GROUP SANDTRAY THERAPY AT SCHOOL WITH PREADOLESCENTS IDENTIFIED
WITH BEHAVIORAL DIFFICULTIES

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Dissertation Prepared for the Degree of

DOCTOR OF PHILOSOPHY

UNIVERSITY OF NORTH TEXAS

August 2005

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Flahive, Mon-hsin Wang, Group sandtray therapy at school with preadolescents identified with behavioral difficulties. Doctor of Philosophy (Counseling), August 2005, 100 pp., 22 tables, 11 figures, references, 90 titles.

Sandtray therapy, a modality of play therapy, has been used in a variety of ways as the treatment intervention with different theoretical approaches; however, there is a very limited amount of empirical research. The purpose of this research is to examine the effectiveness of group sandtray therapy at school with preadolescents identified with behavioral difficulties. This is a pretest-posttest control group design. Participants in the experimental group received sandtray therapy in group for ten weeks, and participants in the wait-list control group received no treatment intervention.

The researcher compared two groups to examine the overall effectiveness of sandtray therapy as determined by the scores of the Child Behavior Checklist-Teacher Report Form (CBC-TRF), Parent Report Form (BASC-PRF), and Self Report of Personality (BASC-SRP). Based on teachers’ reports, statistically significant difference existed between the two groups in terms of preadolescents’ overall behaviors, externalizing behavior problems, and internalizing behavior problems after the ten week treatment intervention. The effect sizes were medium ($d=.52-.59$). According to parents’ reports, a statistically significant difference was found regarding preadolescents’ externalizing behavior problems, and the effect size was medium ($d=.63$). No statistically significant differences were found regarding preadolescents’ total behaviors and internalizing behavior problems based on BASC-PRF. The effect sizes arranged from medium to small ($d=.55$ and .35, respectively). In terms of the total behavior on BASE-SRP, no statistical significant difference was found and the effect was small ($d=.18$). A case example was included to illustrate the process and effect of group sandtray therapy. Based on the results of this study, it
is determined that group sandtray can be an effective treatment intervention for preadolescents identified with behavioral problems. The primary contribution of this study is to present empirical support for the effectiveness of using sandtray therapy.
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To my dear Mr. P
ACKNOWLEDGEMENTS

I am blessed with care, love and help from many people during the process of conducting this research. I hope to use this corner to express my appreciation.

First of all, I want to thank my committee. The support, encouragement, and guidance from Dr. Dee Ray, my major professor, has given me the strength and courage to complete this project. I am especially thankful for her care and assistance at the difficult moments. My committee members, Professor Sue Bratton and Jan Holden have provided me with invaluable insights and suggestions during the course of my study. I also appreciate the assistance and cooperation from the school counselors, teachers, principals, and administrators and the unselfish participation of children and their parents.

I am grateful to my parents, two sisters, close friends, and especially Ying, Little Ghost, and Mei-hsiang on the other side of the world, and my mom-in-law in Austin. Without their love and emotional support, this process would have been much more difficult. Finally, I want to say “Thank you” to my lover, husband, friend and companion: Mr. P. Without your love and care, it would have been simply impossible for me to have completed it!
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CHAPTER I
INTRODUCTION

The mental health of children and adolescents has increasingly become a serious concern nationwide. According to the National Mental Health Information Center (2003), one out of five children and adolescents in the United States show the signs and symptoms of a DSM-IV disorder, and 21% of children and adolescents between the of ages 9 to 17 have some evidence of mental health problems. These children and adolescents suffer from serious behavioral difficulties, and these difficulties may severely disrupt daily functioning at home, school, or community. Serious behavioral difficulties affect one out of every 10 young people at any given time (SAMHSA’s National Mental Health Information Center, 2003). At the same time, no one is immune from mental problems. People from all types of backgrounds and families of all social classes suffer from mental health problems. In terms of the seriousness of children’s and adolescents’ mental health problems, the Surgeon General’s report (2000) referred to it as “a health crisis in this country” (p. 3).

Mental health is essential for ensuring a good quality of life for America’s children and adolescents. Emotional and behavioral problems and associated impairments hinder children’s and adolescents’ development and reduce their quality of life. Children and adolescents who suffer from mental problems have a much greater risk for dropping out of school and having lower functioning skills in life (U.S. Public Health Service, 2000).

According to Erikson (1985), preadolescents struggle with developing industry versus inferiority. Preadolescents with behavioral difficulties have a greater danger of having a sense of inferiority. Preadolescents with emotional and behavioral difficulties may experience sadness and hopelessness for no apparent reason; feel very angry most of the time, cry a lot, or overreact
to things; and/or be frightened that their minds are either controlled or are out of control. They may perceive themselves as being worthless or feel worried or guilty and may suffer constantly from anxiety and fear (U.S. Public Health Service, 2000).

Preadolescents with behavioral difficulties experience rather easily feelings of inadequacy and low self-esteem. Preadolescents’ behavioral difficulties can contribute to their sense of inferiority and make it difficult to master the developmental task of industry. Unfortunately, the health care system has not been able to provide adequate resources to meet these children’s emotional, behavioral, and developmental needs. More than half of the children who desperately need mental health care receive no treatment in any sector of the health care system (U.S. Public Health Service, 2000). Mental health is a significant part of children’s development and general health. How to assist children and adolescents in receiving the appropriate professional health care they need is not just an important issue but also a necessary step.

Schools can play an active role to meet these children’s needs. The most recent Surgeon General’s report (2000) pointed out that schools are the largest providers of mental health services. By strengthening the professional mental health intervention system at school, schools can assist children to receive adequate services. However, the Surgeon General’s report (2000) also emphasized that a lack of efficient treatment choices for school counselors and the difficulty of choosing an appropriate treatment option for preadolescents have reduced the effectiveness of mental health intervention at school. School counselors are burdened with multiple duties and heavy caseloads. They need an efficient treatment choice in order to use their time wisely. In addition, it is difficult to find an appropriate treatment option for preadolescents because of their developmental needs (Bratton & Ferebee, 1999).
The research regarding the treatments for children and adolescents is still in the initial stage. Cognitive-behavioral therapy (CBT) is one of the most widely-researched therapies for children and adolescents (Southam-Gerow & Kendall, 2000). Southam-Gerow and Kendall (2000) pointed out that there is strong empirical support for CBT with internalizing disorders such as anxiety and depression. Several empirical studies have showed the positive therapeutic effect of CBT on children and adolescents with anxiety and depression through individual or family CBT (Cobham, Dadds, & Spence, 1998; Eisen & Silverman, 1998; Kane & Kendall, 1989; Kendall & Sugarman, 1997). Based on a systematic literature review of the efficacy of CBT, Cartwright-Hatton, Roberts, Chitsabesan, Fothergill, and Harrington (2004) supported Southam-Gerow and Kendall’s viewpoint and also found that CBT has a significant positive effect on childhood and adolescent anxiety disorder. Some studies applied the cognitive behavioral therapy in a group format and took into account the positive peer influence in group process (Barrett, 1998; Flannery-Schroeder & Kendall, 2000; Mendlowitz, Manassis, Bradley, Scapillato, Miezitis, & Shaw, 1999).

However, CBT has less positive effect on externalizing disorders such as attention-deficit hyperactivity disorder (ADHD) and conduct disorder. Several studies have indicated that CBT does not provide sufficient efficacy for children with ADHD (Abikoff, 1991; Abikoff & Klein, 1987; Pelham, Wheeler, & Chronis, 1998). It seems that CBT can be an intervention strategy for children or adolescents with anxiety and depression; however, more research is needed to explore other treatment options for children and adolescents with externalizing concerns. In addition, among these studies, none focused on preadolescents. CBT’s effect on preadolescents is unclear. There is a need to explore more treatment options for preadolescents.
Group sandtray therapy is one treatment option for preadolescents. According to Homeyer and Sweeney (1998), sandtray therapy is “an expressive and projective mode of psychotherapy involving the unfolding and processing of intra- and inter-personal issues through the use of specific sandtray materials as a nonverbal medium of communication, led by the client and facilitated by a trained therapist” (p. 6). Group sandtray therapy involves more than one client in session (Kestly, 2001). Compared to CBT, group sandtray therapy is even less researched. It deserves attention to evaluate its effectiveness.

Sandtray therapy is a type of play therapy (Allen, 1988; Carmichael, 1994; Vinturella & James, 1987). Play is a natural language for children and preadolescents to express and communicate their feelings, thoughts, and experiences (Landreth, 2002), and play therapy is an empirically supported treatment option (Ray, Bratton, Rhine, & Jones, 2001). Play therapy showed effectiveness “across modality, age, gender, clinical vs. nonclinical populations, setting, and theoretical schools of thought” (Ray et al., 2001, p. 85). However, because of the developmental stage of preadolescents, modification is needed to accommodate their needs. Preadolescents may have the need to identify with adults and peers and may perceive the traditional play therapy materials as “baby toys” (Ginott, 1994). Preadolescents may accept sandtray therapy more easily than the traditional play therapy because of its materials. Sandtray therapy includes various miniatures that represent different symbolic images. These miniatures may be perceived by preadolescents as a collection of figures instead of “childish toys” (Bratton & Ferebee, 1999). In addition, the message that sandtray therapy has been used widely with adults (Mitchell & Friedman, 1994) can be conveyed to preadolescents to enhance their motivation to participate.
Developmentally, preadolescents are in a transition of moving from the concrete operations period and towards the formal operations period (Philips, 1981). They are in a process of developing abstract thinking and may not be able to verbalize their feelings and thoughts easily. Sandtray therapy responds to preadolescents’ developmental needs to be both concrete and symbolic. Bratton and Ferebee (1999) found that sandtray therapy is a particularly useful medium in working with preadolescents. They believed that the miniatures and sandtray provide more concrete opportunities for symbolic expression compared with other creative art materials such as drawing, painting, and clay – media that tend to be abstract in nature. Sandtray therapy can bridge the gap between play and verbalization and is developmentally appropriate for preadolescents. Although play therapy has been shown to be effective, research focused on the use of sandtray therapy, especially in the group modality, is very limited (Mitchell & Friedman, 1994).

A group format would seem to meet preadolescents’ developmental and psychosocial needs and by addressing problematic behavior in a social context. Erikson (1985) suggested that preadolescence is an important developmental stage in terms of socio-emotional growth and development. Preadolescents need to learn how to do things beside and with others and need to become familiar with the various social roles they may play in society. Friendship is one of the developmental tasks that preadolescents need to master (Newman & Newman, 1996). Peer relationship, acceptance, and close friendship are very important for preadolescents. However, not all preadolescents have the same capacity to make friends and to enjoy the benefits of close relationships. Preadolescents with behavioral difficulties may have low social competence and poor social skills due to interference from their behavioral difficulties. They need a facilitative
and therapeutic environment to enhance their social competence and need to learn more sufficient social skills in order to make friends and maintain positive peer relationships.

Group sandtray therapy can provide this kind of facilitative environment. Ginott (1994) pointed out that, in group therapy, children and adolescents are exposed to a new quality of intimate relationships and can face each other squarely and honestly and experience emotional closeness to other people. “The group as a miniature society offers motivation and support for change, as well as a safe arena for testing new modes of behavior” (Ginott, 1994, p. 13). Because in group sandtray therapy preadolescents need to share materials and ideas, they learn that the sharing of materials and ideas is approved by society and that their own contributions are appreciated and welcomed.

Statement of the Problem

In summary, the current mental health situation for children and adolescents has been a serious issue for the whole country. About one in 10 children and adolescents suffer from some kind of behavioral difficulties (SAMHSA’s National Mental Health Information Center, 2003), and more adequate and efficient intervention is needed, especially for preadolescents. Schools are the biggest mental health service providers for these needy children and adolescents.

However, a more efficient therapeutic intervention that can meet preadolescents’ developmental needs is lacking. Preadolescents have unique developmental needs and require a more developmentally sensitive therapeutic intervention. Group sandtray therapy is one such type of intervention. However, current research is very limited in investigating group sandtray therapy and its effectiveness.
Purpose of the Study

The purpose of this research is to examine the effectiveness of group sandtray therapy treatment with preadolescents with behavioral difficulties as a clinical intervention. This study is expected to contribute to a better understanding of the effectiveness of group sandtray therapy in (1) reducing total behavior problems of preadolescents with behavioral difficulties, (2) decreasing the internalizing problems of preadolescents with behavioral difficulties, and (3) decreasing externalizing problems of preadolescents with behavioral difficulties.

Literature Review

This literature review synthesizes related research regarding the following areas: (1) sandtray therapy; (2) activity group therapy; and (3) play therapy in elementary school. A thorough literature review revealed that most of the research articles in these three areas are theoretically oriented and that empirical studies are relatively limited.

Sandtray Therapy

History and definitions. According to Thompson (1990), H. G. Wells first described the essential elements of sandtray therapy in his 1911 book *Floor Games*. He used pieces of wood, paper, plastic, and miniatures of people and animals to engage floor games with his two sons. They built various cities and islands by using their creative imagination.

Margaret Lowenfeld started her psychiatric treatment of children in 1925 in London. She read Wells’ book and included the materials he used in her clinic, the Institute of Child Psychology (ICP). She also included a metal box partially filled with sand in the room where she saw children. She put the miniatures in the drawers and noticed that many children took the miniatures out from the drawers and put them in the metal box and began to build “the world.” She was very interested in children’s “worlds” and began to record them. She believed that
children project their inner worlds in their sand worlds. For Lowenfeld, sand trays reflect the preverbal, unconscious life of the child and provide an experience and opportunity that is satisfying and expressive for children to meet their need to communicate with the therapist (Mitchell & Friedman, 1994); therefore, the world can be used as a clinical intervention. She published her first paper about “the world” in 1939 and named this approach “the World Technique” (Lowenfeld, 1939).

In 1956, Dora Kalff, a Swiss Jungian child analyst, attended Lowenfeld’s presentation of two “worlds” and recognized that she needed to go to London to learn the world technique from Lowenfeld (Thompson, 1990). After Kalff returned to Zurich, she continued consulting with Jung and his wife, Emma Jung. Kalff incorporated Jungian theory with Lowenfeld’s world technique and created her own approach of sandtray therapy. After consulting with Lowenfeld, Kalff named her own approach “Sandplay” in order to differentiate her Jungian oriented technique from Lowenfeld’s world technique (Mitchell & Friedman, 1994). Kalff first presented on the topic of sandplay in 1962 and published the classic book, Sandplay, in 1980. She taught and lectured widely about sandplay in Europe, the United States, and Japan until she died in 1990 (Mitchell & Friedman, 1994).

