The Effectiveness of Preschool Mental Health Day Treatment on Attachment Pattern Skills

by

Stefanie Kuhnmuench, B.A.

MSW Clinical Research Paper

Presented to the Faculty of the School of Social Work St. Catherine University and the University of St. Thomas St. Paul, Minnesota in Partial Fulfillment of the Requirements for the Degree of Master of Social Work

Committee Members
Michael G. Chovanec, LMFT, LICSW, Ph. D.
Kathleen Fargione, LICSW
Brynn Smith, LICSW

The Clinical Research Project is a graduation requirement for the MSW students at St. Catherine University/University of St. Thomas School of Social Work in St. Paul, Minnesota and is conducted within a nine-month time frame to demonstrate facility with basic social research methods. Students must independently conceptualize a research problem, formulate a research design that is approved by a research committee and the university Institutional Review Board, implement the project, and publicly present the findings of the study. This project is neither a Master’s thesis nor a dissertation.
ABSTRACT

Young children ages three to six, who have insecure or disorganized attachment styles, are more likely to be diagnosed with a psychiatric disorder. Research implies that improving attachment can lead to improved functioning. One mode of treatment for young children with emotional and behavioral disorders is day treatment, specifically day treatment that focuses on attachment. In this study, a secondary data analysis was used to assess the effectiveness of a day treatment program in a community mental health agency in the Midwest for children ages three to six. Scores from the Attachment Pattern Scale (APS) at three points in time, ten days into treatment, six months into treatment and at discharge were used. The data was analyzed to answer the question: do attachment pattern skills improve over time for young children enrolled in day treatment? The study used scores from 41 subjects that were previously enrolled in the day treatment program. Paired t tests were used to compare mean scores at ten days and six months as well as ten days and discharge. The analysis showed that improvements in APS scores between ten days and six months as well as ten days and discharge were statistically significant. Effect sizes were .85 for ten days to six months and 1.51 for ten days to discharge. The results imply that day treatment is effective in improving attachment pattern skills and possibly functioning.
ACKNOWLEDGEMENTS

A special thanks to Mike Chovanec for helping me stay positive and stick to my deadlines. Thanks to Kathleen Fargione for taking time to be a part of my committee and for inspiring me to continue to read and write about my experiences working with young children. Thanks to Brynn Smith for being so enthusiastic about this project. The time you took for all the extra revisions and being part of my committee is truly appreciated. Thanks to my family and friends for sticking with me on my long, and at times melodramatic journey through another phase of education.
TABLE OF CONTENTS

ABSTRACT ................................................................. ii
ACKNOWLEDGMENTS .................................................. iii
TABLE OF CONTENTS ..................................................... iv
INTRODUCTION .......................................................... 1
LITERATURE REVIEW ................................................... 4
CONCEPTUAL FRAMEWORK ........................................ 15
METHODS ............................................................... 21
RESULTS ................................................................. 27
DISCUSSION ............................................................ 34
CONCLUSION ............................................................. 40
REFERENCES ............................................................ 41
APPENDIX A: Letter of Permission for use of Data .................. 48
APPENDIX B: Attachment Pattern Scale (APS) ......................... 49
APPENDIX C: Global Assessment of Functioning (GAF) Scale ....... 50
The Effectiveness of Preschool Mental Health Day Treatment

on Attachment Pattern Skills

In 1996, a study of preschool children found that 21.4% of preschoolers have a diagnosable psychiatric disorder (Lavigne et al., 1996). A separate study in 2010 also found that children entering school, either kindergarten or first grade, have a diagnosable mental health disorder at a rate of 21.6% (Carter, Wagmiller, Gray, McCarthy, Horwitz & Briggs-Gowan). Approximately 1 in 149 pre-kindergarteners are expelled from pre-kindergarten programs each year for behavior problems (Gilliam, 2005). The rate of kindergarteners being expelled is three times higher than the rate of all other grades combined in school.

Although society considers the childhood years a “carefree time” and “people get over things,” research indicates a possible high risk of young children developing mental health issues (Lieberman & Van Horn, 2008). Children continue to be exposed to traumatic and stressful events. These events can lead to maladaptive behavior that, without intervention, can continue on into later childhood and adulthood.

“Relationships seem to exert powerful influences over the individuals participating in them, and also to shape future relationships” (Sroufe & Fleeson, 1986, p. 67). “Attachment” is the relationship between infant and mother (or other primary attachment figure) that humans are hardwired to create from infancy (Bowlby, 1969, 1982). The attachment relationship is a haven of safety for the infant; within the attachment relationship infants learn how to adapt to their environment. Within the relationship infants develop the ability to get needs and wants met. “In the course of their first 5 years, they form mental representations of the psychological, social and physical
realms; develop working hypotheses about how the world works; and use their interactions to test and refine these hypotheses” (Lieberman & Van Horn, 2008, p 3). Furthermore, infants learn to regulate emotions, predict outcomes and interact socially within the attachment relationship (Lieberman & Van Horn, 2008).

Research on attachment shows that secure attachment predicts success in school and adaptability while insecure attachment predicts a greater risk of psychopathology (Sroufe, Egeland, Carlson & Collins, 2005). Disruptions in the relationship, between infant and caregiver, can lead to insecure or disorganized attachment styles that can lead to later psychopathology (Main & Hesse, 2000). Social workers can use attachment skills, for example whether or not a child allows an adult to comfort him/her, as an indication of the child’s level of attachment to assess the effectiveness of day treatment for young children.

In Minnesota, day treatment is being used to treat young children with serious emotional disturbances. According to the Minnesota Department of Human Services (DHS), “9 percent of school-age children and 5 percent of preschool children have a Serious Emotional Disturbance (SED), which is a mental health problem that has become longer lasting and interferes significantly with the child’s functioning at home and in school” (CTSS Providers, 2012). Currently, there are 24-day treatment programs for children in the state. Day treatment is considered an intensive mental health service, serving children “who are unable, for a variety of reasons, to function adequately at school and home” (Vernberg, Roberts & Nyre, 2007, p 170). It is a priority of the Minnesota DHS that mental health services for children continue to be improved (CTSS Providers, 2012). Social workers are currently involved in multiple stages of treatment.
for young children, age three to six, with emotional and behavioral disorders including therapy, crisis intervention and case management.

Young children who have been exposed to trauma often exhibit behavioral problems and an insecure or disorganized attachment style (Sroufe & Fleeson, 1986). These children are often diagnosed with a psychiatric disorder. Since attachment is a predictor in school success as well as the likelihood of later psychopathology, increasing attachment skills will resolve problems (Siegel, 1999). It is unclear whether improvements in young children are correlated with improved attachment since it has not been studied, or if improvements are due to some other factor.

This study will explore the extent that a day treatment program, for young children with emotional and behavioral disorders, in a community mental health agency, in the Midwest, is improving attachment skills over time. This study will broaden the research on the effectiveness of day treatment settings and help to answer the question of whether or not day treatment is an appropriate therapeutic setting to support young children in improving attachment pattern skills. All children have attachment patterns (Sroufe, 2005). New attachment patterns can be experienced through a safe, reliable relationship. One way to create a safe and reliable relationship is in day treatment with safe and reliable adults. If this is true, then attachment pattern skills will improve over time while young children are in day treatment.
Literature Review

The research has shown that children with insecure and disorganized attachments have more cognitive, social and emotional difficulties throughout life (Siegel, 1999). There are too many young children suffering from emotional and behavioral difficulties (Lavigne et al., 1996, Carter et al., 2010). One way to treat emotional and behavioral difficulties is through day treatment, especially day treatment that focuses on forming secure attachments in children. The following literature review will discuss the development of attachment and attachment behaviors in young children. It will then introduce disorders often first diagnosed in childhood. It will explore how insecure and/or disorganized attachment can create cognitive, social and emotional difficulties throughout life. Last, the literature review will report findings from research on day treatment programs that treat children.

