

THESIS

SCHOOL-BASED INDIVIDUAL THERAPY FOR CHILDREN
WITH BEHAVIOR PROBLEMS

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ABSTRACT

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This study was conducted to assess the impact of individual child therapy for children aged 5-11 who exhibit classroom misbehavior. We hypothesized that the emotional availability of children would significantly increase and that reports of behavior problems would significantly decrease over the course of a school-based child therapy intervention. The Emotional Availability (EA) Scales (Biringen, 2008) were used to assess child therapeutic engagement. (Biringen & Easterbrooks, 2000). Therapy sessions were taped monthly to assess the child's EA. Disciplinary referral data and teacher reports of behavior problems using the Teacher Report Form (TRF) (Achenbach,1991) were collected pretest and posttest. Results indicated a significant reduction in disciplinary referrals, but no significant changes in teacher reports or EA scores. Implications and future directions for research are discussed.

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INTRODUCTION

Children with classroom behavior problems pose significant challenges for teachers and often disrupt the learning of fellow students. The causes of behavior problems in school are diverse—some are due to situational and environmental stressors, while others can be classified as more serious emotional and behavioral disorders (Rones & Hoagwood, 2000). The causes and types of student misbehavior are varied, but they often occur in a relational context and are reciprocally influenced by peers, teachers, and parents (Davis, 2003). Children have memories and expectations about themselves and others that strongly influence classroom behavior and subsequent life trajectories (Masten, Roisman, Long, Burt, Obradović, Riley, et al. 2005). In this study, we examine the effectiveness of standard (individual) child therapy in the schools to shift the relational expectations and subsequent behaviors of students with behavioral or socioemotional problems in the classroom. We used the Emotional Availability Scales to assess the emotional engagement of referred students. Therapists were given information on the EA construct but did not receive formal training; thus, EA was largely used as an assessment tool in this study rather than a course of intervention.

Between 12 and 22% of children and adolescents under the age of 18 are in need of mental health services, and schools are the sole treatment providers for the vast majority of students (Greenberg, Domitrovich, & Bumbarger, 2001). Without intervention, mental health problems in childhood often continue into adulthood and become harder to change. For children diagnosed with more severe emotional or behavioral disorders, symptoms

could potentially become more intense with time and could even result in criminal behavior and psychiatric diagnoses later in life (Rones & Hoagwood, 2000).

Students who act out in class but do not meet the criteria for a clinical disorder still create significant problems for teachers and other students. Classroom misbehavior is a major predictor of teacher stress, emotional exhaustion, and ultimately burnout, which reduces teaching quality (Hastings & Bham, 2003). More time spent on discipline and classroom management means less time spent on academic instruction for other students as well (Clunies-Ross, Little, & Kienhuis, 2008). Thus, socioemotional and behavioral problems in the classroom have cascading influences that can shape teacher effectiveness, student achievement, and the larger school climate (Clunies-Ross, Little, & Kienhuis, 2008). Intervention can help not only the high risk children themselves, but also the overall quality of the teaching and classroom context.

Social and Emotional Abilities in School

Research shows that there is a strong link between social abilities and school success (Bergin & Bergin 2009). In a diverse sample of 3rd and 4th graders, social skills were positively related to measures of language, reading and math skills, while problem behaviors were negatively related to these measures (Malecki & Elliot, 2002). In another study, socioemotional adjustment in school predicted academic achievement at grades 1, 3, 6, and 10—these results were significant even after controlling for IQ (Sroufe, Egeland, Carlson, & Collins, 2005). Learning occurs in a social context, and positive relationships create a motivating force for students. Social goals may influence students' motivation as much as learning goals.

Ladd and Burgess (2001) explored risk and protective factors in school behavior problems. They found that children who had a tendency toward aggressive behavior in kindergarten were significantly influenced by their relational experiences. Children who had conflictual relationships with teachers were at greater risk for maladjustment (measured by cooperative participation and misconduct) while positive relationships with teachers buffered the effects of aggressive tendencies. The study also measured peer relationship quality (such as victimization and aggression) and these relationships influenced behavior as well. The authors present an additive model for maladjustment, indicating that early aggression is shaped by both positive and negative relational factors.

Social skills and proper classroom behaviors are crucial in the development of supportive teacher-child relationships, which influence children's academic achievement and school success. Pianta (1999) reported that children with positive relationships with their teachers had better social competencies and fewer behavioral problems, and were better adjusted to school than students who had conflictual relationships with teachers. In another study, the teacher-student relationship mediated the link between effortful control and academic achievement (Valiente, Lemery-Chalfant, Swanson, & Reiser, 2008).

Children with behavior problems who continue to have poor relationships with teachers are at greater risk because chronic relational risks predict more severe behaviors, as well as a broader range of adjustment problems over time (Ladd & Burgess, 2001). In other words, children who had chronically poor relationships with teachers and peers were more likely to expand the scope of their behaviors beyond the classroom and violate broader sociomoral rules. Without intervention, confrontive aggression and misconduct

can solidify into antisocial patterns of relating that become harder to change. It is crucial for schools, policymakers, and clinicians to work towards effective interventions for children in this risk group.

Interventions

Interventions for children with behavior problems work to boost protective factors and reduce risk factors, and these elements can be altered through different systems. Individual level interventions work to change specific child characteristics like social skills, while interactional level interventions work to change the relationship between the child and his or her environment (Greenberg, Domitrovich, & Bumbarger, 2001). Interactional level interventions include those that focus on attachment security, and studies show that secure attachment to a single adult figure is a significant protective factor for at-risk youth (Bergin & Bergin, 2009). Interactional level interventions are promising, but far more studies have focused on behavioral/individual level interventions (Greenberg, Domitrovich, & Bumbarger, 2001).

