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Implementation of Multi-Family Psychoeducational Psychotherapy for Childhood Mood Disorders in an Outpatient Community Setting

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Abstract

Despite advances in Evidence-Based Treatments (EBTs), research suggests these interventions are not utilized in practice settings. This study examined implementation of Multi-Family Psychoeducational Psychotherapy (MF-PEP), an EBT for childhood mood disorders, in two outpatient community clinics. Fifteen community therapists facilitated MF-PEP. Twenty community clinicians referred forty children ages 8 to 12 with mood disorders and their parents who participated in MF-PEP. Preliminary descriptive findings based on observations and self-report questionnaires demonstrated implementation outcomes of acceptability, adoption, appropriateness, feasibility, implementation cost, penetration, and sustainability of MF-PEP at these clinics. Parents also demonstrated significant improvement in knowledge of mood disorders post-treatment. Preliminary results support implementation of MF-PEP in practice settings and suggest community-based MF-PEP may be associated with improvement in clinical outcomes.

Keywords

implementation; evidence-based treatment; children; mood disorders; family therapy

INTRODUCTION

Although research has identified numerous psychosocial Evidence-Based Treatments (EBTs) for youth (Silverman & Hinshaw, 2008), clinicians are not utilizing these

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Dr. Fristad is the author of a treatment manual (Guilford Press Inc.) and MF-PEP workbooks (www.moodychildtherapy.com) for which she receives royalties.

interventions in clinical practice (Sheehan, Walrath, & Holden, 2007; Weersing & Weisz, 2002). Even when EBTs are conducted in the community, evidence regarding their effectiveness is mixed. While some research has demonstrated positive findings for EBTs in practice settings (Weisz et al., 2012), other community-based studies have found that EBTs do not outperform usual care (Southam-Gerow et al., 2010; Weisz et al., 2009) and they have smaller effects than efficacy investigations of the same intervention (Gillham, Hamilton, Freres, Patton, & Gallop, 2006).

IMPLEMENTATION RESEARCH

Implementation research, which involves the identification and evaluation of processes necessary for moving and maintaining treatments in practice settings, may help close this science-practice gap (Fixsen, Blasé, Naoom, & Wallace, 2009; Proctor et al., 2009; Schoenwald & Hoagwood, 2001; Southam-Gerow, Marder, & Ausin, 2008). Indeed, implementation research has recently become an important focus across various health disciplines (Brownson, Colditz, & Proctor, 2012). Theories and models outline various stages of implementation, starting with exploration and then shifting to adoption decision/preparation, active implementation, and finally sustainment (Aarons, Hurlburt, & Horwitz, 2011; Damschroder et al., 2009; Fixsen et al., 2009; Glisson & Schoenwald, 2005; Proctor et al., 2009; Rogers, 2003). During these stages, specific implementation strategies are employed and investigated, such as: identifying appropriate settings and therapists/facilitators; securing and maintaining funding and referrals; making changes at agency, administrative, and system levels; establishing training, supervision, and staff performance evaluation procedures; and creating administrative supports (Fixsen et al. 2009; Southam-Gerow et al., 2008). However, aforementioned models note that various factors can influence the implementation process, and thus must also be considered; including, intervention characteristics, outer setting or social/political context, inner setting or organizational characteristics, and individuals delivering the intervention.

Thus, outcomes in implementation research involve a broad scope consisting not only of client-level outcomes characteristic of efficacy and effectiveness studies, but also therapist, treatment delivery, agency, and system-level variables (Proctor et al., 2009; Schoenwald & Hoagwood, 2001). Proctor et al. (2011) developed a taxonomy of implementation outcomes based on a review of implementation models and studies (see Table 1). These outcomes are crucial for evaluating the success of implementation procedures and are prerequisites for achieving subsequent improvement in service and clinical outcomes (Proctor et al., 2011).

Distinguishing implementation effectiveness from treatment effectiveness in practice settings is crucial (Proctor et al., 2009). If a treatment fails when conducted in the community, it is important to determine if the failure occurred because the intervention was ineffective in the practice setting, indicating an intervention failure, or if an effective intervention was conducted poorly, indicating an implementation failure (Proctor et al., 2011). Thus, examination of implementation of EBTs, separate from treatment efficacy and effectiveness, is essential for elucidating processes involved in the successful transport of EBTs to community settings.

Barriers and Facilitators in Implementation Research

As previously mentioned, a variety of factors related to the intervention, outer and inner settings, and treatment facilitators can impede or enhance implementation. Such characteristics are important to consider and address in order to ease transport of EBTs to the community (Southam-Gerow, Rodríguez, Chorpita, & Daleiden, 2012). For example, children treated in community settings tend to have higher comorbidity, more culturally diverse backgrounds, and greater ecological risks than children treated in efficacy studies (Ehrenreich-May et al., 2011). In addition, inconsistencies in EBT definitions, the overabundance of manuals for some disorders and the lack thereof for other disorders, difficulties in clinicians' awareness and identification of EBTs, clinicians' lack of access to research, and intensive training and supervision required to learn EBTs pose as obstacles (Higa & Chorpita, 2008).

Therapists' attitudes and beliefs about EBTs can also hinder the implementation process. Common attitudinal concerns identified by therapists include: unmet client needs; adaptability and applicability of treatments to clients with comorbidities; restriction of clinical innovation and creativity; feasibility of manual-based treatments; effects on the therapeutic relationship; treatment credibility; and job satisfaction (Addis & Krasnow, 2000; Addis, Wade, & Hatgis, 1999). Finally, at the system level, few incentives to change (e.g., mental health services are not federally regulated) and costs (e.g., training and supervision costs, purchasing of manuals) can impede EBT implementation (Higa & Chorpita, 2008; Southam-Gerow et al., 2012).