Attachment

Development. John Bowlby (1969,1982) first studied attachment in animals. Like animals, people are prewired to attach to the mother (or primary caregiver) in order to get basic needs met as well as to seek comfort. Infants signal the caregiver by crying, for example, and then the caregiver responds and meets the infant’s needs. The pattern of responsiveness creates an internal working model for the infant. Siegel states, “forming mental models is the essential manner in which the brain learns from the past and then directly influences the present and shapes future actions” (1999, p. 72). The mental models that are created give infants a “secure base” (Bowlby, 1969, 1982). The infant can use security they feel with the adult to explore the environment.
Development is an interaction of the person and the environment that continues to change and grow over time (Sroufe, Egeland, Carlson & Collins, 2005). Sroufe et al. conducted a longitudinal study, at the University of Minnesota, following 180 children from birth to adulthood (2005). The participants were observed at different points in life. The study found that children establish an attachment pattern by the age of two: although personality is seen around the age of four, by age two there is a trajectory of how a child will interact with others.

**Attunement.** An attachment to a caregiver happens as infants develop in all relationships, whether there is adequate care or not (Main, 2000). The attachment is formed through the process of attunement (Siegel, 1999). Attunement is the ability of the caregiver to match and mirror an infant’s emotional state. Siegel states, “the developing mind uses the states of an attachment figure in order to help organize the functioning of its own states” (1999, p 70). The primary caregiver does not need to be attuned one hundred percent of the time in order to create a secure attachment. It is the ability of the caregiver to understand when to align and when to back off from the infant that results in attachment style.

Through the interactions with caregivers an infant learns what actions will produce the reaction needed from a caregiver (Sroufe & Fleeson, 1986). The balance of action and reaction creates organization in the brain. The organization and development occurs within the context of the relationship. It is dependent on continued attunement to emotional states of the infant. Through attunement the infant learns a pattern of behavior from the adult. The infant is able to predict reactions and modify behavior. Later in life a child will continue to expect the same interactions from new persons that he or she comes
in contact with. With time and repeated interactions, the responses that infants receive become an internal representation of how the world works (Slade, 2005). The internal representations guide the way a child interacts with new people and in new situations.

**Attachment behaviors in young children.** Attachment patterns can be measured in infants using the strange situation procedure (Ainsworth et al., 1978). Later in life, attachment can also be viewed in children (Main, 2000). Through observation of infants, several patterns of behavior have emerged that can be used to distinguish a young child’s attachment style: securely attached, insecure-avoidant, insecure-resistant or disorganized.

**Secure attachment.** First, securely attached children, at the age of six, are able to be flexible in their view of emotions seen in pictures (Main, 2000). In play, securely attached children create a conflict and then create the solution to the conflict (Rosenberg, 1984). Main reports that when asked to draw a picture, “secure children would typically produce a picture showing centered and grounded figures, of moderate size, at moderate distances from one another, and – in accordance with the level of drawing ability – detailed and well differentiated” (cited by Main, 2000, p 1071). Securely attached children are more likely to be adaptive and flexible in thinking (Siegel, 1999). Secure attachment is also linked to school success: these children “had the capacity to modulate impulses and emotions in situationally appropriate ways” (Easterbrooks & Goldber, 1990).

**Insecure-avoidant attachment.** Insecure-avoidant infants are characterized as avoiding contact with their primary caregiver (Ainsworth, et al., 1978). The primary caregiver, at times, evokes anxiety and distress in the insecure-avoidant attached infant. In school, the avoidant group tends to bully other kids more often (Main, 2000).
Although they do interact with other kids, it is often in a negative way. Teachers reject this group more often than secure or resistant ambivalent kids (Sroufe & Fleeson, 1986). Furthermore, these children seek support from adults less often than children in other attachment categories. Sroufe et al. reported that preschoolers, who were classified as avoidant as infants, “were less compliant, scored higher on hostility and isolation, and had a greater number of total problems” (2005, p 132). As adults, those that are insecure-avoidant attached, “[tend] not to acknowledge or to discuss negative events” (Main, 2000, p 1080).

**Insecure-resistant/ambivalent attachment.** Infants that have an insecure-resistant/ambivalent attachment pattern are difficult to soothe, even by a primary caregiver (Ainsworth et al., 1978). Resistant/ambivalent children “show frequent chronic, low-level dependency, being constantly near or oriented to the teachers; they routinely wait at the edge of the group for the teacher to invite them in” (Sroufe & Fleeson, 1986, p 62). In school, these children become emotionally dysregulated more easily (Sroufe, et al., 2005). Resistant/ambivalent children attempted to interact with peers often but were less likely to be invited into play. In the Sroufe et al. study, it was found resistant/ambivalent children, at ages four-five, on average, scored the lowest IQ out of the three organized groups of attachment.

**Disorganized/disoriented attachment.** Infants that are classified as disorganized are best described as disoriented (Hesse & Main, 2000). Hesse and Main state:

> we suggest that disorganized/disoriented behaviors is expectable whenever an infant is markedly frightened by its primary haven(s) of safety, i.e., the attachment figure(s). If so, then disorganized behavior should of course occur when an infant is maltreated by a parent (2000, p. 1002).
Disorganized/disoriented young children are controlling of the environment (Hopkins, 2000). It is difficult to accept support from adults. Controlling the environment is a way that these children make up for this feeling of helplessness. Young children who display behaviors of disorganized/disoriented attachment are at the highest risk for psychopathology.

**Psychopathology in Young Children**

Children who are exposed to trauma such as maltreatment, neglect and abuse struggle more to regulate emotions, and they show more externalizing behavior (Kim & Cicchetti, 2010). These children may be more likely to develop psychopathology later in life. Emotional regulation, associated with secure attachment, is one factor that can protect infants and young children from later psychopathology.

Brain development is the result of the interplay between the environment and chemicals in the brain (Perry, Pollard, Blakely, Baker & Vigilante, 1995, van der Kolk, 2003). When young children endure trauma it can affect the way their brain develops, which in turn affects the way they function in the future (Perry et al., 1995, van der Kolk, 2003). When infants and young children are exposed to traumatic events, such as abuse, on a regular basis, the brain develops within the stress (van der Kolk, 2003). Van der Kolk states that long-term trauma has a more long lasting impact on a child’s personality than a single traumatic event.

Perry et al. states “Children and infants use a variety of adaptive response patterns in the face of threat, and in a use-dependent fashion, internalize aspects of these responses, organizing the developing brain” (1995, p 286). One of the adaptive responses that infants use is the “fight or flight” response in the face of danger. There are two ways
that the brain develops to deal with trauma or threatening situations (Perry et al., 1995). The first response to fear is hyperarousal. During a fearful or traumatic event, the child’s brain releases more norepinephrine. In continuous states of fear or trauma, the brain maintains a hyperaroused state. When the child is continuously in a state of fear, the brain becomes desensitized to the norepinephrine, and smaller, less fearful events can produce the same reaction and release of norepinephrine. What is a state in most becomes a “trait” (Perry et al., 1995, p 278) in traumatized children. Children who have experienced trauma present as hyperactive, are easily aroused and have difficulty regulating emotions.

