Moving Beyond Efficacy and Effectiveness in Child and Adolescent Intervention Research

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This Special Section of the *Journal of Consulting and Clinical Psychology* focuses on research that extends beyond documenting the efficacy and effectiveness of specific psychological treatments or preventive interventions for children and youths. In the past 30 years, there have been remarkable advances in the development and evaluation of psychological treatments and preventive interventions for a wide range of child and adolescent problems. At the same time, only a small percentage of youths who suffer from emotional and behavioral problems receive psychological services, and many of these services are not evidence-based. This article discusses key features of the Special Section studies, which examine important issues related to (a) disseminating treatments in diverse community settings (i.e., investigating the transportability of treatment), (b) personalizing mental health care (i.e., investigating predictors and moderators of treatment outcome), and (c) developing evidence-based explanations of treatment (i.e., investigating mediators of treatment). Key issues that are raised in the specific studies are discussed, and important considerations for future research are highlighted. Moving the field forward requires innovation, complex research designs, and a willingness to develop treatment models that reach beyond the current body of treatment outcome and prevention research.

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Child and adolescent mental health problems can have devastating and long-lasting consequences. For example, recent findings from the National Comorbidity Survey Replication (Kessler et al., 2005) on the lifetime prevalence and age-of-onset of mental health disorders in the United States concluded that about half of Americans meet criteria for a mental health disorder during their lives and that the first onset of disorder is usually in childhood or adolescence.

Unlike most disabling physical diseases, mental illness begins very early in life. Half of all lifetime cases begin by age 14; three quarters have begun by age 24. Thus, mental disorders are really the chronic diseases of the young. For example, anxiety disorders often begin in late childhood, and mood disorders in late adolescence . . . . Unlike heart disease or most cancers, young people with mental disorders suffer disability when they are in the prime of life, when they would normally be the most productive. (National Institute of Mental Health, 2005, p. 1)

Furthermore, estimates reveal that 10%–20% of children and adolescents suffer from psychological disorders, and the vast majority of these youths (75%–80%) do not receive appropriate specialty services or any services at all (Surgeon General’s Report on Mental Health, U.S. Department of Health and Human Services, 1999). Even more troubling is that among the small percentage of youths who do receive services, dropout rates are as high as 40%–60% (Kazdin, Holland, & Crowley, 1997; U.S. Department of Health and Human Services, 1999). Unfortunately, such findings are not limited to mental health problems among youths in the United States, but they also have been documented in youths from other countries (e.g., Tick, Van der Ende, & Verhulst, 2007, 2008).

Such disconcerting findings emphasize the urgency of preventing and treating mental health problems in youths. In the past 30 decades, there has been an extraordinary acceleration in the number of intervention trials for some of the most prevalent and debilitating psychological conditions of youths. These trials have yielded an impressive body of evidence supporting psychological treatments to ameliorate the symptoms and impairment associated with child and adolescent mental health problems, including anxiety disorders (Kendall, Hudson, Gosch, Flannery-Schroeder, & Suveg, 2008; Silverman et al., 1999), depression (David-Ferdon & Kaslow, 2008; Mufson et al., 2004), conduct disorders and substance use (Schaeffer & Borduin, 2005), attention deficit disorders (Wells et al., 2006), and autism (Yoder & Stone, 2006), among others. Similarly, there is accumulating evidence for the effectiveness of school-based preventive intervention programs for a wide variety of childhood or adolescent problems, including aggressive}

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or externalizing behaviors (Graham-Bermann, Lynch, Banyard, DeVoe, & Halabu, 2007; Shaw, Dishion, Supplee, Gardner, & Arnds, 2006), depressive symptoms (Horowitz & Garber, 2006), and substance use (Brody et al., 2006; Prado et al., 2007).

Along with other journals, the Journal of Consulting and Clinical Psychology (JCCP) has played a key role in disseminating the findings of these intervention trials and promoting a high standard for research in the field. However, child and adolescent psychological intervention research is now at a crossroads. Continued documentation of efficacy and effectiveness of interventions for youths remains important, especially in understudied populations, such as youths who are affected by disasters and terrorism (La Greca & Silverman, 2009). At the same time, it is critical that the field broadens its scope to move to the next level. Within this frame, the current Special Section of JCCP highlights child and adolescent intervention research that addresses issues relating to efficacy and effectiveness, as well as other salient and broader issues of concern. The articles in this Special Section were submitted in response to an open “call for papers,” and the issues represented in these articles are samplings of useful future directions for the field, particularly to help bridge the gap between research and practice.

