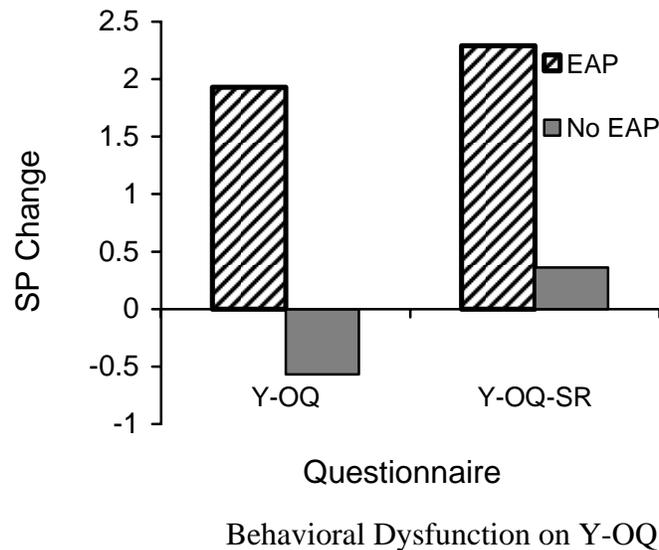
Social Problems on Y-OQ

This scale assesses socially related problematic behaviors. Many of the items assess delinquent or aggressive behaviors of a severe nature, typically involving the breaking of social mores. Assessment is made regarding truancy, sexual problems, running away from home, destruction of property, and substance abuse (Burlingame et al., 1996). The test was significant, $t(26.21) = 2.96$, $p < .01$. Adolescents who received EAP ($M = 1.93$, $SD = 2.55$) on average experienced greater positive social problems change than those who did not receive EAP ($M = -.57$, $SD = 1.99$) (See Figure 6). The 95% confidence interval for the difference in means was .77 – 4.24

Social Problems on Y-OQ-SR

This test was not significant. Those participating in EAP ($M=2.29$, $SD=3.54$) on average did not experience social problems change different from those not participating in EAP ($M=.36$, $SD=2.06$) (See Figure 6).

Figure 6. Treated vs. Control, Social Problems Subscale (SP) Change

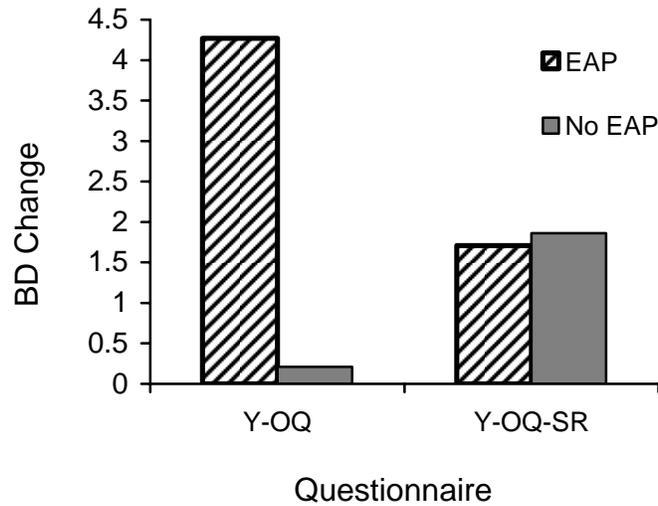


This scale is intended to track change in the youth's ability to organize tasks, complete assignments, concentrate, and handle frustration, including times of inattention, impulsivity, and hyperactivity (Burlingame et al., 1996). The average behavioral dysfunction change (BDch) for the treatment group was 4.27 with a standard deviation of 2.74, and for the control group it was .21 with a standard deviation of 3.98. The test was significant, $t(22.86) = 3.17$, $p < .01$. Adolescents who received EAP ($M = 4.27$, $SD = 2.74$) on average experienced greater positive behavioral dysfunction change than those who did not receive EAP ($M = .21$, $SD = 3.98$) (See Figure 7). The 95% confidence interval for the difference in means was 1.41 – 6.70.