The second way that young children learn to cope with reoccurring trauma is the dissociative continuum (Perry et al., 1995). In the face of danger, some children freeze. The freezing appears to be an oppositional behavior when in reality the child is actually adapting to intense anxiety. Similar to children who become hyperaroused, children who freeze can become terrorized easily by everyday events that trigger the freezing response. At times the freezing becomes full dissociation. Perry et al., describes dissociation as “an automated, automatic, detached response set” (1995, p. 281). Dissociation occurs when the child’s system of seeking support is continuously not responded to and when the person that would provide safety is also the source of fear.

**Disorders First Diagnosed in Childhood.** The American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders (2000) 4\textsuperscript{th} ed., text rev. has identified a group of disorders that are often first diagnosed during childhood. Some examples include Attention Deficit Hyperactivity Disorder (ADHD), Disruptive Behavior Disorder, Overanxious Disorder of Childhood and Reactive Attachment Disorder.
About half the children diagnosed with ADHD are also diagnosed with one of the behavioral disorders: Disruptive Behavior Disorder (DBD), Oppositional Defiant Disorder (ODD) and Conduct Disorder (CD) (DSM IV TR, 2000). ODD occurs in approximately 2-6% of the population while ADHD occurs in approximately 3-7% of the population. ODD, CD and DBD all share common criteria that include behaviors that are not typical of children in a certain age group. The behavior diagnoses do not give meaning or reason as to why the behavior occurs. In settings like school, symptoms of long lasting trauma often look like behavior disorders such as ADHD (Busch & Lieberman, 2007).

At the age of five or six, when children are first entering school, kids who show disruptive behaviors are often diagnosed with one of the previously mentioned diagnoses. Due to the lack of knowledge in school settings, many children are labeled with ADHD and sent to their pediatrician to be medicated (Karr-Morse, Wiley & Brazelton, 1997). Although kids are being identified at the age of five or six as having emotional or behavioral disorders, many of the behaviors began much earlier. Gilliam (2005) found that prekindergarteners are being expelled at higher rates than first to twelfth grade students. Children with behavior problems are being put into school even though emotionally they are not ready (Carter, Wagmiller, Gray, McCarthy, Horwitz & Briggs-Gowan, 2010). There are still very few mental health screens for young children in school districts to determine school readiness, or preventative programs to prepare kids emotionally for school.
Day Treatment

**Components of day treatment.** Day treatment looks different in different settings, and the task of breaking down the components of day treatment programs that are effective is difficult (Whitemore, Ford & Sack, 2003). The Minnesota Department of Human Services defines day treatment for children as:

‘Day treatment program’ for children means a site-based structured program consisting of a group psychotherapy for more than three individuals and other intensive therapeutic services provided by a multidisciplinary team, under the clinical supervision of a mental health professional.

Day treatment programs vary in modality as well as structure across settings. Programs lasting three hours each day are referred to as partial day treatment (Robinson, 2000). These programs allow children to continue to participate in their regular academic setting or continue to participate in a typical preschool setting. There are several components of day treatment for young children that are represented throughout the literature.

**Play.** Play therapy with traumatized children gives the children a place to be safe (Hughes, 2004). As the child plays, the therapist is able to interpret meaning in the play. Young children are not able to use language like adults to express their feelings and experiences (Gil, 1991). Koplow defines play therapy as “a process of using play symbols to establish a connecting dialogue between child and therapist as well as between the child’s conscious and unconscious experience” (2007, p 65). Play therapy is particularly useful in treating young children (Benham & Slotnick, 2006). For young children, play is the major mode of expression. Children use play as a way to express themselves and heal (Gil, 1991).
**Family participation.** Family participation in day treatment has been determined as an important factor in a child’s success across settings (Schmitz & Hilton, 1996, Robinson, 2000, Whitemore, et. al., 2003, Srebnik, 1999). Family interventions included intensive family therapy, in-home skills training, proctored family living space and case management. The positive impact of family therapy could be due to the large portion of children admitted into some day treatment programs that have histories of unstable home life (Schmitz & Hilton, 1996). Through treatment some families also became more stable leading to a more stable environment for the children (Whitemore, Ford & Sack, 2003). The research is unclear whether or not family participation improves attachment between child and caregiver.

**Academic settings.** Schmitz and Hilton investigated programs that are being used for preschoolers with emotional and behavioral disorders (1996). In the study it was found that there are special education rooms in school and day treatment programs for preschoolers with severe emotional and behavioral disorders. According to their research, more collaborative services need to be developed to address the complex needs of children and their families. By interviewing professionals, at three sites, Schmitz and Hilton found that some of the aspects that are important to collaborative programs are “classroom services with educational support and treatment for emotional or behavioral disorders and interdisciplinary service delivery” (1996, p 9).

**Day treatment studies.** The research available shows that day treatment effectiveness has been measured in several ways including symptom reduction and symptom remission (Robinson, 2000), attention problems and global assessment scores (Bennett, Marci, Creed & Isom, 2000), Youth Outcome Questionnaire (Robinson, 2000),
and the Child Behavior Checklist (Whitemore et al., 2003). Due to the wide range of outcome measurements it has been difficult to compare day treatment programs.

In a study conducted by Whitemore et al., a day treatment setting for young children age two to six was used to determine the effectiveness of day treatment for young children with severe emotional and behavioral disorders (2003). In this particular study, children receive treatment four hours per day for 230 days of the year. The treatment “includes special education, intensive case management, academic and developmental skill building, and individual and family therapy” (Whitemore et al., 2003, p 461). The Children’s Behavior Checklist (CBCL) was used as a measure of behavior and emotional problems (Achenbach, 2013). The sample in this study included 139 children with severe emotional and behavioral disorders. Children in this sample, at discharge and follow-up, showed significant progress made in both behavioral and developmental areas.

A study of the outcomes of 215 children attending a partial day treatment program was studied using the Youth Outcome Questionnaire (Y-OQ) (Robinson, 2000). A paired t-test showed a statistically significant change in kids from pre to post test. On average, kids attended the treatment used in the study for approximately nine weeks. Children with externalizing issues showed less gains during the treatment. This result is similar to results in a study that examined 54 children in a day treatment program (Bennett, Macri, Creed & Isom, 2001). Bennett et al. found significant changes in attention as well as improvements in Global Assessment of Functioning scales, but not significant change in aggressive and externalizing behaviors, as rated by teachers (2001).
Schmitz and Hilton (1996) interviewed providers who struggled to name behavioral and emotional outcomes for children in their program. However, they were able to determine the aspects of treatment that were the most beneficial for the children enrolled. Aspects that providers named included small classes, family services, social and emotional development through art and music, as well as crisis intervention. Service providers also attribute more importance to the therapeutic environment of day treatment as opposed to outcomes (Srebnik, 1999).

**Summary of Literature**

All people, beginning in infancy, develop attachment patterns to primary caregivers (Sroufe et al., 2005). Through the relationship between infant and caregiver, the infant develops a sense of self and a personality. Disruptions in the relationship can lead to insecure or disorganized attachment styles that can lead to later psychopathology (Main & Hesse, 2000). During preschool, children are still at a prime age to create change within a safe relationship (Perry et al., 1995). One place that young children can develop skills and learn to trust adults is a day treatment setting (Srebnik, 1999). This study will broaden the research on the effectiveness of day treatment settings in creating improvement in attachment skills over time and help to answer the question of whether or not day treatment is an appropriate therapeutic setting to support young children with emotional and behavioral disorders.
Conceptual Framework

Components of attachment theory, as well as theory that has developed out of attachment theory, were used as a framework for this study. There are several concepts that have been developed out of attachment theory. The concepts that were used for this study have appeared in the literature and provide a background for doing this study. The theory will be used to better understand young children’s pathology in day treatment.