Specifically, the articles in this Special Section focus on the following areas: (a) moving toward disseminating treatments in diverse community settings (i.e., investigating transportability of treatment), (b) moving toward personalized mental health care (i.e., investigating predictors and moderators of treatment), and (c) moving toward evidence-based (EB) explanations of treatment (i.e., investigating mediators of treatment). Advancing knowledge in these areas is critical for developing EB interventions that can be widely disseminated and effectively tailored to the needs of children and families.

As readers can see from the articles in this Special Section, the sharp distinction drawn in the past between efficacy and effectiveness research no longer defines the field. As Chambless and Hollon (1998) suggested, treatment research is more accurately viewed as varying along a continuum of internal validity and external validity. Although internal validity was once viewed as the most essential aspect of treatment research, the need to balance internal and external validity is now generally viewed as paramount (also see Weisz, Doss, & Hawley, 2005). It is this continuum between (or blending of) efficacy/internal validity and effectiveness/external validity that will likely lead ultimately to research that informs practice, and practice that informs research.

Moving Toward Disseminating Treatments in Community Settings: Transportability and Related Issues

A critical step in bridging the research-to-practice gap (Kazdin, 2008) is to develop and evaluate strategies to translate and transport EBPs and prevention programs to diverse “real world” settings, such as practice, school, and primary care settings. The field needs to advance understanding about how implementation procedures work in diverse settings (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Schoenwald & Hoagwood, 2001; Southam-Gerow, Austin, & Marder, 2008). Conceptual models have been developed that consider various levels of the practice context that might play a role in dissemination efforts and influence treatment implementation; these levels include the client, therapist/clinician, model of service delivery, provider organization, and service system (for more details, see Fixsen et al., 2005; Schoenwald & Hoagwood, 2001; Southam-Gerow et al., 2008). Several of these issues are highlighted in the studies contained in this Special Section, as discussed below.

Are Evidence-Based Treatments (EBTs) More Effective Than Usual Care (UC)?

An essential question is whether EBPs produce better outcomes than the usual interventions used with children and adolescents in clinical care. In a meta-analysis of 32 randomized trials that directly compared EBPs with UC (Weisz, Jensen-Doss, & Hawley, 2006), EBTs outperformed UC, and their superiority was not reduced by high levels of youth severity or the inclusion of minority youths.

In this Special Section, Weisz et al. (2009) address the important issue of whether “skilled and effective use of EBPs can be achieved in the limited time available to many practitioners” (p. 384). Focusing on the treatment of depression in youths, the authors randomized therapists in a community clinic to brief training and supervision in cognitive–behavioral therapy (CBT; i.e., one 6-hr training session and 30 min of weekly case supervision) or UC. Youths with a diagnosed depressive disorder, ages 8–15 years, also were randomized to CBT or UC, and the UC condition was allowed to extend until natural termination. Both CBT and UC were effective in reducing youths’ depressive symptoms. However, CBT demonstrated several advantages over UC: It was significantly briefer, less costly, less likely to require additional services (such as pharmacological interventions), and superior in terms of parent-rated therapeutic alliance (an indicator of parent engagement).

Weisz et al.’s (2009) findings are important because they demonstrate that an EBT for youth depression can be transported to a practice setting with brief training and supervision of community clinicians. Their model of brief training and supervision for therapists should be reassuring to those in practice settings who are eager to implement EBPs for children and youths.

The findings also raise issues for future research. One issue pertains to the measurement of change. It appears that CBT produced faster improvement than UC (about 6 months vs. 9 months, respectively); however, the absence of common postintervention assessment points across the two conditions leaves this issue open. To better understand the trajectory of children’s change and recovery, it will be necessary for future studies to incorporate multiple, repeated measures of treatment outcome (e.g., in this case, depressive symptoms) at common time points across treatment conditions.

