

PAIR COUNSELING: THE EFFECTS OF A DYADIC DEVELOPMENTAL PLAY THERAPY ON INTERPERSONAL UNDERSTANDING AND EXTERNALIZING BEHAVIORS

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Abstract: *Play therapy has long viewed the promotion of development as a central goal, and the integration of developmental principles into play therapy also has a long history. Pair counseling is a structured form of dyadic play therapy in which two children's play interactions are guided developmentally by the counselor toward greater social maturity. The current pilot study examined the effects of pair counseling with 20 hospitalized children. Results demonstrated that reductions in problem behaviors following pair counseling were greatest for behaviorally disordered children and that the effects of pair counseling on reductions in delinquent behaviors were partially mediated by changes in interpersonal understanding. The results suggest pair counseling is a particularly appropriate play therapy modality for aggressive, delinquent, and externalizing children.*

Recent outbreaks of teen violence in communities and schools have heightened the public's sensitivity to the need for effective interventions for the prevention and treatment of behavioral disorders. Two forms of dyadic play therapy, namely pair therapy and pair counseling, provide two play therapy modalities for children whose social behavior limits their ability to effectively play, interact, and negotiate with peers. These play therapies are designed to reduce

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problem behaviors among children by promoting interpersonal understanding.

Interpersonal understanding is one social dimension of cognitive development. It includes self-understanding, social reasoning, social problem solving, and behavior regulation (Feffer, 1960; Flavell, 1992; Selman, 1980). It reflects the ability to coordinate social perspectives in a way that allows individuals to understand social norms, expectations for acceptable behavior, and the consequences of misbehavior. Research on cognitive development consistently finds that the maturity of children's interpersonal understanding is related to their social skills (Yeates, Schultz, & Selman, 1991) and to social cognitive processes that contribute to mood and behavioral disorders (Dodge, 1994). For this reason "play is a window on cognitive development" (Belsky, cited in Schaefer & Kaduson, 1994, p. 9), and dyadic play therapy provides a particularly suitable modality for promoting both social and cognitive development.

Pair therapy is the long-term approach to dyadic play therapy. In pair therapy, children play with a same-age peer, and the therapist helps them develop and maintain their relationship (Barr, Karcher, & Selman, 1997; Selman & Schultz, 1990; Selman, Watts, & Schultz, 1997). There is some evidence that long-term pair therapy (e.g., one to two years in length) can produce positive changes in cognitive development and social behavior among children in residential treatment, and that pair therapy effects changes that are not gained through individual or group therapy with inpatient child populations (Nakkula & Selman, 1991; Watts et al., 1997). Yet the length of treatment required for pair therapy may preclude its use in schools or in psychotherapy practices. In such situations pair counseling may provide a more suitable approach.

Pair counseling is the more structured, short-term version of pair therapy. In pair counseling, two children meet weekly to play with each other, using a set of preselected games, activities, and media. What primarily makes pair counseling distinct from pair therapy is the use of guided reflections at the start and conclusion of the sessions and its shorter duration (see Karcher, 1999, for more information on the process). Unlike pair therapy, pair counseling traditionally has been prescribed for children identified as at risk for developing (as opposed to already having) clinical disorders such as depression and conduct disorder, and for children who simply have difficulties managing their

relationships with their peers in schools (Karcher, 1997; Selman & Cohn, 1990). However, the need for short-term, manualized interventions has led to the use of pair counseling for more serious clinical problems. Yet there have been no published studies of the effects of pair counseling for treating inpatient populations with mood or behavioral disorders.

Aside from the differences in length and organization of pair therapy and pair counseling, these play therapy modalities are very similar. In both modalities, assessments of interpersonal understanding, based on perspective-taking theory (Selman, 1980), are used to guide counselor's interventions and to gauge children's therapeutic success. In addition to using standard group play therapy techniques (O'Connor, 1991; Sweeney & Homeyer, 1999), pair therapists and pair counselors use developmental guidance techniques during the sessions to foster more mature social skills by improving children's interpersonal understanding and perspective taking.