Sandtray therapy theorists and researchers have provided various definitions of sandtray therapy based on their applications or theoretical orientations. Kalff (1980) defined sandplay as a natural therapeutic modality that facilitates the client’s expression of the archetypal, symbolic, and intrapersonal worlds and that addresses the client’s everyday issues of outer reality. Carmichael (1994), a play therapist, defined sandtray therapy in a less theory-specific way as an emotional form of individualized expression of the inter- and intrapsychic world of the child. Mitchell and Friedman (1994), two Jungian therapists, provided three definitions. One of them is
an even more overtly atheoretical definition of sandtray therapy as the technique of using
miniatures in a shallow box partially filled with sand, regardless of the therapist’s theoretical
approach. More specifically, Homeyer and Sweeney (1998) defined sandtray therapy as “an
expressive and projective mode of psychotherapy involving the unfolding and processing of
intra- and inter-personal issues through the use of specific sandtray materials as a nonverbal
medium of communication, led by the client and facilitated by a trained therapist” (p. 6).

Ever since Lowenfeld created sandtray therapy, it has been used as a treatment
intervention. Even though a sizable number of therapists practice sandplay according to various
theoretical orientations, sandplay from the Jungian perspective is currently the primary approach
used worldwide (Mitchell & Friedman, 1994). Jung believed that play provides the function of
equilibration between the conscious and unconsciousness aspects of the psyche (Stewart, 1990)
and serves as a type of active imagination. Active imagination is a technique Jung created to
assist the client to engage in a dialogue between consciousness and the unconscious that was
intended to enhance the client’s conscious awareness. For example, the Jungian therapist may
ask the client to engage in a dialogue with one’s feelings such as fear or anger and may
encourage the client to communicate with the feelings reciprocally. Through active imagination,
ego can engage with and have a dialogue with the archetype of Self, an unconscious part of the
psyche, and form an ego-Self connection. This connection helps the client access the healing
power of Self.

Expressive art therapists apply sandtray therapy very similarly to Jungian sandplay
therapists; however, they conceptualize it differently and view sandtray therapy as a type of
expressive art therapy. Expressive art therapists believed that expressive art therapy such as
sandtray therapy can assist clients in verbalizing their unspoken and unresolved conflicts, but
they do not accept the Jungian concepts such as the collective unconscious or archetypes (Synder, 1997).

*Rationale for using sandtray therapy.* Kalff (1980), the first Jungian sandplay therapist, stated that the sand picture that the client produces can be understood as a three-dimensional representation of some aspect of one’s psychic situation. “An unconscious problem is played out in the sandbox, just like a drama; the conflict is transposed from the inner world to the outer world and made visible” (Kalff, 1980, p. 32). By making the inner problem visible, the child has an opportunity to try to resolve it.

Jungian theorists hypothesized that the psyche contained three levels: consciousness, personal unconscious, and collective unconscious (Stein, 1998). Ego is the center of consciousness, and people operate in daily life based on their ego functions. The material in the personal unconscious is that which is rejected by ego or that arises from the collective unconscious. The collective unconscious contains many archetypes that people inherit from their ancestors in order to confront and cope with the environmental challenges to human survival. Many unconscious opposite forces exist within the psyche. If there is imbalance among these forces, people may encounter behavioral difficulties. Theoretically, the symbolic expression of the unconscious forces will help to balance the inequalities of energy. Jung (1964) pointed out that people need to establish the basis for a dialogue with the inner self by using symbols and images of the unconscious mind. Sandtray therapy makes it possible to use symbols and images to grasp the secrets within the unconscious that silently influence lives.

Allan (1988), a Jungian play therapist, stated that sandtray therapy gives the client the opportunity to resolve traumas through externalizing fantasies and by developing sense of a relationship with and control over inner impulses. He indicated that “it is the connection to
unconscious drives, especially the archetype of the Self, and their expression in symbolic form that greatly facilitates healthy psychological functioning” (p. 213). Kalff (1980) believed that “the symbols speak for inner and energy laden pictures of innate potentials of the human being” (p. 29) and that the expression of these potentials facilitate emotional growth. She proposed that the therapist’s understanding of the conflict that emerges in the sand picture can produce an atmosphere of trust between the therapist and the child. Like the original mother-child unity, the therapist-child understanding and trust exert a healing influence on the child.

Providing not a Jungian but a cognitive development rationality, Kestly (2001) pointed out that sandtray therapy is especially beneficial for children and adolescents because of their limited abstract reasoning and language proficiency. She suggested that the right brain is in charge of spatial thinking, and artistic and nonverbal processing, and the left brain is involved with cognitive processing. In other words, the right brain helps people to learn from actual experiences, and the left brain helps people to learn from reasoning and abstract thinking. When people begin to play, they engage the right brain through symbolic thinking and bypass their cognitive awareness. Because children and adolescents are still in a process of developing more advanced cognitive capacity, they primarily use their experiential learning involved with the right brain to deal with issues that are important to them. They need images as well as concrete and tangible items to communicate their complicated inner worlds. The sandtray therapist uses hundreds of various miniatures to represent different images and experiences. “The sand tray is an expansive language providing children with a large vocabulary of miniature images for expressing their elaborate inner worlds” (Kestly, 2001, p. 334).

Homeyer and Sweeney (1998) summarized the benefits for using sandtray therapy as follows: (1) providing opportunity for expression of non-verbalized emotional issues, (2) having
a unique kinesthetic quality and providing a sensory experience, (3) helping to create a necessary therapeutic distance for clients, (4) assisting to create a safe place for abreaction to occur, (5) providing appropriate limits and boundaries which promotes emotional safety of clients, (6) providing a unique setting for the emergence of therapeutic metaphors, (7) effectiveness in overcoming client resistance, (8) providing a needed and an effective communication medium for the client with poor verbal skills, (9) cutting through verbalization used as a defense, (10) creating a place for the client to experience control, (11) addressing the challenge of transference effectively, and (12) addressing deeper intra-psychic issues more thoroughly and more rapidly.

**Therapeutic process.** From a Jungian perspective, the therapist plays an important role in the process of therapist’s and client’s exploration of the client’s personal unconscious (Kalff, 1980). Kalff believed that the Self of the client directs the therapeutic process, and the process is largely unconscious. The therapist is an attentive observer and a witness in this process. The therapist’s role is to provide a “safe and protected space” (Kalff, 1980). Mitchell and Friedman (1994) thought that it is the main focus of the therapist to organize the environment to facilitate and support the Self in initiating its own renewal. In other words, the role of therapist is to provide a safe and protected environment where the inner drama and healing potential of the psyche can unfold (Allan, 1988). More concretely, the therapist needs to be caring, empathic, and warm in order to secure a safe and protected space (Kalff, 1980; Landreth, 1990; Peery, 2003) and not to lead or direct the therapeutic process at any time.

Although it is important that the therapist express an understanding of the child’s sand world, it is not necessary to interpret it. Allan (1988) believed that interpretation is seldom needed, because “the psychological issues are resolved or understood on an unconscious and symbolic level” (p. 215). Carmichael (1994) believed that interpretation is unnecessary and could
violate the original intention of using sandplay as an intervention strategy. Homeyer and Sweeney (1998) warned that therapists usually are tempted to interpret the symbolism of the miniatures and the meaning of the scene for the client; however, the meaning attributed by the client is more important than the therapist’s interpretation. Several sandtray therapists have postulated different stages in sandtray therapy process (Allan, 1988; Carey, 1995; Kalff, 1980); however, these stages seem to share similar dynamics and characteristics. In general, the client’s process of healing is revealed in their symbolic sand world.

Kalff (1980) suggested that sandtray therapy progresses in these stages: (1) animal and vegetative: the stage in which mostly ego expresses itself, and Self is manifest primarily in the symbols of animal and vegetation; (2) fighting stage: the stage in which the client confronts one’s internal conflicts, which enables the client to externalize the issues and to strengthen oneself internally; (3) adaptation to the collective: the stage of integration in which the client is able to adapt to the environment better as a person and perceive oneself more completely.

Allan (1988) divided sandtray therapy process into three stages: chaos, struggle, and resolution. In the stage of chaos, the client’s sand world may seem chaotic and has no organization. The struggle stage is similar to Kalff’s (1980) fighting stage. In the resolution stage, the client finds the resolution for one’s internal struggles. These stages are in recurring cycles and may not follow a certain order.

Carey (1995) divided the therapeutic process similar to the ways Kalff and Allen did. She believed that sandtray therapy process contains four stages: chaos, animal as well as vegetative, fighting, and constellation of Self. Similar to Kalff’s adaptation to the collective, in the stage of the constellation of Self, the client is able to better perceive oneself as a whole.
Applications of sandtray therapy. Sandplay has been used as an assessment tool. A form of play-diagnosis used widely in Sweden is called the Erica-method (Sjolund, 1981). The Erica-method was modified from Lowenfeld’s world technique. Therapists utilize standardized material that consists of sandboxes, miniature toys, and a manual. The assessment results are based on the interpretation from the manual. Sjolund (1981) believed that this method is “a very useful tool for a better understanding of developmental, neurological, and psychopathological problems of childhood” (p. 322).

Cockle (1993) conducted a comparative study of sandtray therapy and found that children’s emotional concerns and issues clearly surface and develop over time through sandplay. She indicated that it is important to assess a child’s emotional functioning over a minimum of four sessions after safety has developed. Vinturella and James (1987) suggested that play therapists can use sandplay as a diagnostic tool to obtain baseline information and assess a child’s maladaptive behavior. Sweeney, Minnix, and Homeyer (2003) suggested using sandtray therapy in lifestyle analysis, is an important assessment process in Adlerian theory and therapy. They stated that some clients may not be ready for cognitive assessment tools and that sandtray therapy is an effective projective medium for analyzing these clients’ lifestyles. However, Lowenfeld (1950) did not agree that the world technique should be used as an assessment tool, because her original intention was to use it as a clinical intervention, and she was afraid that the technique would be misunderstood or distorted when part of it was borrowed and adapted to a different purpose.

Sandtray therapy is a treatment option. Therapists can use sandtray therapy with children and adults. Many case studies have shown that sandtray therapy is effective to work with people who have behavioral difficulties. For example, sandtray therapy can help people who are

Sandtray therapy has been suggested as a therapeutic medium in working with families. Family therapists may choose sand for children or the whole family to explore family boundaries, structure, and dysfunctional patterns of interaction in the family system. Carey (1991) was confident in the development of family sandplay therapy and suggested that although family sandplay therapy is practically virgin territory, it holds the promise of a much deeper, more analytical approach to the healing process.

Since the 1960s, school counselors and teachers in the U.S. have introduced sandtray therapy into the school setting as an aid to academic development, psychological growth, diagnosis, and therapeutic intervention (Carmichael, 1994; Dyk & Wiedis, 2001; Glasse, 1995; Kestly, 2001; Mitchell & Friedman, 1994; Pabon, 2001).

Carmichael (1994) provided some suggestions in using sandtray therapy in schools. For example, before providing sandtray therapy, school counselors can screen children through observation in classroom guidance activities to determine which child needs sandtray therapy. According to Carmichael (1994), school counselors have no time for intensive play therapy, yet they can accommodate the need to include a limited number of children for individual therapy.
and small group counseling sessions. She believed that children who are well suited for sandtray therapy are those with low-self-esteem, poor academic progress, and very active behaviors.

Traditionally, sandtray therapists conduct each session individually, and group sandtray therapy is a relatively new arena (Mitchell & Friedman, 1994). However, group sandtray therapy may provide the efficiency and effectiveness that individual sandtray therapy lacks, especially for preadolescents. Kestly (2001) proposed that group sandtray therapy meets the school counselor’s need to see many children in a short period of time. In addition, she believed that “group process is more productive because it (1) involves peer motivation for change, (2) provides positive adult attention that is nonintrusive, (3) serves to prevent later, more chronic problem behaviors, (4) enhances brain functioning, and (5) allows the child to participate and observe simultaneously” (Kestly, 2001, p. 333).

**Need for empirical research.** Most sandtray therapy researchers have used qualitative methods to understand sandtray and to evaluate its effectiveness. Many case studies have been reported and have shown the effectiveness of sandtray working with individuals or small group of clients with behavioral difficulties (Carey, 1990; De Domenico, 1991; Dundas, 1992; Kosirog & Mahdi, 1983; Mills, 1990; Vinturella & James, 1987). For example, Carey (1990) presented a successful sandtray therapy case with a nine-year-old boy suffering from multiple problems that included enuresis, neurological disorders, mental retardation, and language difficulties. This child demonstrated satisfactory progress after participating sandtray therapy. Carey presented the treatment progress through a very detailed discussion of the pictures of the child’s sandtrays. Dundas (1992) used Jungian sandplay method working for two years with a nine-year-old boy with behavioral problems. She used four pictures of his sand world to explain how the boy integrated the good and bad aspects of life and healed the matriarchal split in his psyche. De
Domenico (1991) reported a clinical example of the Lowenfeld World technique. She worked with a six-year-old girl and her father together. They were referred because of her father’s psychiatric problems. De Domenico described the girl’s sand scene and related it to the session dynamics between the child and the parent. She stated that using sandtray therapy can increase children’s capacity to experience and understand their own inner and outer worlds of life experiences.

Kosirog and Mahdi (1983) used sandtray therapy as a diagnostic and therapeutic tool and reported two cases using sandtray therapy with child clients dealing with their relationship difficulties with their fathers. The therapists believed that sandtray therapy is particularly useful for children and adolescents in “working through conflicts or relationship problems, exploring fantasies, and promoting creative growth” (p. 5). Also employing sandtray therapy to address parental relationship problems, Mills (1990) used sand and water to work with maternally deprived preschool children. She described how three preschoolers used sand and water to express and work through their inner pain of lacking a mother. She believed that the mixing of sand and water and giving children the freedom to be messy facilitate the therapeutic process. Vinturella and James (1987) worked with a grieving child who just lost his father and found that sandtray therapy is an effective tool to facilitate the communication of the child’s ambivalent feelings. They pointed out that sandtray therapy provides an environment and a medium in which children can safely express problems and feelings that may otherwise be too threatening to reveal to an adult.

Although the case studies reviewed in this session demonstrated the usefulness of sandtray therapy with children who have various problems, larger scale empirical and outcome research is
lacking regarding the effectiveness of sandtray therapy, especially group sandtray therapy. More quantitatively oriented research is needed.

**Group Play Therapy/Activity Group Therapy**

Many sandtray therapy researchers viewed sandtray therapy as a type of play therapy. Stewart (1990) pointed out that sandtray therapy as a form of psychotherapy is rooted in symbolic play. Homeyer and Sweeney (1998) stated that the elements of the sandtray process promote play and relationship. Kalff (1980), the pioneering Jungian sandplay therapist, included sandtray therapy as a part of play therapy. Carmichael (1994) also confirmed sandtray therapy’s strong relationship with play therapy. As mentioned above, the sandtray therapist can conduct sandtray therapy in a group format. Bratton and Ferebee (1999) viewed sandtray therapy as a medium appropriate to group activity therapy. In light of understanding group application and dynamics in group sandtray therapy, the author will review the related literature in group play/activity therapy as follows.