While various barriers to implementation exist, facilitators have also been identified and can aid in the transport of EBTs. One important facilitator is creation of user-friendly manuals that contain information on treatment development and theory, therapeutic process factors, procedures for integrating various systems, and strategies for developing positive relationships with clients (Herschell, McNeil, & McNeil, 2004). Emphasis on adaptability and "flexibility within fidelity" (i.e., adherence to treatment techniques and principles while also accommodating clients' individual needs) can also ease practitioners' comfort with EBTs (Kendall & Beidas, 2007). New interventions should also emphasize minimal complexity, improvements on existing interventions, congruence with community need, compatibility with community therapists' values and experiences, and cost-effectiveness (Damschroder et al., 2009; Higa & Chorpita, 2008; Rogers, 2003; Southam-Gerow et al., 2008). Similarly, interventions associated with incentives or conducted in accord with external policies will often experience implementation success (Aarons et al., 2011; Damschroder et al., 2009). Likewise, an agency's culture (e.g., norms, values) and climate (e.g., openness to innovations, leadership engagement) can enhance implementation, as can therapists' self-efficacy and positive beliefs or attitudes about EBTs.

Collaboration among researchers and community stakeholders is also vital to implementation and can help facilitate system-level changes, such as clinical services and administrative operations (Fixsen et al., 2009; Glisson & Schoenwald, 2005; Rogers, 2003; Southam-Gerow, Hourigan, & Allin, 2009; Southam-Gerow et al., 2008; Southam-Gerow et al., 2012). Multi-component training procedures (i.e., manual, workshop, supervision) involving active learning strategies (i.e., observation, feedback, consultation/supervision,

behavioral rehearsal) which take into account contextual factors (i.e., therapist variables, organizational support, quality of training, client variables) are also important in changing therapists' knowledge, attitudes, skills, and behavior and improving client outcomes (Beidas & Kendall, 2010; Herschell, Kolko, Baumann, & Davis, 2010). Thus, aforementioned barriers and facilitators are important to identify and address in implementation research in order to ensure successful transport of EBTs.

Implementation Efforts in Children's Mental Health

Recent research has evaluated implementation strategies and outcomes of psychosocial EBTs for both children and adults (Landsverk, Brown, Reutz, Palinkas, & Horwitz, 2011; McHugh & Barlow, 2010). In youth literature, several national, state-level, and treatment-developer initiated implementation efforts have been conducted (McHugh & Barlow, 2010). Three of the leading implementation initiatives for youth include the National Child Traumatic Stress Network for youth with trauma history (Pynoos et al., 2008), major restructuring of mental health care services for children in Hawaii (Nakamura et al., 2011) via various strategies (e.g., statewide trainings, identification and utilization of common EBT procedures or elements via a distillation and matching model; Chorpita, Daleiden, & Weisz, 2005), and Multisystemic Therapy for youth antisocial behavior (Schoenwald, Heiblum, Saldana, & Henggeler, 2008). These initiatives employed strategies identified as facilitators in implementation research, including: needs and barriers assessment; involvement of community stakeholders; didactic and active training methods; treatment adherence assessment; and outcome monitoring (McHugh & Barlow, 2010).

Though these large-scale efforts are impressive and promising, many were developed with a sense of urgency that precluded consensus on or empirical evaluation of employed implementation strategies (McHugh & Barlow, 2010). Indeed, the majority of implementation research in children's mental health consists of uncontrolled case and descriptive studies (Landsverk et al., 2011). Similarly, most aforementioned barriers and facilitators to implementation are theory-driven, and intuitively make sense, but have not been extensively empirically evaluated. Though more rigorous methodology has recently been employed to examine implementation processes, these youth studies largely focused on broad organizational interventions (Aarons & Sommerfeld, 2012; Glisson et al., 2012) or treatments for disruptive behavior (Landsverk et al., 2011). Only a handful of studies evaluated implementation strategies and outcomes of community-based EBTs for youth depression via descriptive methods (Lyon, Charlesworth-Attie, Stoep, & McCauley, 2011; Southam-Gerow et al., 2009) and more rigorous methodology (Kramer & Burns, 2008; Weisz et al., 2012). Similar to large-scale initiatives, findings from implementation studies for youth offer support for needs and barriers assessment, multicomponent training methods, focus on agency culture (e.g., less rigidity and centralization) and climate (e.g., more engagement and openness to new innovations), community stakeholder involvement, treatment adaptability, and providers' positive attitudes towards EBTs in successful implementation. Though implementation efforts in youth mental health are growing, no studies have evaluated the implementation of psychosocial EBTs for childhood bipolar disorders. In addition, given the relatively new conceptualization of implementation

outcomes outlined by Proctor et al. (2011), no studies have collectively examined these variables.

MULTI-FAMILY PSYCHOEDUCATIONAL PSYCHOTHERAPY

Multi-Family Psychoeducational Psychotherapy (MF-PEP) is an 8-session, manualized, group-based EBT for children with depressive and bipolar disorders and their parents that is ready for community-based implementation research (Fristad, Goldberg-Arnold, & Leffler, 2011). Like other EBTs for childhood mood disorders (David-Ferdon & Kaslow, 2008; West & Pavuluri, 2009), MF-PEP provides psychoeducation about mood disorders and effective treatments, emphasizes family involvement, focuses on skill building (i.e., communication, problem-solving), and includes cognitive behavioral therapy (CBT) strategies. Psychoeducation, social support, and skills development are theorized to lead to a better understanding and management of mood disorders and attainment of more effective treatment, which subsequently results in improved symptoms (Fristad et al., 2011; Goldberg-Arnold, Fristad, & Gavazzi, 1999). Though research supports the efficacy of family-based interventions (Kaslow, Broth, Smith, & Collins, 2012) and family psychoeducation (Lucksted, McFarlane, Downing, & Dixon, 2012), such treatments for childhood mood disorders are not readily implemented in the community.