Behavioral Dysfunction on Y-OQ-SR

This test was not significant. Those participating in EAP (M=1.71, SD=4.50) on average did not experience behavioral dysfunction change different from those not participating in EAP (M=1.86, SD=4.74) (See Figure 7).

Figure 7. Treated vs. Control, Behavioral Dysfunction Subscale (BD) Change



CHAPTER IV

DISCUSSION

The purpose of this study was to determine if participation in an EAP program affects the psychosocial functioning among at-risk adolescents 12-18 years old. The hope was to fill a research gap by examining the therapeutic outcomes of EAP in treating at-risk youth. The hypothesis was that at-risk adolescents who participate in an EAP program would experience greater positive therapeutic progress in psychosocial functioning than those who do not participate in an EAP program. Two test instruments were used, and measured subjects' total change across six subscales as follows:

Intrapersonal Distress, Somatic, Interpersonal Relations, Critical Items, Social Problems, and Behavioral Dysfunction. Change was also assessed within each subscale.

The first test instrument used was the Youth Outcome Questionnaire (Y-OQ), a parent report of adolescent behavior. The total score, a summation of items from all six scales, has the highest reliability and validity, and it is used to track global change in psychosocial functioning (Burlingame, et al., 2003). According to the primary caregiver's perception, there was a statistically significant change in overall psychosocial functioning in the positive direction for those participating in EAP. The average change in psychosocial functioning of at-risk adolescents participating in an EAP program is between 15.77 and 32.11 points greater than at-risk adolescents who are not participating in EAP. There is only a 5% chance that the difference between the control group and the experimental group is due to chance factors.

The second test instrument used was the Youth Outcome Questionnaire Self-Report (Y-OQ-SR), a self-reported measure of treatment progress for adolescents ages 12-18 receiving mental health treatment. Its purpose was to measure the outcomes of therapy and behavioral change as perceived by the adolescents. It is not an equivalent form of, or interchangeable with the Y-OQ (Wells, Burlingame, & Rose, 1999). The total score is a summation of items from all six subscales. This value is the “best index to track global change and has the highest reliability and validity when compared to the scales individually” (Wells, Burlingame, & Rose, 2003, p. 4). According to the adolescents’ view, there is a statistically significant change in overall psychosocial functioning in the positive direction for those participating in EAP. The average change of at-risk adolescents participating in an EAP program is between 8.49 and 33.80 points greater than at-risk adolescents not participating in an EAP program. There is only a 5% chance that the difference between the control group and the experimental group is due to chance factors.

Therefore, it seems that when adolescents are able to recognize and alter maladaptive coping strategies in a concrete way through activities and relationship with a horse or horses, it positively affects their psychosocial functioning outside of the therapeutic setting. This change is reported by both adolescents and their primary caregivers.

The developers of the Y-OQ®2.0 and Y-OQ-SR have derived a reliable change index (RCI) for the total score and for each of the subscales. These numbers were derived between the community and clinical samples, and are used to determine if the change exhibited by an individual is clinically significant. The RCI value for the total

score on the Y-OQ® is 13, meaning an individual's score must change by at least 13 points for the change to be considered clinically significant. In this study, the average change seen in the treatment group was 24.87, which is clinically significant according to the Y-OQ®2.0 Administration and Scoring Manual (Burlingame et al., 1996). The RCI value for the total score on the Y-OQ®-SR2.0 was calculated in the same manner as for the Y-OQ®, and is 18. In this study, the average change seen in the treatment group was 22.29, which is also clinically significant according to the Y-OQ®-SR2.0 Administration and Scoring Manual (Wells, Burlingame, & Rose, 1999).