Landreth (2002) defined group play therapy as a dynamic interpersonal relationship between a child and a therapist trained in both play therapy and group procedures who provides selected play materials and facilitates the development of a safe relationship for children to fully express and explore themselves and others including feelings, thoughts, experiences, and behaviors through children’s natural medium of communication, play (p. 17). Activity group therapy (AGT) shares the same nature as group play therapy and is viewed as a modification of group play therapy adapted to meet the developmental needs of pre-teens (Bratton & Ferebee, 1999; Packman & Bratton, 2003; Slavson, 1945). Frank and Zilbach (1968) defined AGT as being a noninterpretive mode of treatment designed for emotionally disturbed preadolescents.
Slavson first utilized group activity therapy in New York in 1934 (Slavson, 1975), and Schiffer, a close coworker of Slavson, applied activity group therapy in public school (Schiffer, 1952). Slavson (1975) provided the basic concepts for forming an activity group including group process and dynamics, role of the therapist, physical setting, and age of members. He recommended using AGT with preadolescents, especially those with behavior and character concerns.

**Rationale for activity group therapy.** Redl and Slavson (1944) believed that placing preadolescents together can provide support for each other and that “disturbed persons need groups of social mobility where they can feel free and develop relationships at their own pace” (p. 585). They expected that children will change by developing a capacity for relationship because of their “social hunger.” It is especially true for preadolescents. Social hunger is stronger among preadolescents than younger children, and peer relationships are very important for them. Redl and Slavson (1944) noticed that preadolescents have greater group awareness, and their identification with others is accelerated.

Frank and Zilbach (1968) focused on preadolescents’ developmental needs and pointed out that preadolescents need support and a sense of belonging from their peer groups more than from their families. Preadolescents also need to develop social skills, and they learn and try out new social skills while interacting with their peers. Preadolescence is a life development stage in which they begin to develop self and sexual identity. Preadolescents can use the interaction in a small group to try out different roles and explore self-identity.

Sweeney (2003) systematically discussed the rationale for using group format in play therapy. He summarized the basic advantages as follows: (1) promoting spontaneity in clients and increasing the level of participation in their experience, (2) providing clients the opportunity
to deal with their “intrapsychic” and “interpersonal” issues at the same time, (3) vicarious learning, (4) catharsis, (5) assisting clients to experience self-growth and self-exploration from peer feedback, (6) anchoring the therapy to reality, (7) gaining substantial insight into clients’ daily life from the interaction with other members, (8) reducing clients’ need to be repetitious or retreat into fantasy, (9) giving clients opportunities to develop interpersonal skills, and (9) reducing clients’ anxiety when they feel anxious being with the therapist alone.

Process and Structure. Redl and Slavson (1944) pointed out that group members need to feel safe and accepted in order to participate in the group process. Axline (1947) and Ginott (1994) supported the idea of creating a safe environment. Both of them suggested a permissive and free environment for children to express their feelings, thinking, and experiences. MacLennan (1977) emphasized the importance of the experiential approach of AGT. He stated that children experience and work out their problems in the therapeutic group through their interactions with each other, the therapist, and the physical setting and materials. Frank and Zilbach (1968) pointed out that the process of AGT includes three phases. The first phase is to create an atmosphere of acceptance, nonretaliation, and nourishment and to encourage “benign and guided regression” (p. 449). In the second and third phases, when children seem ready, conflicts shown in the first phase are addressed or explored. The role of therapist is to assist children to deal with the conflicts and help children to acquire new ways of coping.

Activity group researchers have expressed different opinions regarding how to structure a group (Bratton & Ferebee, 1999). Some researchers argued that preadolescents benefit from the unstructured and non-directive format (Schiffer, 1969; Slavson, 1975). They stated that an unstructured format gives preadolescents “untrammeled freedom” and helps them express and explore themselves. Other researchers believed that structured and directive activities are more
helpful for preadolescents (Celano, 1990; Lynn & Nisivoccia, 2001; Schaefer & Reid, 1986). They believed that preadolescents learn and explore themselves to a greater degree from structured activities. Gil (1994) suggested the integration of the two approaches in order to provide a permissive environment for preadolescents to express themselves freely and to give them the opportunities to learn from self and others at the same time.

Selection of Participants. MacLennan (1977) suggested several principles for selecting group members. He believed that AGT is suitable for preadolescents experiencing problems in ego development. AGT can help such clients to increase self-esteem, to deal with problems of authority and sibling rivalry, to accept success and to cope with individual demands inevitable in group settings, to reinforce self-identification, to overcome social fears, and to satisfy social hunger. Children who are defiant, dependent, socially fearful, constricted, aggressive, compulsive, and withdrawn can benefit from attending AGT. However, AGT is not an effective choice of treatment for preadolescents whose impulse control completely breaks down when under medium stress or for those who have very low realization of reality or are extremely withdrawn and socially fearful.

Group balance has been emphasized by AGT researchers (Frank & Zilbach, 1968; Ginott, 1975; Slavson, 1944). They suggested choosing group members based on the preadolescents’ needs, their ability to gain from the group therapy, and the specific influences that their personalities, their strengths, and their problems will have on other group members. Bratton and Ferebee (1999) warned that preadolescents with great difficulty in forming attachment and with a history of acting out sexually may not be good candidates for group. They suggested that group members should be of the same sex and generally not more than one year apart in age. They
recommended that therapists have an initial parent interview and at least one individual session with each prospective member prior to forming the group.

*Empirical research in activity/play group therapy.* Few researchers have published their experiences or have conducted empirical studies regarding the outcome and effectiveness of activity/play group therapy. Some outcome research and case studies confirmed the effectiveness of activity/play group therapy, and some argued its usefulness. However, overall, the empirical research on group therapy is relatively limited.

Plenk (1978) proposed a model to use AGT for emotionally disturbed pre-school children based on her clinical experiences. Aronin, Haggott, Finck, and Sartore (1974) stated that activity can assist children to strengthen their self-concepts and suggested a mirror image approach. In a case study, Celano (1990) described how she used structured AGT and games with sexually abused children and found it beneficial because it provided a relatively structured and non-threatening forum for discussing topics that children may find difficult or embarrassing.

VanScoy (1972) presented a case study using AGT with four boys from 11 to 12 with behavioral difficulties in a residential treatment center, and these boys showed improvement based on her observation and feedback from peers and staff. Roos and Jones (1982) reported their work in a multiethnic community with seven girls from 9 to 10 years old experiencing loss and grief.

Two early studies examining the effectiveness of activity/play group therapy revealed unconvincing evidence of its effectiveness (Abramowitz, 1976; McDonough, 1979). Abramowitz (1976) reviewed the empirical outcome research on activity/play, behavior modification, and verbal therapy groups and claimed that the results tended to favor the behavioral approach. However, Abramowitz pointed out that many studies she included failed to describe adequately the treatment process and to report the reliability and validity of the instruments. McDonough
(1979) compared the effectiveness of Self-Instruction Training, a model that consists of modeling and rehearsing scripts along with group play therapy to lessen impulsivity and hyperaggressivity for preadolescent boys. He attributed his non-significant results to inadequate treatment generalization, incomplete randomization, too short of treatment time, too complicated scripts, and inadequate instruments in measuring the target behaviors.

In contrast, two more recent studies supported the effectiveness of group play/activity therapy. Chen (1984) utilized two unstructured and structured group activity/play models with Chinese preadolescents. He used a behavior rating scale to evaluate their effectiveness and found that both treatments were effective approaches for Chinese preadolescents with behavioral problems. About 66% to 70% of the preadolescents who received group activity/play therapy showed significant improvement. Limitations to Chen’s study, however, included that the 20-item behavior rating scale he used seemed too brief and simple, and that the validity and reliability of the behavior rating scale was not discussed. Packman and Bratton (2003) conducted a better established outcome study to examine the effectiveness of activity/play group therapy. They used a pre-test, post-test control group design and more reliable and valid instruments in examining the effectiveness of group play/activity therapy as a school-based intervention with diagnosed with learning disability and preadolescents exhibiting behavior problems. The findings revealed that these preadolescents significantly reduced their problem behavior after the intervention. Through the interpretation of effect size, their study also showed a large overall treatment effect \(d= .82\). In short, there is disagreement regarding the effectiveness of group activity/play therapy, although the best designed study so far yielded strong positive results. Nevertheless, more research is needed to further examine the effectiveness of group activity/play therapy.
Play Therapy in Elementary Schools

The first school-based clinic that provided mental health services in public school was established by the Chicago Board of Education in 1899. This action was the beginning of the development of school psychology (Slater, 1980), and school districts began to develop systems for managing academic, behavioral, and health problem referral (Fagan, 2000). However, play therapy was not utilized in elementary schools until guidance and counseling programs were first established in elementary schools in the 1960s (Landreth, 2002).

Landreth (1983) pointed out that the absence of play therapy programs in elementary schools results from four factors. First, play therapy is a relatively new development, the first use of play in psychological treatment dating back to Sigmund Freud’s (1909) classic case of Little Hans. Second, primary mental health services providers such as counselors, social workers, and school psychologists were not included on elementary school staffs until the 1960s. Third, school personnel have had little understanding of play therapy. Fourth, only few counselor education programs provide specific play therapy training. Although school personnel gradually “have begun to recognize and accept play therapy as an effective therapeutic intervention approach with children in school settings” (Landreth, 1983, p. 200) along with the professional development of play therapy, school counselors and psychologists still use verbal exchange as the main part of treatment intervention, and play therapy is still in its relatively early stages of development as a popular approach in elementary settings. Although play therapy in the elementary school is still in an early stage of developing, recent school counseling studies indicated the trend that elementary school counselors are encouraged to use play therapy as a counseling medium (Ray, Muro, & Schumann, 2004).
Studies have shown that children cannot learn effectively when they are emotionally disturbed (Axline, 1947; Howard & Zimpfer, 1971; Landreth, 1983). The major goal of elementary schools is to facilitate the cognitive, emotional, physical, and social development of children by providing adequate educational resources and learning opportunities. The main objective of applying play therapy with children in an elementary school setting is to help children to be emotionally available for the learning experiences provided (Landreth, 2002). The following literature review will be composed of the rationale for using play therapy in schools, various usage of play therapy in schools, and empirical research regarding play therapy in the elementary schools.

*Rationale for using play therapy in schools.* Drewes (2001) recounted the reasons why the school system is the ideal setting to provide mental health services, especially play therapy. First of all, it is cost-effective in the long term to provide prevention and intervention services in schools. Preventive and intervention services in schools can prevent some children’s emotional issues from getting worse. Because schools can provide low cost or no cost mental health services, more families can be served, thus making mental health services more accessible. Secondly, providing mental health service is easier and more efficient compared with community based services. For example, scheduling is easily managed and can be flexible. It is easier to build a trusting relationship, because children are familiar with the school setting and the counselor. The interdisciplinary approach in the school setting allows for economical use of time in gathering input from different sources such as teachers, social workers, and nurses. In addition, teachers can learn play therapy techniques and skills and apply them in class.

Many play therapy researchers have supported using play therapy in the elementary schools (Axline, 1947; Carmichael, 1994; Drewes, 2001; Kestly, 2001, Landreth, 1983 & 2002; Schiffer,
Play provides a natural way and alternative method for children to express their feelings, thoughts, and experiences (Landreth, 2002). Because children have more concrete cognitive development, play is a developmentally appropriate way to facilitate children to work through their behavioral difficulties.

The use of toys and play material in the school setting creates a more inviting and comfortable environment for children (Drewes, 2001). Children may perceive going to the school counselor’s office as a punishment and have negative feelings. The message that the setting and play therapist are different from the academic environment allows children to be less performance-oriented and more relaxed. Mitchell and Friedman (1994) believed that sandtray therapy is more easily accepted in the school system than many other psychological techniques, because educators have understood that playing in the sand facilitates the development of physical, social, emotional, and academic abilities of children.

Through the use of play, the school counselor can build therapeutic relationship with children. “Since play is the language of the child, play provides a medium for building the essential relationship between counselor and child. The counselor is able to enter into the child’s emotional world as it is freely revealed and acted upon by the child” (Landreth, 1983, p. 202).

*Usage of play therapy in elementary school.* Play therapy has been used in school in many different ways. It has been used as an assessment tool and treatment option (Drewes, 2001; Schmidt, 2001). School counselors, social workers, and teachers have used play therapy individually or in group with different populations in the elementary school such as children at risk, children with emotional disturbances, children who need crisis intervention, children suffering from loss and grief, and children with behavioral problems.
Post (1999) examined the effectiveness of child-centered play therapy and found that it can benefit at-risk elementary school children. At-risk children refers to children who have minority cultural background, low socioeconomic status, and a poor living environment and who are at risk of academic failure and lifelong social problems. She stated that play therapy can help to prevent at-risk children from developing lower self-esteem and from reducing their sense of responsibility for their academic successes and failures. Albaum (1990) found that at-risk children seem happier, become more focused on learning, and deal with fears more effectively after receiving play therapy.

Pabon (2001) reported a time-limited, school-based, individual and group sandplay therapy program for children in emotional crisis. This sandplay program was a part of Intensive Day Treatment Program (IDT), in which multiple modalities were applied to empower children in need. Children and adolescents were referred to this program to receive more tutoring and emotional support. The sandplay therapists usually introduced sandplay therapy to children from age 8 to 13. Pabon presented many case examples of children with various issues such as sexual identity, self-mutilation, behavioral problems, and substance abuse. Lynn and Nisivoccia (2001) addressed the use of goal-focused activity groups in school as a type of crisis intervention for children facing crisis. Group bereavement programs in the school setting serve therapeutic and preventive functions to give necessary support for children experiencing grief and loss (Griffin, 2001). Packman and Bratton (2003) suggested that group activity therapy can be used effectively for preadolescents with learning disabilities and exhibiting behavior problems. According to Reddy, Spencer, Hall, and Rubel (2001), trained school personnel can use therapeutic games to help children with Attention-Deficit Hyperactivity Disorder, and they proposed developmentally appropriate games designed for school settings. In addition to school counselors and social
workers, some researchers suggested that teachers can learn the principles of play therapy and apply them in class. Axline (1947) provided some suggestions regarding how teachers can apply play therapy in their classroom. Glasse (1995) encouraged teachers to use sandplay in their classrooms for assessment and intervention.

Ray, Muro, and Schumann (2004) provided a comprehensive model for implementing play therapy programs in schools. This program consists of three components including play therapy, filial therapy for teachers and parents, and teacher education. They gave practical suggestions about how to implement the play therapy program in school successfully. They emphasized the importance of active involvement of teachers. The program coordinators can help teachers to understand the basic principles of play therapy, can invite teachers to participate in needs assessment, and can provide a positive and constructive environment for continuous communication and participation.