MF-PEP is ready for implementation because it has demonstrated efficacy in two randomized controlled trials (RCTs) with waitlist control plus treatment as usual comparisons (WLC+TAU). The initial RCT of 35 families found that by 6-month follow-up, parents who immediately received MF-PEP demonstrated improved: family interactions; knowledge of mood disorders; ability to obtain services; and attitudes towards mental health treatment. Children reported increased social support from parents. In addition, both parents and children provided positive consumer evaluations (Fristad, Goldberg-Arnold, & Gavazzi, 2002, 2003; Goldberg-Arnold et al., 1999).

The second RCT of 165 families found that children who received the intervention had a significantly greater decrease in mood symptom severity compared with WLC+TAU over 1-year follow-up, with improvement maintained through 18-month follow-up (Fristad, Verducci, Walters, & Young, 2009). Secondary analyses revealed participation in MF-PEP significantly improved quality of services utilized, mediated by parents' beliefs about treatment, and participation in MF-PEP also significantly improved severity of children's mood symptoms, mediated by quality of services used (Mendenhall, Fristad, & Early, 2009). Thus, MF-PEP helps parents become better consumers of mental health services, and access to higher-quality services results in decreased mood symptom severity (Fristad et al., 2009). Based on these results, MF-PEP appears to be an efficacious EBT for children with mood disorders. Thus, implementation research, followed by effectiveness evaluation, is required to examine if the treatment can be transported to community settings and subsequently demonstrate positive clinical effects.

PURPOSE OF THE STUDY

This uncontrolled case study aimed to provide preliminary descriptive and quantitative data on the implementation of MF-PEP at two outpatient community clinics for children with

mood disorders and their parents using Proctor et al.'s (2011) implementation outcome taxonomy. Implementation outcomes of acceptability, adoption, appropriateness, feasibility, implementation cost, penetration, and sustainability were examined via descriptive statistics, summaries of responses to multiple-choice and open-ended questions completed by therapists/clinicians and families, and agency-level observations. One effectiveness outcome, parental knowledge of mood disorders, was examined quantitatively. We hypothesized that MF-PEP at two outpatient community clinics would demonstrate aforementioned implementation outcomes and be associated with significantly improved parental knowledge of mood disorders.

METHOD

Participants

Parents and children—Forty children and their parents receiving services at two outpatient community clinics were referred to MF-PEP by their individual/family clinicians (therapists or psychiatrists) and participated in the current study. Inclusion criteria required children to be between 8 and 12 years old and have a depressive or bipolar disorder diagnosis from their clinician at the time of referral. Children's specific mood diagnoses and comorbid conditions were not collected. Children and at least one parent had to agree to participate in MF-PEP and complete questionnaires. Exclusion criteria for both parents and children were inadequate verbal skill and intellectual functioning at the time of referral, per judgment of the referring clinician, and inability to communicate in English. In MF-PEP efficacy trials, children were required to have IQs ≥ 70 (Fristad et al., 2003; Fristad et al., 2009). Thus, there is no evidence that MF-PEP would be effective for children with IQs < 70 . Also, group content involves discussion, psychoeducation, and skill building, and all groups were conducted in English; therefore, clinicians were instructed only to refer families who could adequately communicate in English and who appeared to be of at least borderline verbal skill and intellectual functioning. See Table 2 for sample demographic characteristics.

MF-PEP therapists—Fifteen therapists employed at two community clinics were recruited to be trained in and facilitate MF-PEP. Inclusion criteria required that therapists participate in MF-PEP training and complete questionnaires. There were no exclusion criteria. A majority of therapists (93%) were female. Regarding licensure, 53% were social workers, 27% were clinical psychologists, 13% were psychology interns, and 7% were social work practicum students.

Referring clinicians—Clinicians employed at two community clinics self-selected to refer eligible families to MF-PEP. The only inclusion criterion was that clinicians complete one questionnaire. There were no exclusion criteria. Twenty clinicians referred the 30 families who completed a majority of MF-PEP sessions. They were contacted one month after MF-PEP. Four clinicians declined participation by not responding to emails or returning questionnaires. Five clinicians could not participate as the families they referred did not continue treatment with them after MF-PEP. One unknown clinician could not be contacted.

Procedure

Study procedures were approved by an institutional review board affiliated with the outpatient community clinics where MF-PEP groups were conducted. Informed consent/assent was obtained from parents, children, and community therapists/clinicians. These clinics are located in close proximity to the university where MF-PEP was developed. Two therapists at these clinics had previously worked with the treatment developer as therapists in the second RCT of MF-PEP.

Parents and children—Families were referred to MF-PEP by their individual/family clinicians and subsequently attended a prescreening interview with an MF-PEP therapist, in accord with standard operating procedures for initiation of group therapy at these clinics. During this session, therapists assessed eligibility, determined compatibility with other group members, and explained group content and structure. Consent/assent and questionnaires were either completed at this meeting or at the first group session. Parents and children were provided with MF-PEP workbooks, completed questionnaires pre- and post-treatment, and each received a \$10 gift card.

MF-PEP therapists—Therapists completed MF-PEP training prior to facilitation (see Results and Discussion). They completed questionnaires after sessions and each received a \$25 gift card.