The independent-samples *t* test for unequal variances for the Y-OQ and Y-OQ-SR suggest that those participating in EAP experience significantly greater amounts of total therapeutic change than those who do not participate in EAP. Moreover, those receiving EAP experienced significantly greater amounts of change than the control group on the following subscales as reported by primary caregivers: Intrapersonal Distress, Interpersonal Relations, Social Problems, Behavioral Dysfunction, and Critical Items. Those adolescents receiving EAP reported significantly greater amounts of change than the control group on the following subscales: Intrapersonal Distress, Somatic, and Interpersonal Relations.

Adolescents did not report statistically significant change in Critical Items, Behavioral Dysfunction, or Social Problems. This is expected, as during the development of the Y-OQ-SR, normative data has shown that adolescents are often unwilling to self-report the extreme scores that are observed by their caregivers (Wells, Burlingame, & Rose, 1999). Adolescents are generally more aware of somatic complaints, fears, anxiety, and depression (i.e. Intrapersonal Distress and Somatic), and

are less willing to report aggressive, acting-out behaviors (i.e. Behavioral Dysfunction and Social Problems) so they underreport those issues (Wells, Burlingame, & Rose, 1999).

Both adolescents and caregivers reported statistically significant change in Intrapersonal Distress, such as anxiety, depression, fearfulness, hopelessness and self harm. Only primary caregivers reported significant change on the subscale for Critical Items, such as paranoia, obsessive-compulsive behaviors, hallucinations, delusions, suicide, mania, and eating disorder issues. The behaviors measured on the Critical Items subscale may have been underreported among adolescents because of embarrassment related to these problems. It is likely that adolescents are unwilling to report struggles in areas that sound “crazy,” such as, “I see, hear or believe things that are not real.” It seems that EAP helps adolescents gain some control over intrapersonal problems, including those measured on the Critical Items subscale.

The ability of adolescents to gain control over intrapersonal problems may be accounted for by the reaction of the horse to the client. It is common in an EAP session for the client’s horse to mirror or take advantage of what the adolescent is feeling. For instance, an adolescent who is feeling apathetic, depressed, and hopeless may behave in a passive manner. Often horses will begin to test the limits of someone who is passive, by invading their boundaries. Horses invade boundaries by behaviors such as, standing too close, nipping, biting, shoving, or kicking. With the help of the therapist, the client may recognize the way their thoughts, feelings, and behaviors are affecting their horse, and seek to make personal changes in an effort to change the dynamics between themselves and their horse. Other problems of an intrapersonal nature can be addressed in the same

manner. In essence, horses provide a form of biofeedback that helps clients figure out how to change things within themselves. For instance, an anxious, fearful, or angry client will result in an anxious, fearful, or angry horse, respectively. Horses provide a visual representation (mirror) of a physiological or emotional response such as fear, anxiety, depression, or anger. Likewise, as the client's thoughts, feelings, physiological responses, and behaviors change, the horse's reaction to the adolescent changes. Through this interchange, clients gain a sense of control as they realize that they can change things in their environment by changing things within themselves.

Adolescents and caregivers reported change in Interpersonal Relations, as well. This scale assesses the adolescent's "attitude toward others, communication and interaction with friends, cooperativeness, aggressiveness, arguing, and defiance" (Burlingame, et al., 2003, pg. 3). Only caregivers reported significant change in Social Problems, which are of a more severe nature than those assessed in the Interpersonal Relationship subscale. The Social Problems scale targets behavior of an outwardly destructive nature such as truancy, sexual problems, running away, vandalism, and substance abuse. Positive changes in interpersonal relationships and social problems may be accounted for by similar aspects of EAP.

In group EAP, teamwork is often a major focus, which would account for change in Interpersonal Relationships, because in order to effectively operate as a team, adolescents must be able to interact with each other. The skills learned as they interact in a manner which helps them reach their goals in a group, can be applied to other relationships outside of EAP. However, this component is not unique to EAP, as similar change has been noted in adventure-based and wilderness therapy programs where

participants must learn to how to interact within a group (Aldana, 2004; Autry, 2001; Caldwell, 2001; Ewert, McCormick, & Voight, 2001).

