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ISSN: 1537-4416 (Print) 1537-4424 (Online) Journal homepage: <http://www.tandfonline.com/loi/hcap20>

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To cite this article: Jonathan I. Martinez, Anna S. Lau, Bruce F. Chorpita, John R. Weisz & Research Network on Youth Mental Health (2017) Psychoeducation as a Mediator of Treatment Approach on Parent Engagement in Child Psychotherapy for Disruptive Behavior, Journal of Clinical Child & Adolescent Psychology, 46:4, 573-587, DOI: [10.1080/15374416.2015.1038826](https://doi.org/10.1080/15374416.2015.1038826)

To link to this article: <https://doi.org/10.1080/15374416.2015.1038826>



Published online: 04 Jun 2015.



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# Psychoeducation as a Mediator of Treatment Approach on Parent Engagement in Child Psychotherapy for Disruptive Behavior

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Parent engagement in treatment for child disruptive behavior has been associated with improved child outcomes in care. However, many families who enter care do not receive an adequate dose of treatment, and parents are often not involved. We examined therapists' use of psychoeducation, a therapeutic practice used to present factual information about target problems and treatments, and its association with parent engagement in child psychotherapy. Participants were drawn from the Child System and Treatment Enhancement Projects' multisite trial contrasting standard evidence-based treatments, modular treatment, or usual care. We included an ethnically diverse sample of 46 youth (ages 7–13) who received treatment for disruptive behavior in modular treatment or usual care. A reliable observational coding system was developed to assess therapists' in-session use of psychoeducation strategies (e.g., discussing causes of misbehavior, describing and providing rationale for treatment, etc.), as well as other engagement strategies (e.g., collaborative goal setting, managing expectations, etc.), in the early phase of treatment. Findings revealed that modular treatment therapists provided more psychoeducation and other engagement strategies compared with usual care therapists. Furthermore, psychoeducation strategies employed by therapists early on uniquely predicted subsequent parent involvement in treatment, over and above the use of other engagement strategies. Finally, therapists' use of the psychoeducation strategy of discussing causes of child's misbehavior mediated the effect of treatment condition on parent involvement in their child's therapy. These findings suggest that the implementation of psychoeducation strategies upon entry into care promotes parent involvement in child psychotherapy for disruptive behavior.

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During the time of this study, the Research Network on Youth Mental Health included Bruce F. Chorpita, Ann Garland, Robert Gibbons, Charles Glisson, Evelyn Polk Green, Kimberly Hoagwood, Kelly Kelleher, John Landsverk, Stephen Mayberg, Jeanne Miranda, Lawrence A. Palinkas, Sonja K. Schoenwald, and John R. Weisz (Network Director). The Modular Approach to Treatment of Children With Anxiety, Depression, or Conduct Problems (MATCH) manual used in this study was a precursor to a revised and expanded version for which Bruce F. Chorpita and John R. Weisz receive income.

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In recent decades, there have been important advances in the child mental health (MH) care evidence base, including an understanding of the etiology of child MH problems, as well as the proliferation of evidence-based interventions for those problems (National Research Council and Institute of Medicine, 2009). Randomized controlled trials demonstrate that child therapies are efficacious (National Research Council and Institute of Medicine, 2009; Weisz & Kazdin, 2010). However, as many as 75–80% of U.S. youth in need do not receive MH services (MHS), with the disparity in need and service use highest among racial/ethnic minority and socially disadvantaged families (Kataoka, Zhang, & Wells, 2002). Among families who initiate services, more than 50% fail to complete treatment (Kazdin, 1996). In fact, the majority of families who enter care attend only a small number of sessions insufficient to receive an adequate dose of treatment (Armbruster & Fallon, 1994; Harpaz-Rotem, Leslie, & Rosencheck, 2004). Thus, despite significant advances in developing evidenced-based interventions for child MH problems, they are limited in impact due to a lack of family engagement in services.

In child psychotherapy, parents' active involvement in treatment is considered critical to achieving successful outcomes (Nock & Kazdin, 2005), with children faring better when parents are actively involved relative to individual child treatment (Dowell & Ogles, 2010; Karver, Handelsman, Fields, & Bickman, 2006). One of the most common presenting problems in children is disruptive behavior (Garland et al., 2001). Many first-line interventions for disruptive behavior problems necessitate active parent engagement (e.g., parent management training; Hoagwood et al., 2010; Weisz & Kazdin, 2010). Parent engagement is defined as consistent treatment attendance, active participation in sessions, and adherence to treatment recommendations between sessions (Nock & Ferriter, 2005). However, many families seeking services often encounter a range of barriers to persistence in MH care, including both structural barriers (e.g., access to providers, financial issues, transportation problems) and perceptual barriers about MH problems and treatments (e.g., recognition of MH needs, knowledge about treatments, stigma related to care; Owens et al., 2002). Knowledge and beliefs about the nature of MH problems and effective treatments—referred to as MH literacy—appear to be among the most common and explanatory barriers, and may limit the use of evidence-based interventions (Jorm, 2000).

Addressing MH literacy concerns at treatment entry may facilitate the engagement of parents in child therapy, as discrepancies in beliefs between parent and provider may shape differing treatment expectations and goals, which in turn jeopardizes engagement (Armbruster & Fallon, 1994; McKay, Harrison, Gonzales,

Kim, & Quintana, 2002). Parents are more likely to drop out of services if they have a mismatch of treatment expectations with the therapist, such as how much parents need to be involved in their child's treatment (Flisher et al., 1997; Nock, Ferriter, & Holmberg, 2007; Nock & Kazdin, 2005). One study found that parents' perception of treatment relevance for their child's problems was the factor that best discriminated treatment dropouts from completers (Morrissey-Kane & Prinz, 1999). For ethnic minority and socially disadvantaged families, unpacking gaps in MH literacy may be critical for engaging parents. For example, addressing parent beliefs about MHS at treatment outset was associated with increased parent engagement in care in a sample of low-income, predominantly ethnic minority youth and their families (McKay, Nudelman, McCadam, & Gonzales, 1996; McKay, Stoewe, McCadam, & Gonzales, 1998). A qualitative study with Mexican American parents found that most parents initiating child MHS experienced disapproval from family who felt there was no MH problem or were skeptical of treatment and expressed that Latinos were less likely to receive MHS because of a lack of knowledge about effective treatments. In addition, parents were more likely to drop out if they endorsed unrealistic beliefs and expectations for child therapy (McCabe, 2002).