The first concept is that, based on behavioral observations, children can be classified into one of four categories of attachment style. Attachment style is predictive of later success in school and life as well as a predictor of later psychopathology (Siegel, 1999). The four categories of attachment style will be presented to illustrate how young children may display behaviors in a day treatment setting. Insecure and disorganized attachment styles are the most common in young children in day treatment. Second, the concept of developing a therapeutic relationship will be explored. Through the therapeutic relationships, young children develop attachment skills. The therapeutic relationship is used in day treatment as a vehicle of change. This will help to answer the question of whether day treatment is effective in improving attachment skills over time.

Styles of Attachment

Attachment classifications and the Strange Situation. Ainsworth et al., developed the Strange Situation to investigate and classify infants into attachment styles (1978). The Strange Situation procedure consists of a number of observations with a mother, her infant and an experimenter (stranger). In the procedure, the infant and mother are observed in the room playing. An experimenter enters the room and the mother leaves. A few minutes later the mother returns and is reunited with the infant. At this time
the experimenter leaves the room. Next, the mother leaves the infant alone in the room. The experimenter enters the room, and then the mother reenters. Last, the experimenter leaves the room without being noticed. During the interactions, observations are being made of the interaction between infant and the mother, infant and experimenter and how the infant reacts when left alone. Based on this data, three groups of organized attachment were established: secure, anxious/avoidant and anxious resistant/ambivalent.

Classifying an infant as securely attached is a measure of the relationship between infant and caregiver rather than a behavioral trait of the infant (Sroufe & Fleeson, 1986). Securely attached children are able to explore their environment (Ainsworth et al., 1978). If they experience fear securely attached children are able to return to their mother to be comforted. Once securely attached infants are comforted they are able to return to play and exploration. Children who are securely attached are also more likely to engage in positive peer interactions (Pastor, 1981).

The second group classified by the strange situation, is anxious/avoidant attachment (Ainsworth et al., 1978). Infants who display the anxious/avoidant attachment pattern avoid their mother upon reunion. Before the separation there is less checking in with the mother and less interaction between the two. When experiencing fear, anxious/avoidant children do not seek out comfort from adults, and also struggle to self soothe.

The third attachment pattern observed during the strange situation was the anxious/resistant attachment pattern (Ainsworth et al., 1978). In the procedure, anxious/resistant children struggle to explore the room and struggle to engage in play. Furthermore, these children struggle to be comforted by their mothers.
There was a group of infants during the Strange Situation that did not fit into any of the organized patterns of attachment: secure, insecure avoidant or insecure resistant ambivalent (Hesse, 1999, Main & Solomon, 1990 as cited by Hesse & Main, 2000). Main and Solomon (1990) named this style disorganized. Disorganized infants are described as displaying a variety of behaviors including freezing and stilling, contradictory behaviors and fear of the parent.

The Therapeutic Relationship

Creating change. Children who have secure attachments are more likely to be able to function socially and emotionally (Thompson, 2006). This is particularly true when the attachment figure has remained secure over time. Furthermore, insecure attachment could be a risk factor for later psychopathology. With a safe and trusting therapeutic relationship, children who come to day treatment with a pattern of insecure or disorganized attachment can create secure attachments to other adults (Perry, et al., 1995).

The change in the attachment relationship occurs through a therapeutic interaction (Wallin, 2007, Schore & Schore, 2007). Wallin (2007, p 1) writes:

If our early involvements have been problematic, then subsequent relationships can offer second chances, perhaps affording us potential to love, feel, and reflect with freedom that flows from secure attachment. Psychotherapy, at its best, provides just such a healing relationship.

Rather than what is said or the interventions that occur, it is within the therapeutic relationship between the therapist and child that the change transpires. Through the therapeutic relationship, the child begins to learn self-regulation skills. The relationship can repair damage and help to create new patterns in the brain to allow a child to better cope in the environment (Schore & Schore, 2007).
The therapeutic relationship is different than a therapeutic alliance, often used in therapy with adults. The therapeutic alliance is a mutual rapport that is built through empathic, authentic interactions between the therapist and client (Cooper & Lesser, 2011). In an attachment focused day treatment, the emphasis of the therapeutic relationship is, “how to be with the patient, especially during affectively stressful moments” (Schore & Schore, 2008, p 17). The therapist is able to accept and hold the extreme emotions that the young children experience.

**The therapeutic relationship in day treatment.** In day treatment, there are several ways the therapeutic relationship is used as an avenue for change. First, the day treatment staff meets the young child ‘where he or she is’ (Klorer, 2000). Meeting the young child where he or she is means that the staff allow the children to express themselves and communicate in their own way. The staff acts as a co-regulator of emotions (Gearity, 2009). Co-regulation helps the child learn that he or she can trust adults to help. When a child becomes aroused, the staff member stays with the young child to help regulate the strong emotions. This allows the young child to learn that there can be a different solution to big emotions, and trust begins to build.

As the child is able to use the therapeutic relationship to regulate emotions and think about emotions, behaviors can begin to change (Gearity, 2009). Staff begins to help children understand how feelings affect actions. Staff provides positive choices to maintain the young child’s sense of control. Positive solutions are suggested and practiced to allow young children to solve problems in new ways. Gearity states, “Because [young children] feel more secure in adult help, children can change disruptive behaviors and learn new behavior patterns that work in the community” (2009, p 67).
This relationship needs to be reliable (Gearity, 2009). Staff does this by providing consistent co-regulation, help, and positive regard, even when the child is having a hard day. As the young child learns to use the adult to regulate emotions, new learning of emotional regulation can occur. One specific strategy used in day treatment is verbal reflections. When using a verbal reflection, staff use phrases like, “we can make this OK, we can find solutions” (Gearity, 2007, p 42). The staff uses verbal reflection to put words to actions and behaviors (Koplow, 2007). The following is an example of verbal reflection, one specific strategy used in day treatment. The young child in this example is hiding in his cubby when the teacher approaches (Koplow, 2007, p 80):

TEACHER (regards child empathically): Sounds like you didn’t want to come to school today.
CHILD: Ana didn’t go to school!
TEACHER: Oh! Ana stayed home with Mommy?
CHILD (nods): I want to stay with Mommy, too. (He sounds angry.)
TEACHER: Ana stayed home and you had to come to school. You sound angry about that. Do you want to write a letter to Mommy to tell her how you feel?
(The child nods, takes teacher’s hand, and enters the room.)

The teacher in this example offers both emotional and content reflections to help the young child understand the emotions that he is experiencing. The child can learn a new way to handle emotions.

It appears that attachment skills can improve, but whether day treatment improves attachment skills is absent in the literature. In order to answer the question of whether day treatment is effective in changing attachment skills over time, several components of attachment theory were used as a conceptual framework. Ainsworth et al. (1978), discovered that young children can be classified into one of four categories of attachment style. In day treatment, young children most often display insecure and disorganized
attachment styles. The *therapeutic relationship* is used to create a framework for a secure attachment for young children in day treatment. Day treatment creates change in young children by using a therapeutic relationship to develop secure attachment behaviors in children with serious emotional disturbances.
Methods

Research Design

This study is a secondary analysis of data collected over the last four years at a community mental health agency in the Midwest. Summative evaluation research was used in order to determine the effectiveness of the day treatment program on improving subjects’ attachment skills over time.