Referring clinicians—Clinicians from two community clinics were informed about MF-PEP via fliers and word-of-mouth. They utilized clinical judgment when self-selecting to refer eligible families. Approximately one month after MF-PEP, referring clinicians completed one questionnaire and each received a \$10 gift card.

Measures and Evaluation Methods

Study measures were completed by parents, children, MF-PEP therapists, and referring clinicians. See Table 3 for a summary of each self-report measure, including informant who completed the measure, outcome measured, sample items, scoring, when administered, number administered, and number completed. Three of six measures were used in previous investigations of MF-PEP, with adequate psychometric properties. The Understanding Mood Disorders Questionnaire (UMDQ; Gazazzi, Fristad, & Law, 1997) was originally developed to measure changes in parents' knowledge of mood disorders and has good internal consistency ($\alpha = .73$), test-retest reliability ($r = .70$), and predictive validity (i.e., sensitive to changes in knowledge following MF-PEP; Fristad et al., 2003; Gavazzi et al., 1997; Mendenhall et al., 2009). The Parent Group Evaluation Form and Child Group Evaluation Form have previously been used to assess families' perceptions of MF-PEP (i.e., content, format, activities, benefit; Fristad, 2006). Both demonstrated good internal consistency in the current study ($\alpha = .85$ and $.83$, respectively). Given that the field of implementation research is far from achieving consensus regarding measurement of outcomes (Proctor et al., 2011), and the purpose of the current study was to describe implementation of community-based MF-PEP, three measures aimed to assess implementation outcomes of MF-PEP in particular, rather than broad EBT implementation in general, were created. Simple

observation of processes and changes at these clinics was also used to supplement self-report measures. Table 4 summarizes all outcomes and evaluation methods.

RESULTS

Implementation Outcomes

Parents and children reported high *acceptability* with MF-PEP, as evidenced by high mean ratings (4.0 on a measure with a score range of 1 to 5) with MF-PEP content, format, components/activities, perceived benefit, and overall (see Figure 1). Community therapists and clinicians also reported high *acceptability* with MF-PEP (see Table 5). A majority of MF-PEP therapists reported that training was adequate and most rated the therapist workbook and verbal training presentation as “*helpful*” or “*very helpful*.” Most referring clinicians also noted families discussed MF-PEP in ongoing treatment and reported improvement in the therapeutic relationship, parent and child coping, and family climate and attitude.

Other implementation outcomes were also demonstrated (see Table 6). Regarding *adoption*, these clinics expressed interest in MF-PEP and subsequently developed and completed training, created a referral network, and implemented 8 groups over 2 years. MF-PEP was also viewed as *appropriate*, as only 1 family discontinued due to incompatibility with needs, most community therapists had received training in other manualized EBTs for youth, and all referring clinicians agreed with MF-PEP content/goals. MF-PEP was also *feasible*, as evidenced by implementation of 8 groups with adequate recruitment (3 to 8 families per group) and completion rates (75%), ability to secure required space and materials, and reported usefulness/ease of treatment techniques. However, some components were difficult to facilitate given space restrictions (i.e., physical activity) and children’s developmental or cognitive level (i.e. CBT, problem-solving, medication discussion). Provider *penetration* was also demonstrated, as all trained therapists facilitated MF-PEP at least once. In addition, MF-PEP appears to be *sustainable* in these clinics, as a majority of therapists were interested in facilitating future MF-PEP groups, most clinicians were “*somewhat likely*” or “*very likely*” to refer future clients, and group facilitation has continued since study completion and spread from 2 to 3 clinics.

Finally, MF-PEP *costs*, including training, workbooks, prizes, supplies, snacks, and billing/administration/supervision time were manageable. Specifically, this agency broke even financially with 2 child group therapists, 1 parent group therapist, and 7 families per group. All groups contained three licensed clinicians: 1 group had 7 families and 6 groups had 4 families; 5 groups had 4 families complete 4 sessions. Number of families required to break even in this setting reduces to 4 if a trainee (without billing requirements) serves as the child co-therapist. Though initial costs associated with MF-PEP set up and training are high, results suggest MF-PEP is financially feasible in this setting (see Table 7). Fidelity was not assessed.

Effectiveness Outcome

On the MF-PEP Referring Clinician Questionnaire, 100% of clinicians reported “*more accurate knowledge and a better understanding of mood disorders*” from parents. Similarly, on the UMDQ, parental knowledge of mood disorders significantly improved from pre-treatment ($M = 33.27$, $SD = 7.72$) to post-treatment ($M = 36.86$, $SD = 3.30$), $t(21) = -3.36$, $p = .003$, $d = 0.60$.

DISCUSSION

Despite the existence of several EBTs for childhood mood disorders (David-Ferdon & Kaslow, 2008; West & Pavuluri, 2009), and the strong support for use of family-based interventions (Kaslow et al., 2012) and family psychoeducation (Lucksted et al., 2012) in their treatment, limited research has examined implementation of these interventions in practice settings. The current study described and examined implementation of MF-PEP, an EBT for childhood mood disorders, at two outpatient community clinics using Proctor et al.’s (2011) implementation outcome taxonomy. Implementation outcomes of acceptability, adoption, appropriateness, feasibility, implementation cost, penetration, and sustainability were demonstrated. In addition, parents’ knowledge of mood disorders significantly improved post-treatment. Thus, preliminary results suggest successful implementation of MF-PEP in outpatient community clinics is possible and may be associated with improved effectiveness outcomes.