In child psychotherapy, presenting factual information to parents about their child's MH problems and effective treatments is commonly referred to as *psychoeducation* (Lukens & McFarlane, 2004). Hoagwood et al. (2010) identified components of effective psychoeducation-based programs, with components including (a) education on the nature of child MH problems, (b) discussion of family factors impacting child MH, (c) clarification of the child's need for services, and (d) education on the nature of treatment. Psychoeducation has emerged as an evidence-based practice across a variety of child MH interventions (Fristad, 2006; Lukens & McFarlane, 2004) and may be a powerful tool for addressing perceptual barriers to engaging families, particularly families with low MH literacy. As psychoeducation facilitates the comprehension of complex information, families receive optimistic messages about the treatability of child MH problems (Miklowitz & Goldstein, 1997). Parents are treated as partners in treatment based on the assumption that the more knowledgeable the parent, the greater the chance of positive child outcomes (Lukens & McFarlane, 2004). Orienting and preparing families for treatment using psychoeducation strategies may help alter misconceptions that derail engagement.

A range of interventions, in addition to psychoeducation, have been developed to improve engagement of families in care. These other engagement interventions have demonstrated increased attendance at initial

intake (McKay et al., 1996; Szapocznik et al., 1988), throughout treatment (Chacko et al., 2009; McKay et al., 1998; Nock & Kazdin, 2005; Prinz & Miller, 1994), and greater treatment motivation and adherence (Chacko et al., 2009; Nock & Kazdin, 2005). Many such engagement approaches emphasize a collaborative, problem-solving component to address practical barriers (Chacko et al., 2009; McKay et al., 1996; Nock & Kazdin, 2005; Szapocznik et al., 1988). Several are based on motivational interviewing (Miller & Rollnick, 1991), which assume active resistance or lack of readiness to change and thus address motivational barriers (Dishion & Kavanagh, 2000; Nock & Kazdin, 2005; Szapocznik et al., 1988). Relatedly, some protocols ensure that concerns from previous negative experiences in care are addressed (Dishion & Kavanagh, 2000; McKay et al., 1996). Although general treatment expectations are targeted in some form, these engagement interventions may not address parents' attributions about their child's problems, or provide information on problem etiology or rationale for treatment. Thus, there appears to be a relative emphasis on motivational and practical barriers and somewhat less attention to MH literacy barriers and use of psychoeducation strategies for engaging families.

However, as discussed previously, engagement strategies that go beyond addressing practical barriers and treatment motivation are particularly indicated for families with low levels of MH literacy. For these families, psychoeducation can target problem recognition barriers by increasing parents' understanding of child MH problems and addressing misperceptions of child MH needs. Psychoeducation can also target misperceptions about care, where the rationale for evidence-based interventions can be provided. Indeed, psychoeducation strategies have resulted in increased knowledge about child MH problems (Brent, Poling, McKain, & Baugher, 1993; Fristad, 2006), increased treatment attendance (Becker et al., 2013; Fristad, 2006), adherence with treatment recommendations (Pavuluri et al., 2004), and cognitive preparation of families entering services (Becker et al., 2013). Although there is evidence that therapists in usual care settings provide psychoeducation strategies to parents in the treatment of child disruptive behavior, they rarely deploy these strategies with sufficient intensity to promote a well-developed understanding of child MH problems and treatments (Garland et al., 2010).

## THE CURRENT STUDY

The central aim of the current study was to examine the unique effect of therapist use of psychoeducation strategies, over and above the use of other engagement strategies, on promoting parent engagement in treatment among families of children with disruptive behavior

problems. As engagement interventions have demonstrated increased family engagement in the literature, we were particularly interested in examining the unique effect of psychoeducation strategies on promoting parent engagement. To investigate this aim, an observational coding system was developed to code treatment sessions recordings for therapist in-session use of psychoeducation and other engagement strategies. Data for this study were drawn from a community-based trial that included therapists randomized to provide an evidence-based treatment approach (modular treatment [MT]) or usual care (UC) for children with disruptive behavior. The MT protocol featured modules based on common elements of evidence-based treatments for youth with disruptive behavior (e.g., praise, rewards, psychoeducation, etc.), which allowed therapists to flexibly deliver these evidence-based practices to their clients over the course of treatment.

Given the evidence that therapist use of psychoeducation strategies is associated with increased parent engagement (Hypothesis 1), we predicted a unique effect of therapist use of psychoeducation strategies on promoting parent engagement while controlling for therapist use of other engagement strategies. Because the MT protocol permitted flexible use of a psychoeducation module, along with evidence that UC therapists rarely deploy psychoeducation strategies with sufficient intensity to promote a well-developed understanding of child MH problems and treatments (Garland et al., 2010; Hypothesis 2) we predicted there would be more observable therapist use and extensiveness of psychoeducation in MT versus UC. Last, (Hypothesis 3) we predicted that the higher levels of parent engagement in MT versus UC would be explained by therapist use of psychoeducation strategies while controlling for therapist use of other engagement strategies.

## METHOD

### Data Source

The current study utilized data from the Child System and Treatment Enhancement Projects' (Research Network on Youth Mental Health) multisite trial (Weisz et al., 2012), a randomized effectiveness trial that tested standard and modular arrangements of evidence-based treatments compared with UC procedures in community clinic settings in Hawaii and Massachusetts. The overall trial included 84 therapists providing treatment to 174 clinically referred youth (ages 7–13) for problems related to anxiety, depression, and/or disruptive behavior. Therapists were randomly assigned to provide child treatment in one of three conditions: (a) UC procedures in their clinics, or with evidence-based practices deployed in two forms; (b) standard manual treatment,

using full treatment manuals as they have been tested in previous clinical trials; or (c) MT, in which therapists learn the component practices of all of the standard manuals but individualize the use of the components for each child using a guiding clinical algorithm. Therapists in the MT condition used the Modular Approach to Therapy for Children (Chorpita & Weisz, 2005), a collection of modules designed to correspond to evidence-based treatment procedures.

All 84 therapists from the multisite trial were potentially eligible for the current study, 80% of which were women, with a mean age of 40.6 years, and self-identified as the following: 56% White, 23% Asian American, 6% African American, and 6% Pacific Islander. The mean number of years of clinical experience was 7.6 years, and 40% were social workers, 24% were psychologists, and 36% were classified as “other.” Therapists reported the following orientations: 38% cognitive behavioral, 23% eclectic, 15% psychodynamic, 8% behavioral, 8% family systems, and 8% other. There were 174 youth participants 7 through 13 years of age, with a mean age of 10.59 years ( $SD=1.76$ ), 70% of which were boys; participants included 45.0% Caucasian, 32% multiethnic, 9% African American, 6% Latino/a, 4% Asian American or Pacific Islander, 2% “other”, and 2% who chose to not identify their ethnicity. Annual family income was less than \$40,000 for 55% of the sample, \$40,000–\$79,000 for 28% of the sample, \$80,000–\$119,000 for 12% of the sample, and \$120,000 or more for 6% of the sample (see Weisz et al., 2012, for a complete description of the overall trial’s study design).