Conclusion

It is obvious that there is a great need to provide a developmentally appropriate and effective psychological intervention for preadolescents with behavioral difficulties. Schools are the biggest providers of mental health services for preadolescents and have high accessibility and flexibility for preadolescents to receive intervention. The characteristics of group sandtray therapy such as bridging verbal and nonverbal communication, group format, and activity orientation meet the developmental needs of preadolescents. Although group sandtray therapy seems to be a good treatment option for preadolescents in schools, the only research reported in the professional literature involved case study reports of a multi-modality treatment program that included sandtray therapy (Pabon, 2001). The study proposed herein involves a more scientifically rigorous pre-post control group design to examine group sandtray therapy alone.
with preadolescents in school. The primary contribution of this study is to show whether or not there is empirical support for the effectiveness of group sandtray therapy in the school setting with a sample of preadolescent students with emotional and/or behavioral problems.
CHAPTER II
METHODS AND PROCEDURES

The purpose of this study was to examine the effectiveness of group sandtray therapy treatment with preadolescents identified with behavioral difficulties as a clinical intervention utilizing a pre-test/post-test control group design. This inquiry included 56 preadolescents from the 4th and 5th grade in two elementary schools. Two trained therapists conducted group sandtray therapy for 10 weeks. Participants in the experimental group received sandtray therapy in group. This chapter includes the research questions, hypotheses, definition of terms, methods and procedures, suggested analyses, and limitations of this research.

Research Question and Hypotheses

This study explored the effectiveness of group sandtray therapy treatment with preadolescents identified with behavioral difficulties in 4th and 5th grade at school. I compared two groups after the initial ten weeks to determine overall effectiveness by the scores on the Behavior Assessment System for Children-Teacher Report Form (BASC-TRF), the Behavior Assessment System for Children-Parent Report Form (BASC-PRF), and the Behavior Assessment System for Children-Self-Report of Personality (BASC-SRP). Hypotheses for this study included:

1. There is a statistically significant difference on the Behavioral Symptom Index scale between the pretest scores and posttest scores of the BASC-TRF for the experimental sandtray therapy group as compared with the control group.

1a There is a statistically significant difference on the Externalizing Behavior Problems scale between the pretest scores and posttest scores of the
BASC-TRF for the experimental sandtray therapy group as compared with the control group.

1b There is a statistically significant difference on the Internalizing Behavior Problems scale between the pretest scores and posttest scores of the BASC-TRF for the experimental sandtray therapy group as compared with the control group.

2. There is a statistically significant difference on the Behavioral Symptom Index scale between the pretest scores and posttest scores of the BASC-PRF for the experimental sandtray therapy group as compared with the control group.

2a There is a statistically significant difference on the Externalizing Behavior Problems scale between the pretest scores and posttest scores of the BASC-PRF for the experimental sandtray therapy group as compared with the control group.

2b There is a statistically significant difference on the Internalizing Behavior Problems scale between the pretest scores and posttest scores of the BASC-PRF for the experimental sandtray therapy group as compared with the control group.

3. There is a statistically significant difference on the Emotion Symptom Index scale between the pretest scores and posttest scores of the BASC-SRP for the experimental sandtray therapy group as compared with the control group.

Definition of Terms

Aggression refers to the tendency to act in a hostile manner (either verbal or physical) that is threatening to others (Reynolds & Kamphaus, 1992). For the purpose of this study, aggression
was operationally defined by the Aggressive subscale of the Behavior Assessment System for children (BASC).

*Anxiety* refers to the tendency to be nervous, fearful, or worried about real or imagined problems (Reynolds & Kamphaus, 1992). For the purpose of this study, anxiety was operationally defined by the Anxiety subscale of the BASC.

*Attention problems* refer to the tendency to be easily distracted and unable to concentrate more than momentarily (Reynolds & Kamphaus, 1992). For the purpose of this study, attention problems was operationally defined by the Attention Problems subscale of the BASC.

*Behavioral difficulties* refer to behavioral problems that may be affected by emotional problems and severely disrupt daily functioning at home, school, or community such as aggressive behaviors, conduct problems, and withdrawal from peers. For the purpose of this study, behavioral difficulties was defined by the teachers in the two local schools.

*Conduct problems* refer the tendency to engage in antisocial and rule-breaking behavior, including destroying property (Reynolds & Kamphaus, 1992). For the purpose of this study, conduct problems was be operationally defined by the Conduct problems subscale of the BASC.

*Depression* refers to feelings of unhappiness, sadness, and stress that may result in an inability to carry out everyday activities (neurovegetative symptoms) or may bring on thoughts of suicide (Reynolds & Kamphaus, 1992). For the purpose of this study, depression was be operationally defined by the Depression subscale of the BASC.

*Externalizing behavior problems* refers to the external expression of internal problems. These behaviors include aggression, hyperactivity, and conduct problems (Reynolds & Kamphaus, 1992). For the purpose of this study, externalizing behavior problems was operationally defined by the Externalizing Problems scale of the BASC.
Group sandtray therapy refers to an expressive and projective mode of psychotherapy involving the unfolding and processing of intra- and inter-personal issues through the use of specific sandtray materials as a nonverbal medium of communication, involving clients in a small group and facilitated by a trained therapist (Homeyer & Sweeney, 1998).

Hyperactivity refers to the tendency to be overly active, rush through work or activities, and act without thinking (Reynolds & Kamphaus, 1992). For the purpose of this study, hyperactivity was be operationally defined by the Hyperactivity subscale of the BASC.

Internalizing Problems refer to problems that mainly involve inner distress. The internalizing problems include anxiety, depression, and somatization (Reynolds & Kamphaus, 1992). For the purpose of this study, internalizing behavior problems was be defined by the Internalizing Problems scale of the BASC.

Preadolescence refers to the transitional period between childhood and the onset of puberty, often designated as between the ages of 9 and 12 (Slavin, 1991). For the purpose of this study, preadolescents was be operationally defined as children between the ages of 9 to 12.

Social Skills refer to the skills necessary for interacting successfully with peers and adults in home, school, and community settings (Reynolds & Kamphaus, 1992). For the purpose of this study, social skills was operationally defined by the Social Skills subscale of the BASC.

Somatization refers to the tendency to be overly sensitive to and complain about relatively minor physical problems and discomforts (Reynolds & Kamphaus, 1992). For the purpose of this study, somatic complaints was operationally defined by the Somatization subscale of the BASC.

Withdrawal refers to the tendency to evade others to avoid social contact (Reynolds & Kamphaus, 1992). For the purpose of this study, withdrawal was operationally defined by the Withdrawal subscale of the BASC.
Instrumentation

The Behavior Assessment System for Children (BASC) is a multi-method approach created by. It has forms for two age levels: 8-11 and 12-18. This approach includes two rating instruments: Behavior Assessment System for Children-Teacher Report Form (BASC-TRF) and Behavior Assessment System for Children-Parent Report Form (BASC-PRF). The BASC-TRF is administered to teachers and the BASC-PRF is administered to parents. Their purpose is to gather descriptions of the child’s observable behavior at school and home, respectively.

Teachers or parents describe how children have acted over the last six months and circle the appropriate answer from the rating scale. It usually takes about 20-30 minutes for teachers or parents to complete. The BASC requires observers to have a considerable amount of contact with the child such as interacting with the child daily for a month. For the purpose of this study, teachers and parents were asked to rate the children on behaviors over the last month.

The BASC also includes a self-report form, Behavior Assessment System for Children-Self-Report of Personality (BASC-SRP), on which the child can describe one’s emotions and self-perceptions. It is a comprehensive personality inventory (Reynolds & Kamphaus, 1992). It is designed to be administered directly to children and consists of statements that the respondents choose as True or False. It usually takes about 30 minutes to fill out.

The BASC has two scales: Clinical and Adaptive. The Clinical Scale assesses maladaptive behaviors such as hyperactivity, aggression, conduct problems, anxiety, depression, somatization, atypicality, withdrawal, attention problems, and learning problems. The Adaptive Scale measures positive behaviors such as adaptability, social skills, leadership, and study skills.
Reliability for the BASC is well established. Two kinds of reliability, internal consistency and test-retest reliability, have been examined for BASC-TRF and BASC-PRF. Reynolds & Kamphaus (1992) reported the internal consistency on the BASC-TRF ranges from 0.88 to 0.90 for both genders and the two age levels. The test-retest correlations showed a median value ranging from 0.82 to 0.91 for the two age levels. Both of these findings indicate high reliability. The BASC-PRF internal consistency reliabilities have been in the mid 0.80s to low 0.90s. Test-retest reliability of BASC-PRF has shown a median value of 0.88, indicating that parents tend to respond consistently and the questions are clear and unambiguous. These findings also indicate high reliability of the instrument.

Two kinds of reliability have been examined for the BASC-SRP. Reynolds and Kamphaus (1992) reported the internal consistency averages 0.8 for both genders and the two age levels. The test-retest correlations have a median value of .76 at each age level. Both results have demonstrated that the BASC-SRP is highly reliable.

Recruitment of Participants

This research was conducted in two public elementary schools outside of a large southern U.S. city. I applied for approval to use human subjects from the University of North Texas Internal Review Board. After approval, I also received the permission from the local independent school district to conduct this research and contacted the school administrators in two local public elementary schools to assess the needs of their students for mental health services and determine whether or not the schools were interested in participating in this study. The two schools were interested in participating. In order to assist teachers to identify potential participants for this study, this study was introduced to all teachers of the 4th and 5th grades during the teacher meetings in the beginning of the semester. Teachers were encouraged to refer
the students who were experiencing behavioral difficulties such as disruptive behaviors in class, having difficulties getting along with others, withdrawal, and showing signs of anxiety or sadness.

My research assistants and I contacted the parents of potential participants by phone and by mail about this study. I included information about the purpose of this study, procedures, benefits, confidentiality, and ways to contact me if parents had any questions regarding this research. I also invited parents to allow the opportunity for their children to participate in this study. Fifty nine parents agreed to participate, and they read and signed an informed consent form (See Appendix A) before the study began. I identified the 59 volunteer preadolescents ranging in age from 9 to 12 (4th and 5th grade students) as suitable for participation. However, two participants in the experimental group dropped out of the study because of a transfer to the other schools, and one parent whose child was assigned to the control group withdrew her consent because she decided to seek mental health services outside of school for her child. Therefore, 56 students participated and completed this study (28 in the experimental group and 28 in the control group).

In order to assign the participants into the experimental and control groups, I accounted for their gender, age, and ethnicity, as suggested in the professional literature (Bratton & Ferebee, 1999; Ginott, 1975; Slavson & Redl, 1944). Every participant had a number code assigned randomly. First, I identified the gender of the participants and divided the participants into two groups based on their gender. Then African American and Hispanic students who were viewed as a racial minority groups, were assigned to the experimental and control group in relatively equal numbers (experimental group $n=21$ and control group $n=19$). Within ethnicity and gender groups, children were randomly assigned to one of the two research groups. The participants were divided again into 10 small groups of three to allow for group intervention. As suggested
by Bratton and Ferebee (1999), the members in the small groups were the same gender and were less than one year apart in age. The background information for the 56 participants completing this research is shown in Table 1.

Table 1

*Background Information for the Participants*

<table>
<thead>
<tr>
<th></th>
<th>Experimental Group n=28</th>
<th>Control Group n=28</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>Female</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td><strong>Ethnic Group</strong></td>
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<td>7</td>
<td>9</td>
</tr>
<tr>
<td>African American</td>
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<td>5</td>
</tr>
<tr>
<td>Hispanic</td>
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<td>14</td>
</tr>
<tr>
<td><strong>Grade</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fourth</td>
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<td>15</td>
</tr>
<tr>
<td>Fifth</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td><strong>Participating in Mentoring</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>No</td>
<td>20</td>
<td>21</td>
</tr>
</tbody>
</table>
Data Collection

I collected quantitative data before and after the intervention by asking the parents to complete the BASC-PRF, teachers to complete the BASC-TRF, and children to complete the BASC-SRP. I also collected subjective data in session including the pictures of the participants’ sandtrays and the session notes from the two therapists, one of whom was me.

Prior to beginning to collect data, I obtained the parent informed consent forms from all of the parents of potential participants and then asked the parents and teachers of the participants to complete the pre-test instruments, the BASC-PRF and the BASC-TRF. For the administration of the BASC-PRF, I mailed the BASC-PRF to the parents, or my research assistants visited the parents at their homes and provided baby-sitting so that the parents were able to fill out the instrument. For administration of the BASC-TRF, my research assistants substituted for the teachers in the classroom to provide them time to fill out the instruments during the school day without distractions. I used the number code in all data collection to ensure confidentiality.

After obtaining parental consent, I showed all of the potential participants the sandtray room and asked them to fill out an assent form to participate. At the same time, my research assistants or I administered the BASC-SRP. Post-test data were collected from parents, teachers, and the participants following the same procedure used to collect the pre-test data. One hundred twelve BASC-TRFs, and 112 BASC-SRPs, including pre-test and post-test data, were collected. However, only 106 BASC-PRFs were received; I failed to obtain 6 BASC-PRFs including one pretest and 5 post-tests.

In addition to its established reliability, the BASC also includes indicators of validity. The validity of the instrument may be compromised for variety of reasons such as random responses regardless of content, response sets, and emotional difficulties or stress on the part of teacher or
parent. The validity of the individual scale is assessed by using a $F$ Index, consistency with other results, and response pattern, as suggested by Reynolds and Kamphaus (1992). $F$ Index assesses the possibility that a teacher or a parent rated a child in an inordinately negative way. If $F$ Index is in either the Caution or the Extreme Caution range, it is possible that the teacher or parent has a strong negative response regarding the child’s behavior. I need to consider the possibility that a negative response set has skewed the results. In order to determine the BASC’s validity, Reynolds and Kamphaus (1992) suggested that the examiner should compare the rating with other BASC results. Therefore, if any collected BASC-TRF or BASC-PRF was in Caution or Extreme Caution range, I compared its results with other BASC results to determine its validity. If there was great discrepancy between the rating and the other BASC results, the scale was excluded. In addition, if response pattern or consistency was either in the Caution or Extreme Caution range, I reviewed the particular collected scale to determine its validity.

For BASC-SRP, the $V$ Index is used to determine its validity in addition to $F$ Index, response pattern, and consistency. It includes 5 nonsensical items that may be marked because of carelessness or a failure to understand the question or to cooperate with the process. Reynolds and Kamphaus (1992) pointed out that if 2 items are marked, the scale needs further review and interpretation. If more than 3 items are marked, the scale is highly questionable and “typically indicates a child who is uncooperative, illiterate or mentally retarded, or confused or psychotic” (pp. 56-57).

I followed the instructions of Reynolds and Kamphaus (1992) to determine the validity of the collected data. Regarding $F$ Index, 4 BASC-TRFs, 8 BASC-PRFs, and 8 BASC-SRPs were in the Caution or Extreme Caution ranges. After comparing with other BASC results, no BASC-TRF was excluded, but 5 BASC-PRFs and 4 BASC-SRPs were excluded. Additional 9 BASC-
SRPs were excluded from the sample because their V Index scores were in the Questionable or Extreme Questionable range.

For example, the T scores of Behavioral Symptoms Index (BSI), externalizing problems, and internalizing problems on Jason’s (pseudonym) BASC-PRF were 109, 91, and 103, respectively. The $F$ Index for this instrument was in the Extreme Caution range. I compared these T scores with the T scores on Jason’s BASC-TRF which were 42, 40, and 47. The $F$ Index, response pattern, and consistency for Jason’s BASC-TRF were all in the Acceptable range. The T scores of the Emotion Symptoms Index and clinical maladjustment on Jason’s BASC-SFP were 59 and 61. All of the validity indicators on Jason’s BASC-SRP were also in the Acceptable range. Whereas the TRF and SRP scores were comparable, the PRF scores were discrepant, thus, I excluded the later.