Another issue raised by Weisz et al. (2009) is whether the training of therapists was sufficient to optimally implement the EBT in a new setting (e.g., with more intense training, would there be stronger outcome effects for the EBT?). Such findings highlight the need to further understand and evaluate issues relating to therapist training of EBT procedures, including the intensity and extent of training. Indeed, Lochman et al. (2009), discussed below, found that the intensity of therapist training had an effect on a preventive intervention’s outcome. Given that there are diverse approaches to therapist training (e.g., skills-based, practice-based coaching, frequent and intense feedback; see Fixsen et al., 2005;
Weisz et al., 2009), those who are interested in transporting EBTs to their community settings would do well to carefully consider the various approaches and ascertain the specific approach that they believe would be most acceptable and useful to the therapists working in that setting.

This raises a further point that it is not just therapist training issues that would be useful to consider but also the specific EBT being transported to a particular community setting (Weisz et al., 2009). For many of the mental health problems of childhood and adolescence, several EBTs are available (see the special issue on EB psychosocial treatments for children and adolescents in the Journal of Clinical Child and Adolescent Psychology, 2008, Volume 37, Issue 1; Weisz, Hawley, & Doss, 2004). Selecting the particular EBT that will be transported (assuming that only one EBT can be selected, at least in the early phases of EBT implementation) should be considered within the context of the likely fit with the community setting. Addressing issues of fit between EBTs and community settings will help improve the likelihood that youths with mental health problems receive some form of an EBT.

How Much Therapist Training Is Needed?

As with EBTs, a critical issue facing research on preventive interventions is gaining a better understanding of how to disseminate EB prevention programs on a wider scale. As noted, one area of importance is type and intensity of therapist training and feedback needed to successfully transport EB programs. This issue is especially important for programs that are delivered in school settings, where school personnel must learn how to deliver the program effectively.

In this Special Section, Lochman et al. (2009) directly addressed the issue of therapist training intensity. In a large-scale field trial, the authors evaluated how the intensity of the training provided to school counselors affected outcomes associated with an EB prevention program for children’s behavior problems: the Coping Power Program (Lochman & Wells, 2002, 2004). Counselors were assigned to Training plus Feedback in Coping Power (CP-TF), Basic Training about Coping Power (CP-BT), or a Comparison (C). Study measures included assessments of program implementation (e.g., number of sessions scheduled; intervention objectives completed), child externalizing behaviors, and potential mediating processes (e.g., outcome expectancies; parental discipline practices). Compared with children treated by counselors in the C condition, high-risk children treated by those who received CP-TF had better outcomes on several measures of externalizing behavior problems and adaptive behaviors, although other measures (e.g., parenting behaviors) were not affected by the intensity of counselor training. CP-TF also was associated with better quality of engagement with children than CP-BT (which may have contributed to more favorable outcomes), although the two conditions did not differ significantly on several program measures.

The findings support the intensity of therapist training with feedback (especially prompt and detailed feedback) for successfully disseminating EB prevention programs to children in school settings, although even the basic training of school personnel produced some measurable gains in children’s adaptive behavior. As with Weisz et al. (2009), this study provides some guidance on methods for training clinicians in school or community settings in the use of prevention interventions.

Lochman et al.’s (2009) study also leaves open several important areas for future research. Issues for further investigation include understanding what is the minimal level of therapist training–intensity needed to produce successful child outcomes; evaluating whether positive outcome effects are maintained over time; understanding school or setting-based factors, such as organizational structure, which might influence program outcomes; and examining the cost-effectiveness of intense therapist training.

Contextual Factors in Transporting Interventions

Schoenwald, Sheidow, and Chapman (2009) provide a different angle on aspects of the practice setting that may influence treatment outcomes, namely, clinical supervision to support the implementation of a specific treatment. This investigation was part of a large-scale multisite study of practice context factors affecting the implementation and outcomes of an EBT for problem youths (multisystemic therapy [MST]; Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998) in UC settings. Schoenwald et al. (2009) examined relations among organizational context (climate and structure), clinical supervision, therapist adherence, and youth outcomes at 1-year posttreatment. The participating youths and families were treated by 429 clinicians across 45 provider organizations.