### Participants

We only included children who were treated for disruptive behavior, as this treatment evidence base demonstrates that active parent participation is indicated and integral to the delivery of first-line interventions (e.g., parent management training), more so than anxiety and depression child treatments. Treatment within MT and UC arms were assessed, as these treatments offer flexibility in the dose (amount and intensity) of therapist use of psychoeducation and other engagement strategies. Thus, of the 184 youth participants in the Child System and Treatment Enhancement Projects Clinic Treatment Project effectiveness trial, the current study subsample included participants who were treated in the MT or UC arms ( $n=135$ ), received treatment for disruptive behavior problems within these arms ( $n=66$ ), had at least one treatment session after study randomization ( $n=59$ ), and had at least one available therapy session recording in the early phase of treatment (i.e., first three treatment sessions;  $n=46$ ). Of these 46 cases,  $n=25$  and  $n=21$  cases were treated in the MT and UC arms, respectively. See Table 1 for subsample descriptives.

TABLE 1  
Sample Descriptives by Treatment Condition

	MT ( $n=25$ ) $n$ (%)	UC ( $n=21$ ) $n$ (%)	Total Sample ( $N=46$ ) $n$ (%)
Youth Gender			
Male	21 (84.0)	14 (66.7)	35 (76.1)
Female	4 (16.0)	7 (33.3)	11 (23.9)
<i>M</i> Youth Age ( <i>SD</i> )	9.6 (2.0)	10.4 (1.7)	10.0 (1.9)
Youth Race/Ethnicity			
Non-Hispanic White	12 (50)	7 (33.3)	19 (42.2)
Africa American	3 (12.5)	4 (19.0)	7 (15.6)
Latino	2 (8.3)	1 (4.8)	3 (6.7%)
Mixed	6 (25)	8 (38.1)	14 (31.1%)
Other	1 (4.2)	1 (4.8)	2 (4.4)

*Note.* One participant chose not to identify their race/ethnicity. MT = modular treatment; UC = usual care.

### Measures

*Psychoeducation and engagement strategies observational coding system (Martinez, Lau, & Chorpita, 2012).* We developed an observational coding system to code therapy session recordings from the early phase of treatment (i.e., first three treatment sessions) to measure therapists’ in-session use of psychoeducation and other engagement strategies directed at parents in child therapy sessions. The coding system was developed to align with the structure of the Therapy Process Observational Coding System–Strategies Scale (McLeod & Weisz, 2010) to characterize psychoeducation and other engagement strategies common in the child therapy evidence base. The coding system follows the structure of the Therapy Process Observational Coding System–Strategies Scale in that it includes both Microanalytic and Extensiveness Scales. The Microanalytic Scale is intended to track the occurrence and frequency of therapist use of specific psychoeducation and other engagement strategies over the course of a session. The Extensiveness Scale is designed to capture the extent to which the therapist follows-through with each psychoeducation and engagement strategy, with each strategy rated at the end of the session on a 7-point Likert scale.

The psychoeducation codes consist of the following five strategies used by therapists: (a) describing child behavior problems, (b) discussing causes of child’s misbehavior, (c) describing goals of treatment, (d) providing rationale for treatment, and (e) providing strategies for managing misbehavior. The engagement codes consist of the following six strategies used by therapists: (a) collaborative goal setting, (b) validating and affirming parent’s commitment to treatment, (c) checking in about past experiences and addressing concerns in treatment, (d) managing expectations and

what can work, (e) defining roles in treatment process, and (f) addressing and problem-solving barriers to treatment (see Table 2 for coding definitions of psychoeducation and engagement codes). The MT protocol featured psychoeducation and engagement modules that would allow MT therapists to flexibly deliver psychoeducation and other engagement strategies throughout the course of treatment. As the MT protocol included these modules that were derived from the child therapy evidence base, some of the codes were based from the MT protocol. In addition to these codes, psychoeducation and engagement composite scores were derived by summing the individual psychoeducation and engagement strategies from the 7-point Likert scale. Thus, the psychoeducation composite comprised the sum of the five individual psychoeducation strategies (composite total out of 35), and the internal consistency of this composite was in the acceptable range ( $\alpha=0.78$ ; see Table 3 for interitem correlations of psychoeducation items). The engagement composite comprised the sum of the six individual engagement strategies (composite total out of 42). Due

TABLE 3  
Interitem Correlations of Psychoeducation Strategies

Variable	1	2	3	4	5
1. Describing Child Behavior Problems	—				
2. Discussing Causes of Child's Misbehavior	.63	—			
3. Describing Goals of Treatment	.33	.06	—		
4. Providing Rational for Treatment	.13	.02	.31	—	
5. Providing Strategies to Manage Misbehavior	.25	.32	.40	.46	—

to the low base rate of individual engagement strategies observed in session recordings, only the engagement composite score was used to capture therapists' overall use of other engagement strategies.

*Scoring strategy.* The scoring strategy includes a Microanalytic Scale for raters to code the occurrence of specific psychoeducation or other engagement strategies during a given time segment (defined as 5-min periods) with an entire treatment session. The Microanalytic Scale

TABLE 2  
Psychoeducation and Engagement Coding Definitions

Codes	Definition
<b>Psychoeducation Codes</b>	
Describing Child Behavior Problems	Extent to which the therapist describes child behavior problems in general (e.g., symptoms, diagnosis, impairment) and behavior problems specific to the child.
Discussing Causes of Child's Misbehavior	Extent to which the therapist discusses general factors that may contribute to child misbehavior, elicits specific factors from parent, and reflects/summarizes contributing factors.
Describing Goals of Treatment	Extent to which the therapist describes what will occur during treatment sessions and describes specific treatment goals or changes that can occur for parent and child.
Providing Rationale for Treatment	Extent to which the therapist provides evidence of efficacy of treatment, discusses consequences of untreated behavior problems, and provides informational handouts about treatments for problems.
Providing Strategies to Manage Misbehavior	Extent to which therapist provides strategies to manage child's misbehavior and provides rationale for strategies.
<b>Engagement Codes</b>	
Collaborative Goal Setting	Extent to which therapist elicits main challenges going on with child or family, elicits goals or changes parent would like to see occur in child, and reviews/clarifies main challenges or goals.
Validating & Affirming Parent Commitment to Treatment	Extent to which therapist validates parent as caring adult, emphasizes that parent is expert on child, and reminds parent of his/her invaluable role in treatment process.
Checking in About Past Experiences & Addressing Concerns in Treatment	Extent to which therapist elicits from parent what has worked well/positive experiences and not worked well/negative experiences in treatment, and elicits concerns parent has with current treatment.
Managing Expectations and What Can Work	Extent to which therapist describes what will or will not occur in treatment process, and emphasizes working with parent to provide strategies to manage child's behavior.
Defining Roles in Treatment Process	Extent to which therapist describes parent, child, and therapist role in treatment and reinforces participation.
Addressing and Problem-Solving Barriers to Treatment	Extent to which therapist elicits from parent potential barriers to parent/child participation, and helps problem solve barriers.