Regarding collecting subjective data, I took the pictures of the participants’ sandtrays and videotaped the sessions in order to obtain subjective data. My research assistant or I filled out the sandtray session summary (See Appendix B) developed by Homeyer and Sweeney (1998) after every session and included notes regarding group interaction and verbalization. Information about the participants’ sandtrays was documented individually concerning the trays’ themes, organization, and miniatures used. The teachers’ feedback and comments were documented and used as part of the qualitative data.

**Intervention**

Three participants comprised each of the 10 small groups in the experimental group in the beginning of the intervention. After the pre-test was completed, the participants in the experimental group received group sandtray therapy once a week for 10 weeks. Participants in the wait-list control group received no treatment intervention during the same time period. After
the collection of post-test data from both of the experimental and wait-list control groups, the participants in wait-list control group received the treatment intervention for 10 weeks.

Two female doctoral level graduate counseling students facilitated the sandtray therapy groups. I led five sandtray therapy groups, and the other play therapist led the other five groups for the experimental group in the first 10 weeks. The same intervention was provided for the participants in the control group after the posttest was completed. In terms of training and qualifications, both therapists had taken extensive play therapy training including introduction to play therapy, advanced play therapy, and group play therapy courses. One therapist received sandtray therapy training as a course, and the other therapist received sandtray therapy training as a part of group play therapy course. They received play therapy supervision from two Registered Play Therapist- Supervisors (RPT-S) for two years. One therapist was a Licensed Master Social Worker (LMSW) and Licensed Professional Counselor Intern (LPC-I). The other therapist was a Licensed Professional Counselor (LPC).

For the treatment intervention, the two therapists followed the guidelines provided by Homeyer and Sweeney (1998) for individual sandtray session and adapted them in the group format. The authors proposed six steps to conduct a session: (1) room preparation, (2) introduction to the participant, (3) creation of the sandtray, (4) post-creation, (5) sandtray clean-up, and (6) documenting the session.

Room Preparation

I obtained permission to set up two sandtray rooms in the two schools by using their portable rooms and an empty space close to the gym. The shelves were used to arrange the miniatures. In each of the two rooms, I categorized the miniatures and arranged them on the shelves based on their categories. The rooms included three plastic and three wooden sandtrays.
for each room. Each participant has their own tray. Initially, I planned to use plastic containers for both rooms because of limited budget. However, a school teacher donated three wooden sandtrays; therefore, I decided to use different trays for the different schools. I set up three plastic containers with the blue lids under them as suggested by Carmichael (1994) to simulate water or wooden sandtrays in the middle of the room and the shelves with miniatures on the surrounding walls. I also filled up 1/3 of the plastic containers with play sand (Homeyer & Sweeney, 1998) and provided a cup of water for each tray.

*Introduction to the Client*

After room preparation, the therapist introduced the sandtray to the clients. This process was a nondirective introduction. The therapist structured the session by saying, “Here is a collection of miniatures (pointing to the shelves). You may use as many or as few as you like. I would like you to take a few moments to look at them and then select a few that really interest you. Place them in the sand (pointing to the sandtray). Then add as many as you like to create a world in the sand. I will sit here quietly until you are finished. Take your time and let me know when you are done.” The group members could begin to create their sandtray after the introduction. If they were not clear about the introduction, they may ask the therapist to repeat or ask questions. Ideally, the time for a sandtray session should be an hour, as suggested by Kestly (2001), and the group members may have 45 minutes for the creation of their sandtray. However, in order to match with the school’s schedule, a session was limited to 45 minutes with up to 30 minutes for the group members to create their sand worlds.

*Creation of the Sandtray*

In the creation phase, the therapist tried to understand the members by observing their trays. The therapist observed the process of the group members’ sand world creation without any
comments. The therapist paid attention to the miniatures the group members used in the creation phase and the emotional content of their sandtrays. For example, the therapist noticed that a group member used fire miniatures in the center of the tray and put two girls in front of the fire after she had been ignored by the two group members for a few sessions. In another group, a member used a lot of aggressive animals fighting one another, and two of them were drinking alcohol while fighting.

The therapist also observed the creation process. For example, a member created a peaceful scene with people and domestic animals in the tray. A big dinosaur came in and destroyed the scene. The other member created a car race scene. All of the cars were able to finish the whole race except one car. The car always got stuck at the same spot. Sometimes, the therapist also checked with her own feeling and perceived what emotion the sandtray evoked in her.

Post-creation

In the 15-minute post-creation phase, the therapist invited the group members to share their stories about their sand world. In this phase, the therapist tried to understand the members’ inner worlds through their verbalizations. The participants were not required to share their stories. They could choose to share or not. Regarding the story sharing process, the therapist asked if the members wanted to share their stories individually by asking “Do you want to share your sand world with us [therapist and other group members]? You can choose to share or choose to pass.” The therapist and other members listened to the story if the member chose to share one’s story. The therapist may have asked any or all of several questions, such as, “What is the title of your sand world?” “What is he/she doing?” “What is this one?” for exploration and further clarification.
The therapist acted as facilitator, based on the belief that because preadolescents have a self-healing potential, the role of the therapist is to provide a “safe and protected” space for the preadolescents to exert their own inner potentials for growth and healing (Kalff, 1980). The safe and protected space was created by the therapist’s therapeutic responses. The therapist did not judge or criticize the participants’ behaviors. She accepted all of the group members’ feelings and verbally reflected them back to the members. She did, however, set some limits during the session to maintain the physical and emotional safety of the therapy, such as no hitting or name calling. The process of sand world building and story sharing was self-directed by the participants. The therapist did not direct or instruct the participants how to build the sand world or to tell stories. Some sandplay therapists give a delayed interpretation after sandtray therapy has been finished for several months to several years (Mitchell & Friedman, 1994). The therapists in this research did not provide any interpretation in session or after the therapy was finished.

Sandtray Clean-up and Documentation

In terms of sandtray clean-up and documentation, the therapist did not ask the participants to clean up their sandtrays. At the end of each session, after the therapist escorted the group members back to their classrooms, she took a digital photo of the sandtray the individual group member created, then cleaned up the trays and put the miniatures back on the shelves. The therapist documented every sandtray session by using the sandtray session summary created by Homeyer and Sweeney (1998) and added notes about the significant group interaction during the session.
Analysis of Data

After the pretest and posttest were completed, several research assistants and I scored the instruments by using the computer scoring software available for the Behavior Assessment System for Children (BASC). I used SPSS® computer software to analyze the collected quantitative data. I tested the hypotheses by using an analysis of covariance (ANCOVA). ANCOVA was used to determine statistical significance between the experimental group and the control group on the post-test mean compared with the pre-test mean for each of the hypotheses. In order to apply ANCOVA in this study, the assumptions for ANCOVA have to be met, specifically the test for homogeneity. I also calculated Cohen’s $d$ to determine the effect size and practical significance.

I synthesized the qualitative data including the videotapes and sandtray pictures to examine if there was any change in the participants’ sand worlds, emotions, or behaviors.
CHAPTER III
RESULTS AND DISCUSSION

This chapter includes the results, discussion, limitations, and implications of this study. The detailed statistical results are presented in the results session. In the discussion, I interpret the results, analyze a client’s serial sandtray pictures, and discuss the implications of this research. I also list the limitations of this study’s design and implementation.

Results

Analysis of covariance (ANCOVA) was utilized on all appropriate data to test the hypotheses of this research. Several assumptions needed to be met to perform ANCOVA, including a sample from a normally distributed population, homogeneity of variances, homogeneity of regression slopes, and the linear relationship between covariate and dependent variable. Pre-test T scores of the Behavior Assessment System for Children (BASC) were chosen as covariate, and post-test T scores were the dependent variable. All of these assumptions were tested and met. The .05 level of significance was established as a criterion for either accepting or rejecting the hypotheses.

In terms of the practical significance of the results, Cohen’s $d$ was calculated to determine the effect size. Cohen (1969) defined effect size as the degree to which a phenomenon exists. He set up the criteria to interpret effect size: $d=.20$ means a small effect size, $d=.50$ means a medium effect size, and $d=.80$ means a large effect size.

To address experimenter bias and possible skill differences among the two therapists providing interventions, I analyzed data using ANCOVA comparing groups between therapists. According to results of the Behavior Assessment System for Children-Teacher Report Form (BASC-TRF) and Parent Report Form (PRF), no statistically significant differences were found
at .05 alpha level ($F=.648$ and $p=.428$ for BSI on BASC-TRF; $F=.042$ and $p=.84$ for BSI on BASC-PRF).

**Hypothesis 1**

The first hypothesis is that there is a statistically significant difference on the Behavioral Symptom Index scale between the pretest scores and posttest scores of the BASC-TRF for the experimental sandtray therapy group as compared with the control group. Table 2 presents the pre and post-test means and standard deviations for the experimental and control groups. Table 3 presents the mean gain scores for the experimental and control groups, and Table 4 presents the results of ANCOVA and Cohen’s $d$ effect size.

Table 2

*Mean Scores for the Behavior Symptom Index on BASC-TRF*

<table>
<thead>
<tr>
<th></th>
<th>Experimental Group $n=28$</th>
<th>Control Group $n=28$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
</tr>
<tr>
<td>Mean</td>
<td>49.82</td>
<td>49.75</td>
</tr>
<tr>
<td>SD</td>
<td>9.218</td>
<td>8.893</td>
</tr>
</tbody>
</table>

*Decrease of mean indicates the improvement of behaviors*

Table 3

*Mean Gain Scores for the Behavior Symptom Index on BASC-TRF*

<table>
<thead>
<tr>
<th></th>
<th>Experimental $n=28$</th>
<th>Control $n=28$</th>
<th>Total $n=56$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain Mean</td>
<td>-.07</td>
<td>3.82</td>
<td>1.88</td>
</tr>
<tr>
<td>SD</td>
<td>5.127</td>
<td>9.072</td>
<td>7.561</td>
</tr>
</tbody>
</table>

*Decrease of mean indicates the improvement of behaviors*
Table 4

*Analysis of Covariance for the Behavior Symptom Index on BASC-TRF*

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p*</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate (pretest)</td>
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<td>2533.011</td>
<td>50.579</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>249.123</td>
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<td>249.123</td>
<td>4.975</td>
<td>.030</td>
<td>.52</td>
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<tr>
<td>Error</td>
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<td>53</td>
<td>50.080</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>5573.125</td>
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<td></td>
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</tbody>
</table>

*Computed using alpha=.05*

Table 4 shows that the $F$ ratio for the main effects was statistically significant at the .05 level, $F=4.975, p=.03$, indicating that there was a statistically significant difference in the experimental group’s Behavior Symptom Index as measured by the BASC-TRF when compared to the control group. On the basis of this data, hypothesis 1 was retained.

The Behavior Symptoms Index (BSI) is a combination of central scales from the clinical composites and reflects the overall total behavior problems. BSI of the BASC-TRF indicates the teachers’ overall observation of the preadolescents’ general behaviors at school. Based on the results of ANCOVA (See Table 2), the preadolescents participating in group sandtray therapy for ten weeks demonstrate statistically significant difference in their pre and post scores on the BSI of the BASC at the .05 level of significance as compared with the participants in the control group. According to the means of pretest and posttest of the experimental and control groups (See Table 2-3), the preadolescents in the experimental group had a .07 decrease in their mean score, but their peers in the control group experienced an increase of 3.82. Cohen’s $d$ was
calculated to determine the practical significance of the findings, and a medium effect size 
\((d=.52)\) was found. This indicated that group sandtray therapy had a medium treatment effect on 
the overall behavior of the participants in the experimental group when compared to the control 
group.

_Hypothesis 1a_

Hypothesis 1a is that there is a statistically significant difference on the Externalizing 
Behavior Problems scale between the pretest scores and posttest scores of the BASC-TRF for the 
experimental sandtray therapy group as compared with the control group. Table 5 presents the 
pre and post-test means and standard deviations for the experimental and control groups. Table 6 
presents the mean gain scores for the experimental and control groups, and Table 7 presents the 
results of ANCOVA and Cohen’s \(d\) effect size.

Table 5

**Mean Scores for the Externalizing Behavior Problems Scale on BASC-TRF**

<table>
<thead>
<tr>
<th></th>
<th>Experimental Group (n=28)</th>
<th>Control Group (n=28)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
</tr>
<tr>
<td>Mean</td>
<td>49.50</td>
<td>49.96</td>
</tr>
<tr>
<td>SD</td>
<td>10.415</td>
<td>9.299</td>
</tr>
</tbody>
</table>

*Decrease of mean indicates the improvement of behaviors*
Table 6

*Mean Gain Scores for the Externalizing Behavior Problems Scale on BASC-TRF*

<table>
<thead>
<tr>
<th></th>
<th>Experimental n=28</th>
<th>Control n=28</th>
<th>Total n=56</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain Mean</td>
<td>.46</td>
<td>5.36</td>
<td>2.91</td>
</tr>
<tr>
<td>SD</td>
<td>4.710</td>
<td>7.484</td>
<td>6.670</td>
</tr>
</tbody>
</table>

*Decrease of mean indicates the improvement of behaviors*

Table 7

*Analysis of Covariance of for the Externalizing Behavior Problems Scale on BASC-TRF*

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p*</th>
<th>d</th>
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<tr>
<td>Covariate (pretest)</td>
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<td>Between</td>
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<td>10.437</td>
<td>.002</td>
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</tr>
<tr>
<td>Error</td>
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<tr>
<td>Total</td>
<td>5981.429</td>
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<td></td>
<td></td>
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</tbody>
</table>

*Computed using alpha=.05*

Table 7 shows that the $F$ ratio for the main effects was statistically significant at the .05 level, $F=10.437$, $p=.002$, indicating that there was a statistically significant difference in the experimental group’s externalizing behavior problems as measured by the BASC-TRF when compared to the control group. On the basis of this data, Hypothesis 1a was retained.

The Externalizing Problems composite is composed of the Hyperactivity, Aggression, and Conduct Problems scales indicating disruptive behavior problems such as aggression,
hyperactivity, and delinquency. Both of the BASC-TRF and BASC-PRF include the Externalizing Problems composite to examine the disruptive behaviors of preadolescents.

The results of the Externalizing Behavior Problems scales on the BASC-TRF demonstrated a statistical significance ($p=0.002$). The mean gain of BASC-TRF showed a gain of .46 for the experimental group while the control group experienced an increase of 5.36. Cohen’s $d$ was calculated to determine the practical significance of the findings, and a medium effect size ($d=.54$) was found. This indicated that group sandtray therapy had a medium treatment effect on the externalizing behavior of the participants in the experimental group when compared to the control group.

*Hypothesis 1b*

Hypothesis 1b is that there is a statistically significant difference on the Internalizing Behavior Problems scale between the pretest scores and posttest scores of the BASC-TRF for the experimental sandtray therapy group as compared with the control group. Table 8 presents the pre and post-test means and standard deviations for the experimental and control groups. Table 9 presents the mean gain scores for the experimental and control groups, and Table 10 presents the results of ANCOVA and Cohen’s $d$ effect size.