Implementation Outcomes

Although several impressive EBT implementation efforts have been initiated (McHugh & Barlow, 2010), the majority of implementation research in children’s mental health is comprised of uncontrolled case and descriptive studies (Landsverk et al., 2011), and none have collectively examined Proctor et al.’s (2011) implementation outcomes. This study also provides a descriptive evaluation of EBT implementation; however, its value lies in adding to the scarce literature examining implementation strategies and outcomes of EBTs for youth depression (Kramer & Burns, 2008; Lyon et al., 2011; Southam-Gerow et al., 2009; Weisz et al., 2012) and marks the first implementation study of a psychosocial EBT for childhood bipolar disorders.

Parents, children, and community therapists/clinicians reported high *acceptability* with MF-PEP. Previous literature has demonstrated the importance of provider attitudes and acceptability in the implementation process (Aarons & Sommerfeld, 2012; Glisson et al., 2012; Rogers, 2003). Importantly, therapists reported that the training methods were acceptable, which included both didactic (workbook review, workshop) and active learning (consultation/supervision) strategies. This finding is promising, as research suggests multicomponent trainings are most effective in changing therapists’ knowledge, attitudes, skills, and behavior and improving client outcomes (Beidas & Kendall, 2010; Herschell et al., 2010; McHugh & Barlow, 2010). Though less research has evaluated the role of youth and family acceptability, intuitively, it makes sense that families’ acceptability would likely facilitate implementation of EBTs.

Regarding *adoption*, clinics expressed interest in learning and implementing MF-PEP and initiated procedures associated with its uptake, including preparation via development of a referral network and training system, subsequent completion of training, and implementation of 8 groups over 2 years. Such planning and preparatory strategies have been identified as crucial during the adoption phase of implementation (Fixsen et al., 2009; Southam-Gerow et al., 2008). Uptake was also positively influenced by clinician-researcher collaboration throughout the study design and facilitation process. Community stakeholder involvement has consistently been identified in implementation literature as a facilitator, and certainly enhanced uptake of MF-PEP in the current study (Fixsen et al., 2009; Glisson & Schoenwald, 2005; McHugh & Barlow, 2010; Rogers, 2003; Southam-Gerow et al., 2009; Southam-Gerow et al., 2008). Thus, sufficient planning and university-agency collaboration eased implementation of MF-PEP.

Community therapists and clinicians also endorsed *appropriateness* of MF-PEP. Specifically, they agreed with session content/goals and had previous experience with EBTs, with over half having received prior training in other manualized interventions. Therapists and clinicians thought MF-PEP was appropriate in these clinics given their skills and the agency's mission of providing EBTs to youth and families. These clinics were particularly interested in MF-PEP, as children with mood disorders make up a sizable portion of their clientele, and they did not offer a similar treatment. Thus, these clinics demonstrated a positive innovation climate (i.e., openness), which has been shown to enhance implementation of EBTs (Aarons & Sommerfeld, 2012; Glisson et al., 2012). Also, congruence with therapists' skills and capitalization on community need facilitated implementation of MF-PEP, both of which have been identified as important factors in implementation research (Damschroder et al., 2009; Glisson & Schoenwald, 2005; Higa & Chorpita, 2008; Rogers, 2003; Southam-Gerow et al., 2008).

Therapists also reported most treatment techniques were *feasible* and *costs* were manageable. Indeed, MF-PEP possesses intervention characteristics associated with ease and success of implementation (e.g., minimal complexity, able to be adapted, cost-effective; Damschroder et al., 2009; Herschell et al., 2004; Higa & Chorpita, 2008; Proctor et al., 2011; Rogers, 2003; Weisz et al., 2012). Specifically, instructions were clearly outlined in detailed therapist, parent, and child workbooks. When therapists had difficulty with techniques, they were encouraged to use "flexibility within fidelity" to adhere to MF-PEP principles while adapting procedures to match youths' developmental and cognitive abilities (Kendall & Beidas, 2007). Also, in response to difficulties conducting physical activities, the treatment developer devised alternate activities and "Group-in-a-Box," which contains all materials needed for facilitation of MF-PEP, further improving *feasibility* of the treatment (see www.moodychildtherapy.com). Finally, *feasibility* was also demonstrated via successful facilitation of training, attainment of required space and materials, and adequate group recruitment and completion rates.

Although initial *implementation costs* associated with MF-PEP are high (e.g., training, materials), clinics in the current study broke-even financially with 3 therapists and 7 families per group. However, use of a trainee therapist can substantially reduce costs (4 families

needed to reach break-even point in current study), and further enhance implementation of MF-PEP.

Provider *penetration* was also demonstrated, in that all trained therapists administered the intervention at least once. This outcome is promising, especially given the resources and costs invested in starting a new intervention. It also further demonstrates the importance of positive attitudes and open innovation climate, which likely enhanced provider penetration at these clinics.

Finally, *sustainability* of MF-PEP in this setting is promising, as most therapists/clinicians were interested in continuing to facilitate MF-PEP and refer families, group facilitation continued since study completion, and implementation spread from 2 to 3 clinics. Indeed, this study demonstrated intervention characteristics (e.g., fit, adaptability, perceived benefit), contextual factors (e.g., agency culture, implementation climate), processes (e.g., training, planning, ongoing support) and capacities (e.g., funding, resources, community stakeholder involvement) important in sustainability of innovations (Stirman et al., 2012). Thus, positive implementation outcomes provide preliminary support for transport of MF-PEP to the community.