Child therapy is one intervention that targets the relationship between the child and his or her environment. Play Therapy, Filial Family Therapy, and Cognitive Behavioral Therapy are some of the most popular practices in this field. The specific mechanisms of change in these models remain elusive, but many argue that therapeutic alliance is a fundamental ingredient in successful outcomes. Indeed, hundreds of studies in the adult literature link behavior change to therapeutic alliance, and in 2002 the American Psychological Association identified it as an important element in evidence-based practice (McLeod, 2011). The child therapy field, however, lacks consistent definitions, methodology and evidence linking alliance with outcomes. Children who are

emotionally connected to their therapists will likely be more receptive and open to change, but there are few reliable, valid measures to assess this aspect of the therapist-client relationship.

The Emotional Availability Scales were originally created to assess the affective climate of the parent-child dyad. Parent-child relationships are similar to therapist-client relationships—therapists create an environment of sensitivity, structure, and emotional safety. From this safe space, clients are able to explore and process uncomfortable emotions. Emotional Availability could provide useful insight into therapeutic alliance and therapeutic mechanisms of change.

Emotional Availability

Emotional availability (EA) assesses the global, relational quality of an adult-child relationship, and numerous studies have established its link to attachment across different cultures, SES, and child ages (Oyen, Landy, & Hillburn-Cobb, 2000; Easterbrooks, Biesecker, & Lyons-Ruth, 2000; Bornstein, Putnick, Heslington, Gini, Suwalsky, Venuti, et al., 2008). EA has also been applied to relationships beyond the parent-child context— children are more likely to form secure attachments with emotionally available child care workers (Biringen et al., 2008). EA is an exciting construct that links attachment-based representations to measurable behavior change. In this study, we will assess the emotional availability of children in school-based, individual therapy and track their subsequent outcomes.

Emotionally available adult-child relationships are characterized by sensitivity, structuring, nonintrusiveness, and nonhostility on the adults' side, and responsiveness and involvement on the child's side. These dyads are natural, easygoing, and provide a

secure base from which the child can explore. The adult appropriately reads the child's cues and structures the interaction, while the child is able to safely explore and include the adult in their play. A child who exhibits externalizing behaviors for example, might have had intrusive and hostile caregivers in the past, resulting in their own low levels of involvement and responsiveness. This pattern reinforces itself, and the child's low responsiveness and involvement may elicit similarly hostile or intrusive responses from other adults (Sroufe, Egeland, Carlson, & Collins, 2005).

EA is a useful construct because unlike attachment security, it can be measured in low-stress situations like play. During any dyadic interaction, the EA Scales (Biringen, 2008; Biringen, Robinson, & Emde, 1998) can be used to determine the affective quality of relationships on a continuous scale. It can also be applied to different relationships and in different contexts, allowing researchers to study changes in relational behavior. One of the greatest strengths of EA is its assessment of global affect. Instead of counting discrete behaviors, EA recognizes and appreciates the "feel" of interactions. Subtle differences in voice tone, posture, and facial expressions are all taken into account.

Children who have emotionally available relationships with parents tend to be less aggressive and are also less likely to be victimized by their peers (Biringen, 2004; Biringen, Skillern, Mone, & Pianta, 2005). When children integrate emotional availability into their internal working models, their experiences in school may match those expectations. Positive peer relationships are associated with school success, so EA has the potential to have a cascading effect.

EA is also associated with children's attentiveness. When children's eye movements were tracked in a Kindergarten classroom, more attentive children also had

greater emotional availability; children with high EA also had fewer behavioral problems in school and got along with their teachers better than children with low EA (Biringen, Skillern, Mone, & Pianta, 2005). It is likely that these children had supportive, understanding relationships with early caregivers that shaped their internal working models and expectations of other adults. .

Emotional availability has typically been studied with regard to mother-child dyads, but because children are open systems, their experiences in one context are applied to others—they are constantly learning and making meaning about the world around them. Internal working models are continuously shaped by new interpersonal experiences, including those with teachers, therapists, and other school professionals (Mikulincer & Shaver, 2007). Increasing the emotional availability of children in one setting may alter behaviors in other settings as well.

The Current Study

This study will use an individual child therapy model with general EA principles used as a frame to improve the emotional availability and behavioral outcomes of children exhibiting socioemotional or behavioral problems. We hypothesize that children who receive the therapy will show significantly fewer problem behaviors reported by parents and teachers and will show significant increases in emotional availability during therapy sessions, as measured by pre- and posttests.

METHOD

Participants

Teachers from one Thompson Valley Elementary school referred 19 students who exhibited socioemotional or behavioral problems in a K-5 classroom. One student dropped out, leaving 18 participants to receive the full therapy dose of 10 to 12 sessions. While clinical diagnoses were not the focus of this project, 50% of the sample scored within clinical or borderline range of ADHD symptoms according to teacher reports. For clinical range scores of the sample, see tables 1-2.

Five participants did not report their ethnicity; of the 13 participants who gave their ethnicity, 9 (64.3%) were White and 4 (35.7%) were Hispanic. Two of the 19 subjects were female, and ages ranged from 5 to 11 ($M = 8.16$; $SD = 1.83$).

Measures

The Emotional Availability Scales, Version 4. The Emotional Availability Scales (EAS) assess the global, relational quality of adult-child interactions. The scales measure four EA dimensions for the adult (sensitivity, structuring, nonintrusiveness, and nonhostility) and two EA dimensions for the child (responsiveness and involving); each dimension also includes seven subscales. In this study, Emotional Availability was only assessed for the child (Child Responsiveness; Child Involvement) because coders were not adequately reliable in scores of adult EA.