yields occurrence and observed frequency of use of each therapy practice. The scoring strategy also includes Extensiveness ratings to measure the extent to which therapists deployed psychoeducation and other engagement strategies within a treatment session on a 7-point Likert scale, ranging 1 (*not at all*), 3 (*somewhat*), 5 (*considerably*), and 7 (*extensively*). Extensiveness ratings reflect both frequency and thoroughness of use of the strategy. Thoroughness is determined by the detail and/or quality in which the therapist employs the strategy, and/or the extent to which the therapist follows-through with the strategy (i.e., covering different components of the strategy in full and not abandoning the strategy after limited use). A low Extensiveness rating reflects a cursory and/or incomplete application of the treatment strategy with limited follow-through, whereas a high Extensiveness rating reflects a high degree of effort or force that the therapist places in delivering the treatment strategy. Definitions for each anchor point on the 1-to-7 Likert scale relevant to each strategy were provided in the coding manual.

**Coders.** The coding team consisted of the first author and four undergraduate research assistants under the supervision of a clinical psychologist (coauthor). Four coders were trained for 8 consecutive weeks before being released to code recordings independently. Training of coders included didactic training on the coding manual, practice scoring of sessions, review of specific session segments, and weekly coding meetings to clarify codes and arrive at consensus. Interrater reliability was calculated across all coders for each of the items using intraclass correlations (ICCs). Given our coding design where we trained a group of four coders who were each randomly assigned different recordings to code, we used a two-way mixed average measures with absolute agreement ICC. Coders were approved for coding independently after their ratings achieved acceptable interrater reliability ( $ICC \geq .60$ ; Cicchetti, 1994). Weekly coding meetings were held throughout the duration of coding project to prevent rater drift.

**Pilot coding phase.** A pilot coding phase was conducted to aid in the development of items for the coding system as well as train coders to establish adequate pre-study interrater reliability. A random sample of session tapes from early treatment sessions in the UC and MT arms were coded. Based on training in a detailed coding manual, four undergraduate student coders independently coded five therapy sessions. Items that demonstrated poor agreement during the pilot phase were refined or dropped. During the piloting phase, coders provided feedback on item content and definitions,

which were used to refine the coding system items. After the piloting phase was completed, a final version of the coding manual was produced and utilized throughout the current study.

**Therapy session recordings.** For the 46 cases in the current sample, all therapy session recordings in the early phase of treatment (i.e., first three treatment sessions) were coded. A total of 105 available session recordings out of 138 possible session recordings (76.1%) in the early the treatment phase were available, with a per case average of 2.28 recordings ( $SD = .83$ ). Of these 105 session recordings, 64 included sessions with parents (61.0%). As the observational coding system measured therapist use of strategies directed at parents in child therapy sessions, sessions that did not include a parent received the lowest rating for all psychoeducation and engagement codes.

### Parent Engagement Measures

**Parent involvement.** Sessions in which a parent was present at their child's therapy session were documented for each case from therapy session recordings. Each therapy session recording captured whether the session included the child client only, the parent only, or both the parent and child. The proportion of sessions in which a parent was present throughout their child's treatment episode (i.e., the number of parent only plus parent and child sessions out of the total number of therapy sessions) was documented and used as the outcome variable of parent involvement. Therapist use of psychoeducation and other engagement strategies measured in early treatment (i.e., first three treatment sessions) were used as a predictors of parent involvement beyond the initial phase of treatment (i.e., beyond the third treatment session). Parent involvement beyond the third session was used as the key outcome variable, as including early coded treatment sessions would result in counting early session involvement toward the outcome variable that is being predicted.

**Therapeutic alliance.** The quality of the parents' working alliance with their children's therapists was assessed at study completion (2-year follow-up) via the Therapeutic Alliance Scale for Children (Shirk & Saiz, 1992). The nine-item parent-report form has shown good internal consistency ( $\alpha = .92$ ) and good 7-day to 14-day test-retest reliability ( $r = .82$ ) in samples of parents of clinic-referred youth. In the current sample, the parent-therapist alliance scale demonstrated good internal consistency ( $\alpha = .84$ ). Sample items included "I looked forward to meeting with my child's therapist, I liked spending time with my child's therapist, and I feel

like my child's therapist was on my side and tried to help me." Response items were on a 4-point Likert scale: 1 (not like me), 2 (a little like me), 3 (mostly like me), and 4 (very much like me).

**Satisfaction with services.** The Client Satisfaction Questionnaire–Parent Report (CSQ-8/P; Attkisson & Greenfield, 2004) consists of an eight-item parent-report on satisfaction with their child's services, which was assessed at study completion (2-year follow-up). The CSQ-8 has demonstrated good internal consistency in numerous studies with diverse client samples ( $\alpha$  ranges = .83–.93). In the current sample, the CSQ-8/P demonstrated good internal consistency ( $\alpha$  = .91). Sample items included "How would you rate the quality of services your child received, Did you get the kind of service you wanted for your child, How satisfied are you with the amount of help your child received?" Response items were on a 4-point Likert scale: 1 (quite dissatisfied), 2 (indifferent or mildly dissatisfied), 3 (mostly satisfied), and 4 (very satisfied).

## RESULTS

### Reliability of Psychoeducation and Engagement Strategies Observational Coding System

Of the 64 coded sessions recordings in which a parent was present, 15 (23.4%) were randomly selected for double-coding to examine interrater reliability using two-way mixed average measures with absolute agreement intraclass correlations (ICCs). ICCs below .40 reflect "poor" agreement, .40–.59 reflect "fair" agreement, .60–.74 reflect "good" agreement, and .75 and above reflect "excellent" agreement (Cicchetti, 1994). The average ICCs for the five psychoeducation Extensiveness codes and the Microanalytic occurrence codes were .78 and .75, respectively. The ICCs for the psychoeducation and engagement Extensiveness Scale composites (total scores) were .85 and .66, respectively. The ICCs for the psychoeducation and engagement Microanalytic Scale composites (any occurrence) were .96 and .64, respectively. Thus, all codes demonstrated acceptable reliability (ICCs > .60).