In EAP adolescents learn the difference between being passive, aggressive, and assertive. A horse will invade personal boundaries or ignore a person who is passive, and may become aggressive with a client who is using aggression or coercion to get the horse to do something. In EAP, the adolescent must learn to direct the horse without manipulating it. One way to manipulate a horse is to bribe it with food. They must also learn to direct the horse without physically forcing a behavior, which would be considered aggressive. In this way, a horse can teach an adolescent how to be assertive, which is a skill that is easily transferred to other relationships.

As was discussed in the Biblical Integration section of this paper, clients can learn how to work within rules, boundaries and expectations (pressures) instead of resisting them. Clients must often teach their horse how to submit to pressure. In this situation, the defiant, argumentative teenager becomes the parent and the horse becomes the teenager. Through this metaphor, therapists can help argumentative or defiant adolescents to view their behavior from the perspective of adults in their lives. Adolescents can gain insight into the negative outcomes of resistance and rebellion seen in the horse, and may apply this to themselves. Moreover, the horse can model the appropriate behavior that will help adolescents avoid negative psychosocial outcomes.

Horses can also be used as a poignant metaphor for substance abuse. One way this can be done is for the client to attempt to get the horse to participate in an activity when food is a distraction. Horses are “addicted” to food; when food is within reach, even the most amenable horses can focus on little else. As adolescents seek to help a

horse with this “addiction,” they will often gain insight into their own addictive behaviors. They may also be able to personally use some of the same techniques they used to help their horse.

As teens learn how to build healthy relationships with their horses, the therapist can help transfer this learning to relationships outside of EAP. For instance, basic trust and respect can be learned from a horse. When a horse is manipulated, trust is compromised and the horse may begin to treat the client with disrespect. Clients can communicate honesty through consistent behavior. Once the horse’s trust is breached, it is much harder to regain. This can be discussed and compared to relationships with people. An adolescent can learn how to build a relationship with his/her horse based on honesty, trust, respect, and love. The therapist is then able to discuss these concepts as they apply to other relationships in the client’s life and transfer what is learned to those relationships. In essence, if it works in relationship with the horse, the same principle will work in relationships with people.

Adolescents reported significant change in the somatic problems scale. Caregivers did not report significant change in this area, which indicates either absence or unawareness of somatic problems (Burlingame, et al., 2003). This subscale addresses symptoms such as headaches, dizziness, stomachaches, nausea, bowel difficulties, and pain or weakness in joints. All of these symptoms can result from psychological problems, often related to mood or anxiety disorders. Therefore, it makes sense that adolescents who showed improvement in intrapersonal distress also reported improvement in this area. EAP helps clients make intrapersonal changes, which could result fewer somatic complaints.

Caregivers reported statistically significant positive change in behavioral dysfunction. This subscale assesses changes in the ability to organize, complete, and concentrate on tasks. It also describes changes in task-related frustration, inattention, hyperactivity, and impulsivity (Wells, Burlingame, & Rose, 2003). Many EAP sessions are built upon an activity with an ultimate goal in mind. The task can be frustrating and require attention and concentration. With a little redirection, clients can learn to focus and productively deal with frustration while in session. This research shows that these skills seem to transfer to practical areas of life, such that primary caregivers notice a change in the day-to-day life of adolescents participating in EAP.

This study has attempted to fill the quantitative research gap in EAP by examining the therapeutic outcomes of EAP in treating at-risk youth. At-risk adolescents from a residential, basic care facility and those in outpatient care programs participated in this study, increasing its external validity. Five different therapy teams (therapists and horse specialists) conducted the therapy sessions for this study. This increased the chances that detected change was a result of EAP and not personal counseling style. The test results from the Y-OQ and the Y-OQ-SR suggest that both primary caregivers and clients report statistically significant, positive therapeutic progress in psychosocial functioning. Participation in an EAP program positively affects the psychosocial functioning among at-risk adolescents ages 12-18.