Reliability. Two coders were trained using the standard training protocol for the EA Scales (Biringen, 2005). Reliability was then assessed for the current sample using total EA scores. Total EA scores are the summed subscales for each of the two child domains and range from 1-29. Coders scored two rounds of videos to establish reliability using Pearson correlations—seven videos in the first round and ten in a second round. In the first round, there was a high level of reliability ($r = .86$) for total child responsiveness, as well as a high correlation ($r = .92$) for total child involvement. The second reliability round included the data from round one ($N = 7$) plus three additional videos ($N = 10$), and the reliability was acceptable for both child responsiveness ($r = .84$) and child involvement ($r = .89$).

Parent and teacher questionnaires. The Child Behavior Checklist / 6-18 (CBCL) is a 120-item questionnaire used to identify internalizing and externalizing behavior problems in children within the last six months and is designed for the primary caregiver (Achenbach, 1991). The Teacher Report Form / 6-18 (TRF) is a 120-item questionnaire that teachers complete about current students' behaviors, and includes internalizing, externalizing, inattentiveness, and hyperactivity subscales; inattentiveness and hyperactivity are also combined for an additional Attention-Deficit Hyperactivity Disorder (ADHD) subscale score (Achenbach, 1991). Survey return rate was a challenge in this study—at pretest, four teachers did not return the TRF and five parents did not return the CBCL. At posttest, three teachers did not return the TRF and 11 parents did not return the CBCL. Because over half of CBCL surveys were missing at posttest, we did not use this measure in analyses. Parent reports will not be referred to for the

remainder of the paper, except Time one scores to describe the types/level of child problems; see table 3 for these descriptives.

Disciplinary referrals. Disciplinary referrals were obtained through the School Wide Information System (SWIS) which tracks behavior problems and referrals throughout the school. Frequencies of disciplinary referrals before the onset of therapy but in the same year (August-December) and at the very end of the period of therapy (April-May) were used in analyses. The reader should note that therapy began in the third week of January and ended in May.

Procedure

In accordance with IRB, consent was first established through the principal of the school. Researchers then contacted the school guidance counselor who helped to coordinate with teachers and parents through the remainder of the project.

Students identified by teachers as candidates for child therapy received a packet to take home with a letter explaining the study, a parental consent form, and a questionnaire (CBCL). Once parental consent was established, the child's teacher received a consent form and teacher questionnaire (TRF). The child's teacher, the research team, and the school counselor established a regular time and day of the week the student would meet with the therapist. Note that all referred children (regardless of profile of scores) were included in the study.

Marriage and family therapists in the community were recruited to take part in the study; a total of four therapists and two MFT graduate students volunteered to see children enrolled in the project. Therapists met with child participants for 30 minutes, 10 to 12 times over the course of four months. Approximately every fourth session was

recorded and these tapes were used to code the child's EA towards the therapist— a total of three filmings were completed over the course of the study (time one, time two, time three). Post-test questionnaires from teachers were collected approximately 2 weeks after the end of the therapy.

Individual child therapy protocol. Therapists were given access to information on the principles of emotional availability (e.g., *The Universal Language of Love*, *Raising a Secure Child*, two books that explain EA behaviors and interactions for parents). Therapists also were given access to the standard EA training videos online. Therapists were instructed to be emotionally available throughout their individual child therapy sessions and to consistently provide a secure base for the child to explore attachment-based issues. Thus, the therapists were only provided information about EA but were not actively trained in the EA Scales (to reliability) nor actively video coached with respect to their use of EA during therapy (Biringen, 2005).

Marriage and family therapists are trained to have a strong systemic focus and are encouraged to work with the whole family unit whenever possible. Programs typically include classes on child development and supervised therapeutic experience working with children and families. A recent study of 27 MFT program directors and 184 licensed marriage and family therapists reported that in terms of treating children, MFTs were most competent in addressing parenting and blended family issues; they were less competent in DSM diagnosis and clinical assessments (Raimondi & Walters, 2004). The systemic, relational perspective of MFTs dovetails with attachment-based interventions and gives them a richer understanding of therapeutic goals because family systems are rooted in attachment needs and behaviors. However, these therapists had not received

any in-depth coursework or training in attachment or attachment-derived methods during their master's program or afterward.

Therapists used the MacArthur Story Stem Battery monthly to help them assess attachment narratives and therapeutic areas of focus. In this procedure, children were given dolls to represent their family. Therapists began to tell a story that highlighted separation and reunion themes (parents going away for the weekend), and children were asked to complete the narrative (Robinson, Mantz-Simmons, Macfie, & The MacArthur Narrative Working Group, 1992). In this study, MSSB was not used as a measure but as a therapeutic strategy.

Therapists also had phone or in-person group supervision every two weeks with Dr. Zeynep Biringen, child psychologist and creator of the Emotional Availability Scales. In these meetings, therapists discussed strategies to help move the child towards a more secure attachment narrative. Collaborative feedback was used to guide therapy. The supervisor watched at least one video of each therapist with the child client, but did not use active video coaching as an aspect of the supervision.

RESULTS

Clinical range frequencies were calculated with pretest CBCL and pretest TRF reports to assess the clinical makeup of the sample; these frequencies can be found in Tables 1-2. Descriptive statistics were also calculated for pretest CBCL reports (Table 3), and pretest and posttest TRF reports (Table 4). Descriptive statistics were also calculated for EA scores at times one two and three and pre and posttest disciplinary referrals; see Tables 5-6.