Results indicate that two of the four dimensions of clinical supervision, “structure and process” and “focus on clinician development,” predicted long-term changes in youth behavior and functioning. A third dimension of clinical supervision, “focus on adherence to principles,” predicted therapist adherence. Consistent with previous findings for short-term outcomes in the MST Transportability Study (e.g., Schoenwald, Sheidow, & Letourneau, 2004; Schoenwald, Sheidow, Letourneau, & Liao, 2003), therapist adherence to the protocol predicted long-term reductions in behavioral problems in youths.

These results provide good news for the large-scale transport of EBTs to UC settings, as they suggest that it is feasible to implement treatment-model-specific clinical supervision with community-based mental health professionals. On a broader level, the study represents an encouraging first step in demonstrating a significant linkage between clinical supervision and reliable and valid measures of youth outcome. It suggests the importance of assessing and monitoring both the structure and process of clinical supervision during the course of youth treatment. Whether similar dimensions of clinical supervision, observed in the context of MST supervision in Schoenwald et al.’s (2009) study, will emerge as relevant predictors of outcome in other EBTs is an exciting new avenue of research.

Moving Toward Personalized Mental Health Care: Predictors and Moderators of Intervention

A central aspect of clinically useful intervention research involves the study of pre-existing patient variables that predict intervention outcome, as well as an evaluation of how intervention works for different subgroups of children and families. This focus not only allows the field to understand for whom a given intervention is appropriate but it also serves an essential role in stim-
ulating work on adapting and tailoring interventions to specific youths. Such efforts can lead to personalized mental health care for youths and families (National Institute of Mental Health Strategic Plan, U.S. Department of Health and Human Services, 2008) as well as to further intervention development and intervention research. Such work also can lead to addressing mechanisms that may produce stronger intervention effects for children and adolescents who otherwise are either partial or nonresponders to intervention.

Predictors of treatment outcome are variables that account for outcome irrespective of the treatment condition (main effect model). Predictors of intervention outcome can be evident, for example, when children with high levels of depressive symptoms (compared with those with low levels of depressive symptoms) have poorer outcomes following treatment for anxiety, regardless of the treatment condition (e.g., individual CBT, group CBT). Moderators of treatment outcome are variables that account for whom or under what conditions change occurs (interaction model; Kraemer, Wilson, Fairburn, & Agras, 2002). A moderator “refers to those characteristics that influence the intervention–outcome relation” (Kazdin, 2008, p. 152). Moderators may include characteristics of the children, parents, therapists, and treatment format (e.g., individual, group). For example, the Conduct Problems Prevention Research Group (2002) found that an intervention for youths with conduct problems was more effective when parents had low levels of social support than when they had high levels of social support; in contrast, low levels of parental social support were related to poorer outcomes for children in the control group. This finding indicated that level of parental social support was a moderator of intervention outcome. Although moderators of intervention outcome have been examined extensively, it is often difficult to translate existing findings to clinical decision making (see Kazdin, 2008). Several articles in the Special Section address factors that affect treatment outcome, as noted below.

**Does Readiness to Change Predict or Moderate Treatment Outcome?**

In this Special Section, Lewis et al. (2009) examined adolescents’ readiness to change in the Treatment for Adolescents with Depression Study (TADS; March et al., 2007). Their approach to readiness to change was based on the transtheoretical model of change (Prochaska & Velicer, 1997), with stages for precontemplation, contemplation, action, and maintenance. Contrary to expectations, readiness to change did not moderate adolescents’ responses to the various treatment arms in the TADS study, although adolescents’ action scores did emerge as a predictor of treatment outcome. Specifically, across the different TADS treatment conditions, adolescents who had higher action scores at baseline displayed greater reductions in depression after treatment relative to those with lower action scores.