THE THEORETICAL ASSUMPTIONS UNDERLYING PAIR COUNSELING

Pair counseling is based on Selman's (1980) model of interpersonal understanding. Interpersonal understanding is defined as the ability to understand social situations in terms of the multiple perspectives of the individuals involved. Thus, interpersonal understanding is determined by the complexity of individuals' perspective-taking abilities.

Selman's (1980) research described a sequence of perspective-taking abilities that unfolds between childhood and adolescence. He described infants and toddlers as egocentric because they do not differentiate their own and others' perspectives, but found that young children develop the ability to articulate their own subjective perspectives (a first-person perspective). Older children further develop the ability to consider both their own and another's perspective simultaneously (a second-person perspective). Later, as they approach adolescence, children typically become able to take a more abstract perspective on their relationships with other individuals and to coordinate their separate perspectives (third-person perspective). This third-person point of view also may be called the we perspective,

because it represents individuals' ability to understand and to act in ways that consider what's best for their relationships with others. By helping children to understand others' points of view, this more mature perspective taking contributes to their recognition of social norms and a larger societal point of view.

Selman (1980) describes interpersonal understanding as the ability to apply perspective-taking skills to social situations (rather than solely to understand specific individuals' perspectives). Interpersonal understanding determines individuals' awareness of the social and societal impact of their actions. For example, egocentric perspective taking leads individuals to demonstrate immature interpersonal understanding, such as when delinquents act in ways that suggest they are oblivious to how the community in general construes and evaluates their impulsive actions. Such children seem unconcerned with the social ramifications of their delinquent behavior. Yet those who are able to coordinate two social perspectives simultaneously are aware that people have an internal, covert psychological life that cannot be objectively inferred. This awareness leads them to look to social norms to predict a group's response to, or the consequences of, their behavior. Children whose interpersonal understanding is based on the ability to coordinate two or more social perspectives are more attentive to how they fit into society and how their actions will affect their social standing. They become keenly aware of the long-term interpersonal and social ramification of their actions.

Rosen (1985) argued the need for a development-promoting therapy, specifically with delinquent children, that would promote children's altruism and social skills. Yet although much research links interpersonal understanding to delinquent behavior, it is unclear whether such therapies would better treat internalizing disorders, like depression, or externalizing disorders, like delinquency and conduct disorder. Kazdin (2000, p. 22) defines externalizing disorders as a function of "problems directed toward the environment" and internalizing disorders as a function of "problems directed toward inner experience." Although pair counseling occurs in the external, interpersonal play environment, such that changes would be expected in interpersonal behaviors, the interpretations that children derive about themselves from their play and their interactions with peers likely

become directed inwards. To date it is unknown whether the impact from pair counseling is greater for children with internalizing or externalizing disorders.

Both internalizing and externalizing disorders appear to be related to these cognitive developmental deficits (Dodge, 1994). Children with greater interpersonal understanding tend to be less aggressive, more sensitive to the feelings of others, and less likely to act in overtly delinquent ways (Beardslee, Schultz, & Selman, 1987; Chandler, 1973; Leadbeater, Hellner, Allen, & Aber, 1989; Selman, Beardslee, Schultz, Krupa, & Podorefsky, 1986). Many researchers suggest that it is the children with externalizing disorders, those who demonstrate these interpersonal understanding deficits and cognitive distortions, who are most amenable to remediation through a development-promoting therapy like pair counseling (Yeates & Selman, 1989; also see Dodge, Pettit, McClaskey, & Brown, 1986; Kazdin, 1987).

There is some evidence that, at least among children, promoting social understanding may exacerbate internalizing disorders by facilitating ruminative thinking, social anxiety, and depressive thoughts like shame and guilt (Noam, 1998; Tangney & Fischer, 1995). Thus, there is reason to believe that pair counseling would be more effective for children with externalizing or behavioral disorders than for children with internalizing or mood disorders. To date, however, no empirical tests of the relative effects of pair counseling on different disorders have been conducted; as a result, the hypothesis that the effects of pair counseling for different disorder groups are mediated or explained by growth in interpersonal understanding also has not been tested.

The next step in this line of developmental research is to identify the processes that account for therapeutic changes among different diagnostic groups (Kazdin, 2000). Because the effectiveness of counseling and psychotherapy with children has been demonstrated (see Weisz, Weiss, Han, Granger, & Morton, 1995), it is now important to begin to use theory to explain both why interventions work and for whom they work best (Kazdin, 2000). Therefore, studies that compare the relative efficacy of specific treatments for different clinical problems are critical.