Clinical Implications

One of the clinical implications of this study is an increased awareness of the benefits of using unique therapeutic modalities, such as EAP, in working with at-risk youth. Mental health professionals and researchers are constantly searching for effective

interventions to address the problems of adolescents. EAP offers an innovative method to help adolescents address and alter maladaptive coping strategies and behaviors in a new and challenging environment. This study supports the use of EAP as the primary intervention used in counseling at-risk adolescents or as a unique and appropriate adjunct to traditional psychotherapy. Often, weekly psychotherapy sessions simply are not enough to be effective, and many youths are highly resistant to traditional office-based counseling. While it is not the purpose of this study to compare EAP to traditional talk therapy, some preliminary conclusions can be drawn in this area, pending further research. Nine of the participants in the treatment group were receiving traditional talk therapy in addition to EAP. If a subject receives more than one treatment it is often difficult to discern which modality truly caused the improvements. Therefore, eight of the participants in the control group were receiving also traditional talk therapy from the same counseling center as those in the treatment group. Both groups contained adolescents who were receiving additional counseling in order to control for this variable. Change in those receiving only traditional talk therapy did not exceed the RCI set forth by either test manual. As previously stated, those receiving EAP in addition to traditional talk therapy experienced statistically significant change in psychosocial functioning.

It may be postulated that traditional talk therapy poses certain limitations in working with at-risk adolescents which EAP is able to overcome. At-risk adolescents often utilize community support outside of mental health organizations. Hayden (2005) suggests that diverse therapeutic modalities may exhibit some of the attractions of non-mental health community support agencies, such as carrying less stigma, lack of an office, and being more intrinsically motivating and interesting. Perhaps the most

important clinical consideration in the study of EAP is its ability to provide a less threatening environment for adolescents to experience the benefits of working with a mental health professional.

Limitations of the Study

A limitation of this study was that a convenience sample was used. There is a possibility that an extraneous variable inherent in the treatment and control groups caused the differences. However, this is not likely to confound the research, because students were not selected based on any inherent characteristic.

Participants received EAP independent of filling out the questionnaires. All of the adolescents in the experimental group would have participated in an EAP program regardless of this research. Therefore, it is possible that EAP is beneficial only to a certain personality type. However, it must be noted that many of the clients from the residential basic care facility exhibited various forms of resistance.

Traditional therapy and EAP at the residential basic care facility is often mandatory. This may reduce the possibility that EAP is effective because certain types of individuals have an innate desire for outdoors and adventure and are more likely to volunteer for outdoor, experiential activities and are therefore more prone to benefit from EAP.

Another limitation was that data was assessed from those participating in either group or individual EAP. A distinction was not drawn between these two treatment modalities. However, there are inherent differences. In group therapy certain clients may not be capable of trusting others enough to reveal key material which he or she fears others may find unacceptable. These clients may be more apt to self-disclose in individual therapy. Confidentiality cannot be guaranteed in a group setting, which could

also affect the depth of disclosure. Individual therapy often lends itself to working on deeper and more personal issues.

Group work allows for “in vivo” interpersonal work, while in individual therapy these problems are merely discussed. Group work more poignantly promotes universality, and can provide a peer support system. In group work, members receive multiple feedback, and members can model successful communication and coping skills. EAP may narrow the gap between traditional group and individual therapy, because of the introduction of the horse to the therapeutic process. In individual EAP, the horse provides feedback and “in vivo” work on successful communication, coping skills, and relationship issues. Nonetheless, this research project is less powerful because data was not gathered exclusively from either individual or group EAP.

It was very difficult to control for race, gender, age, and risk level. The participants of this study were moderately ethnically diverse, consisted of both male and female, were of a specified age range, and had specific reasons for referral to EAP. All of the participants had three or more risk factors. However, the treatment group had an average of 5.7 risk factors compared to the control group with 4.3 risk factors. The sample size was not large enough to compare the effects of EAP between race, gender, age, and risk level. As a result, this affects the degree to which the results can be generalized to all at-risk youth.