Sample

A convenience sample was used for this research. The program has a diverse group of children ages three to six years. Generally, there are more boys enrolled in the program than girls. Data that is included in the sample are: Attachment Pattern Scale (APS) scores from ten days into treatment, six months into treatment and at discharge. The data has a primary diagnosis associated with it. Also, GAF scores will be criteria for participants although this is not the main measure being used in this study. The sample includes 41 subjects with data collected during the time that the subject was enrolled in the day treatment program. A more detailed description of the sample is available in the Data Analysis section of this study.

Protection of Human Subjects

The data used is secondary analysis of day treatment subjects that are no longer in the program. The data is property of the agency. The agency gave the researcher permission to use the data after the Institutional Review Board at St. Catherine University/University of St. Thomas approved it (See Appendix A for Letter of Permission). The data was de-identified to keep names of day treatment subjects confidential. The data was coded without using names of the original subjects. The
researcher did the coding of the data. Data was stored on a password protected flash drive. The flash drive was stored in a locked filing cabinet. The agency was informed of what data was used but the subjects’ names remained anonymous.

**Research Setting**

This study was conducted using data from a community mental health agency in the Midwest. Data collected is from clients that attended the Preschool Mental Health Day Treatment program. The division of the mental health agency serves young children that are diagnosed with an emotional or behavioral disorder in a day treatment setting. The program was started in 1999. The program has eight-day treatment rooms, serving up to 112 children per day. At full capacity, each room has seven children and four staff. The rooms are staffed with a graduate level Mental Health Practitioner II (MHP II). MHP II’s are working towards licensure in Social Work, Marriage and Family Therapy or professional Clinical Counseling. The rooms are also staffed with a Mental Health Practitioner I (MHP I). MHP I’s have a Bachelor’s Degree and two thousand hours of supervised experience in a mental health setting. Rooms are also staffed with graduate level interns from a social work or psychology program and Therapy Trainees (TT). TT’s have experience with children and have taken a general psychology course at a university or college. Children come to the program for three hours per day, five days per week.

Along with day treatment programming, children may also participate in individual play therapy or skills, family therapy or skills, occupational therapy, speech therapy and/or music therapy. Some children are also receiving Mental Health Behavioral Aide treatment in their home or academic setting in conjunction with day treatment. The
program is primarily funded through insurance. The majority of enrollees are on Medicaid. The program has received grants for special programs.

**Instruments**

There are two instruments that were used to collect data that were used in the secondary analysis. The following instruments were included in the analysis: the Attachment Pattern Scale (APS) (See Appendix B for a copy of the APS) and the Global Assessment of Functioning (GAF) (See Appendix C for a copy of the GAF). Some demographic data on the clients participating in the day treatment program is also available. The following data was collected when available: gender of participant, age at discharge, age at intake, primary diagnosis at intake, length of time in day treatment, data on family involvement and data on federal and/or state funding.

**Attachment pattern scale.** The APS was created and studied by two students at Argosy University working on their dissertations towards their Psy D. The concepts for the development of the APS came out of a second scale, Clinician’s Attachment Pattern Scale (CAPS) (Olson, 2000). Kottschade (2004) and Kingston (2004) used the items from the CAPS and expanded it to create the APS. The APS is a 46-item questionnaire (Kottschade, 2004, Kingston, 2004). In this study the APS is filled out by one of the client’s primary day treatment therapists, either the MHP I or MHP II. Questions are worded positively to try to highlight the secure attachment skills that young children are using. An example of an APS question is “Question 19. Accepts physical or verbal expression of affection from others.” The behavior or characteristic from each question is rated from 0-Never/Rarely, 1-Once in a great while, 2-Sometimes, 3-Frequently, 4-Always or almost always or N-not observed based on how often the child displays the
behavior or characteristic. An average APS total score equal to or greater than 2.56 indicates functional skills. See Appendix B for the full APS.

Kingston (2004), a developer of the APS, conducted a study on the scale’s reliability. Kingston (2004) collected data on APS scores from 164 children to determine whether or not the APS was a reliable measure of attachment. The children were brought into the study based on having an attachment trouble and were currently seeking treatment. The APS was administered both to the parent and the therapist to determine reliability. The results show that the APS is a reliable measure in four areas: “emotional connectedness, social skills, emotional management, and self-regulation” (Kingston, 2004, p 52).

Kottschade (2004), another developer of the APS used the same 164-child sample from Kingston (2004) research to determine whether or not the APS is a valid measure. The scores of the APS were compared to the scores of the Behavioral and Emotional Rating Scale (BERS). The analysis of the two scores generated “moderate to very strong correlations on subscale and total score comparisons” (p 53). These results also may imply that improved attachment skills decrease behavioral and emotional problems.

Global assessment of functioning. The GAF score is Axis V of the multiaxial classification system of the DSM-IV-TR (2000) 4th ed., text rev. The DSM-IV-TR describes Axis V, “for reporting the clinician’s judgment of the individual’s overall level of functioning. This information is useful in planning treatment and measuring its impact, and in predicting outcome” (4th ed., text rev., American Psychiatric Association, 2000, p. 32). GAF scores are recorded at the initial assessment of the client as well as at the time of discharge from the program. GAF scores are reviewed every three months when
treatment plan updates are conducted. GAF scores are a subjective score, given by the clinician performing the assessment, and include psychological symptomatology as well as impairment in functioning. GAF scores were collected to determine if there was any correlation between improvements in attachment skills and improvements in general functioning.

**Data Collection**

Data was collected for this secondary data analysis using the following steps:

1. The researcher had direct access to the data files.

2. The data was de-identified using a number to represent each set.

3. Subjects were chosen based on the availability of a full set of APS scores, which includes scores at ten days into treatment, six months into treatment and discharge.

4. The researcher had access to the following data for each subject:
   
   1) APS scores at ten days into treatment, six months into treatment and discharge
   
   2) GAF scores: intake and discharge scores
   
   3) Gender
   
   4) Age at intake
   
   5) Age at discharge
   
   6) Primary diagnosis at intake
   
   7) Length of time in day treatment
   
   8) Data on family involvement
   
   9) Data on federal and/or state funding
5. Once the data was de-identified it was stored on a password protected flash drive. The flash drive was stored in a locked filing cabinet.

6. Data was only taken outside of the agency once it was de-identified to conduct data analysis. The data was only available to the researcher.

7. Data analysis was conducted at the St. Catherine University/University of St. Thomas.

8. The de-identified data was destroyed on May 25, 2012.

Data Analysis

Data analysis was used to answer the following questions. Was there an improvement in attachment skills between ten days and six months? Was there an improvement in attachment skills between six months and discharge? Is there a difference in improvement in attachment skills at discharge based on gender, age or diagnosis?

Data analysis was conducted using IBM-SPSS Statistics Software. IBM-SPSS Statistics Software is software used to analyze data sets. T-tests were used to compare groups. The ten-day, six-month and discharge APS score were compared using t-tests. Discharge APS scores were also used to compare the group of subjects that had family involvement and the group of subjects that did not have family involvement as part of their treatment.
Results

Description of the Sample

The secondary data analysis had an original sample size of N = 50, 39 males and 11 females. In an initial evaluation of the data set, data for six males was thrown out. The data had insufficient information on when the Attachment Pattern Scale (APS) was administered and recorded. Data for a seventh male was also taken out of the sample due to insufficient information on age at discharge and treatment length. From the original sample size, two females’ data was not used. The data sets had insufficient data on treatment length and age at discharge. The data used in the final analysis was N = 41, 32 males and 9 females.