The current pilot study explored the effects of pair counseling with children in residential treatment. The current study included

measures of both problem behaviors and cognitive development (i.e., interpersonal understanding) to test the effects of pair counseling for children with mood versus behavioral disorders. The current study tested the hypothesized role of increased interpersonal understanding as the primary therapeutic process contributing to reductions in problem behaviors following pair counseling. Three hypotheses were formulated:

1. Pair counseling will have a greater positive impact on externalizing problem behaviors than internalizing problem behaviors as rated by clinicians. Therefore, pair counseling will be more effective for children with behavioral disorders than with mood disorders.

2. The effects of pair counseling on changes in interpersonal understanding, as rated by task performance on a cognitive-developmental questionnaire, will be greater for children with behavioral than mood disorders.

3. The differential effects of pair counseling on delinquent behavior for the two diagnostic groups will be mediated or explained by increases in interpersonal understanding.

METHOD

Sample

The sample included 26 children in residential treatment at a Midwestern state psychiatric treatment facility. The main exclusion criterion was that children whom the staff expected to be at the hospital for less than 3 months were excluded. Six participants were discharged and left the study before the 15th session. Thus, pre- and post-analyses included data for only 20 participants. Five missing values for changes in interpersonal understanding and for delinquent behaviors were computed by a mean replacement based on diagnostic group and gender.

Of the participants who received the full 15 to 18 sessions of pair counseling, 10 were assigned to the behavioral disorder group (those who had either conduct disorder or oppositional defiant disorder as their primary diagnosis), and 10 were assigned to the mood disorder diagnostic group (those who had either bipolar I depression, major depression, or dysthymic disorder as their primary diagnosis) (see Table 1). Only children who met the full DSM-IV criteria for their mood or

behavioral disorders as their primary diagnosis were included. Nine of the children were diagnosed with externalizing or internalizing disorders as their secondary diagnoses. Eight of the children were diagnosed with ADHD as a second or third diagnosis. One child in both of the diagnostic groups had comorbid psychotic features. Most of the children, both male ($n = 9$) and female ($n = 11$), were from low-income, working-class, and white-collar Caucasian families. The boys ranged in age from 8 to 12, and the girls from 9 to 17. Two African American children, one female and one male, were included in the study.

Counselors

The three pair counselors were a developmental/counseling psychologist, a counseling psychology doctoral student, and a counseling master's student, all of whom participated in 12 hours of training on how to conduct pair counseling and assessments of interpersonal understanding. Sessions were audio- and videotaped for adherence checks of the counselors' use of reflection techniques during the sessions.

Measures

Relationship Questionnaire (Rel-Q; Schultz & Selman, 1998). This 12-scenario questionnaire was used to assess the level of interpersonal understanding that the children proposed to solve hypothetical social dilemmas. Three scenarios were read aloud to the children, and they then rated four possible solutions to each scenario. Each of the solutions reflected one of the four perspective-taking levels: 0 (egocentric), 1 (first-person), 2 (second-person), and 3 (third-person). The children rated each problem solution as poor, okay, good, or excellent. The mean of the responses provided an estimate of the children's level of cognitive development. Children who rated as "good" or "excellent" those responses that reflected mature perspective-taking abilities earned high scores (2 or 3), and those who rated the more cognitively mature responses as "poor" or "okay" received lower scores (0 or 1). The interpersonal understanding score reflected the mean of 12 solution items. Cronbach's interitem reliability for the measure was acceptable ($\alpha = .67$) and similar to previous research (Schultz & Selman). The measure reportedly has good properties of validity in terms of positive

correlations with other measures of cognitive development and with teacher-based assessments of social skills (Schultz & Selman).