### Effect of Psychoeducation on Promoting Parent Engagement

Three hierarchical regression models were tested to examine the unique effect of therapist use of psychoeducation strategies (predictor variables) on promoting parent engagement (three outcome variables: parent involvement, alliance, and satisfaction) while accounting for therapist use of other engagement strategies (control

variable). In the first step, the engagement composite was entered into each model. In the second step, the psychoeducation strategies were entered into the model. To determine whether multicollinearity among psychoeducation predictors impacted coefficient estimates due to the potential of unstable standard errors, Tolerance and the Variance Inflation Factor (VIF) were examined. Tolerance is an indication of the percentage of variance in the predictor that cannot be accounted for by the other predictors, with values less than .10 indicating that a predictor is redundant, and VIF (1/tolerance) values greater than 10 suggesting a high degree of multicollinearity (Chen, Ender, Mitchell, & Wells, 2003). These multicollinearity diagnostics revealed that Tolerance and VIF values for each of the five psychoeducation predictors were in the acceptable range, indicating that using these psychoeducation items in a single model is justified. Three additional hierarchical models were tested in a similar fashion using the psychoeducation composite replacing the individual psychoeducation strategies, thus producing a total of six hierarchical regression models. Table 4 displays the results of each step of the six hierarchical models.

In the first step for all hierarchical regression models, therapist use of other engagement strategies (engagement composite) in the initial phase of treatment was significantly associated with subsequent parent involvement ( $B = .04, p < .05$ ) but was unrelated to other outcome variables (alliance and satisfaction). For the three models using the individual psychoeducation strategies, the results are as follows. In the second step, therapist use of psychoeducation strategies in the initial phase of treatment was found to be uniquely associated with subsequent parent involvement (two of five psychoeducation predictors significant: *Discussing causes of misbehavior*  $B = .13, p < .05$ ; *Describing goals of treatment*  $B = .14, p < .05$ ) while controlling for therapist use of other engagement strategies. In addition, three of five psychoeducation strategies were significantly associated with parent–therapist alliance; however, these associations were inconsistent. Neither therapist use of psychoeducation nor other engagement strategies were related to parent satisfaction.

Three additional hierarchical models were tested using the psychoeducation composite in place of the five psychoeducation strategies for the second step. As predicted, therapists' use of psychoeducation in the initial phase of treatment was found to be uniquely associated with subsequent parent involvement (*psychoeducation composite*  $B = .04, p < .05$ ) while controlling for therapist use of other engagement strategies. Of note, therapist use of other engagement strategies was no longer associated with parent involvement after accounting for psychoeducation strategies. Therapist use of psychoeducation (composite) was unrelated to



TABLE 4

Hierarchical Regression Models of the Effects of Therapist Use of Psychoeducation and Other Engagement Strategies on Parent Engagement

	Variable	Parent Involvement Model			Alliance Model			Satisfaction Model		
		B	SE	$\beta$	B	SE	$\beta$	B	SE	$\beta$
Step 1 Control Variable	Engagement Composite	.04	.02	.35*	-.09	.16	-.09	-.07	.12	-.10
Step 2 <sup>a</sup> Psychoed Variables Model	Engagement Composite	.01	.02	.04	-.12	.21	-.0.12	-.08	.18	-.11
	Describing child behavior problems	-.07	.06	-.22	2.53	.80	.89**	.23	.56	.11
	Discussing causes of child's misbehavior	.13	.05	.49*	-2.04	.69	-.79**	-.13	.46	-.07
	Describing goals of treatment	.14	.06	.38*	.46	.66	.13	-.04	.58	-.04
	Providing rationale for treatment	.03	.10	.05	-2.3	.96	-.40*	-1.58	.86	-.36
	Providing strategies to manage misbehavior	-.01	.06	-.05	-.13	.56	-.05	.38	.50	.20
Step 2 <sup>a</sup> Psychoed Composite Model	Engagement Composite	.04	.02	.35	.02	.22	.02	-.06	.17	-.08
	Psychoed Composite	.04	.02	.50*	-.13	.18	-.15	-.02	.14	-.03

<sup>a</sup>Each Step 2 model was tested hierarchically with Step 1, but not together.

\* $p < .05$ . \*\* $p < .01$ .

other outcome variables (alliance and satisfaction). The psychoeducation composite models were also examined by treatment condition. Within the UC condition, therapist use of psychoeducation was uniquely associated with parent involvement ( $B = .15$ ,  $p < .01$ ) while controlling for therapist use of other engagement strategies, which was nonsignificant ( $B = -.05$ ,  $p = .41$ ). Within the MT condition, therapist use of psychoeducation was not associated with parent involvement ( $B = .02$ ,  $p = .46$ ) while controlling for therapist use of other engagement strategies, which was also nonsignificant ( $B = -.02$ ,  $p = .51$ ).

### Psychoeducation and Other Engagement Strategies Observed in MT Versus UC Sessions

For early treatment sessions in which a parent was present, the occurrence rates for therapist use of psychoeducation and other engagement strategies were examined by condition. For the MT condition, the rate of occurrence of each psychoeducation strategy was

above 60%, with the exception of *providing rationale for treatment* (27.7%). For the UC condition, the rate of occurrence of each psychoeducation strategy was below 40%. The psychoeducation composite occurred in 95.7% of MT sessions, but only in 52.9% of UC sessions. The engagement composite occurred in 87.0% of MT sessions, but only in 58.8% of UC sessions.

Independent samples  $t$  tests were conducted to examine differences in psychoeducation strategies and other engagement strategies delivered to parents in MT and UC conditions (see Table 5). For these analyses, to obtain scores for each child case (as opposed to scores for each session recording), Extensiveness ratings for early treatment sessions were averaged (i.e., mean Extensiveness ratings for Sessions 1–3 for each child case). Compared with UC therapists, MT therapists received significantly higher Extensiveness ratings for the delivery of the individual psychoeducation strategies and composite, as well as the engagement composite. Cohen's  $d$  was assessed as a measure of effect size

TABLE 5  
Average Psychoeducation Extensiveness Ratings (Case Level) by Treatment Condition

Psychoeducation Strategies	MT <sup>a</sup>	UC <sup>b</sup>	$t(44)$	ES
Describing Child Behavior Problems	2.8 (1.7)	1.2 (0.5)	4.6*	1.3
Discussing Causes of Child's Misbehavior	3.2 (1.8)	1.3 (0.9)	4.5*	1.3
Describing Goals of Treatment	2.7 (1.4)	1.3 (0.6)	4.6*	1.3
Providing Rational for Treatment	1.5 (0.9)	1.1 (0.3)	2.5*	0.6
Providing Strategies to Manage Misbehavior	3.2 (1.7)	1.2 (0.7)	5.3*	1.5
Psychoeducation Composite	13.4 (4.6)	6.0 (2.3)	7.1*	2.0
Engagement Composite	12.7 (3.9)	7.2 (1.9)	6.3*	1.8

Note. MT = modular treatment; UC = usual care; ES = effect size = Cohen's  $d$ , which is the difference between the means of the two study groups divided by the pooled standard deviation.