The age range for the 41 participants at the time of intake was 2.83 years to 5.83 years. The mean age at intake was 4 years. At the time of discharge the age range for participants was 3 years to 6.67 years. The mean age of participants, at discharge, was 5 years. Treatment length is defined as the time in the program from the first day of day treatment until the discharge date. Treatment length does not account for missed days of treatment. Treatment lengths ranged from 3 months to 1.58 years. The mean length of treatment was less than one year at 11.83 months.

Other descriptive factors include family involvement, public assistance and diagnosis. Family involvement included: family skills, family therapy and participation in family activities associated with the program. Children’s Mental Health Case Management services were also included as a family component however, not all subjects enrolled in the day treatment qualified for this service. Of the 41 participants, 17 families were involved and 23 families were not involved in programming. There was missing
data on family involvement for one participant. Public assistance is defined as any type of assistance the family or participant is receiving from the state or federal government including medical assistance, Minnesota Family Involvement Program (MFIP) or food support. The majority of the sample was on some type of public assistance: 37 were on public assistance, 3 subjects were not, and data was unavailable for 1 of the participants.

As shown in Table 1, the participants had one of eight primary diagnoses.

Table 1

*Diagnoses of Participants by Gender*

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Females n</th>
<th>Males n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disruptive Behavior Disorder</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Attention-Deficit Hyperactivity Disorder</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Post-Traumatic Stress Disorder</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Adjustment Disorder with Mixed Disturbance of Emotion</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Adjustment Disorder with Predominant Disturbance of Conduct</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Generalized Anxiety Disorder</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Reactive Attachment Disorder</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Anxiety Disorder, NOS</td>
<td>-</td>
<td>1</td>
</tr>
</tbody>
</table>

*Note.* N = 41.

**Attachment Pattern Scale**

**Descriptive statistics.** A day treatment therapist filled out the APS at ten days into treatment, six months into treatment and at discharge. APS scores at ten days range from 1.00 – 3.00 with a mean score of 2.14 and a standard deviation of .52. Scores were
EFFECTIVENESS OF DAY TREATMENT

not evenly distributed. APS scores at six months range from 1.51-3.51 with a mean score of 2.59 and a standard deviation of .48. APS scores at six months were not evenly distributed and are have a slight negative skew. APS scores at discharge range from 1.53 – 3.73 with a mean score of 2.93 and a standard deviation of .52. APS scores at discharge are not evenly distributed.

**Paired t-tests.** Paired t-tests are used to determine the differences of means. For this data set a paired t-test is used to compare mean scores of the APS at three points in time, including ten days into treatment, six months into treatment and at discharge. One assumption of a paired t-test is that the data is evenly distributed. Although the data of the APS scores at ten days, six months and discharge is not evenly distributed it is not skewed enough to effect the analysis. Furthermore, the difference between scores was evenly distributed. The APS scores are interval data. The sample sizes of each group, ten days, six months and discharge is roughly equal. The means of the APS scores at ten days, six months and discharge are shown in Table 2. The cutoff score for the APS is greater than or equal to 2.56. Mean scores for six months and discharge were above the cutoff score indicating a functional level of skills.

Table 2
**Attachment Pattern Scale Mean Scores**

<table>
<thead>
<tr>
<th></th>
<th>Ten Days</th>
<th>Six Months</th>
<th>Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Scores</td>
<td>2.14</td>
<td>2.59</td>
<td>2.93</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>.52</td>
<td>.48</td>
<td>.52</td>
</tr>
</tbody>
</table>

*Note. Ten Days N = 41. Six Months N = 41. Discharge N = 41. APS cutoff score = 2.56. Scores at or above cutoff score indicates functional skills.*

A paired t-test is used to determine if there was a statistically significant difference between APS scores at ten days and six months, t(38) = -6.75, p = .000, p < .05. There is a statistically significant different between mean APS scores at ten days and six months. There is also a large effect size, ES = .85. On average, participants improved .85 standard deviations between ten days into treatment and six months into treatment.

A paired t-test was also used to determine if there is a statistically significant difference between APS scores at six months and discharge, t(38) = -4.10, p = .000, p < .05. There is a statistically significant difference between APS scores at six months and discharge. The ES = .71, on average participants increased APS scores .71 standard deviation between six months of treatment and discharge.

Finally, a paired t-test was used to determine if there was a statistically significant difference between APS scores at ten days and discharge, t(40) = -9.818, p = .000, p < .05. There was a large effect size when comparing APS mean scores at ten days and discharge, ES = 1.51. On average, participants moved 1.51 standard deviations on APS scores from ten days to discharge.

**Global Assessment of Functioning**
Descriptive statistics. The Global Assessment of Functioning (GAF) is assessed at intake, treatment plan reviews and discharge for participants. GAF scores used in this study are from the initial assessment and discharge due to the inability to find GAF scores at other intervals. GAF scores at the initial assessment range from 15-55 and have a mean GAF score of 37.39 and a standard deviation of 6.66. GAF scores at the initial assessment are not evenly distributed. GAF scores at the time of discharge range from 30-75 with a mean score of 50.20 and a standard deviation of 8.304. GAF scores at discharge are not evenly distributed.

Table 3

Mean GAF Scores

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intake</td>
<td>37.39</td>
<td>6.66</td>
</tr>
<tr>
<td>Discharge</td>
<td>50.20</td>
<td>8.30</td>
</tr>
</tbody>
</table>

Note. N = 41.

Paired t-tests. A statistically significant difference between GAF scores at the initial assessment and GAF scores at discharge. A paired t-test was used to compare the GAF scores at the initial assessment and discharge, t(40) = -12.805, p = .000, p < .05 and was found to be statistically significant. GAF scores improved at a statistically significant level from intake to discharge.

Differences in Groups

Another way to understand the data is differences of mean APS scores using demographics to group the sample. First, participants were grouped based on diagnosis, then the mean APS discharge score was calculated for each diagnosis, see Table 3. The number of participants in each diagnosis group varied from n = 1 to n = 18 thus a paired
t-test was not appropriate for this data set. The number of female participants in the data set was approximately one third of the number of male participants so a paired t-test was not used. Table 4 shows the mean APS scores for males and female participants.

Table 4

*Mean Discharge APS Scores by Diagnosis*

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>n</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disruptive Behavior Disorder</td>
<td>18</td>
<td>2.95</td>
</tr>
<tr>
<td>Attention Deficit/Hyperactivity Disorder, Combined Type</td>
<td>3</td>
<td>3.28</td>
</tr>
<tr>
<td>Post Traumatic Stress Disorder</td>
<td>3</td>
<td>3.09</td>
</tr>
<tr>
<td>Adjustment Disorder with Mixed Disturbance of Emotion</td>
<td>8</td>
<td>2.99</td>
</tr>
<tr>
<td>Adjustment Disorder with Predominant Disturbance of Conduct</td>
<td>1</td>
<td>3.50</td>
</tr>
<tr>
<td>Generalized Anxiety Disorder</td>
<td>5</td>
<td>2.69</td>
</tr>
<tr>
<td>Anxiety Disorder, NOS</td>
<td>1</td>
<td>1.53</td>
</tr>
<tr>
<td>Reactive Attachment Disorder (313.89)</td>
<td>2</td>
<td>2.62</td>
</tr>
</tbody>
</table>

*Note.* N = 41. APS cutoff score = 2.56. Scores at or above cutoff score indicates functional skills.