Correlations of EA with Teacher Report and Disciplinary Referrals

Pearson correlations were performed to test the hypothesis that increases in EA would be linked with lower TRF scores. There were no significant correlations among EA scores at the three time points and teacher reports of internalizing, externalizing, or ADHD behaviors, or of EA at the three time points and disciplinary referrals. There were, however, significant correlations between pretest teacher reports of inattention and EA child responsiveness at time one ($r = .66, p < .05$), pretest inattention and EA child involvement at time one ($r = .67, p < .05$) and pretest ADHD behaviors and responsiveness at time one ($r = .66, p < .05$). Posttest teacher reports of inattention were significantly correlated with EA Child responsiveness at time two ($r = .53, p < .05$). The positive correlation between EA and ADHD symptoms is counterintuitive, but this may be related to other factors associated with ADHD. It is conceivable, for example, that the ADHD children were pleased with the one-on-one interaction afforded by individual child therapy. Age was significantly negatively correlated with teacher reports of

hyperactivity ($r = -.82, p < .05$), ADHD behaviors ($r = -.79, p < .05$), externalizing behaviors ($r = -.59, p < .05$), and total TRF scores ($r = -.69, p < .05$) at pretest, such that younger children scored higher on problematic behavior. At posttest, age was significantly negatively correlated with measures of hyperactivity ($r = -.71, p < .05$), ADHD behaviors ($r = -.52, p < .05$), and total TRF scores ($r = -.51, p < .05$). Age was not significantly correlated with child EA scores at times one, two, or three.

Pre/Posttest Changes

Paired sample *t* tests were conducted to test the hypothesis that child EA scores would increase over the course of therapy. No significant changes were found between time 1 and time 2, time 2 and time 3, or time 1 and time 3. Paired samples *t* tests were also performed to test the hypothesis that there would be significant reductions in teacher reports of internalizing, externalizing, and ADHD behaviors; no significant changes were found here either.

There was, however, significant change in the number of disciplinary referrals from before to (August through January) ($M = 3.00, SD = 4.67$) to the end (April through May) of the therapy ($M = .57, SD = 1.02$), $t(13) = 2.02, p < .05$. In other words, the average referral rates of children in the study significantly decreased over the course of therapy.

Monthly frequencies of school-wide disciplinary referrals were also collected. Monthly school-wide referral frequencies were divided by the number of children attending the school ($N = 215$), and monthly sample referral frequencies were divided by the number of children in the study with reported SWIS data ($N = 14$) to create a standard metric of referrals per child per month. At pre-test, the average referral rate per student

per month in the therapy group ($M = .51$, $SD = .37$) was slightly higher than the average referral rate per student per month in the general school population ($M = .18$, $SD = .09$), $t(10) = -2.17$, $p < .10$. And at post-test, the average referral rate of the therapy group ($M = .29$, $SD = .30$) was closer to the general school population mean ($M = .16$, $SD = .06$), $t(2) = -.563$, n.s. (see Figure 3).

DISCUSSION

The current study examined the relationship between EA scores over the course of child therapy and subsequent behavioral outcome measures; we hypothesized that Child EA scores would significantly increase and that this would be related to significant reductions in problem behaviors. There were significant reductions in disciplinary referrals for children in the study, suggesting that the therapy influenced objective measures of behavior problems. Results also indicated that disciplinary referrals for the therapy group at pretest were higher than that of the general school population, and this difference shrunk by the end of the standard child therapy sessions at school. However, teachers knew which children were participating in the study, and this could have influenced referral rates for those children. Regardless, these results are promising because disciplinary referrals have been cited as valid measures of student behavior even when controlling for student, classroom, and school factors (Pas, Bradshaw, & Mitchell, 2011).

Results from this study did not support the hypothesis that emotional availability would significantly increase over the course of the individual child therapy, and this null result could be due to several factors. Dosage could have been a contributing factor—ten to twelve 30-minute sessions, particularly without the involvement of parents or teachers, may not have been enough time for children to fully develop relationships with their therapists. It could also be that standard child therapy practice without evidence-based training does not yield significant therapeutic outcomes in the area of emotional

availability in relationships, an area closely linked with attachment (Easterbrooks & Biringen, 2000). The issue of usual care versus evidence-based practice is a hotly contested issue among clinicians and researchers. A recent meta-analysis of 36 randomized, controlled child therapy interventions concluded that evidence-based practices were generally more effective than usual care, but that usual care was as good or better than evidence-based practices in a subset of these studies (Weisz, Jensen-Doss, & Hawley, 2006).

Results also did not support the hypothesis that there would be significant reductions in teacher reported behavior problems. The null results could also be related to informant bias. Teachers may be more attentive to behavior that fits past schemas because it is easier to attend to familiar expectations. Studies have linked teacher attributions to student outcome measures, suggesting that schemas have strong and lasting influence on perceptions (Dobbs & Arnold, 2009).

There was a significant positive relationship at time one between pretest teacher reports of inattentiveness and child responsiveness and child involvement, and pretest teacher reports of overall ADHD behaviors and child responsiveness. Teacher reports of inattentiveness at posttest were also linked to child responsiveness at time two. In other words, students who scored high on EA at times one and two were also more likely to exhibit inattentiveness and ADHD behaviors in the classroom. It could be that time outside of the typical classroom environment was a welcome relief for these children, or that these children thrive on more individualized attention—their distractibility could suggest an interest in people rather than class work. Teachers did not report any decline in classroom ADHD behaviors, but the therapy may have influenced domains beyond

those assessed by the TRF. For example, individual attention and relational variables could stimulate higher order thinking or creativity within this population.

The Range of Possible Changes model grew out of the latest push for evidence-based interventions (EBIs) and underscores the use of variable outcome and study results. Inconsistent results across studies and outcome measures tend to be dismissed as error rather than used to create more nuanced hypotheses. Results may indicate context-specific patterns that can be used to individualize treatment (De Los Reyes & Kazdin, 2006). For example, standard (individual) child therapy may not reduce teacher-reported ADHD symptoms in class or increase emotional availability in the therapist-child relationship, but it might improve math or lateral thinking for that population. Another intervention may not influence frequency of disciplinary referrals at school, but it might influence behavior or relationships at home. The emotional availability of children in this sample did not significantly change over the course of therapy, and these results could guide future applications of the EA construct. Future research could address when, how, and under what circumstances the EA principles are most useful.