Table 8

*Mean Scores for the Internalizing Behavior Problems Scale on BASC-TRF*

<table>
<thead>
<tr>
<th></th>
<th>Experimental Group $n=28$</th>
<th>Control Group $n=28$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
</tr>
<tr>
<td>Mean</td>
<td>46.04</td>
<td>46.00</td>
</tr>
<tr>
<td>SD</td>
<td>6.692</td>
<td>5.981</td>
</tr>
</tbody>
</table>

*Decrease of mean indicates the improvement of behaviors*
Table 9

Mean Gain Scores for the Internalizing Behavior Problems scale on BASC-TRF

<table>
<thead>
<tr>
<th></th>
<th>Experimental $n=28$</th>
<th>Control $n=28$</th>
<th>Total $n=56$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain Mean</td>
<td>-.04</td>
<td>3.04</td>
<td>1.50</td>
</tr>
<tr>
<td>SD</td>
<td>5.337</td>
<td>9.481</td>
<td>7.779</td>
</tr>
</tbody>
</table>

*Decrease of mean indicates the improvement of behaviors

Table 10

Analysis of Covariance of for the Internalizing Behavior Problems scale on BASC-TRF

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>$p^*$</th>
<th>$d$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate (pre test)</td>
<td>888.166</td>
<td>1</td>
<td>888.166</td>
<td>17.378</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>206.564</td>
<td>1</td>
<td>206.564</td>
<td>4.042</td>
<td>.049</td>
<td>.59</td>
</tr>
<tr>
<td>Error</td>
<td>2708.799</td>
<td>53</td>
<td>51.109</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3941.982</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Computed using alpha=.05

Table 10 shows that the $F$ ratio for the main effects was statistically significant at the .05 level, $F=4.042$, $p=.049$, indicating that there was a statistically significant difference in the experimental group’s internalizing behavior problems as measured by the BASC-TRF when compared to the control group. On the basis of this data, hypothesis 1b was retained.

The Internalizing Behavior Problems composite consists of the Anxiety, Depression, and Somatization scales. Both the BASC-TRF and BASC-PRF include the Internalizing Problems composite to examine the internally behavioral difficulties of preadolescents. Preadolescents
with high score of the Internalizing Behavior Problems may experience depression, anxiety, or related internal difficulties. In general, the symptoms of internalizing problems are less obvious than those of externalizing problems (Reynolds & Kamphaus, 1992). The results of ANCOVA for internalizing behavior problems on the BASC-TRF indicated that the statistically significant difference exists between the experimental and control groups ($p=0.49$). The effect sizes for BASC-TRF was medium ($d=0.59$).

**Hypothesis 2**

The second hypothesis is that there is a statistically significant difference on the Behavioral Symptom Index scale between the pretest scores and posttest scores of the BASC-PRF for the experimental sandtray therapy group as compared with the control group. Table 11 presents the pre and post-test means and standard deviations for the experimental and control groups. Table 12 presents the mean gain scores for the experimental and control groups, and Table 13 presents the results of ANCOVA and Cohen’s $d$ effect size.

Table 11

*Mean Scores for the Behavior Symptom Index of BASC-PRF*

<table>
<thead>
<tr>
<th></th>
<th>Experimental Group $n=23$</th>
<th>Control Group $n=23$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
</tr>
<tr>
<td>Mean</td>
<td>50.13</td>
<td>47.00</td>
</tr>
<tr>
<td>SD</td>
<td>10.096</td>
<td>13.139</td>
</tr>
</tbody>
</table>

*Decrease of mean indicates the improvement of behaviors*
Table 12

**Mean Gain Scores for the Behavior Symptom Index on BASC-PRF**

<table>
<thead>
<tr>
<th></th>
<th>Experimental $n=23$</th>
<th>Control $n=23$</th>
<th>Total $n=46$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain Mean</td>
<td>-3.13</td>
<td>.83</td>
<td>-1.15</td>
</tr>
<tr>
<td>SD</td>
<td>7.394</td>
<td>10.093</td>
<td>8.974</td>
</tr>
</tbody>
</table>

*Decrease of mean indicates the improvement of behaviors*

Table 13

**Analysis of Covariance for the Behavior Symptom Index on BASC-PRF**

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>$p^*$</th>
<th>$d$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate (pre test)</td>
<td>3550.122</td>
<td>1</td>
<td>3550.122</td>
<td>43.927</td>
<td>.000</td>
<td>.55</td>
</tr>
<tr>
<td>Between Groups</td>
<td>233.495</td>
<td>1</td>
<td>233.495</td>
<td>2.889</td>
<td>.096</td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>3475.182</td>
<td>43</td>
<td>80.818</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7617.152</td>
<td>45</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Computed using alpha=.05

Table 13 shows that the $F$ ratio for the main effects was not statistically significant at the .05 level, $F=2.889$, $p=.096$, indicating that there was no statistically significant difference in the experimental group’s Behavior Symptom Index as measured by the BASC-PRF when compared to the control group. On the basis of this data, hypothesis 2 was rejected.

Similar with BSI of the BASC-TRF, BSI of BASC-PRF reflects the parents’ perceptions of their children at home. Table 7 showed that no statistical difference existed between the experimental and control groups at the .05 level of significance. However, the mean scores for
the preadolescents in the experimental group decreased 3.13, and their counterparts experienced an increase of .83. Cohen’s $d$ was calculated as .55, and the effect size was determined to be moderate on the total behavior of the students in the experimental group when compared to the control group.

**Hypothesis 2a**

Hypothesis 2a is that there is a statistically significant difference on the Externalizing Behavior Problems scale between the pretest scores and posttest scores of the BASC-PRF for the experimental sandtray therapy group as compared with the control group. Table 14 presents the pre and post-test means and standard deviations for the experimental and control groups. Table 15 presents the mean gain scores for the experimental and control groups, and Table 16 presents the results of ANCOVA and Cohen’s $d$ effect size.

Table 14

*Mean Scores for the Externalizing Behavior Problems Scale on BASC-PRF*

<table>
<thead>
<tr>
<th></th>
<th>Experimental Group $n=23$</th>
<th>Control Group $n=23$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
</tr>
<tr>
<td>Mean</td>
<td>47.52</td>
<td>44.48</td>
</tr>
<tr>
<td>SD</td>
<td>8.565</td>
<td>10.242</td>
</tr>
</tbody>
</table>

*Decrease of mean indicates the improvement of behaviors*
Table 15

Mean Gain Scores for the Externalizing Behavior Problems Scale on BASC-PRF

<table>
<thead>
<tr>
<th></th>
<th>Experimental n=23</th>
<th>Control n=23</th>
<th>Total n=46</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain Mean</td>
<td>-3.04</td>
<td>2.26</td>
<td>-0.39</td>
</tr>
<tr>
<td>SD</td>
<td>5.174</td>
<td>12.300</td>
<td>9.708</td>
</tr>
</tbody>
</table>

*Decrease of mean indicates the improvement of behaviors

Table 16

Analysis of Covariance of for the Externalizing Behavior Problems Scale on BASC-PRF

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p*</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate (pre test)</td>
<td>3438.537</td>
<td>1</td>
<td>3438.537</td>
<td>40.794</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>413.249</td>
<td>1</td>
<td>413.249</td>
<td>4.903</td>
<td>.032</td>
<td>.63</td>
</tr>
<tr>
<td>Error</td>
<td>3624.506</td>
<td>43</td>
<td>84.291</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7864.435</td>
<td>45</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Computed using alpha=.05

Table 16 shows that the F ratio for the main effects was statistically significant at the .05 level, $F=4.90, p=.032$, indicating that there was a statistically significant difference in the experimental group’s externalizing behavior problems as measured by the BASC-PRF when compared to the control group. On the basis of this data, hypothesis 2a was retained.

The results of the Externalizing Behavior Problems scales on the BASC-PRF demonstrated both statistical significance ($p=.032$) and practical significance ($d=.63$). The mean gain scores of BASC-PRF revealed a decrease of 3.04 for the preadolescents who received group
sandtray therapy, and the preadolescents without any intervention experienced an increase of 2.26.

**Hypothesis 2b**

Hypothesis 2b is that there is a statistically significant difference on the Internalizing Behavior Problems scale between the pretest scores and posttest scores of the BASC-PRF for the experimental sandtray therapy group as compared with the control group. Table 17 presents the pre and post-test means and standard deviations for the experimental and control groups. Table 18 presents the mean gain scores for the experimental and control groups, and Table 19 presents the results of ANCOVA and Cohen’s $d$ effect size.

**Table 17**

*Mean Scores for the Internalizing Behavior Problems Scale on BASC-PRF*

<table>
<thead>
<tr>
<th></th>
<th>Experimental Group $n=23$</th>
<th>Control Group $n=23$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
</tr>
<tr>
<td>Mean</td>
<td>48.52</td>
<td>46.61</td>
</tr>
<tr>
<td>SD</td>
<td>12.584</td>
<td>12.467</td>
</tr>
</tbody>
</table>

*Decrease of mean indicates the improvement of behaviors*

**Table 18**

*Mean Gain Scores for the Internalizing Behavior Problems Scale on BASC-PRF*

<table>
<thead>
<tr>
<th></th>
<th>Experimental $n=23$</th>
<th>Control $n=23$</th>
<th>Total $n=46$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain Mean</td>
<td>-1.91</td>
<td>1.78</td>
<td>-.07</td>
</tr>
<tr>
<td>SD</td>
<td>8.168</td>
<td>9.125</td>
<td>8.765</td>
</tr>
</tbody>
</table>

*Decrease of mean indicates the improvement of behaviors*
Table 19

*Analysis of Covariance of for the Internalizing Behavior Problems Scale on BASC-PRF*

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>$F$</th>
<th>$p^*$</th>
<th>$d$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate (pretest)</td>
<td>2945.785</td>
<td>1</td>
<td>2945.785</td>
<td>41.212</td>
<td>.000</td>
<td>.35</td>
</tr>
<tr>
<td>Between Groups</td>
<td>187.898</td>
<td>1</td>
<td>187.898</td>
<td>2.629</td>
<td>.112</td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>3073.607</td>
<td>43</td>
<td>71.479</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6219.739</td>
<td>45</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Computed using alpha=.05*

Table 19 shows that the $F$ ratio for the main effects was not statistically significant at the .05 level, $F=2.63$, $p=.112$, indicating that there was no statistically significant difference in the experimental group’s internalizing behavior problems as measured by the BASC-PRF when compared to the control group. On the basis of this data, hypothesis 2b was rejected.

The results of BASC-PRF did not show the statistical significance. However, the preadolescents participating in the group sandtray therapy had a decrease regarding their mean score (-1.91) when their peers showed an increase of 1.78. The effect sizes for BASC-PRF were small ($d=.35$), demonstrating small practical significance.

**Hypothesis 3**

The third hypothesis is that there is a statistically significant difference on the Emotional Symptom Index (ESI) scale between the pretest scores and posttest scores of the BASC-SRP for the experimental sandtray therapy group as compared with the control group. Table 20 presents the pre and post-test means and standard deviations for the experimental and control groups.
Table 21 presents the mean gain scores for the experimental and control groups, and Table 22 presents the results of ANCOVA and Cohen’s $d$ effect size.

Table 20

*Mean Scores for the Emotion Symptom Index of BASC-SRP*

<table>
<thead>
<tr>
<th></th>
<th>Experimental Group $n=21$</th>
<th>Control Group $n=22$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
</tr>
<tr>
<td>Mean</td>
<td>47.86</td>
<td>46.67</td>
</tr>
<tr>
<td>SD</td>
<td>10.140</td>
<td>7.806</td>
</tr>
</tbody>
</table>

*Decrease of mean indicates the improvement of behaviors*

Table 21

*Mean Gain Scores for the Emotion Symptom Index on BASC-SRP*

<table>
<thead>
<tr>
<th></th>
<th>Experimental $n=21$</th>
<th>Control $n=22$</th>
<th>Total $n=43$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain Mean</td>
<td>-1.19</td>
<td>1.09</td>
<td>-.02</td>
</tr>
<tr>
<td>SD</td>
<td>5.555</td>
<td>5.353</td>
<td>5.510</td>
</tr>
</tbody>
</table>

*Decrease of mean indicates the improvement of behaviors*
Table 22

*Analysis of Covariance for the Emotion Symptom Index on BASC-SRP*

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p*</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate (pre test)</td>
<td>1792.672</td>
<td>1</td>
<td>1792.672</td>
<td>71.473</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>46.573</td>
<td>1</td>
<td>46.573</td>
<td>1.857</td>
<td>.181</td>
<td>.18</td>
</tr>
<tr>
<td>Error</td>
<td>1003.267</td>
<td>40</td>
<td>25.082</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2820.605</td>
<td>42</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Computed using alpha=.05

Table 22 shows that the $F$ ratio for the main effects was not statistically significant at the .05 level, $F=1.857$, $p=.181$, indicating that there was no statistically significant difference in the experimental group’s Emotion Symptom Index as measured by the BASC-SRF when compared to the control group. On the basis of this data, hypothesis 3 was rejected.

The Emotional Symptoms Index (ESI) is a global indicator of behavioral difficulties particularly related to internalized disorders. It is composed of 8 scales including two scales from the Clinical Maladjustment composite (Social Stress and Anxiety), two scales from the Personal Adjustment composite (Interpersonal Relations and Self-Esteem), and two scales from the Other composite (Depression, and Sense of Inadequacy). The results of ESI on BASC-SRP showed that there is a no statistically significant difference on the Emotional Symptom Index (ESI) scale between the pretest scores and posttest scores of the BASC-SRP for the experimental sandtray therapy group as compared with the control group (See Table 22). Cohen d was calculated as .18, and a small effect size was determined. A decrease of mean was found (mean gain =-1.19) for
the overall emotional state of the students in the experimental group when compared to an increase mean gain of 1.09 for the control group.

*Subjective Data*

In terms of clinical significance, I used a case example to illustrate the process of group sandtray therapy. This case was representative of the experiences of some participants in this study. A series of sandtray pictures, my observation, the comments from this client, and the BASC scores of this client were used. Although the background of this client is provided, his name has been changed to protect his confidentiality.

Henry was a 4th grader referred by his teacher. His teacher reported that he was hyperactive and acted out in class. His mother was concerned about his attention problems. Based on the therapist’s initial observation, Henry was somewhat withdrawn and seemed depressed. He did not talk to the therapist in the initial meeting when filling out the BASC-SRF; however, on the way back to his class, he asked the therapist softly when the session would begin and expressed the wish and hope that “it begins next week.” During the ten-week session, Henry was always very involved in building his own tray and consistently shared his stories with the group. He did not show any acting-out behaviors nor did he seem distracted. It seemed that he was more verbal in the later sessions and gave compliments to the other two group members about what he liked about their trays.