Achenbach Child Behavior Checklist (CBCL; Achenbach, 1990). The parent CBCL checklist included 113 problem behaviors which were rated as present or absent for each child. Examples of items for the delinquency subscale included she or he "lacks guilt," "lies," and "steals." The checklist measured the internalizing problem behaviors (withdrawn and depressed/anxious behaviors), the externalizing behavior problems (delinquent and aggressive behaviors), as well as social problems and attention problems (see Table 2). The parent rating form was used because the children resided at the hospital. Clinicians rated children on all scales. The attention problems scale was included because of the number of children in the study with this diagnosis. The social problems scale was included because pair counseling was designed primarily to promote social skills. Computer scoring was done, and raw scores for number of problem behaviors were used to get exact change scores.

Treatment Procedures

Children with contrasting primary diagnoses were paired together, and all pairs included children of the same sex, same age (within 1 year), and similar cognitive-developmental level.

The pairs met twice a week for 50 minutes to play in the presence of a counselor who provided the children opportunities to practice more mature interpersonal understanding. Specifically, negotiation and agreement were encouraged and guided by three rules: (a) the pair decides together what to do; (b) whatever they do, they must do together; and (c) they are not to hurt each other, the counselor, or the property in the room (Selman & Schultz, 1990).

There were three parts to each play session (see Karcher, 1999). The sessions began with greetings. After reflecting on the previous session's successes and failures, the partners decided together which of several provided activities they would engage in during the current session. The 12 activities they were provided to choose from included UNO, Twister, Sorry, puppets, Jenga, Ungame cards, Lifestories, Nerf basketball, Friendship Island, a police hat for skits, playing cards, and drawing paper with Crayola markers. The children could choose to

change games, but only after they both agreed to do so. During the middle part of the sessions, the children played games and talked while the counselor facilitated their interactions by helping them resolve conflicts and by identifying moments of successful cooperation or compromise. During the session the counselor attempted to promote the children's developmental understanding using the three techniques (described below). For the last 10 minutes, the children were asked to reflect on their conflicts and successes, to evaluate the impact of their actions on their ongoing friendship, and to anticipate how they might handle similar conflicts differently in future sessions (see Karcher, 1999 for more details). More structure and direction was necessary to assist the younger children in reflection and planning.

To promote interpersonal understanding during the session, while the children played, the counselors used three techniques described by Selman and Schultz (1990). Each of these three intervention techniques was used to promote one of the three main levels of social perspective taking: (a) by empowering the counselor helped the children to articulate their needs (e.g., articulating single perspectives—growth from level 0 to level 1); (b) by linking the counselor joined the perspectives of the two children (e.g., helping the children coordinate their two social perspectives—growth from level 1 to level 2); and (c) by enabling the counselor helped the children to see the long-term consequences of their individual actions on their collective relationship (i.e., helping them take a third-person perspective—growth from level 2 to level 3). These three techniques were used by the counselors to help the pair play at a level of social and developmental maturity just above that which they tended to demonstrate on their own. Adherence checks revealed that the enabling reflection technique was used most often.

Study Procedures

Permission forms and information sheets were read in person to children and distributed through mail to parents by the nominating clinicians and research staff. Full informed, written parental consent was obtained from the parent or guardian. After the children decided to participate in the study, precounseling ratings were used to ensure that we included only children whose clinically elevated problem behaviors (on the CBCL) matched their primary diagnosis (from their files). The

CBCL rating scales were completed by the primary staff member assigned to work with the child on the unit and who therefore had the greatest exposure to the child. The CBCL was completed for all children on the unit by their primary staff at the start of the intervention study and at 3 months. This allowed for blind ratings because the CBCL scale was regularly used by the staff to assess all children's progress on the unit.

The Relationship Questionnaire (Rel-Q) assessment was read aloud to each child at the beginning of the treatment and after the last session. The Rel-Q measure took about 20 minutes to complete. Both pre- and post-assessments were administered by an unfamiliar researcher to avoid priming effects and reduce social desirability influences.

The three research hypotheses were tested using pre-post within and between group designs as well as regression analyses to explain change scores. Hypothesis 1 was tested using nonparametric tests of the differential effects of pair counseling on changes in problem behaviors between the two diagnostic groups. Hypothesis 2 was tested by comparing posttest scores (controlling for pretest scores and age) on interpersonal understanding between the two diagnostic groups. Hypothesis 3 was tested using regression analyses that evaluated the mediating role of changes in interpersonal understanding on the differential effectiveness of pair counseling for the two diagnostic groups. Because of the importance of age and gender in the effectiveness of child psychotherapy (Weisz et al., 1995), the effects of both age and gender were controlled for in the separate analyses or ruled out through post-hoc comparisons. Given the absence of a control group and high initial problem behavior scores among the inpatient children, regression to the mean effects were addressed by examining mean differences between the diagnostic groups on the dependent variables at pretest.