Effectiveness Outcome

A significant increase in *parental knowledge of mood disorders* was evident from pre- to post-treatment, with parent-reported mean improvement of 3.59 points on the UMDQ. In addition, all referring clinicians corroborated improved parental knowledge. Similar increases on the UMDQ were found in efficacy trials of MF-PEP at post-treatment (2.8 to 4.4 mean point improvement; Fristad et al., 2003) and 6-month follow-up (1.28 to 3.42 mean point improvement; Mendenhall et al., 2009). Similar increases in efficacy and effectiveness evaluations are promising and have clinical significance. Mediator analyses suggest that MF-PEP led to decreased mood symptom severity by improving service utilization, and this improvement occurred in part as a result of increased parental knowledge and beliefs about treatment (Mendenhall et al., 2009). Thus, improved knowledge is related to mechanisms of change in MF-PEP; similar increases in knowledge observed in the current study suggest community-based MF-PEP may be associated with improvement in mood symptoms via the same mechanism.

The current study did not evaluate other effectiveness outcomes or collect longitudinal data, as the primary objective was to describe and evaluate the implementation process. In addition, efficacy trial results suggest significant improvement in other effectiveness outcomes, such as favorable treatment beliefs and mood symptom severity, would not be apparent until 6- and 12-month follow-ups, respectively, since MF-PEP effects change by helping parents become better consumers of mental health services, and access to higher-quality services results in decreased mood symptoms (Fristad et al., 2009). Although follow-up data were not collected, significant increase in parental knowledge of mood disorders post-treatment indicates MF-PEP may be effective for families in community clinics and result in clinically meaningful improvements.

Limitations

Given the preliminary nature of this study, several limitations were apparent. However, many of these limitations are appropriate, given the early stage of this research, and useful for informing the next phase of evaluation. As this study was primarily concerned with providing descriptive and preliminary data on implementation of MF-PEP, the sample was small and information on implementation outcomes were broadly summarized rather than meticulously analyzed for detailed information. For example, extensive demographic information, children's mood diagnoses, families' individual session attendance, service recipient penetration, number of families referred to MF-PEP, who attended a prescreening interview, and who then participated in MF-PEP, reasons for declining study participation, and treatment fidelity were not collected. In addition, half of the measures were created for use in this study, most instruments were specific to MF-PEP, data were missing or incomplete in some cases, and some outcomes simply involved observation of changes and/or processes at this agency. Also, clinics in this study pose unique environments as the treatment developer had connections with two therapists and staff was experienced with EBTs. Finally, only one effectiveness outcome, parental knowledge of mood disorders, was evaluated via pre-post analysis. Thus, implementation outcomes and the sole effectiveness finding are specific to this agency and may differ when MF-PEP is implemented in novel settings. Though these shortcomings limit the conclusions that can be drawn about implementation and effectiveness of MF-PEP and generalizability of findings, results are promising and suggest that MF-PEP may be implementable in practice settings and associated with positive clinical outcomes.

Conclusions and Future Directions

The current study described and provided preliminary support for the implementation of MF-PEP, an EBT for children with mood disorders, at two outpatient community clinics using Proctor et al.'s (2011) implementation outcome taxonomy. It also adds to the small literature examining implementation of psychosocial EBTs for youth depression and marks the first implementation evaluation of a psychosocial EBT for childhood bipolar disorders.

Results suggest MF-PEP can be successfully implemented in outpatient community clinics. Implementation outcomes of acceptability, adoption, appropriateness, feasibility, implementation cost, penetration, and sustainability were demonstrated. In addition, significant improvement in parents' knowledge of mood disorders indicates community-based MF-PEP may result in positive effectiveness outcomes.

Future implementation studies of MF-PEP using a larger and diverse sample, fidelity monitoring, and empirical investigation of implementation constructs in novel community settings are needed. In addition, effectiveness evaluations of MF-PEP are needed to supplement preliminary implementation efforts. An effectiveness trial is currently underway that will evaluate longitudinal outcomes and treatment adherence of community-based MF-PEP and provide more definitive evidence regarding the transportability of MF-PEP to practice settings.

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Figure 1.
Parent- and child-reported acceptability of MF-PEP.

Table 1

Proctor and Colleagues' (2011) Taxonomy of Implementation Outcomes

Implementation Outcome	Measurement Level	Definition
Acceptability	Providers Consumers	Perception that a treatment and its components are agreeable or satisfactory
Adoption	Providers Agency	Intention or action to try or employ an Evidence-Based Practice
Appropriateness	Providers Consumers Agency	Perceived fit or compatibility of an Evidence-Based Practice for a particular setting, provider, or consumer; perceived fit of the treatment to address a particular problem
Feasibility	Providers Agency	Extent to which a new treatment can be successfully carried out within a given setting
Fidelity	Providers	Degree to which an intervention is implemented as intended by program developers and original protocol
Implementation Cost	Providers Agency	Cost of implementing a new treatment within a particular setting
Penetration	Agency	Integration of an intervention within a service setting
Sustainability	Administrators Agency	Extent to which an implemented treatment is maintained within a service setting's ongoing operations

Note. Definitions of implementation outcomes were paraphrased from Proctor et al. (2011, p. 67–70).

Table 2

Demographic Information

Demographics (<i>n</i>)	<i>M (SD)</i> or %
Children's Age and Sex (<i>n</i> = 40)	
Age, <i>M (SD)</i>	10.15 (1.23)
Male	53
Children's Race (<i>n</i> = 30)	
Caucasian	77
Biracial (Caucasian and African American)	13
African American	7
Asian	3
Children's Previous/Current Treatment (<i>n</i> = 30)	
Pharmacotherapy	93
School-Based Therapy	33
Home-Based Therapy	27
Emergency Room for Mood or Behavior	20
Inpatient Psychiatric Care	20
Online Support Groups	7
Residential/Day Treatment	3
Parent/Caregiver Informant (<i>n</i> = 32)	
Biological Mothers	75
Adoptive Mothers	10
Biological Fathers	6
Maternal Biological Grandmothers	6
Paternal Biological Grandmothers	3

Note. All above categories are mutually exclusive, with the exception of Children's Previous/Current Treatment.