A further limitation of this study is due to the nature of quantitative study or outcome research. This study merely provides preliminary evidence of the therapeutic outcomes of EAP. It does not address which aspects of EAP are most responsible for the therapeutic benefits.

All of the therapists and horse specialists in this study were certified to administer this type of therapy through the Equine Growth and Learning Association (EAGALA). EAGALA provided the operational definition and theoretical underpinnings of EAP for the purposes of this study. However, there were no additional measures taken to assure that the therapy teams in this study practiced exclusively within the confines of the EAGALA model of EAP. It was required that the therapeutic teams submitting data were certified and trained through EAGALA, but this study did not assure homogeneity of theory and practice. An attempt was made to control for this variable by including data from five different therapy teams. This increased the likelihood that the change was the result of specific psychological constructs and theoretical structures present in EAP.

As in any type of research, experimenter bias can confound the research. One way this was addressed was through the use of objective testing instruments (Youth Outcome Questionnaire and Youth Outcome Questionnaire Self-Report). Moreover, the tests were graded by people who were unaware of the subjects' status to control for bias in the grading of the questionnaires. However, the experimenter and the other therapists collecting data for this study were aware of which participants were members of the control group or the experimental group. As a result, the Rosenthal effect, which asserts that the experimenter's beliefs about the individual may result in special treatment, causing the individual to fulfill the experimenter's expectations, may be a factor. When this is the case, change is a result of the expectations of the experimenter, rather than the independent variable, which in this study is participation in EAP.

The participants knew when they were part of the experimental group. This could result in demand characteristics, which are features of a study which suggest a desired

outcome. In other words, participants could have manipulated and confounded this experiment by purposely trying to confirm the experimental hypothesis. Participants were given an informed consent, which stated the purpose of this research. It is possible that they reported greater improvement than was actually present as a way to verify the effectiveness of EAP.

A control group phenomenon that can threaten internal validity in research is the “Resentful Demoralization of the Comparison Group.” Here, the control group lowers their performance or behaves in an inept manner because they have been denied the experiential treatment. When this occurs, the experimental group looks better than they should. In this study, the control group was aware that they had not been chosen for participation in EAP. The control group showed virtually no improvement, while the treatment group showed great improvement. Demoralization could be a contributing factor.

Suggestions for Future Research

This study was important because it provided empirical evidence to affirm EAP as an effective intervention for at-risk adolescents. However, subsequent process research is needed to determine which aspects of EAP are most responsible for the therapeutic benefits. For instance, the literature in this field suggests that the process behind the horse’s ability to mirror the client’s emotions and behaviors should be studied. Several sources suggest that this ability to function as a mirror is the primary reason horses are beneficial to the therapeutic process (Greenwald, 2003; Hayden, 2005; Kersten & Thomas, 2004; McCormick & McCormick, 1997;). This field will greatly benefit from

future study in the processes at work and the benefits of mirroring, and the horse's role in this interaction.

Research to determine levels of homogeneity of psychological constructs and processes among EAP practitioners would be an important development in this field. Future research needs to address the long-term affects of EAP on this population. Duplicate research should be more specific about the number of risk factors present in the participants. Exclusive study of both individual and group EAP is needed, as are comparison studies between the two. Moreover, due to the difficulty of obtaining a random sample, future research may consider doing an analysis of covariance, which controls for any covariate that could be making a difference in a non-random group.

Lastly, future research should explore which populations of participants will obtain the greatest therapeutic benefit from EAP. Specific considerations include age, race, gender, socioeconomic status, cultural background, diagnostics, and duration of treatment.

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Appendix A

Informed Consent for Primary Caregivers of Those Participating in EAP

Initials _____

Denver Seminary
6399 S. Santa Fe Dr.
Littleton, CO 80120
303-761-2482
Bettina Shultz – primary researcher
Phone – 720-252-3687

CONSENT TO PARTICIPATE IN PSYCHOLOGICAL RESEARCH
(Consent form for adolescents participating in EAP and their primary caregiver)

You are being asked to participate in research study. This study is part of a Masters thesis being presented to the faculty at Denver Seminary in Denver, Colorado. Before you consent to participate, please read the following information and ask as many questions as necessary to ensure your understanding. The person who gave you this form can answer any questions you may have. I would love to talk to you and/or answer any additional questions. I can be reached at 806-533-1350 or 720-252-3687 (cell).