In the first session, Henry spent all of the time building his tray and did not say anything during the tray-building time; however, he shared his story during the story-sharing time. His first sandtray picture is shown as follows (See Figure 1). In the initial scene, the big mouse was not there, and it seemed like the two men were helping the woman. However, when the therapist asked Henry if he would like to add anything or say anything during the story sharing time, he
put in a big mouse and told the group that the mouse used its tail to strangle the woman (See Figure 1).

*Figure 1.* Henry’s first sandtray.

During the second session, Henry created a scene titled “The Destiny” (See Figure 2). He told the group that this was created based on a movie he saw. There was a kind of virus that would kill people. People had been attacked by the virus and died. Animals are also dead, and a lot of people are buried. This is why there were several grave stones in the tray. The person on the tractor was holding a weapon and trying to kill the virus. I noted that Henry used the same woman figure lying on the stretcher (See Figure 2).
Henry began to build his third scene by putting up several grave stones. His third sandtray picture is shown as Figure 3. He told the group that these children went to the gravesite as a field trip because a teacher was killed by the spider, and he put a female figure under the spider (See Figure 3). There was a fight between soldiers, and the dog went to the school cafeteria for food. The guy (close to the middle lower side) was watching TV. The therapist noticed that he put the same woman figure in the tray and that she was touched by the spider.
Next session, Henry seemed happier and had more interaction with one group member. His fourth tray picture is shown as Figure 4. A part of his story is about spiders attacking people, but the person watching TV did not know what was happening. The woman he had used for three sessions was attacked by an insect. This side of tray (left side) seemed very destructive and full of despair, just like the first three; however, for his fourth tray, it seems more hopeful and helpful. For example, a girl on the stretcher on top of an ambulance was helped by a doctor. He also put a baby dinosaur with blocks around it and a gun pointing outward. The alligator was in the container with fences around it. A person could cross the bridge without being hurt. On the side of the tray (right side), there was a forest with animals and a person sharing food. Henry also put fences to divide this part from the other side.
Figure 4. Henry’s fourth sandtray.

Henry named his next tray “Halloween Night II.” He was quiet but smiled a lot when he was building the tray. He said that people dressed up for Halloween such as a witch, superman, and superwoman. People also had a garage sale. Kids were playing and riding the dinosaurs. He said “that person thought the superman was real and jumped on him!” This tray seemed more playful even though there were soldiers fighting and a big shark on the right side (See Figure 5).
During the sixth session, Henry sometimes would share some miniatures with the other two members if he thought they may need them during the tray-building time. He seemed interested in the other two members’ trays and asked many questions. He told the other group member who had not shared his story since the first session that “I like your world.”

Henry created a tray called “Fun World” as his sixth tray (See Figure 6). He said that “some one is getting married and people are dancing. Teachers come to the party, too.” However, “the evil scientists are trying to make the bug bigger, but people don’t know about it.” “The cat smells the food in the school cafeteria and is climbing up to the roof to get the food. A lady is wearing a skeleton to scare people. In the car, there is treasure.” It is interesting to note that the woman he used for four times had a bath in the bathtub and had a cake to eat. Henry did not add the cake and the candy bar until the therapist asked him if he would like to add anything in the tray. He put the cake next to the woman and the candy bar on the highchair of the baby. He said
that “The lady in the tub gets a cake. There is a baby in the high chair. He got the candy bar. He found it in the trash can.” This tray is the most positive scene out of his six trays. It seems much more organized and joyful. It seems that Henry was aware that the danger was still there. However, it was more contained.

*Figure 6. Henry’s sixth sandtray.*

Henry’s next tray is what he named “Civil War.” He said that “American soldiers thought they won and were going home, but they got attacked again. The marbles are treasure. They [the soldiers] want to find them. They built fences [He pointed at the fences close to the marbles]. One side [left] is the good guys, and one [right] is the bad guys. The aliens are hit by the meteor. The dinosaurs are drinking water because they are thirsty [See Figure 7].”
Henry’s following tray included several ideas (See Figure 8). He described that “The yellow figure is the evil professor [He put wet sand on top of him when he was telling the story]. The pink and blue ones are his brothers, but they are good. The man [at the left corner close to the red devils] has a hat on his head so he won’t be hurt by the devil. The woman [on the right side] is about to be killed by the helicopter. The person on the tractor is scared. He holds the teddy [Henry put one teddy bear on the person and pretended that he was holding it and put it in the first aid kit box. He also put another teddy bear in a basket.]” Henry added the doctor/patient scene during story-sharing time. “The doctors are tying to help the woman and her husband. Her husband needs help because his leg is broken.”
It is interesting to note that in the tray, the three supermen and superwoman fight with the
devils, the dinosaur is eating a soldier, and the helicopter is about to hurt a girl. The therapist
intuits the scenes as being about fights between good and evil, or opposites.

Figure 8. Henry’s eighth sandtray.

Henry’s final tray also composes several ideas (See Figure 9). He told the group that
there is an evil president who did not give people food. People are mad at him. The woman [the
nurse] is trying to examine the evil president’s head [the marble] to find out what is wrong. The
two kids put the different signs together and try to confuse people. The guy was run over by the
bus. The dinosaur is the boy’s pet [on the left side]. The girl [on the left side] hit the spider on
the head and saved the day.

This tray seemed more organized than the last tray. The therapist noticed that there were
three unicorns attacking the dinosaurs and the shark. This sub-scene appears consistent with the
fight between the opposites shown in the last tray. The rescue vehicles and the little girl hitting the big spider seem to convey that Henry is feeling more hopeful, powerful, and stronger.

Figure 9. Henry’s last sandtray.

From the review of Henry’s serial sandtray pictures, it appears that Henry was feeling less depressed and developing a stronger ego. My subjective perception was supported by Henry’s pre-post BASC-Self Report Forms (See Figure 10) and the pre-post BASC-PRF which Henry’s mother filled out (See Figure 11).
Figure 10. T scores of Henry’s BASC-SPR.
Figure 11. T scores of Henry’s BASC-PRF.

If any T score on the left side of chart is higher than 70, it is in the Clinically Significant range and suggests a high level of maladjustment. If a T score is between 69-60, it is in the At Risk range. If any T score on the right side of chart including Personal Adjustment, Relations with Parents, Internal relations, Self-esteem, and Self-reliance is lower than 30, it is in Clinically Significant range. If a T score is between 31 and 40, it is in At Risk range.

From Figure 10, it is easy to see that most of Henry’s T scores on the subscales on the left side decreased except two were unchanged and one increased (Attitude to Teachers). His scores on the ESI and Sense of Inadequacy lowered from the Clinical Significant range to the At Risk range. His scores on the Clinical Maladjustment, Locus of Control, Social Stress, Anxiety, Personal Adjustment, and Self-reliance lowered from the At Risk to the Normal range. His mother also noticed the behavior change in many areas. For example, the scores on the
Hyperactivity, Conduct Problems, Withdrawal, Adaptive Skills, Social skills, and Leadership changed from the At Risk to the Normal range. However, most scores on Henry’s BASC-TRF remained unchanged. Although Henry showed progress in many areas, his BSI of the posttest was still in the At Risk range. His mother still had concerns about his attention problems (Attention scale remained unchanged). It seemed there was room for further growth.

Discussion

Results of the BASC-TRF

The statistical results of the BASC-TRF indicated a statistically significant difference between the experimental and wait-list control group in terms of their overall behaviors, externalizing, and internalizing problems. The results of practical significance also suggested medium effect size (d=.52, .54, and .59, respectively). However, as presented in the results session, all of the mean gain scores of the Total Behavior (See Table 3, 6, and 9), the Externalizing, and Internalizing problems on the BASC-TRF for participants in the experimental group demonstrated negligible changes (mean gain scores=-.07, .46, and -.04, respectively). The mean gain scores of the Total behavior, the Externalizing, and Internalizing problems on the BASC-TFR for participants in the wait-list control group demonstrated noticeable increase (mean gain scores=3.82, 5.36, and 3.04, respectively). The increase of the mean gain scores suggests an increase in problem behaviors. The results of the BASC-TRF suggested that teachers perceived the behaviors of the preadolescents in the experimental group as unchanged while their peers in the wait-list control group worsened. Based on the results of the BASC-TRF, it seems that without the intervention, preadolescents suffered from more behavioral difficulties. It appeared that group sandtray therapy prevented the preadolescents from experiencing more behavioral difficulties.
Regarding the method of collecting BASC-TRFs, the procedures of administering BASC-TRFs were consistent. My research assistants substituted for the teachers in the classroom to provide them time to fill out the instruments during the school day without distractions. It seemed to help to ensure the validity of the data, and no BASC-TRF was excluded because of validity concerns.

Results of the BASC-PRF

Only the Externalizing problems scale on BASC-PRF demonstrated a statistically significant difference between the experimental and wait-list control groups and indicated a medium effect size ($d=.63$). All of the Total Behavior, the Externalizing, and Internalizing problems scales on the BASC-PRF for participants in the experimental group demonstrated a decrease of mean gain scores (mean gain scores=-.3.13, -3.04, and -1.91, respectively). The decrease of the mean gain scores indicates the improvement of behaviors. At the same time, the participants in the wait-list control group experienced some degree of increase in their mean gain scores (mean gain scores=.83, 2.26, and 1.78, respectively), indicating a worsening of behaviors.

Based on the parents’ reports, it appears that the preadolescents receiving group sandtray therapy demonstrated positive behavioral changes regarding their externalizing problems. They also demonstrated some improvement in terms of their total behaviors and internalizing problems while their counterparts showed some decline in their behaviors although results from Total behavior and Internalizing problem scales were not statistically significant. These results are consistent with trends from Garza’s findings (2004). She conducted a study to examine the effects of culturally responsive child-centered play therapy with Hispanic children and found that according to the parents’ reports, the children receiving play therapy showed statistically
significant decreases in externalizing behavior problems and moderate improvements in their internalizing behavior problems.

It is noted that although the gain mean difference (3.96) between the experimental and control groups on the BSI scale of the BASC-PRF is greater than the gain mean difference (3.89) on the BSI of the BASC-TRF, no statistically significant difference was found. It seemed attributed to the smaller sample for the BASC-PRF (n=23) compared with the BASC-TRF (n=28). It is reasonable to assume that statistically significant difference would have been achieved if the sample was greater.

However, the results of the BASC-PRF may be affected by the different methods of administering the BASC-PRFs. The BASC-PRFs were either mailed or obtained through home visits. The BASC-PRF obtained via home visits may have greater validity than the ones obtained via mail. Parents of the participants receiving home visits may have been less distracted and had more time to fill out the scales because babysitting was provided. They also may have provided more accurate answers because my research assistants were available to answer any questions the parents may have had. For the parents who completed the scales at home without babysitting, their environmental factors were less controlled. The parents may have responded to it in a more careless way or spent less time on it compared with the parents who received home visits.

The inconsistency of administration of the BASC-PRFs may affect the validity of the collected BASC-PRF. In future research, it is suggested to administer the BASC in a consistent manner, and a less distractive environment is preferred. Unfortunately in this study, due to the limited time of collecting the instruments, providing all of the parents with individual home visits was not feasible.
Results of the BASC-SRP

The results of the BASC-SRP demonstrated no statistically significant differences regarding the preadolescents’ total behaviors between the experimental and wait-list control group. The effect size for the self-report of total behavior is small ($d=.18$). The mean gain scores for the experimental group (-1.19) indicated a slight decrease and an increase for the wait-list control groups (1.09). It appears that the preadolescents participating in the group sandtray therapy did not perceive any behavioral or emotional change within themselves.

However, I noted the problems with integrity of data collection of BASC-SRP. As discussed in the data collection session, 13 BASC-SFP (23%) were excluded because of their high scores on validity index or lack of consistency with other collected data. This indicated that at least one-quarter of the participants may have experienced difficulties in understanding the contents, answering without reading the questions, or holding uncooperative attitudes, etc. About 50% of the participants spoke a language other than English at home, and they may have had less comprehension of English than regular 4th or 5th graders. About 15% of the participants were in the special education program, and many of the participants in this study had low academic performance. These factors may have affected their abilities to complete the BASC-SRP accurately.

In addition, based on my experiences of administrating the BASC-SRP to the preadolescents, it seemed that many of the participants had difficulty in completing the scale attentively. Many of them complained that the “test” was too long. Some of them rushed through the instruments even though they were allowed as much time as needed. Although my research assistant clarified that the instrument was not a “test” but a tool to express how you think and how you feel, many of them still referred to it as a “test.” This perception may have affected the
preadolescents’ completion of the scale, and they may have tried to get the “right answer” to meet social expectations. It is possible that they may have had difficulty in using language to conceptualize their behaviors abstractly and reflect them on the instruments. It could be that some of the preadolescents may not have been aware of their own behavioral or emotional problems.

Researcher’s Observations

Developmental stages of preadolescents. I observed a phenomenon in the process of conducting research and therapy regarding developmental responses to the sandtray modality. For example, in terms of preadolescents’ developmental stages and group sandtray therapy, it seems that group sandtray therapy may be more suitable for children who have reached preadolescence. Preadolescence is a transitional stage between childhood and adolescence. According to Piaget’s theory of cognitive development, cognitively, preadolescents may still operate somewhat in a concrete mode; however, they are developing the ability to operate more abstractly (Philips, 1981). Using traditional play therapy may not satisfy their need to express themselves in a more elaborated and sophisticated way; however, they cannot manage language well enough to fully express themselves through verbalization (Ginott, 1994). Therefore, sandtray therapy is viewed as a compromise between play therapy and traditional talk therapy.

However, physical age may not represent mental development. Some nine-year or ten-year-old children still operate very concretely in terms of their cognitive development. For example, some children in this study appeared more appropriate for play therapy than the limited physical expressions offered by sandtray therapy. Assessment is needed to determine if a preadolescent is suitable for sandtray therapy or traditional play therapy. Further research is needed to assess the suitability of group sandtray therapy for potential clients.
Group dynamics and individual process. Interactions between the group members sometimes may facilitate the members’ individual process of dealing with their own issues and provide support. Sandtray therapy provides an opportunity for preadolescents to confront and resolve personal issues in session. The sandtray can be used to reflect their internal conflicts or struggles. Group members can provide suggestions or insights in terms of resolving them or just provide emotional support for confronting the issues. For example, John (pseudonym) was arranging a scene with a man fighting monsters. The other group member gave him an axe and said “Take it. That one [the man] can use it.”

However, group dynamics sometimes may prevent group member from engaging in exploring personal issues, especially for members who share different concerns or issues. For example, a participant built sandtrays for the first few sessions, and these trays seemed to be related to her conflicts with her family. The other two members had stronger needs to develop their social skills and feel connected with their peers. They invited the other member to join them to play in the sand. It appeared that that group member with family issues decided to join the other two as a group to play instead of working on her own personal issues. She may be affected by peer pressure or her need to be connected.