Table 3

Summary of Study Measures

Measure	Informant	Outcome	Sample Items	Scoring	# Administered	# Completed
Parent Group Evaluation Form	Parent	Acceptability	<ul style="list-style-type: none"> Attending MF-PEP helped me understand my child's symptoms. I benefited from family projects. 	<ul style="list-style-type: none"> 16 items scored 1 (<i>strongly disagree</i>) to 5 (<i>strongly agree</i>) Total and subscales (content, format, activities, children's benefit) are averages ranging from 1 to 5 Higher scores reflect greater acceptability 	30 Post-Treatment	26
The Understanding Mood Disorders Questionnaire	Parent	Knowledge of Mood Disorders	<ul style="list-style-type: none"> Without treatment, clinical depression rarely lasts more than one month. Partial responses to medication are common. 	<ul style="list-style-type: none"> 20 items (mood disorder course, treatment) scored 0 (<i>false</i>) or 1 (<i>true</i>), 15 items are reverse scored 19-item mood symptom checklist scored 0 (<i>no</i>) or 1 (<i>yes</i>) Total score is sum of items ranging from 0 to 39 Higher scores reflect greater knowledge 	40 Pre-Treatment 30 Post-Treatment	30 Pre-Treatment 24 Post-Treatment 22 Pre-Post Pairs
Child Group Evaluation Form	Child	Acceptability	<ul style="list-style-type: none"> Attending MF-PEP helped me get along better in my family. I liked meeting other people my age. 	<ul style="list-style-type: none"> 16 items scored 1 (<i>strongly disagree</i>) to 5 (<i>strongly agree</i>) Total and subscales (content, format, activities, parents' behavior) are averages ranging from 1 to 5 Higher scores reflect greater acceptability 	30 Post-Treatment	24
MF-PEP Therapist Session Evaluation Survey	MF-PEP Therapist	Acceptability Feasibility	<ul style="list-style-type: none"> Did training prepare you for this session? What components were difficult to implement? 	<ul style="list-style-type: none"> 1 Yes/No item (felt training prepared them for specific session) 2 Open-Ended items (components that were easy or difficult to implement) 	192 Post-session	187
MF-PEP Therapist Post-Group Feedback Survey	MF-PEP Therapist	Acceptability Appropriateness Sustainability	<ul style="list-style-type: none"> Are you interested in continuing to run MF-PEP? Rate helpfulness of reviewing the therapist workbook. 	<ul style="list-style-type: none"> 3 Yes/No items (felt prepared from training, interest in continuing to run MF-PEP, training in other EBTs) 2 items (helpfulness of workbook review and verbal presentation training) scored 1 (<i>not helpful</i>) to 5 (<i>very helpful</i>) 	15 Post-Treatment	13
MF-PEP Referring Clinician Questionnaire	Referring Clinician	Acceptability Appropriateness Sustainability	<ul style="list-style-type: none"> How did parents' coping skills change after MF-PEP? 	<ul style="list-style-type: none"> 3 Yes/No items (agreement with MF-PEP goals, positive influence on family attitude, family discussion of MF-PEP in individual therapy) 	30 Post-Treatment	20

Measure	Informant	Outcome	Sample Items	Scoring	# Administered	# Completed
		Parental Knowledge of Mood Disorders	Did MF-PEP change family climate?	<ul style="list-style-type: none">6 Multiple-Choice items (changes in parental knowledge, parent and child coping, therapeutic relationship, family climate; likely to refer future clients)3 to 5 response options (e.g., significant decline; some decline; same; some improvement; significant improvement)		
		Parental Knowledge of Mood Disorders				
		Parental Knowledge of Mood Disorders				

Table 4

Evaluation Methods for Outcomes

Outcome	Method	Analyses and Observations
Acceptability	Self-Report Measures	<ul style="list-style-type: none"> Descriptive statistics (<i>M</i>, <i>SD</i>) of subscales and composite scores on the Parent Group Evaluation Form and the Child Group Evaluation Form Percent of positive responses on the MF-PEP Therapist Session Evaluation Survey, MF-PEP Therapist Post-Group Feedback Survey, and MF-PEP Referring Clinician Questionnaire
Adoption	Agency-Level Observations	<ul style="list-style-type: none"> Agency interest in learning and implementing MF-PEP Development and completion of training system and referral network Number of groups implemented at community clinics
Appropriateness	Agency-Level Observations Self-Report Measures	<ul style="list-style-type: none"> Percent of discontinued families due to incompatibility of MF-PEP with needs Percent of therapists who received training in other EBTs on the MF-PEP Therapist Post-Group Feedback Survey Percent of clinicians who agreed with content/goals of MF-PEP on the MF-PEP Referring Clinician Questionnaire
Feasibility	Agency-Level Observations Self-Report Measures	<ul style="list-style-type: none"> Recruitment and completion rates of groups Therapists' completion of training and ability to secure space/materials Therapists' feedback regarding ease/difficulty of implementing therapeutic techniques/activities on the MF-PEP Therapist Session Evaluation Survey
Fidelity	Not Assessed	<ul style="list-style-type: none"> Fidelity was not assessed due to logistical limitations (funding, staffing)
Implementation Cost	Agency-Level Observations	<ul style="list-style-type: none"> Costs associated with implementing MF-PEP Number of therapists and families required for agency to break-even Number of groups which met break-even standards
Penetration	Agency-Level Observations	<ul style="list-style-type: none"> Provider penetration (staff who delivered MF-PEP divided by all trained; Proctor et al., 2011)
Sustainability	Agency-Level Observations Self-Report Measures	<ul style="list-style-type: none"> Percent of therapists interested in facilitating future groups on the MF-PEP Therapist Post-Group Feedback Survey Percent of clinicians likely to refer future families on the MF-PEP Referring Clinician Questionnaire Number of groups implemented during and after study
Knowledge of Mood Disorders	Self-Report Measures	<ul style="list-style-type: none"> Percent of clinicians reporting improvement in parental knowledge on the MF-PEP Referring Clinician Questionnaire Two-tailed, dependent-measures <i>t</i>-test and <i>d</i> to evaluate pre-post changes in parents' knowledge on the Understanding Mood Disorders Questionnaire