Researcher: Bettina Shultz, Masters student at Denver Seminary for the degree of Counseling Licensure.

**Thesis
Chairperson:** Dr. Elisabeth Suarez

**Purpose of
Research:** To examine the therapeutic outcomes of adolescents 12-18 who participate in equine-assisted psychotherapy.

**Duration of
Research:** Ten weeks.

**Procedures to
Be Followed:** The adolescent will participate in at least 10 Equine-Assisted Psychotherapy sessions. Prior to the first session, the adolescent will fill out a 30-item questionnaire, the Youth Self Report (YSR). A Checklist which will give the researcher some general information about the adolescent, will be filled out by either the therapist, parent, or adult currently living with the adolescent. This will only take about ten minutes. The adolescent will then participate in 10 sessions of Equine Assisted Psychotherapy. After the tenth session or before the 11th session (if the adolescent wishes to continue counseling) the same 30-item questionnaire will be filled out by the adolescent. Before any of the information from the questionnaires can be used for the purposes of research, the adolescent's legal guardian must sign this consent form.

Risk Involved: The risk involved in participating in this research is minimal. The adolescents participating in this study will already be enrolled in counseling via equine-assisted psychotherapy. While any type of counseling carries with it certain risks, these are risks the adolescent will experience apart from taking the Youth Self Report. If any of the questions are found embarrassing or offensive, the adolescent may choose not to answer them. However, the answers to the questionnaires are confidential (see *confidentiality* section)

Benefits Involved: The information that is shared will be used to learn how to better meet the needs of youth who participate in traditional and unique counseling. Mental health professions as well as teachers, probation officers, mentors, and other professionals involved in working with at-risk youth will be able to use this information to better help other teenagers in similar situations.

Confidentiality: There will be no names placed on the questionnaires, and the researcher is the only person who will see the results of the questionnaires. The researcher will not have knowledge of which scores belong to which person. The data from this study will be presented to the faculty at Denver Seminary in order to fulfill the degree requirements. Finally, the results of this research may be published in scientific journals. However, at no time will your name or any identifying information be reported in the presentation of this research.

Participant Withdrawal: Your participation in this study is completely voluntary and you are free to withdraw or terminate at any time.

Contact Person: Bettina Shultz
Phone with confidential voicemail 720-252-3687

Signature and Acknowledgement: My signature indicates below that I have read the above information and have had the opportunity to ask questions about my participation. I understand that information gathered from these questionnaires will be used for the purposes of research. I acknowledge having received a copy of this agreement.

Name of adolescent participant (printed): _____
Name of adult filling out Youth Outcome Questionnaire (printed): _____
Signature of Parent/Legal Guardian: _____ Date: _____
Signature of adult filling out Youth Outcome Questionnaire (if different from parent/legal guardian): _____ Date: _____

Appendix B

Informed Consent for Primary Caregivers of Those not Participating in EAP

Initials _____

Denver Seminary
6399 S. Santa Fe Dr.
Littleton, CO 80120
303-761-2482
Bettina Shultz – primary researcher
Phone – 720-252-3687

CONSENT TO PARTICIPATE IN PSYCHOLOGICAL RESEARCH

You are being asked to participate in research study. This study is part of a Masters thesis being presented to the faculty at Denver Seminary in Denver, Colorado. Before you consent to participate, please read the following information and ask as many questions as necessary to ensure your understanding. The person who gave you this form can answer any questions you may have. I would love to talk to you and/or answer any additional questions. I can be reached at 806-533-1350 or 720-252-3687 (cell).