Limitations

This study has several limitations. First, the sample is small and was drawn from a single school, which reduces inferential power. In addition, the population of children included a wide range of behavior problems, including externalizing and internalizing kinds. Greater homogeneity of the population and a larger sample size to examine group differences might provide information on what outcomes are most clear for each type of behavior problem.

Therapists also varied widely in their therapeutic styles and implementation of emotional availability. Individual child therapy can look extremely different when there is not a manualized set of procedures or goals. The Macarthur Story Stem was a consistent part of protocol in sessions, but this also proved to be a limitation of the project. Students did not like the activity, and filming different activities would have given coders the chance to see the dyad in other contexts.

This school-based child therapy did not involve parents or teachers in sessions, and including the parents might have resulted in bigger pre- to post changes. Weekly 30-minute sessions with a therapist might not be sufficient to create changes in the child's relationships, but active coaching of parents (Biringen et al., 2010; Bratton, Landreth, & Lin, 2010) as well as teachers in emotional availability (Biringen et al., in press) has resulted in such changes. Greenberg and colleagues (2001) also note that successful interventions are those that stretch beyond individual child characteristics and address larger systems. Significant and lasting change is more likely to take place when teachers and parents are included in program design because this provides consistent, systemic change.

Future Directions

The current study used a standard individual child therapy model, with only information provided to the therapists about EA, rather than manualized EA training and EA video coaching. In contrast, prior research on the use of the EA interventions with parents (Biringen et al., 2010) and teachers, via video coaching (Biringen et al., in press) indicates clear improvements in EA in the adult-child relationship. Interventions designed specifically to video coach EA in the therapist-child relationship would be

exciting to explore. But, the present results indicate that standard child therapy, which includes elements of both “talking cure” and play therapy do not necessarily lead to such change in the affective presence of the child.

Future research should also explore the relationship between therapeutic outcomes and the EA of the client/therapist dyad, because this study only examined the child’s side. Therapeutic alliance is cited as the most significant element in successful treatment, and the EA Scales could be easily applied in this context. The scales could also highlight elements that have the greatest influence on certain populations or disorders—for example, structuring might have the largest impact on symptoms of phobia, and sensitivity might have the largest impact on depressive symptoms. In our sample, the child’s EA toward the therapist varied considerably across “standard therapy” by different therapists (Figure 1), with children showing improvements in some but not other therapist-child pairings, suggesting the beginnings of a view of therapeutic alliance.

Research should continue to rigorously assess interventions for children with behavioral or socioemotional problems. Different children have different needs, and the range of possible changes model is an important lens to use in the age evidence-based intervention. Researchers should continue to work towards effective, nuanced, and individualized treatment for children in need.

Table 1

CBCL Pretest Clinical Range Frequencies

	Normal Range		Borderline Range		Clinical Range		Total	
	N	%	N	%	N	%	N	%
Internalizing ^a	7	50	3	21.4	4	28.6	14	100
Externalizing ^b	6	42.9	3	21.4	5	35.7	14	100
Total ^c	8	57.1	1	7.1	5	35.7	14	100

^a Includes anxious/depressed, withdrawn/depressed, and somatic complaint subscales

^b Includes rule breaking behavior and aggressive behavior subscales

^c Includes internalizing and externalizing subscales, social problem, thought problem, and attention problem subscales

Table 2

TRF Pretest Clinical Range Frequencies

	Normal Range		Borderline Range		Clinical Range		Total	
	N	%	N	%	N	%	N	%
Internalizing ^a	6	42.9	1	7.1	7	50	14	100
Externalizing ^b	8	57.1	1	7.1	5	35.7	14	100
ADHD ^c	7	50	4	28.6	3	15.8	14	100
Total ^d	4	26.7	5	33.3	6	40	14	100

^a Includes anxious/depressed, withdrawn/depressed, and somatic complaint subscales

^b Includes rule breaking behavior and aggressive behavior subscales

^c Includes inattention and hyperactivity subscales

^d Includes internalizing, externalizing, ADHD, social problem, and thought problem subscales

Table 3

CBCL Pretest Descriptive Statistics

	Pretest		
	N	Mean	SD
Internalizing	14	8.79	7.94
Externalizing	14	13.21	10.79
Total	14	42.21	30.20

Table 4

TRF Pre/Post Descriptive Statistics

	Pretest				Posttest			
	N	Mean	SD	N	Mean	SD		
Inattention	15	17.21	7.10	16	15.50	5.85		
Hyperactivity	15	9.71	7.29	16	9.89	7.42		
ADHD ^a	15	26.93	11.27	16	25.38	9.67		
Internalizing	15	10.57	5.22	16	9.13	4.94		
Externalizing	15	12.5	10.82	16	13.13	12.52		
Total	15	56	24.21	16	53.06	24.49		

^a Composite ADHD symptom scores of inattention and hyperactivity

Table 5

EA Child Subscales Descriptive Statistics

Note: EA was assessed every four weeks

	Time 1			Time 2			Time 3		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Responsiveness	17	24.82	4.35	18	25.11	4.24	16	24.75	4.71
Involvement	17	24.06	5.12	18	23.78	5.34	16	23.25	5.62

Table 6

Disciplinary Referral Pre/Post Descriptive Statistics

Note: Data is based on monthly referral frequencies

	Pretest			Posttest		
	N	Mean	SD	N	Mean	SD
Number of Referrals	14	3.00	4.67	14	.57	1.02