Table 5

*Mean APS Scores at Discharge by Gender*
Gender  | n | Mean  
---|---|---
Male  | 32 | 2.96  
Female | 9  | 2.82  

*Note.* N = 41. APS cutoff score = 2.56. Scores at or above cutoff score indicates functional skills.

The final grouping that was used was participants who were and were not involved in a family component of treatment. Table 5 shows the mean APS scores at discharge for the participants with a family component and those participants without a family component.

Table 6

*Mean APS Scores at Discharge by Family Involvement*

| Family Involvement | n | Mean  
---|---|---
| Yes  | 17 | 2.82  
| No   | 23 | 2.73  

*Note.* N = 40. APS cutoff score = 2.56. Scores at or above cutoff score indicates functional skills.

Discussion

Findings
The sample. Although the sample size of this study, N = 41, is small, this is preliminary research using a scale that measures attachment in a day treatment study. Other studies used have had a larger sample size however the instruments may not have been capturing important elements of change in young children. It is important to note that nearly all of the 41 participants were on some type of public assistance. Furthermore, although ethnicity was not identified in this study, the majority of participants in this day treatment program are African American males. These factors could imply broader societal influences on who is being diagnosed with mental health disorders and who is being treated in intensive mental health programs for young children. In this particular sample there were only two young children diagnosed with Reactive Attachment Disorder (RAD). The remaining participants can be placed into one of three categories of diagnosis: disruptive, adjustment and anxiety. Despite the sample only having two participants with a diagnosed attachment disorder, on average the subjects improved their attachment pattern skills throughout the course of treatment. This implies that relationship based treatment has an impact on a broader spectrum of children with mental health disorders.

There are approximately three times more males than females in the sample. This sample does not include all young children that have been or are currently enrolled in day treatment. It suggests that more young males are being diagnosed and treated than young females in this type of intensive mental health treatment. This study did not address factors that lead to referrals or the specific behaviors young children displayed before enrolling in a day treatment setting.
The impact of day treatment on attachment pattern skills. The core of this research study is the hypothesis that day treatment for young children with emotional and behavioral disorders is effective in bringing about an improvement in attachment pattern skills. Based on paired t-tests, comparing the means of APS scores at three points in time, there was a statistically significant difference between mean scores at ten days and six months, six months and discharge and ten days and discharge. These results support the premise that day treatment for young children is an effective treatment to improve attachment pattern skills over time. These results are also congruent with findings from other day treatment studies on children of multiple ages. Other research including Whitemore, et al (2003), Robinson (2000) and Bennett, et al (2001) all showed statistically significant differences. The APS was not used in the aforementioned studies. However, results also indicated that the participants of those day treatment programs made improvements over time.

This study also yielded a statistically significant change in Global Assessment of Functioning (GAF) scores from initial assessment to discharge. A paired t-test was used to compare means of GAF scores. Independently, it is difficult to use the GAF as a measure, however it the results do support the notion that young children improve in global functioning as well as in attachment pattern skills over time. This finding is consistent with Bennet et al. (2001) findings of improved GAF scores for participants of a day treatment program.

Implications for Social Work
This study reveals several important implications for social work practice. First, day treatment is effective in improving attachment pattern skills over time, for a sample of 41 young children, with emotional and behavioral disorders at a community mental health agency. This study helps support the use of the APS, a scale that measures attachment pattern skills in children that are too old for the Strange Situation (Ainsworth, 1978) and too young for the Adult Attachment Interview (Main, 2000). The APS is a valid and reliable scale that fills a gap in evaluating and understanding attachment in children. In the future it is possible that the APS could be studied and then used to evaluate and better inform treatment. Currently the APS can continue to be used by social workers as well as other mental health professionals as a supportive measure to determine attachment pattern skills.

The research implies that social workers should consider family participation when treatment young children with emotional and behavioral disorders. Family involvement and no family involvement were calculated as a descriptive statistics. For young children whose families were involved in treatment there is a mean score of 2.82 while the mean score of young children whose families were not involved in treatment is 2.73. This result may imply that family involvement is an important factor in day treatment for treating young children with emotional and behavioral disorders. One explanation for this is that attachment is a two way street. What the young children achieved in day treatment might not apply across settings. If caretakers and families were involved in treatment, attachment pattern skills might also have been improving in those familial relationships. Family involvement should be considered by social workers as a mode of treatment for young children with emotional and behavioral disorders.
Limitations and Recommendations for Future Research

Although this study showed positive changes in attachment pattern skills over time there are also several limitations to the study and results. First, the low sample size is a limitation in the ability to generalize the results from this study to other day treatment settings. The low sample size also includes low numbers of young children with certain diagnoses that may be seen more in the general population or other samples of day treatment participants.

It is recommended that continued data be collected at the particular agency used in this study. A larger sample size would strengthen the results that the program is effective in increasing attachment pattern skills over time. It would also be useful for the agency to collect more demographic information such as race/ethnicity, attachment style of the parent or primary caregiver and the type of family involvement. Collecting more information could support different ideas about what is effective when working with young children with emotional and behavioral disorders.

The APS is a developing instrument that has not been used widely to assess the effectiveness of day treatment on attachment pattern skills over time. Further research should continue to use the APS to assess for attachment skills over time as well as to strengthen the validity and reliability of the measure. It will be important to continue to develop this instrument, as there are not other instruments that evaluate attachment pattern skills in children at this particular age group as well as older children and adolescents.

The APS could also be introduced in other agencies and programs that are also using day treatment as an intensive treatment for young children as well as older children
and adolescents with emotional and behavioral disorders. Further research would strengthen the validity and reliability of the APS as well as determine how attachment pattern skills are changing in other settings and other age groups. Studies like these could help determine the crucial period to treat children with decreased attachment pattern skills.

Another limitation of this study is the lack of information on treatment modality. Currently, there is not a manual describing how to practice day treatment with young children in this setting. APS scores could vary on several factors including the clinician who filled out the APS, the clinician’s feelings towards the participants, the length of time the clinician has been in day treatment as well as the amount of experience the clinician has. The results do not account for differences in APS assessors. A child is not guaranteed the same treatment team for the length of treatment. A different person could have rated participants at all three points in time. Although in this particular setting, the assessor is most likely the MHP I, changes in positions happen frequently.

Last, as with other studies on the effectiveness of day treatment for children, there is very little in the literature on how to do effective day treatment as well as the components of it. The results of this study point to a methodology that includes using attachment focused interventions. It would be useful for social work practice as well as the practice of other mental health professionals to understand why and how day treatment works for changing attachment pattern skills over time. Furthermore, this research could make it more clear why and how day treatment can be effective in other ways. Studies on what works would be difficult to plan and carry out. Children enrolled
in day treatment are a vulnerable population. The views vary of what works and how to do things as well as specific clinicians styles throughout the field.

Conclusion
The purpose of this study was to determine whether or not day treatment for young children was effective in improving attachment pattern skills over time using the Attachment Pattern Scale as a measure of attachment pattern skills. This study addressed a gap in the research by using a scale that assesses attachment pattern skills. The study focused on attachment with the premise that improved attachment is correlated with improved functioning in young children with emotional and behavioral disorders.

The study found that this day treatment setting is effective at changing attachment pattern skills over time. Paired t-tests were used to compare mean APS scores at three points in time. The paired t-tests revealed that there is a statistically significant difference in the mean APS scores from ten days to six months, six months to discharge and ten days to discharge. Furthermore, the means of GAF scores improved at a statistically significant rate between intake and discharge supporting the idea that improvements in attachment pattern skills is correlated with general functioning.