Researcher: Bettina Shultz, Masters student at Denver Seminary for the degree of Counseling Licensure.

**Thesis
Chairperson:** Dr. Elisabeth Suarez

**Purpose of
Research:** To examine the amount of psychosocial change that occurs during a ten week period in adolescents 12-18

**Duration of
Research:** Ten weeks.

**Procedures to
Be Followed:** The adolescent will fill out a 30-item questionnaire, the Youth Self Report (YSR). The parent or the adolescent will fill out the Checklist which will give the researcher some general information about the adolescent. In ten weeks the adolescent will fill out the same questionnaire. Before any of the information from the questionnaires can be used for the purposes of research, the adolescent's legal guardian must sign this consent form.

Risk Involved: The risk involved in participating in this research is minimal. If any of the questions are found embarrassing or offensive, the adolescent may choose not to answer them. However, the answers to the questionnaires are confidential (see *confidentiality* section)

Benefits Involved: The information that is shared will be used to learn how to better meet the needs of youth who participate in traditional and unique counseling. Mental health professions as well as teachers, probation officers, mentors, and other professionals involved in working with at-risk youth will be able to use this information to better help other teenagers in similar situations.

Confidentiality: There will be no names placed on the questionnaires, and the researcher is the only person who will see the results of the questionnaires. The researcher will not have knowledge of which scores belong to which person. The data from this study will be presented to the faculty at Denver Seminary in order to fulfill the degree requirements. Finally, the results of this research may be published in scientific journals. However, at no time will your name or any identifying information be reported in the presentation of this research.

Participant Withdrawal: Your participation in this study is completely voluntary and you are free to withdraw or terminate at any time.

Contact Person: Bettina Shultz
Phone with confidential voicemail 720-252-3687

Signature and Acknowledgement: My signature indicates below that I have read the above information and have had the opportunity to ask questions about my participation. I understand that the information gathered from these questionnaires will be used for the purposes of research. I acknowledge having received a copy of this agreement.

Name of adolescent participant (printed): _____
Name of adult filling out Youth Outcome Questionnaire (printed): _____
Signature of Parent/Legal Guardian: _____ Date: _____
Signature of adult filling out Youth Outcome Questionnaire (if different from
parent/legal guardian): _____ Date: _____

Appendix C

Risk Factor Determinant

Initials _____

Checklist

Please place a checkmark next to the statements that apply to the adolescent participating in research. This checklist should be filled out by the therapist, the parent, or the adult currently living with the adolescent. All information given here is completely confidential, and will be used to ensure that all participants in the study have had similar life experiences and struggles.

- _____ I am male.
- _____ I am female.
- _____ I live in a residential facility.
- _____ I live at home with my parents. If not who do you live with? _____
- _____ I am between the ages of 12 and 18. How old are you? _____
- _____ My family's income would be considered below the poverty line.
- _____ I have a physical and/or learning disability.
- _____ I have been a victim of a crime.
- _____ I have been a victim of violence, abuse or neglect.
- _____ One or both of my parents are alcoholics and/or abuse substances.
- _____ My parents are divorced, separated, or were never married.
- _____ One or both of my parents have a mental illness.
- _____ My mother experienced significant physical difficulties during her pregnancy with me.
- _____ In my family I experience significant discord and disorganization.
- _____ I was a low birth weight infant.
- _____ There are more than four siblings living in my home.
- _____ One or more of my parents did not finish High School.
- _____ I suffer from a defect I've had since birth.

Appendix D

Youth Outcome Questionnaire

The publisher can be contacted at:

American Professional Credentialing Services LLC

E-mail: APCS@QQFAMILY.com

Web: www.QQFAMILY.com

1-888-MH SCORE (1-888-647-2673)

Appendix E

Youth Outcome Questionnaire Self-Report

The publisher can be contacted at:

American Professional Credentialing Services LLC

E-mail: APCS@QQFAMILY.com

Web: www.QQFAMILY.com

1-888-MH SCORE (1-888-647-2673)