Table 5

Community Therapists' and Clinicians' Acceptability of MF-PEP

Acceptability Question	Positive Response	<i>n</i>	% Endorsed
MF-PEP Therapists			
Review of Therapist Workbook	Helpful or Very Helpful	10	100
Verbal Training Presentation	Helpful or Very Helpful	10	90
Adequate Individual Session Training	Yes	187	84
Adequate Overall Training	Yes	10	80
Referring Clinicians			
Change in Parent Coping	Some or Significant Improvement	15	93
Discussion of MF-PEP in Ongoing Treatment	Yes	18	83
Change in Therapeutic Relationship	Some or Significant Improvement	15	73
Change in Child Coping	Some or Significant Improvement	15	73
Positive Influence of MF-PEP Motto on Family's Attitude	Yes	18	67
Change in Family Climate	Some or Significant Improvement	15	67

Note. MF-PEP Motto is "It's Not Your Fault, But It's Your Challenge!" Different *n* for each question resulted from therapists/clinicians not responding to all items on the MF-PEP Therapist Post-Group Feedback Survey and MF-PEP Referring Clinician Questionnaire.

Table 6**Implementation Outcome Results for Community-Based MF-PEP**

Implementation Outcome	Results
Adoption	<ul style="list-style-type: none"> Agency expressed interest in learning and implementing MF-PEP Staff developed training system (1–2 day workshop with treatment developer or experienced therapist; supervision provided as needed), completed training, and created a referral network Agency implemented 8 groups over 2-year study
Appropriateness	<ul style="list-style-type: none"> 22% of families ($n = 40$) discontinued due to scheduling difficulties; 3% ceased because they felt MF-PEP was incompatible with their needs 54% of MF-PEP therapists ($n = 13$) received training in other manualized EBTs for children 100% of referring clinicians ($n = 18$) agreed with content/goals of MF-PEP
Feasibility	<ul style="list-style-type: none"> Agency implemented 8 groups, consisting of 8 90-minute sessions, with adequate recruitment (3–8 families/group, $M = 5$/group) and completion (75% of 40 families completed 4 sessions) Agency implemented training system and secured adequate space (conference rooms) and required materials (workbooks, snacks, prizes) Therapists reported most treatment techniques were useful, but some were difficult to implement (i.e., CBT, problem-solving, medication discussion) depending on children's developmental and cognitive level Physical activities were difficult to implement given clinic space restrictions
Fidelity	<ul style="list-style-type: none"> Though not assessed, structured training and detailed workbooks suggest therapists may be able to deliver MF-PEP with a reasonable degree of fidelity
Implementation Cost	<ul style="list-style-type: none"> Costs include therapist, parent, and child workbooks, prizes and supplies (poster board, writing utensils), snacks, therapist billing and administration time, training, and supervision Agencies in current study can break even financially with 2 child group therapists, 1 parent group therapist, and 7 families per group If a trainee (without billing requirements) serves as the child co-therapist, 4 families per group are needed to break even All groups contained at least 3 licensed therapists: 1 group had 7 families and 6 groups had 4 families; 5 groups had 4 families complete 4 sessions
Penetration	<ul style="list-style-type: none"> 100% provider penetration: $n = 15$ trained therapists implemented MF-PEP at least once
Sustainability	<ul style="list-style-type: none"> 92% of therapists ($n = 13$) were interested in facilitating future MF-PEP groups 90% of referring clinicians ($n = 20$) were "somewhat likely" or "very likely" to refer future clients 8 groups conducted over 2 years; group facilitation has continued since study completion and spread from 2 to 3 clinics associated with this agency

Table 7**Implementation Costs of MF-PEP**

Implementation Costs	Costs for 8 Families and 3 Therapists (\$)
Training (1–2 day workshop with treatment developer)	2,000–3,000
Therapist Workbooks (\$25 each)	75
Child Workbooks (\$25 each)	200
Parent Workbooks (\$25 each)	200
Group-in-a-Box Supplies	260
Water and Snacks for Parent and Child Groups	40
Total Cost	2,775–3,775

Note. Other considerations, which will vary by setting and billing structure, include therapists' billable and administration time, utilization of a trainee with lower billing requirements as the child group co-therapist, supervision/consultation, and method/number of families billed; Group-in-a-Box Supplies contain everything needed to run a group for 8 families other than snacks, including name tags, scissors, tape, bubbles (for teaching breathing exercises), pencils, pens, activity cards, crayons, markers, a box for immediate reinforcers (e.g., stickers, candy), other reinforcers, pencil sharpener, ball, yarn, highlighter, posters in a protective tube, poster tape, body tracing paper, words-of-wisdom cards, prizes, and graduation certificates.