RESULTS

This study tested a hypothesized mediator relationship between cognitive development and externalizing problem behaviors. The findings suggested that, for the sample as a whole, a biweekly course of 15 to 18 sessions of pair counseling facilitated gains in developmental

understanding equal to one year of normal developmental change. This finding reflected changes that were both clinically and statistically significant. As hypothesized, gains in interpersonal understanding were greatest for children with behavioral disorders. These cognitive developments mediated the reductions in delinquent behaviors thereby supporting the hypothesis that pair counseling was a more effective intervention for the behaviorally disordered children partly because of its impact on their interpersonal understanding.

Because the two outcome measures produced different distributions for pretest, posttest, and change score data, both nonparametric and parametric tests were employed depending on the normality of posttest and change score distributions.

Hypothesis 1: Pair counseling will have a greater impact on externalizing than internalizing problem behaviors. Reductions in problem behaviors were larger for children who met the criteria for behavioral disorders (BD) than for those with mood disorders (MD). Means and standard deviations are presented in Table 2. Because of the non-normality of the CBCL change scores, Wilcoxon Rank Sum test-statistics were used to test the relative effects of pair counseling for children with mood versus behavioral disorders (see Table 2). The ranked means of change scores on problem behaviors were significantly greater for the behavioral disorder group at posttest on scales of Aggression, Delinquent Behaviors, and Attention. Nonsignificant differences between the two diagnostic groups were found for changes on Depressive Behaviors, Social Problems, and Withdrawn Behaviors. These results indicate the effects of pair counseling were greater for the behavioral disorder group in general, specifically on externalizing problems.

Hypothesis 2: The effects of pair counseling on changes in interpersonal understanding will be greater for children with behavioral than mood disorders. Gains in interpersonal understanding also were greater for the behaviorally disordered children than for children with mood disorders. The normal distribution of the data allowed us to conduct two parametric tests of the differences between pre- and postassessments of interpersonal understanding. First, related samples *t*-tests for interpersonal understanding with 18 degrees of freedom indicated a significant increase in interpersonal understanding

between time 1 and 2 for all children of .16 of a developmental level (see Table 2). This change is meaningful given that growth from one level to another typically occurs every 3 to 4 years between childhood and adolescence (Schultz & Selman, 1998; Selman, 1980). Second, these increases in interpersonal understanding were greater for the behaviorally disordered group (see Table 2). Analyses of covariance, using age and pre-test scores as covariates, revealed that mean levels of interpersonal understanding at postassessment were greater for behaviorally disordered children ($\underline{M} = 2.35$, $\underline{SD} = .44$) than for the mood disordered group ($\underline{M} = 2.19$; $\underline{SD} = .36$), $F(3,16) = 7.60$, $p < .05$.

Hypothesis 3: The differential effects of pair counseling for the diagnostic groups on delinquent behavior will be mediated or explained by increases in interpersonal understanding. Having found that the greatest effects of pair counseling were on externalizing problem behaviors and that behaviorally disordered children showed the greatest gains in developmental understanding, we tested the hypothesis that increased interpersonal understanding contributed to the reduction in delinquent behaviors. The correlation between changes in interpersonal understanding and delinquent behavior was significant, $r = -.54$, $p < .01$, suggesting mediation might have occurred. Therefore the mediation model tested the hypothesis that the effects of pair counseling on delinquent behavior were a function of increased interpersonal understanding.