Figure 1

Changes in Child EA Responsiveness Scores during Child Therapy

Note: Session times are in 4-week increments

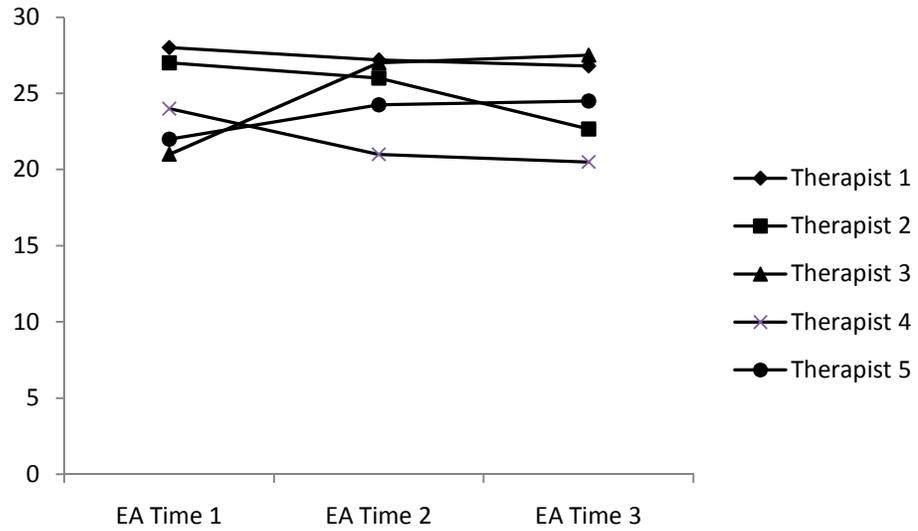


Figure 2

Changes in Child EA Involvement Scores during Child Therapy

Note: Session times are in 4-week increments

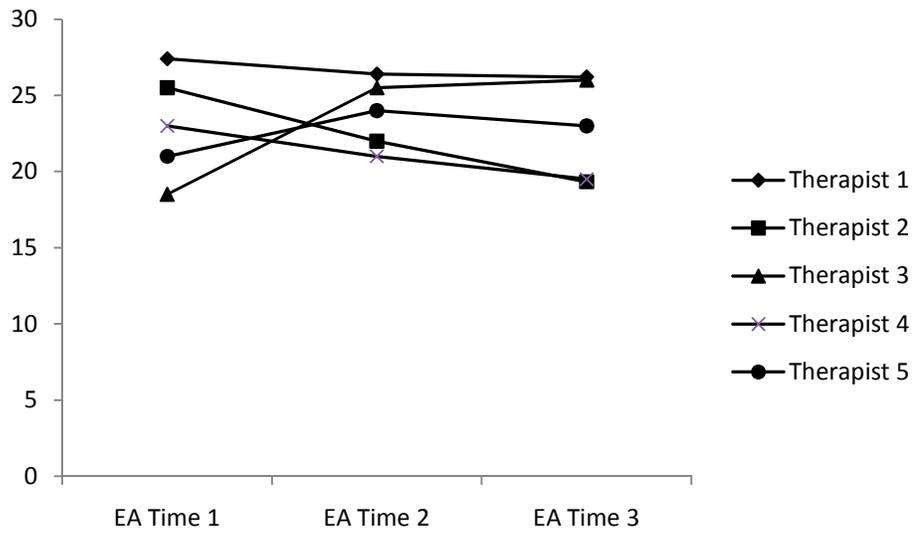
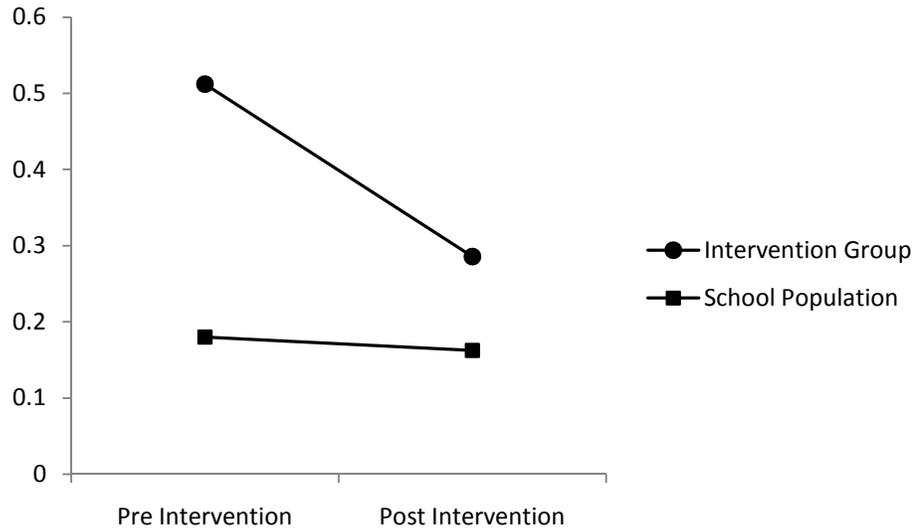


Figure 3

Changes in Average Number of Disciplinary Referrals per Student per Month for Therapy Group and General School Population

Note: Pre therapy data is August-January; post therapy data is April-May



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APPENDIX I: LITERATURE REVIEW

School-based interventions

School-based interventions for students with behavior problems are usually first level programs that focus on building individual social and emotional skills. These programs typically include structured lessons on anger management, nonaggressive modes of social perception, self control, and interpersonal problem solving, among others. A meta-analysis of 84 randomized, controlled studies including 16,723 students reported a small but significant effect size of $d=.38$ for social skills training programs (Losel & Beelman, 2003). Another meta-analysis focused specifically on school-based interventions for antisocial behavior, and reported an effect sizes of $d=.21$ and $d=.29$ for universal and indicated programs, respectively (Wilson & Lipsey, 2007). This evidence suggests that social and emotional learning programs can have positive impacts on student behaviors.