<sup>a</sup> $n = 25$ .

<sup>b</sup> $n = 21$ .

\* $p < .05$ .

for MT versus UC differences in deployment of psychotherapeutic strategies, which almost all differences demonstrating large effects (Cohen's  $d > 0.8$ ).

### Parent Engagement in Child Therapy by Treatment Condition (MT Versus UC)

Participants attended an average of 14.59 ( $SD = 10.74$ ) sessions (range = 2–41) during the study period. Of the 105 coded early treatment sessions (i.e., Sessions 1–3), parents were involved (i.e., present) in 64 sessions (61.0%). As predicted, parent involvement varied significantly by treatment condition, with MT parents being involved in more sessions than UC parents. For early treatment sessions, UC parents were involved in 17 out of 53 sessions (32.1%), whereas MT parents were involved in 47 of 52 sessions (90.4%;  $t = 7.56$ ,  $p < .001$ ). Parent involvement beyond the early phase of treatment (i.e., after third session) also varied significantly by treatment condition, with UC parents being involved in 28.0% of sessions and MT parents being involved in 71.6% of sessions ( $t = 3.6$ ,  $p < .01$ ). There were no significant differences between MT and UC conditions in parent-reported measures of satisfaction with child MHS and parent–therapist alliance, and therefore mediation analyses focused on parent involvement as the engagement outcome of interest.

### Psychoeducation as a Mediator of Treatment Approach on Parent Engagement

The proposed mediational relationship was examined using the INDIRECT macro for SPSS (Preacher & Hayes, 2008), which estimates the total, direct, and indirect effects of a predictor variable on an outcome variable through a proposed mediator variable (or multiple mediators) and allows controlling for the influence of other variables. The *total effect* is the effect of X on Y in the absence of the Mediator (known as path C); for the current study, this is the effect of treatment condition on parent involvement in the absence of therapist use of psychoeducation. Conversely, the *direct effect* is the effect of X on Y while controlling for the Mediator (known as path C'); for the current study, this is the effect of effect of treatment condition on parent involvement while controlling for therapist use of psychoeducation strategies. The *indirect effect* is a measure of the amount of mediation and represents the portion of the relationship between X and Y that is mediated by the proposed Mediator; for the current study, this is portion of the relationship between treatment condition and parent involvement that is mediated by therapist use of psychoeducation strategies. Therefore, the *indirect effect* was assessed as a measure of the hypothesized

mediational effect of psychoeducation. Estimates of all paths are calculated using ordinary least squares regression.

The Preacher and Hayes (2008) approach is the preferred method for testing mediation in the current study, in lieu of the traditional Baron and Kenny (1986) approach, as it allows testing for multiple mediators in one single model. Preacher and Hayes delineated several advantages to testing a single multiple mediation model instead of running separate simple mediation models. First, testing multiple mediators allows one to conclude whether a set of mediator variables mediates the effect of X on Y. Second, it is possible to determine to what extent potential variables mediate the effect of X on Y, conditional on the presence of other mediators in the model (in essence, controlling for other mediators in the model). Third, when multiple mediators are tested in a multiple mediation model, the likelihood of parameter bias due to omitted variables is reduced, as opposed to running several separate mediation models that may lead to biased parameter estimates (due to omitted variables). Fourth, including several mediators in one model allows one to determine the relative magnitude of the specific indirect effects associated with each mediator variable. Fifth, this method uses *Bootstrapping*, a nonparametric resampling procedure in which indirect effect estimates are calculated across 5,000 bootstrap samples, along with 95% confidence intervals for the indirect effects. Bootstrapping is a preferred test for determining significant mediation (i.e., significant indirect effect) over the Sobel test, as it makes no sampling distributional assumptions of the indirect effect, and thus can be effectively utilized with smaller sample sizes while preserving power to detect a significant indirect effect. Given these advantages, this analytic approach is preferred for the current study given the small sample size, testing for multiple psychoeducation mediators simultaneously, and adjusting all paths for the potential influence of the engagement covariate.

Figure 1 depicts findings of the mediation model. This mediation model used the psychoeducation composite as the hypothesized mediator and controlled for therapists' use of other engagement strategies. The effect of treatment condition (MT vs. UC) on psychoeducation (hypothesized mediator) was significant ( $B = 4.56$ ,  $p < .01$ ). The direct effect of psychoeducation on parent involvement was not significant ( $B = .03$ ,  $p = .08$ ). However, this path is not required to be significant to test for mediation using the Preacher and Hayes (2008) method. The total effect of treatment condition on parent involvement was significant, with greater parent involvement in MT versus UC ( $B = .40$ ,  $p < .05$ ). However, the direct effect of treatment condition on parent involvement was not significant ( $B = .25$ ,  $p = .17$ ). That is, the effect of treatment condition on parent involvement

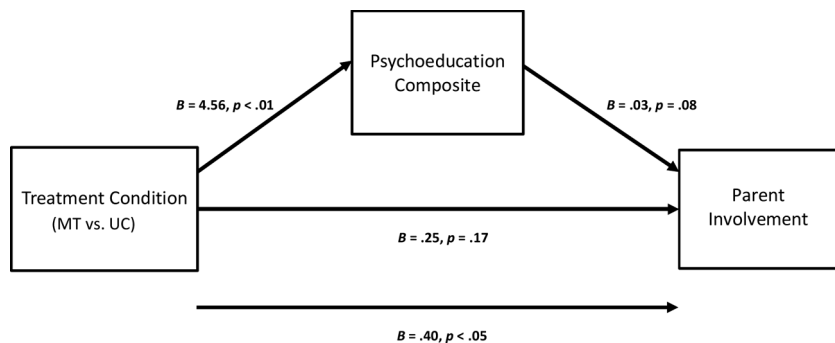


FIGURE 1 Mediation model, controlling for therapist use of other engagement strategies. Note. MT = modular treatment; UC = usual care.

was no longer significant when controlling for psychoeducation, suggesting the presence of mediation. To formally test for mediation (i.e., a significant indirect effect of treatment condition on parent involvement via the hypothesized mediator of psychoeducation), the bootstrap confidence intervals were assessed, which revealed no significant indirect effect (Bootstrap  $M$  of indirect effect  $B = .15$ ), 95% confidence interval  $[-.02, .40]$ . Thus, the hypothesized mediational effect of therapist use of psychoeducation on the relationship between treatment condition and parent involvement did not reach statistical significance.