To test the mediator model we used the three-step process described by Baron and Kenny (1986). They suggest a sequence of three regression models. The first two simple regression models tested that diagnostic group was significantly related to both the mediator (changes in interpersonal understanding) and the criterion variable (reductions in delinquent behaviors). The third tested that, when the criterion variable was regressed on both the mediator and predictor variables, the effect of diagnostic group (the predictor variable) was reduced. In these analyses, diagnostic group was dummy coded, with 0 = mood disorder and 1 = behavioral disorder. Age was entered in the models that included the mediator variable because the relationship between changes in intergroup understanding and age was significant ($r = .48$, $p < .05$) and the difference in mean age for those children with mood disorders ($\underline{M} = 12.85$; $\underline{SD} = 2.79$) and those with conduct disorders ($\underline{M} = 10.80$; $\underline{SD} = 2.44$)

approached significance, $F(1,18) = 3.04$, $p = .10$. In the analyses in Table 3, the first regression model (step 1) demonstrated that diagnostic group (the predictor variable) had a differential effect on reductions in delinquent behaviors (the criterion variable). The second model (step 2) demonstrated that, after partialing out the effects of age, the two diagnostic groups (the predictor variable) had a differential effect on changes in interpersonal understanding (the mediator variable). In the third model (step 3), the criterion variable (reductions in delinquent behaviors) was regressed on both the predictor variable (diagnostic group) and mediator variable (changes in interpersonal understanding). This third model demonstrated partial mediation, which suggested that the effects of pair counseling in reducing delinquent behavior were partially explained by increased interpersonal understanding (see Figure 1). This partial mediation indicated that one part of the reduction in delinquent behavior resulting from pair counseling was a function of increases in interpersonal understanding. Another part of the change in delinquent behavior was a function of the type of child (*viz.* diagnostic category and age). Sixty-six percent of the variance in behavioral changes was explained by the model.

Covariates and Confounds

Several checks were run to rule out rival explanations of the findings. This study did not include a control group because, given that most therapies are found to be better than no treatment, the study was designed to test the relative effects of pair counseling for two distinct diagnostic groups. By confirming theorized relationships between treatment processes (*i.e.*, increases in interpersonal understanding) and significant decreases in problem behavior, our arguments for the effects of pair counseling were strengthened. However, the study included a small number of children, which surely compromised the power of the mediation analyses and make future replication of the mediation model important. There was, however, sufficient power (.84) to detect the between-group effect on interpersonal understanding ($\eta = .41$).

Efforts also were made to rule out the confounds of age and gender on interpersonal understanding. First, age was included as a significant covariate in both the ANCOVA and regression analyses. Second, a one-way ANCOVA testing gender effects on interpersonal

understanding when controlling for age was nonsignificant, $F(3,16) = 1.28$, $p = .28$, suggesting no sex differences on pretest levels of interpersonal understanding. Similarly, there were no gender differences in mean change scores for either delinquent behavior problems, $F(1,18) = .17$, $p = .68$, or for interpersonal understanding, $F(1,18) = 1.69$, $p = .20$. Finally, a second mediation model (step 3 in Table 2) was conducted with the addition of gender as a predictor. This model remained significant, but gender did not contribute significantly to the model.

It was important to ensure that neither of the two diagnostic groups was more likely to experience a regression to the mean on the problem behavior scales studied here. Showing no pretest differences on delinquent behaviors between the two diagnostic groups would indicate that greater reductions in these problem behaviors by one group did not reflect differential regression to the mean effects. Given that mood-disordered and behaviorally disordered children would be expected to differ on these two scales, we initially were surprised that the two groups did not differ in their pretest levels. However, the majority of the mood-disordered children were diagnosed with bipolar disorder and were admitted to the hospital during a manic phase. This fact explains the similarly high levels of externalizing behaviors for both groups at pretest, and further supports our interpretation of the findings because the cycling aspect of bipolar disorder should make children with mood disorders more likely to manifest decreases in problem behaviors over time (which did not occur). Thus, we feel confident that neither confounding variables nor regression to the mean effects provide a better explanation of the findings reported here.

DISCUSSION

This pilot study takes the first step toward providing empirical validation for the use of pair counseling with delinquent children and confirming the important role of cognitive-developmental growth in pair counseling's effectiveness. The most significant finding was that increases in interpersonal understanding were found to predict decreases in externalizing problem behaviors. Indeed, the greatest reductions in problem behaviors were in those externalizing behaviors

that research has shown to be exacerbated by cognitive-developmental deficits. This finding is promising because externalizing problems, such as delinquency, are the most difficult to treat and are some of the most common problems among children reported to clinics (Kazdin, 1987; Weisz et al., 1995). The changes in both interpersonal understanding and problem behaviors after pair counseling were greatest for children with behavioral disorders.