School-wide positive behavioral support (SWPBS) is the most widely used school-based intervention for behavior problems. Positive behavior support grew out of applied behavior analysis research and uses a systems approach to modify behavior (Warren et al, 2006). There are three tiers in the system—tier one is applied to all students and highlights clear goals and behavior expectations in school, such as respect for others. Tier two is for students who do not respond to the general tier one goals, but who also do not exhibit severe or chronic problems that indicate more focused intervention. These students may be in small groups that teach social skills, or report to a

central location throughout the day to monitor behavior. Students may also review their “behavioral data” with their teachers to monitor progress (Lewis, Jones, Horner, & Sugai, 2010)

Finally, tier three is directed at students who do not respond to second tier interventions, and it provides a focused, individualized education plan with behavioral goals and expectations for each student. Children who exhibit severe externalizing behavior are also tier three students, and often have a functional behavior assessment (FBA). FBA is used to assess the function of the child’s behavior—for example, shouting obscenities in class may serve to bring the child attention from the teacher, and interventions might teach prosocial ways to replace the original behavior. A key element in each tier is integration with universal school-wide expectations that promote inclusion of these students (Lewis, Jones, Horner, & Sugai, 2010).

In contrast to the SWPBS’s behavioral approach, play therapy focuses on individual attention and therapeutic play to shift internal processes, which in turn changes behavior. Developmentally, elementary school children function at the preoperational (2-7 years old) and concrete operational (8-11 years old) stages—children in the preoperational stage are learning words to represent objects in the world, while concrete operational children are learning to use basic reason and logic. Abstract reasoning and exploration of higher-order, complex emotions are beyond the scope of these stages (Piaget, 1962). Rather than the verbal process typical of talk therapy, children use play to integrate their thoughts and feelings and to make sense of the world (Landreth, Ray & Bratton 2009).

Treatment outcomes in play therapy are significant—in a meta-analysis of 93 controlled studies, measures of externalizing and internalizing behaviors, relationship quality, and social adjustment had effect sizes ranging from .81 to 1.12. The majority of the studies were nondirective/humanistic, and these had an effect size of .93 (Bratton, Ray, Rhine & Jones, 2005). In contrast to behavioral approaches, play therapy aims to change the child's attitudes and schemas, which will lead to behavior change. Schemas shape behaviors and behaviors shape schemas, which is why both therapeutic and behavioral interventions have similar outcomes, despite their differences.

A central tenet of play therapy is the development of a warm, accepting relationship between therapist and child. Children with externalizing behaviors typically have strained relationships with teachers, so a positive child-therapist relationship may provide a new experience with adults. The teacher-student relationship is especially important because it impacts social and academic outcomes throughout elementary school (Baker 2006). In one study, teachers' stress decreased for both short term (8 weeks) and long term (16 weeks) play therapy interventions. The children had 30-minute individual sessions with a play therapist following the Child Centered Play Therapy (CCPT) protocol—in CCPT, therapists express unconditional positive regard and genuineness towards the child while following the child's lead in play (Ray, Henson, Schottelkorb, Brown & Muro, 2008). Giving aggressive children an accepting, individually-focused environment in the school setting might shift the teacher-student relationship, which has far-reaching influence.

Attachment-Based Interventions

Perhaps the most significant adult-child relationship is that of parent and child, and attachment-based interventions focus on this dyad. Interventions like the Circle of Security and Connect Program teach parents how to be a secure base for their children, and both programs have reported significant treatment effects. The Circle of Security program is designed for toddlers and preschoolers, while Connect is designed for at-risk teens (Hoffman, Marvin, Cooper & Powell, 2006; Moretti & Obsuth, 2009). The Connect program underscores the powerful influence of relationships on teens' behavior—after a 10-week program, aggressive, at-risk teens exhibited significant reductions in externalizing symptoms and improvements in social functioning and affect regulation. The program was largely designed for parents, but teachers and other school professionals could benefit from similar interventions.

Video feedback is a powerful tool in attachment-based interventions. In a meta-analysis of 80 intervention studies, programs that used video feedback methods were more effective than those that did not ($d = .44$) (Bakermans-Kranenburg, van IJzendoorn, & Juffer, 2003). The video feedback to promote positive parenting intervention (VIPPP) has been successfully used with insensitive mothers, adoptive mothers, and mothers of children with externalizing behavior problems. In this program, mothers are taped with their babies during every day interactions and coached on four themes: exploration versus attachment behavior, speaking for the child (verbalizing accurate perceptions of the child's cues), sensitivity chain (child signal: parental response: reaction of the child), and sharing (Juffer, Bakermans-Kranenburg, & Van IJzendoorn, 2008). Video feedback

allows participants to reflect on their own behaviors, which leads to more substantial change.

Emotional Availability has been applied in intervention programs for parents (Biringen et al, 2010) and teachers (Biringen et al, in press) and also uses video feedback as a fundamental tool. The parent intervention is designed for adults who are primary caregivers for children and is composed of 10 parents or primary caregivers who meet weekly for 2 hours for 12 weeks. Group members film themselves interacting with their children for 20 minutes before the first session, and these videos are used throughout the program to assess the EA in the adult-child relationship. Sessions begin with a 45 minute informational video about applying EA principles (e.g. how to respond when your child is emotionally unavailable; why “the power of observation” is important in relationships; balancing emotional expressiveness and autonomy) and these topics correspond to EA workbook sections. Following the video, group members discuss the week’s reading, participate in activities, and watch videos of other group members.

A recent study of the EA Parent intervention yielded significant improvements in EA sensitivity and structuring scores, as well as significant improvements in child responsiveness and involvement. These results suggest that an EA principles and behaviors can be successfully shaped through a manualized, step-by-step program.