The INDIRECT command allows testing for multiple mediators in one model, and therefore the individual psychoeducation strategies were entered as multiple mediators while still controlling for therapist use of other engagement strategies (see Figure 2 for multiple

mediator model). There was a significant effect of treatment condition on *describing child behavior problems* ( $B = 1.15, p < .05$ ) and *discussing causes of child's misbehavior* ( $B = 1.61, p < .01$ ). The direct effect of these hypothesized mediators on parent involvement was only significant for *discussing causes of child's misbehavior* ( $B = .12, p < .05$ ). The total effect of treatment condition on parent involvement was significant, with greater parent involvement in MT versus UC ( $B = .40, p < .05$ ). However, the direct effect of treatment condition on parent involvement was not significant ( $B = .22, p = .23$ ). That is, the effect of treatment condition on parent involvement was no longer significant when controlling for multiple psychoeducation mediators, suggesting the presence of mediation. To formally test for mediation (i.e., significant indirect effects of treatment condition on parent involvement via specific

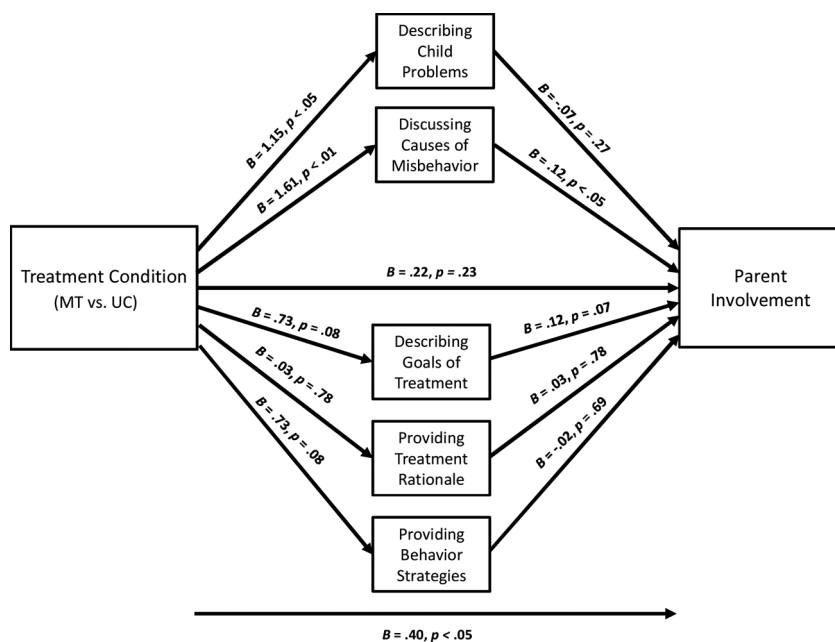


FIGURE 2 Multiple mediation model, controlling for therapist use of other engagement strategies. Note. MT = modular treatment; UC = usual care.

psychoeducation mediators), the bootstrap confidence intervals were assessed, and revealed a significant indirect effect for *discussing causes of child's misbehavior* (Bootstrap  $M$  of indirect effect  $B = .19$ ), 95% confidence interval [.001, .52]. Thus, the hypothesized mediational effect of therapist use of psychoeducation strategies on the relationship between treatment condition and parent involvement reached statistical significance for the strategy of *discussing causes of child's misbehavior*.

## DISCUSSION

The current study examined the extent to which therapists used psychoeducation and other engagement strategies, consistent with evidence-based practices, within a randomized effectiveness trial for children treated with evidence-based approaches versus usual care (UC). This study provides detailed data on the variability of psychoeducation and other engagement strategies deployed by therapists in evidence-based MT and in UC. We hypothesized that therapist use of psychoeducation strategies in the early phase of treatment would uniquely promote subsequent parent engagement in child treatment for disruptive behavior, after accounting for therapist use of other engagement strategies. This was partially supported by the study findings, as therapist use of psychoeducation strategies uniquely predicted parent involvement beyond the initial treatment phase while accounting for therapist use of engagement strategies. However, therapist use of psychoeducation strategies was inconsistently related to parent-therapist alliance and unrelated to parent satisfaction with their child's services. As a psychoeducation module was featured in the MT protocol that permitted flexible use of psychoeducation throughout the course of treatment, it was important to determine that our index of observed psychoeducation was not merely a proxy for adherence to the MT protocol. As such, it was particularly important to establish whether the association between psychoeducation and parent engagement could be observed within the UC condition. This was evidenced, as UC therapists' overall use of psychoeducation in early treatment was significantly associated with later parent involvement, whereas therapist overall use of engagement strategies was unrelated to parent involvement.

In assessing the role of specific psychoeducation strategies, therapist use of strategies including *discussing causes of child's behavior problems* and *describing goals of treatment program* were found to significantly predict parent involvement while controlling for therapist use of other engagement strategies. These findings align with observational studies of predictors of parent involvement in child therapy. For example, parents' expectations about treatment and parent-youth agreement on

the focus of treatment have been associated with improved family attendance (Brookman-Frazee, Haine, Gabayan, & Garland, 2008; Nock & Kazdin, 2001). Preparing and orienting parents to their child's treatment using psychoeducation strategies can help address parent misconceptions about child MH problems and unrealistic treatment expectations, thereby increasing parent involvement in services. Indeed, a recent study found that engagement interventions that outperformed other engagement interventions on indicators of family engagement utilized psychoeducation as a core element (Becker et al., 2013).

As hypothesized, there was more observable therapist use and extensiveness of psychoeducation and other engagement practices in MT versus UC early treatment sessions. The individual psychoeducation strategies and overall composite occurred in the majority of early treatment MT sessions but infrequently in UC sessions. When psychoeducation strategies were deployed by UC therapists, they were delivered with much lower extensiveness compared to MT therapists. As the MT protocol featured a psychoeducation module that would allow therapists to flexibly use psychoeducation with their clients over the course of treatment, this finding is not surprising. Yet this finding is also consistent with research that suggests that directive treatment approaches (such as psychoeducation) are not observed as frequently in UC compared to evidence-based treatment models (Malik, Beutler, Alimohamed, Gallagher-Thompson, & Thompson, 2003). Although UC therapists have positive attitudes about psychotherapeutic techniques that may be conceptualized as directive (Brookman-Frazee, Garland, Taylor, & Zoffness, 2009), when they use psychoeducation in their practice, they rarely deliver these strategies with sufficient intensity that would be consistent with the expectations of evidence-based treatment models (Garland et al., 2010).