The impact that pair counseling had on the behaviorally disordered children is significant for two reasons. First, delinquent behaviors are difficult to treat through psychotherapy alone, are not treatable with medication, and have a high rate of persistence into adulthood (Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998; Kazdin, 1987). The second significant aspect of this finding is that the mood and behaviorally disordered groups did not differ in their externalizing problem behaviors or interpersonal understanding at the start of pair counseling. Given similarly elevated externalizing behaviors among the mood disordered children (*viz.* manic bipolar), larger reductions in behavior problems would have been anticipated for this group.

The changes in problem behaviors, however, were limited to externalizing problem behaviors and attention problems. Between group differences in changes in depression, withdrawal behaviors, and social problems after pair counseling were not significant.

Although these findings demand replication and further study, they support the use of development-promoting play therapies like pair counseling in the treatment of conduct-disordered and delinquent children. Understanding the impact of other therapeutic processes on reductions in problem behaviors, such as factors inherent in the interpersonal relationship between the pair of children or with the counselor, may help account for other therapeutic effects of pair counseling not explained by cognitive development or diagnostic group.

This study had a number of limitations that should be addressed in future studies. Although the study was guided by theory and compared the effects of pair counseling for different diagnostic groups, as recommended by Kazdin (2000), the absence of a control group is a limitation. Our ability to include children with mood disorders as a comparison group was helpful and our ability to correlate both proximal

outcomes (interpersonal understanding) and more distal outcomes (problem behaviors) is theoretically important, but at this stage in the empirical validation of pair counseling, a replication study with a control group could provide an important extension to these findings.

The sampling procedures used in this study also added to the complexity and limitations of the study. The sample included only those hospitalized children for whom consent could be obtained, and who met the criteria of an externalizing or internalizing disorder as a primary diagnosis. This, of course, introduced considerable comorbidity to the sample, as is common in treatment settings (Kazdin, 2000). This sampling strategy also led to considerable age and gender variation. Although efforts were made to rule out the confounding effects of age and sex, future studies attempting to replicate or extend this research should recruit a sample that is stratified by age and sex and which reflects less comorbidity.

Another problem with this study is the modest sample size, which limited the number of variables that could be studied. Although we (a) attempted to account for variation in age, gender, and diagnostic group; (b) used a manualized treatment; and (c) conducted manipulation checks to ensure that techniques were employed, many more variables (child characteristics and treatment processes) need to be accounted for in future studies. This will require a larger sample to provide sufficient statistical power to adequately detect such effects.

This study provides an important first step toward the empirical validation of pair counseling as an effective play therapy for children with behavior disorders. The study asked if reductions in problem behaviors were related to developmental changes following pair counseling, and the findings suggest that externalizing problem behaviors are indeed related to core relational deficits in interpersonal understanding among the behaviorally disordered children. The findings confirmed the importance of promoting interpersonal understanding in the treatment of children in general, but specifically for children with conduct and behavior problems. This study illustrates that pair counseling may be a particularly well-suited play therapy modality for children with behavior problems like delinquency, and supports the use of reflection techniques during dyadic play therapy to foster children's interpersonal understanding.

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Table 1
Descriptive Information on Study Sample Population

Mood Disordered Diagnostic Group				
No.	<u>Diagnosis</u>		Sex	Age
	Primary	Secondary		
1.	MDD		F	9
2.	BD		F	11
3.	BD		F	13
4.	MDD	CD	F	15
5.	BD	ADHD	F	16
6.	BD	CD	F	16
7.	MDD	ADHD	F	17
8.	MDD		M	10
9.	BD		M	10
10.	BD	ADHD	M	12

Behaviorally Disordered Diagnostic Group

No.	<u>Diagnosis</u>		Sex	Age
	Primary	Secondary		
11.	ODD	MDD	F	10
12.	ODD	ADHD	F	11
13.	CD	MDD	F	15
14.	CD	DYS	F	15
15.	ODD	ADHD	M	8
16.	ODD	ADHD	M	8
17.	CD	ADHD/MDD	M	10
18.	CD	BD/ADHD	M	10
19.	CD	DYS	M	10
20.	ODD	DYS	M	11

ADHD = Attention-deficit hyperactivity disorder. BD = Bipolar I or II disorder. MDD = Major depressive disorder. DYS = Dysthymic disorder. ODD = Oppositional defiant disorder. CD = Conduct disorder.