The findings of this preliminary research study are profound. The findings imply that day treatment can be effective at treating young children with emotional and behavioral disorders at young ages. Day treatment should continue to be studied and developed to meet the needs of this vulnerable population of young children to help them reach the highest level of success.

References


Appendix A. Letter of Permission for use of Data

Dear Stephanie:

We have received the letter from the IRB Committee at St. Catherine University, giving their approval for your research study using data regarding the children in [Redacted] Preschool Day Treatment Program. Since this was the last approval needed before we give our consent, we are happy to approve your study and invite you to make arrangements with [Redacted], the Program Manager of the [Redacted] Mental Health Program to begin.

Our understanding is that you will conduct the study under the parameters identified by the IRB Committee at St. Catherine’s and the description you supplied to us in your earlier communication.

Sincerely,

[Redacted]

Director, Behavioral and Mental Health and Clinical Research Committee
## Appendix B. Attachment Pattern Scale (APS)

### Attachment Pattern Scale

Directions: Listed below are characteristics and behaviors associated with the area of attachment. When answering, consider what is appropriate and expected for most children around the same age. Please circle the response that best describes how often the child has demonstrated the behavior or characteristic during the past month, using the following scale:

- **0-Never/Rarely**
- **1-Once in a great while**
- **2-Sometimes**
- **3-Frequently**
- **4-Always or almost always**
- **N-not observed**

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Shows good eye contact</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>2 Expresses affection toward others</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>3 Adjusts to change and handles transitions</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>4 Asks appropriately for what he/she wants or needs</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>5 Tells the truth</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>6 Thinks before acting</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>7 Separates from caregiver without being overly clingy</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>8 Shows sensitivity/understanding of others’ feelings</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>9 Appears emotionally connected to therapist</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>10 Regulates eating (can tell when hungry or full)</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>11 Allows others to comfort him/her when upset or hurt</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>12 Is able to make and keep friends</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>13 Displays emotions that match or fit the situation</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>14 Feels successful and competent</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>15 Tolerates frustration, appropriate to age level</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>16 Appears happy</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>17 Manages anxiety</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>18 Controls bladder functions</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>19 Accepts physical or verbal expression of affection from others</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>20 Feels physically healthy (i.e. few complaints of headaches, stomachaches, pains)</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>21 Demonstrates an ability to soothe or calm self</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>22 Separates from therapist and leaves therapy session on time</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>23 Accepts limits and is able to follow rules</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>24 Demonstrates nurturing behaviors toward self (as seen in play, being kind to self)</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>25 Developmental level appears to match chronological age</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>26 Appears emotionally connected to caregiver</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>27 Demonstrates guilty feelings for misbehavior</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>28 Values people as people, rather than as objects</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>29 Asks permission before taking things (does not steal)</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>30 Self-discloses; shares more personal aspects of self</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>31 Maintains appropriate physical boundaries with others</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>32 Gives people emotional &quot;space,&quot; instead of being demanding and needy</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>33 Interacts appropriately with strangers (is not overly friendly or withdrawn)</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>34 Expresses a wide range of emotions</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>35 Accepts shades of grey (instead of seeing people /situations as all good or all bad)</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>36 Trusts others</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>37 Trusts there will be enough food (does not hoard or steal food)</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>38 Appears aware of his/her feelings</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>39 Shows nurturing toward others, including dolls or toys</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>40 Able to work on issues involving loss or trauma</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>41 Is trustworthy</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>42 Uses caregivers as a secure base (seeks caregiver out for reassurance and can separate again)</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>43 Able to identify people that love or care about him/her</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>44 Expresses anger appropriately and safely</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>45 Exhibits healthy self-esteem</td>
<td>0 1 2 3 4 N</td>
</tr>
<tr>
<td>46 Shows good judgment regarding what to disclose and to whom</td>
<td>0 1 2 3 4 N</td>
</tr>
</tbody>
</table>
Appendix C. Global Assessment of Functioning (GAF) Scale

Global Assessment of Functioning (GAF) Scale

(From DSM-IV-TR, p. 34.)
Consider psychological, social, and occupational functioning on a hypothetical continuum of mental health-illness. Do not include impairment in functioning due to physical (or environmental) limitations.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Superior functioning in a wide range of activities, life's problems never seem to get out of hand, is sought out by others because of his or her many positive qualities. No symptoms.</td>
</tr>
<tr>
<td>90</td>
<td>Absent or minimal symptoms (e.g., mild anxiety before an exam), good functioning in all areas, interested and involved in a wide range of activities.</td>
</tr>
<tr>
<td>80</td>
<td>If symptoms are present, they are transient and expectable reactions to psychosocial stressors (e.g., difficulty concentrating after family argument); no more than slight impairment in social, occupational, or school functioning (e.g., temporarily failing behind in school/ work).</td>
</tr>
<tr>
<td>70</td>
<td>Some mild symptoms (e.g. depressed mood and mild insomnia)</td>
</tr>
<tr>
<td>60</td>
<td>OR some difficulty in social, occupational, or school functioning (e.g., occasional truancy, or theft within the household), but generally functioning pretty well, has some meaningful interpersonal relationships.</td>
</tr>
<tr>
<td>50</td>
<td>Moderate symptoms (e.g., flat affect and circumstantial speech, occasional panic attacks)</td>
</tr>
<tr>
<td>40</td>
<td>OR moderate difficulty in social, occupational, or school functioning (e.g., few friends, conflicts with peers or co-workers).</td>
</tr>
<tr>
<td>30</td>
<td>Serious symptoms (e.g., suicidal ideation, severe obsessional rituals, frequent shoplifting)</td>
</tr>
<tr>
<td>20</td>
<td>OR any serious impairment in social, occupational, or school functioning (e.g., no friends, unable to keep a job).</td>
</tr>
<tr>
<td>10</td>
<td>Some impairment in reality testing or communication (e.g., speech is at times illogical, obscure, or irrelevant)</td>
</tr>
<tr>
<td>0</td>
<td>OR major impairment in several areas, such as work or school, family relations, judgment, thinking, or mood (e.g., depressed man avoids friends, neglects family, and is unable to work; child frequently beats up younger children, is defiant at home, and is failing at school).</td>
</tr>
<tr>
<td></td>
<td>Behavior is considerably influenced by delusions or hallucinations</td>
</tr>
<tr>
<td>30</td>
<td>OR serious impairment in communication or judgment (e.g., sometimes incoherent, acts grossly inappropriately, suicidal preoccupation)</td>
</tr>
<tr>
<td>21</td>
<td>OR inability to function in almost all areas (e.g., stays in bed all day; no job, home, or friends).</td>
</tr>
<tr>
<td>20</td>
<td>Some danger of hurting self or others (e.g., suicide attempts without clear expectation of death; frequently violent; manic excitement)</td>
</tr>
<tr>
<td>11</td>
<td>OR occasionally fails to maintain minimal personal hygiene (e.g., smears feces)</td>
</tr>
<tr>
<td>10</td>
<td>OR gross impairment in communication (e.g., largely incoherent or mute).</td>
</tr>
<tr>
<td>1</td>
<td>Persistent danger of severely hurting self or others (e.g., recurrent violence)</td>
</tr>
<tr>
<td>0</td>
<td>OR persistent inability to maintain minimal personal hygiene</td>
</tr>
<tr>
<td></td>
<td>OR serious suicidal act with clear expectation of death.</td>
</tr>
<tr>
<td></td>
<td>Inadequate information.</td>
</tr>
</tbody>
</table>