Similarly, other engagement strategies occurred in the majority of early treatment MT sessions but infrequently in UC sessions. When engagement strategies were deployed by UC therapists, they were delivered at a much lower extensiveness than MT therapists. This result is surprising when one considers that UC therapists often spend much time using eclectic strategies to engage clients, often at the expense of delivering evidence-based, cognitive and behavioral strategies (McLeod & Weisz, 2005). It is important to note that the engagement strategies that were observationally coded corresponded to practices found in evidence-based interventions that utilize enhanced engagement strategies. UC therapists may spend much time on such things as joining empathically with parents to engage and build rapport in ways that may not necessarily position the parent to be an active agent in the child's treatment. In addition, UC therapists may place an

emphasis on engagement but may direct most of their attention on engaging their child clients rather than the parents. This is supported by the significantly higher proportion of child-only sessions in UC relative to MT.

Levels of parent engagement in treatment for child disruptive behavior were characterized across treatment conditions, and it was hypothesized that parents assigned to receive MT would demonstrate higher engagement in services than parents in UC. This hypothesis was partially supported. As predicted, parents in the MT condition were involved in a much higher proportion of sessions than parents in the UC condition; however, there were no differences in parent ratings of the parent-therapist alliance and satisfaction with services between MT and UC conditions. That is, parents' feelings of having a collaborative relationship with their child's therapist and their satisfaction with their child's services were similar across MT and UC conditions. This finding may be due to a lack of sensitivity in these measures to detect differences because of a ceiling effect and demand characteristics (i.e., consumers wanting to provide positive feedback), as ratings of alliance and satisfaction were generally very high. Studies support that parents often express high satisfaction with services, regardless of whether those services result in improvement in their children (Garland, Aarons, Hawley, & Hough, 2003). This finding that parent-rated measures of alliance and satisfaction were no different between UC and MT may help dispel some of the concerns that therapists have regarding the use of evidence-based practices interfering with the development of therapeutic alliance and contributing to poorer engagement of families (Nelson, Steele, & Mize, 2006).

Finally, it was hypothesized that effect of treatment condition (MT vs. UC) on parent involvement would be explained by therapist use of psychoeducation strategies while controlling for use of other engagement strategies. This was partially supported by study findings. Treatment condition significantly predicted parent involvement (with greater parent involvement in MT vs. UC), and the direct effect of treatment condition on parent involvement was no longer significant when accounting for overall psychoeducation strategies. However, the indirect effect of treatment condition on parent involvement via psychoeducation did not reach statistical significance, thus indicating no significant mediation. There was evidence that therapist use of individual psychoeducation strategies mediated the relationship between treatment condition and parent involvement, as *discussing causes of child's misbehavior* with parents in initial sessions significantly predicted later parent involvement beyond the early phase of treatment. A formal test for mediation showed a significant indirect effect of treatment condition on parent involvement via

*discussing causes of child's misbehavior*, thus supporting the presence of mediation. This specific psychoeducation strategy may have accounted for differences in parent involvement between treatment conditions due to increasing parents' understanding of factors associated with child misbehavior. Parents who hold biopsychosocial etiological beliefs about causes of child problems are more likely to use MHS to address those problems (Yeh et al., 2005). *Discussing causes of child's misbehavior* may target parent misperceptions about causes of misbehavior and highlight causes that can be targeted in evidence-based treatment for child disruptive behavior that leverages parent involvement.

The results of the current study should be interpreted in light of some study limitations. First, although we used multiple measures of parent engagement, we did not examine the quality of parent engagement in session (e.g., actively contributing to therapeutic discussions and activities, asking questions, etc.). Second, session recordings were not available for all early treatment sessions due to missing data, but there were no differences in missingness in MT versus UC. It is conceivable that some psychoeducation and engagement strategies occurred in sessions that were not recorded, and thus not captured in early treatment sessions adding error to our analysis. Third, the small sample size did not permit the examination of moderators of parent involvement, such as racial/ethnic and socioeconomic background. Fourth, as the MT condition had more initial sessions attended by a parent, we observationally coded more MT sessions relative to the UC condition, and thus may have had more of an opportunity to observe therapist use of psychoeducation and other engagement strategies in the MT condition. Fifth, treatment for child behavior problems typically includes some degree of psychoeducation, and it may be that we were measuring therapist use of strategies common to all behavioral treatments. Last, we did not include the standard manual condition in the current study due to a lack of resources for observationally coding additional recordings in this treatment arm, which would have elucidated the extent to which therapists deploy psychoeducation and other engagement strategies while adhering to a particular treatment manual. Despite these limitations, the current study has important merits that warrant consideration. The development of a reliable observational coding system to examine therapist in-session use of psychotherapeutic strategies, inclusion of a relatively diverse group of participants and providers who are generally representative of other samples from community-based MH settings, assessing multiple indicators of parent engagement, and use of randomized sample of therapists in a larger effectiveness trial are notable strengths of the current study.

## CONCLUSION

Consistent with the existing literature, we found great variability in parent involvement among families receiving care in community-based MH services for child disruptive behavior. The findings of low occurrence and extensiveness of psychoeducation and other engagement strategies deployed by UC therapists reflect a cursory and/or incomplete application of these psychotherapeutic strategies with limited follow-through. These findings are consistent with research that indicates gaps in using evidence-based practices in community-based service settings. Although the observational coding measure used in the current study is not a measure of fidelity to a particular treatment, the low occurrence and extensiveness of psychoeducation and other engagement strategies suggests that these evidence-based strategies are not being delivered in UC as thoroughly as would be expected in an evidence-based model. Taken together, these findings replicate results from similar observational coding studies that show psychotherapeutic strategies conceptually consistent with evidence-based practices for children with disruptive behavior are delivered with some frequency in UC but are not delivered with sufficient intensity.

There is a substantial amount of research on client characteristics that predict engagement in care. An understanding about how specific in-session psychotherapeutic strategies may influence parent involvement in child psychotherapy further elucidates the therapist's role in promoting parent involvement. These results support the need for training community-based therapists in implementing psychoeducation strategies early in care to promote parent involvement in child MHS. This may be especially important for families with lower levels of MH literacy, such as ethnic minority and socially disadvantaged families that may experience perceptual barriers to engagement in child MH care. Future studies should investigate whether psychoeducation strategies promote MH literacy among ethnically diverse parents initiating services, and whether this results in increased parent engagement in child MH care.

## ACKNOWLEDGMENTS

The authors would like to acknowledge the UCLA Culture and Minority Mental Health Lab and the Child F.I.R.S.T. lab for their contribution to the observational coding of therapy session recordings.

## FUNDING

This study was supported by a Ford Foundation Fellowship from the National Research Council of the National Academies.

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