Table 2

Mean and Wilcoxon Ranked Sum Illustrating Between-Groups Differences in Change Scores on Problem Behaviors

<u>Outcome Measure</u>	<u>Mood Disordered Children</u>			<u>Behaviorally Disordered Children</u>			<u>z score</u>	<u>t-test</u>
	<u>M</u>	<u>SD</u>	<u>W</u>	<u>M</u>	<u>SD</u>	<u>W</u>		
<u>Change on CBCL</u>								
Delinquent	.14	.69	.33	-3.29	2.98	-3.27	-2.57**	
Aggressive	-1.43	2.70	-1.33	-5.43	3.41	-5.43	-1.95*	
Attention	-.57	1.13	-.33	-3.57	5.56	-3.29	-1.98*	
Depressed	-1.43	2.57	-1.67	-4.86	3.76	-4.86	-1.74†	
Withdrawn	-.71	1.38	-.83	-1.43	1.99	-1.43	-.45	
Social problems	.14	.69	-.33	-.43	1.13	-1.00	-.68	
Change in interpersonal understanding	.10	.22		.19	.23			-2.62*

W = Wilcoxon mean rank.

† $p < .10$. * $p < .05$. ** $p < .01$.

Table 3

Hierarchical Regression Analyses Illustrating Effects of Diagnostic Group and Changes in Interpersonal Understanding on Reduction in Delinquent Behaviors

<u>D Delinquent Behaviors</u>				
Step and Predictor Variable	<u>R</u> ²	<u>B</u>	<u>F</u>	<u>t</u>
Step 1	.56		22.67***	
Diagnostic group		-3.55		-4.76***
<u>D Interpersonal Understanding</u>				
Step and Predictor Variable	<u>R</u> ²	<u>B</u>	<u>F</u>	<u>t</u>
Step 2	.53		9.57*	
Diagnostic group		.18		3.29**
Age		.04		3.93***
<u>D Delinquent Behaviors</u>				
Step and Predictor Variable	<u>R</u> ²	<u>B</u>	<u>F</u>	<u>t</u>
Step 3	.66		10.25***	
Diagnostic group		-3.13		-3.26***
Interpersonal understanding		-4.60		-1.46
Age		-.03		-.15

* $p < .05$. ** $p < .01$. *** $p < .001$. D= Change score.

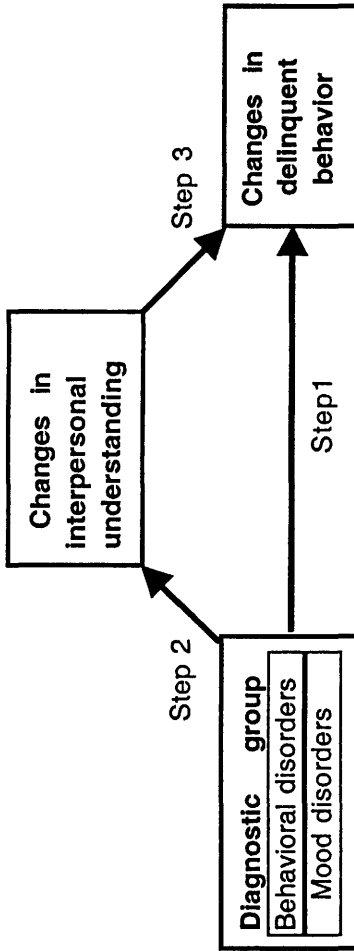


Figure 1

Effects of diagnostic group and interpersonal understanding on reductions in delinquent behaviors. Three steps of the mediator model reported in Table 3 are illustrated in this figure. These include Step 1: Direct effect of diagnostic group on changes in delinquent behavior; Step 2: Direct effect of diagnostic group on growth in interpersonal understanding; and Step 3: Partially mediated effect of diagnostic group on changes in delinquent behaviors through growth in interpersonal understanding.