Significant improvements in EA have also been observed in child care workers (Biringen et al, in press). In this program, teachers were filmed with target children before the intervention, and then received two one-hour information sessions about EA principles and how to use them in the classroom. EA coaches then visited classrooms four times to observe teacher-child interactions and provide checklist-style feedback to

participants. During one visit, EA coaches watched pretest videos with teachers to provide more thorough collaborative feedback.

The Child Care intervention lasted three to four months, and resulted in significant increases in caregiver structuring scores and child responsiveness scores. The attachment Q-sort was also used as an outcome measure, and children in the intervention group significantly increased attachment security over the course of the intervention. Interestingly, teachers in the control group significantly increased in scores of detachment and hostility and decreased in scores of supportiveness over the four month period. These results have important implications for the child care industry—emotional availability and attachment security are shaped in the classroom context, and teacher interventions can be used to significantly improve them.

Attachment and Externalizing Behaviors

Attachment Theory has been heavily researched since its introduction over thirty years ago and it underscores the significance of early relationships (Bowlby, 1969). The following will review its influence on developmental outcomes and highlight its use in the field of school-based interventions.

Attachment theory provides a lens to understand relationships and socioemotional development (Bowlby, 1969). According to this framework, children develop attachments to at least one primary caregiver in their first years of life. Attachment classification is shaped by relational factors between child and caregiver—consistent, dependable caregivers who provide both physical and emotional support create secure attachment styles, while inconsistent and rejecting caregivers create insecure-dependent and insecure-avoidant attachment styles. These classifications influence the trajectory of

the child's life by providing a relational template on which other relationships are built. (Bergin & Bergin, 2009; Sroufe, Egeland, Carlson, & Collins, 2005). These relational templates, or internal working models, shape behavior through memories and expectations. Children who have positive views of themselves and others are more likely to behave in ways that confirm these positive beliefs.

The Minnesota Study of Risk and Adaptation is an important longitudinal study that examined wide-ranging developmental characteristics of children from birth to late adolescence. Children's internal representations of relationships and their relational experiences were assessed at infancy and toddlerhood (12-24 months) early childhood (4-5 years), middle childhood (8 years), early adolescence (12 years), and late adolescence (19 years) through drawings, narratives, and teacher reports of peer competence and emotional health. Analyses correlated attachment representations with earlier experience when earlier representations were controlled. In other words, experience influences attachment representations above and beyond earlier attachment representations. The authors propose an interactional path of social development in which experience and internal representations recursively shape each other (Carlson, Sroufe & Egeland, 2004). For children with behavior problems, poor experiences in school confirm their negative attachment representations which will shape their future experiences.

Relational Template's influence on aggression

Numerous studies have linked conduct problems with insecure attachment. For example, insecure attachment assessed at birth was correlated with child conduct problems 4 years later (Shaw et al 1996), and disorganized attachment at 18 months predicted teacher-rated conduct problems 7 years later (Lyons-Ruth et al, 1997). In a

sample of clinic-referred preschoolers with oppositional-defiant disorder, 80% were insecurely attached (Speltz, Greenberg, & DeKlyen, 1990); in another study, attachment security predicted conduct problems 6 years later, even when controlling for maternal depression (Vando, Rhule-Louie, McMahon & Spieker, 2008). Finally, in a recent meta-analysis including 69 studies and nearly 6,000 participants, attachment classification was firmly associated with childhood externalizing behaviors with an effect size of $d=.31$. The authors note that while the effect size is small, it would take 1,700 studies with null results to reduce the association to nonsignificance (Fearon, Bakermans-Kranenburg, van IJzendoorn, Lapsley & Roisman, 2010). Evidence clearly supports the link between attachment and behavior problems, and Bowlby's concept of Internal Working Models elegantly explains this association.

Social information processing (SIP) parallels the internal working model construct and has been applied in the context of peer relationships. SIP offers a schema or script that children use to infer the meanings of others in social situations, much like internal working models. Social schemas are efficient for information processing, but they can also lead to distortions. For example, insecurely attached children who had rejecting and unresponsive caregivers may expect the same from others, even when evidence suggests otherwise. Insecure attachment has been associated with negative peer attributions at age 5, while secure attachment has been associated with positive attributions of peer intent (Suess, Grossman & Sroufe, 1992). Children with behavior problems tend to have poor peer relationships which could suggest they have maladaptive SIP schemas, or internal working models.

Relational Template's influence on cognitive abilities

Internal working models influence children's cognitive development, as well. Secure attachment is associated with greater mastery motivation, cognitive skills, and academic achievement than insecure attachment, and secure toddlers have better pre-reading skills and attitudes towards reading than insecure toddlers. After they enter school, secure children score higher on verbal, math, and reading assessments than their insecurely attached peers (Moss, & St-Laurent, 2001; Bus & Van Ijzendoorn, 1988; Granot & Maysel 2001). This is especially pertinent to children with behavior problems because the many may struggle with some form of learning interference. Learning difficulties may contribute to frustration and subsequent behavioral problems in these children.

The more interactions children have with peers and other adults, the further they develop their semantic representations and language development. Reciprocally, children's language abilities influence their relationships—higher language ability is associated with better peer relationships and more open emotional communication. In a recent study, 36-month attachment security was associated with 54 month affective mutuality and language ability; these also correlated with 1st grade hostile attributions, language ability, and peer competence (McElwain, Booth-Laforce, Lansford, Wu & Dyer, 2008). In other words, early attachment security predicted open communication about emotions, and this in turn significantly influenced peer relationships.

Attachment security has far-reaching influence on child outcomes. Life course trajectories are shaped by early relationships, and this offers interventionists an opportunity to change these pathways early. Parents, teachers, and peers have lasting

influence on at-risk youth and children with behavior problems, and the power of these relational patterns should be taken into account when designing interventions.