To resolve the conflict between group dynamics and individual process, it is suggested to match the group members based on their concerns or issues in the group member selection process. In addition, group format may not be the best for all preadolescents. Although developmentally, preadolescents have the need to engage with peers and develop appropriate social skills, some preadolescents may benefit more directly from individual sandtray therapy depending on the level of their emotional issues. Further research for individual sandtray therapy is needed.
Effectiveness of Group Sandtray Therapy

In terms of the statistical results, four of seven hypotheses were retained. One of three measurements (the BASC-TRF) indicated statistical significant difference between the experimental and control group regarding their overall behavior of the preadolescents, and two of them (the BASC-PRF and SRP) suggested some improvement in their total behavior. Regarding practical significance, two of the three measurements (the BASC-TRF and PRF) revealed an overall medium effect size.

Both of the BASC-TRF and PRF demonstrated a statistically significant difference between the experimental and control group in terms of their externalizing problems. Both of them indicated a medium effect size. The results of the BASC-TRF for internalizing problems also demonstrated a statistically significant difference between the experimental group and the control group. The effect size for the internalizing problems on the BASC-TRF was also medium. After synthesizing the findings, it appears that group sandtray therapy has a positive therapeutic effect on preadolescents identified with behavioral difficulties.

However, no comparison with other treatment interventions was designed in this study. One possibility exists that some children from the control group might have deteriorated due to frustration of not receiving sandtray therapy at the same time as the experimental group members. In order to control for this factor, a comparison group would need to be added. For example, one comparison group would take preadolescents out of the class for some type of activity for fun; however, no therapy would be provided. After the treatment period, I would compare the pre and post scores of the instruments to examine the effectiveness of group sandtray therapy and the comparison group. However, this particular design was not utilized in the present study because it was not practical in the school setting. Students in 4th and 5th grades needed to take the state
academic performance assessment, and teachers were not willing for students to be pulled out from the class unless they perceived that the treatment may benefit the students. Pulling students out from the class for fun activity may be very hard for teachers to accept. It is also hard to convince parents to give permission for such an activity.

Limitations of this Study

I have recognized some limitations of this research design. They are as follows:

1. The sample size of research was relatively small (experimental group n=28, control group n=28). A larger sample size may increase the statistical power of hypotheses and validate the results.

2. This is a pre-posttest experimental and control group research design. No other treatment options were used to compare with group sandtray therapy. It is unknown that if group sandtray therapy is more effective than other available interventions.

3. Teachers and parents were aware of which participants were in the experimental and control groups. Although I did not inform teachers, they were aware of which children were leaving class. The Hawthorne Effect may have affected their judgment and perceptions of the participants.

4. The selection of participants was limited to voluntary subjects from two local elementary schools in northeast Texas. Generalization of the results of this research is limited to other populations.

5. This research is a pre and post research design. It was not able to indicate the changes during the treatment period and show the trend of change compared with repeated measures.
Implications

In terms of statistical significance, four of the seven hypotheses were accepted, and the rest of them showed positive trends. Regarding practical significance, five of the seven hypotheses revealed a medium effect size. It suggests that group sandtray therapy may have a positive therapeutic impact on preadolescents with behavioral difficulties. This study implies that group sandtray therapy may be able to be used as an appropriate treatment option for preadolescents with behavioral difficulties, especially for preadolescents with externalizing behavior problems. Reports from both parents and teachers showed a behavior difference between the preadolescents participating in sandtray therapy and ones without intervention. However, because this study is the first inquiry of this kind, future research is needed to further investigate the effectiveness of group sandtray therapy.

The other implication of this study is that group sandtray therapy may be an appropriate approach for school counselors to use because of its accessibility and efficiency. School may be the only setting for preadolescents to have access to the mental health resources. For example, according to the 2002-2003 Texas Education Agency Report (2004), over 50% of the children at the two local elementary schools that participated in this research belonged to the economically disadvantaged population. Because of their economic disadvantage, they may have very limited professional mental health assistance available for them outside of school.

Because group sandtray therapy adopts a group format, it uses the school counselor’s time more efficiently. Utilizing group format can serve more children at the same time. In addition, because it is easier to arrange time for several students to meet as a group than a regular clinical setting, it is easier to have group sandtray therapy at school.
Suggestions for Future Research

More Research Needed

This study is the first research to examine the effectiveness of group sandtray therapy quantitatively. The empirical research regarding sandtray therapy is extremely limited. More research is needed to evaluate its therapeutic effect. Replication research with a larger sample is recommended to increase the power of the statistical measures. Comparing group sandtray therapy to other interventions is encouraged to further investigate the effectiveness of group sandtray therapy. There is a need to apply group sandtray therapy to other populations to examine its effectiveness in these populations. It is also suggested to explore the effectiveness of individual sandtray therapy. In addition, further research is encouraged to investigate the therapeutic process of group sandtray therapy.

Follow-up and Length of Counseling

The length of counseling was designed for ten weeks in this research. Although the results showed that it may be helpful to preadolescents to alleviate their behavioral difficulties, I found that some participants could benefit from group sandtray therapy for a longer period of time to further their gain in counseling. I received feedback from the school counselor and a few parents after termination. They found that therapy was helpful for their children, and their behaviors changed while they were in therapy; however, after the therapy was terminated, there were still a few incidents of acting out. Follow-up evaluation regarding the lasting effect of sandtray therapy is needed.

Composite of the Group Members

A random assignment with the considerations of gender, age, and racial background was used in organizing the sandtray groups. It was observed that preadolescents with similar issues
had better connection with each other and perceived the group as a safe environment more quickly. Because the sandtray may reveal some powerful images of personal feelings and thoughts, a sense of safety is important for group members. It is suggested to use matching instead of random assignment for the composite of group members.

_Counseling in School_

School is a conducive environment to provide counseling and conduct research. The school system can provide administrative support, and school counselors, teachers, and administrative personnel are available for consultations. However, space, confidentiality, and conflict within the school schedule are concerns. A separate sandtray room or a complete private space may not be available because of limited space. A counselor or a researcher may need to change schedule because of field trip or state exams. Flexibility is important in working at school.

_Selection of Sandtray Miniatures_

It is suggested not to use expensive or breakable items as sandtray miniatures while working with children. They may not be aware of the breakability of the miniatures, and breaking miniatures unintentionally may have negative emotional effect on the client and hinder the therapy process. The expensive miniatures may not be replaced easily because of the price. It is recommended to use plastic or wooden figurines instead of resin or glass.

_Conclusion_

There is a great need to explore developmentally appropriate treatment options for preadolescents with behavioral difficulties. Literature review has suggested that theoretically group sandtray therapy could be an appropriate intervention strategy. Statistical analyses and the illustration of a case example in this study have provided possible empirical support for the effectiveness of using group sandtray therapy with preadolescents.
APPENDIX A

PARENTAL INFORMED CONSENT AND CHILD ASSENT FOR PARTICIPATION IN RESEARCH
Title of Study: Group Sandtray Therapy at School with Preadolescents Identified with Behavioral Difficulties

Principal Investigator: Mon-hsin Flahive

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the proposed procedures. It describes the procedures, benefits, risks, and discomforts of the study. It also describes your right to withdraw your child from the study at any time.

Start Date of Study  ____ September 27, 2004 ____  End Date of Study  ____ March 31, 2005__.

PURPOSE OF THE STUDY AND HOW LONG IT WILL LAST:
Your child is invited to participate in a research study to determine if sandtray therapy is an effective way of helping children. The purpose of the study is to find out if sandtray therapy is helpful in improving the way children act and feel.

If you agree to allow your child to participate, your child will receive ten 45-minute group sandtray therapy sessions with two other children.

DESCRIPTION OF THE STUDY INCLUDING THE PROCEDURES TO BE USED:
The purpose of this study is to examine the effectiveness of group sandtray therapy with 4th and 5th grade students identified as exhibiting behavioral and/or emotional difficulties. Sandtray therapy is a form of counseling that uses a sandtray and miniature figurines. During sandtray therapy, children are asked to express their feelings through the use of the sand and figures and then asked to discuss these emotions. For children this age, it is sometimes helpful to allow them to express themselves both through words and through play. Sandtray therapy uses both methods to help children.

If you agree for your child to participate in this research, you will be asked, at the beginning and end of the study, to fill out the Behavior Assessment System for Children-Parent Report Form (BASC-PRF) which asks questions regarding your child’s behavior. Your permission also allows your child’s homeroom teacher to fill out the Behavior Assessment System for Children-Teacher Report Form (BASC-TRF), which asks the teacher to report on your child’s behavior in the classroom. Your child will be asked to complete a Behavior Assessment System for Children-Self-Report Form (BASC-SRP) which asks your child to report on his or her own behavior at home and at school. Each instrument takes about 30 minutes to complete.

In this study, your child will participate in one of two groups. One group will begin immediately and your child will receive sandtray therapy for ten weeks. The second group will be put on a waiting list and begin sandtray therapy following the completion of the first group,
meaning that they will begin approximately 10 weeks from now. The purpose of the two groups is to examine the effectiveness of group sandtray therapy on children’s behavior when compared with children who are not receiving sandtray therapy. By the end of the study, all children will have received ten weeks of group sandtray therapy.
DESCRIPTION OF THE STUDY INCLUDING THE PROCEDURES TO BE USED (CONTINUED):
When your child participates in sandtray therapy, he or she will be pulled from another school activity upon the approval of the teacher. Your child will miss an academic or extracurricular experience. Sandtray therapy will be led by two doctoral level students who have received master’s degrees in a mental health field. Sessions will take place weekly for 45 minutes each time.

DESCRIPTION OF PROCEDURES/ELEMENTS THAT MAY RESULT IN RISK, DISCOMFORT, OR INCONVENIENCE:
There is no foreseeable personal risk directly involved in this study. Anything that is said or done during sandtray therapy is considered confidential, meaning that the therapist will not reveal anything that happens in the session to anyone. However, if your child discloses child abuse, neglect, exploitation or intent to harm another person, the therapist is required by law to report it to the appropriate authority. Your child’s participation is completely voluntary. You or your child may withdraw at any time during the course of the study.

However, you or your child might experience some discomfort, which may include one or more of the following:
1. Because sandtray therapy is a counseling method, your child will be expressing emotions that could be strong for him or her. The therapist will help your child talk through these emotions and will stop therapy if she notices any harmful effects upon your child.
2. It is also possible that the teacher will have knowledge of your child’s reason for leaving the classroom.
3. Also, because your child is participating in a group format, confidentiality among group members cannot be guaranteed but will be encouraged.

BENEFITS TO THE SUBJECTS OR OTHERS:
The possible benefits to your child can include: (1) improvements in self-esteem, (2) improvements in emotional difficulties, (3) improvements in behavioral difficulties, (4) improvements in social interaction and skills, and (5) increased academic progress.

CONFIDENTIALITY OF RESEARCH RECORDS:
All information will be kept confidential in a locked cabinet in the clinic of the Department of Counseling, Development, and Higher Education at the University of North Texas. Names or other identifying information of parents and children will not be disclosed in any publication or discussion of this material. Information obtained from the questionnaires will be recorded with a code number. Only the investigator will have a list of the participants’ names. The sandtray therapy session may be videotaped. Only the principal investigator will see the videotapes in order to collect data such as the frequency of group interaction. The videotapes will be destroyed after a year.
REVIEW FOR PROTECTION OF PARTICIPANTS:

This research study has been reviewed and approved by the UNT Institutional Review Board (940) 565-3940.

RESEARCH SUBJECTS’ RIGHTS: I have read or have had read to me all of the above.

Mon-hsin Flahive has explained the study to me and answered all of my questions. I have been told the risks or discomforts and possible benefits of the study.

I understand that my child does not have to participate in this study, and my refusal to allow my child to participate will involve no penalty or loss of rights to which my child is entitled. I may withdraw my child at any time without penalty or loss of benefits to which my child is entitled. The study personnel can stop my child’s participation at any time if it appears to be harmful to my child, if I or my child fail to follow directions for participation in the study, if it is discovered that my child does not meet the study requirements, or if the study is cancelled.

In case there are problems or questions, I have been told that I can call Mon-hsin Flahive, a UNT doctoral student in the Department of Counseling, Development, and Higher Education, at telephone number (940) 321-1234 or her faculty sponsor, Dr. Dee Ray at telephone number (940) 555-1234. I understand my child’s rights as a research subject, and I voluntarily consent to allow my child to participate in this study. I understand what the study is about and how and why it is being done. I will receive a signed copy of this consent form.

__________________________  __________________________  __________________________  __________________________
Signature of Subject       Date     Signature of Witness       Date

For the Investigator or Designee:

I certify that I have reviewed the contents of this form with the person signing above, who, in my opinion, understood the explanation. I have explained the known benefits and risks of the research.

__________________________
Principal Investigator or Designee Signature       Date
Title of Study: GROUP SANDTRAY THERAPY AT SCHOOL WITH PREADOLESCENTS IDENTIFIED WITH BEHAVIORAL DIFFICULTIES

I understand I am participating in a group with two other children where I will be asked to play with sand and other small toys. I also know that Miss Mon-hsin will be asking me to answer questions on paper about myself.

Principal Investigator: Mon-hsin Flahive

______________________________ (name of child) has agreed to participate in this research study.

Signature of the Subject       Signature of the Parent or Guardian must be substituted if waiver of assent is required.

WAIVER OF ASSENT

The assent of ____________________________ (name of child) was waived because of

_____ Age

_____ Maturity

_____ Psychological state of the child

______________________________________
Signature of Parent or Guardian       Date
APPENDIX B

SANDTRAY SESSION SUMMARY

Adapted with permission (Homeyer & Sweeney, 1998).
## Sandtray Session Summary

<table>
<thead>
<tr>
<th>Session # ______</th>
<th>Date: ______</th>
<th>No Show ____</th>
<th>Reason: ______</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client: ________</td>
<td>Counselor:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Client approach to task:
- Wet _______ Dry _______ Shaping of sand _______
- Ease/Difficult getting started ________ Purposeful/ Unpurposeful ________ Determined/ Hesitant ________
- Internally/ Externally driven ________ Able/ Unable to become full involved ________

### Description of tray:
- Organized – Chaotic _______ Open – Closed _______ Action – Static _______ Empty – Excessive _______
- Whole logical picture – Several Ideas ________

### Sandtray theme
- Peaceful _______ Aggressive _______ Violent _______ Healing/Helpful _______ Secretive/Buried _______
- Depressed/Empty _______ Fantasy _______ Conflict _______ Need for Nurturance _______ Protective _______
- Sexual _______ Withdrawal _______ Loss _______ Other: _______________________

### Description of miniatures used:
- People: ________
- Animals: ________
- Deities: ________
- Buildings/structures: ________
- Plants/Trees: ________
- Vehicles: ________
- Natural things: ________
- Manufactured things: ________
- Fantasy figures: ________
- Other: ________

### Title of tray: _________________________
- Describe the client’s verbal and affective expressions or significant interactions with other group members during tray construction:

- Describe the story (metaphors/themes) about the sandtray offered by client:

- Conceptualization of process:

Attach picture of sandtray for session
REFERENCES


http://www.mentalhealth.org/publications/allpubs/CA-0004/default.asp


*Journal of Humanistic Education and Development, 36*, 74-82.