The concept of “readiness to change” is a complex one, particularly in samples of depressed adolescents, as well as probably among adolescents who exhibit externalizing behavior problems. The study by Lewis et al. (2009) represents a useful springboard for further inquiry, as it suggests the potential utility of investigating stages of change in youth treatment outcome research (also see King, Chung, & Maisto, 2009). If replicated, the findings highlight the role of a patient characteristic that may predict treatment outcome and suggest the importance of assessing adolescents’ readiness to change in the early stages of treatment. For adolescents who are ambivalent toward change, the findings also suggest that supplementing current EBTs with interventions designed to increase adolescents’ motivation for change, such as motivational interviewing (e.g., Suarez & Mullins, 2008), might be a useful strategy to consider in the future. In addition to motivational interviewing, there are a host of other potentially useful strategies that might improve adolescent motivation and/or engagement in treatments (e.g., McKay et al., 2004). The main take-home message is the need to consider youths’ motivation for change throughout the treatment process and the possible need to intervene accordingly when motivation begins to waiver or falter.

**Does Parent Participation Predict Treatment Outcome?**

Fixed attributes of the family and child can also serve as useful predictors of which parents are likely to benefit from intervention, on the basis of analyses conducted within intervention conditions. In a study of the Fast Track multicomponent school-based program—designed to prevent serious conduct problems among at-risk children—Nix, Bierman, McMahon, and the Conduct Problems Prevention Research Group (2009) examined a variety of family and child attributes influencing outcome, including parents’ attendance and quality of participation in parent groups when the children were in first grade. Quality of participation was assessed by family coordinators’ ratings, completed at the end of each session, of (a) parents’ amount and quality of participation in the parent group sessions, (b) parents’ amount and quality of participation in parent–child sharing time at the end of sessions, and (c) parents’ completion of homework assignments.

Perhaps the most interesting finding to emerge was that after carefully controlling for other family characteristics and for design variables—such as site, cohort, and gender effects—it was not parent attendance that was the most consistent predictor of treatment response, but quality of parent participation. Specifically, quality of parent participation predicted improvements in parents’ positive perceptions of their children, their warmth directed toward their children, and their involvement with children’s schools, as well as a reduction in the use of physical punishment as a discipline method. In addition, parents who faced more challenges in their lives—particularly those parents with less education and lower skill jobs—were less likely to show high-quality participation in the parent management training.

These findings require further replication using other treatment samples; the authors note that there could be a ceiling effect or restricted range operating in this study, as the majority of parents might have gone to enough sessions to bring about change, leaving insufficient variability to detect dose-response relations. Nevertheless, this finding is consistent with the sentiment of many mental health professionals who work with parents; namely, it is quality (not quantity) of parent involvement that is important. As such, this finding has practical implications for clinical care, as it affirms the importance of facilitating parents’ active engagement and involvement in treatment activities. Together with Lewis et al.’s (2009) article, these findings highlight the important role of patient engagement and motivation in EBTs.
Are Site Differences a Function of Differing Patient or Therapist Characteristics?

Although the above studies directly examined patient and parent characteristics that predicted intervention outcomes, another investigation in this Special Section focused on patient and protocol characteristics that contributed to site differences in a clinical trial. The study by Spirito et al. (2009) represents one of the few studies in the field to highlight possible site differences in treatment outcomes in multisite randomized clinical trials (MRCTs), rather than controlling for site or ignoring site as a factor in the design. In the primary analyses of a six-site MRCT, the Treatment of SSRI-Resistant Depression in Adolescents (TORDIA), these authors observed substantial variation by site in the performance of a medication-only condition and a combined medication plus CBT condition. Spirito et al. examined two potential causes of site differences: sampling factors (particularly clinical characteristics of the participants) and treatment protocol factors (particularly fidelity). Results indicate that differences in the clinical characteristics of participants at baseline across-site (and within-site/ across conditions) were the most salient explanations for site differences in outcome (and for differences in outcome within sites across conditions). Specifically, low levels of family conflict and low levels of youth hopelessness were related to better response rates to intervention, and variations in these patient variables accounted for the site differences.

Spirito et al.’s (2009) findings are important on several levels. It is not unusual for researchers and consumers of research to worry about possible site variations in implementing EBT protocols. In this regard, Spirito et al.’s study, which directly addressed this issue, is welcome reassurance: At least in the context of TORDIA, client characteristics contributed to site differences much more substantially than any inconsistencies in treatment protocol delivery across sites. In terms of future MRCTs, Spirito et al.’s findings highlight the importance of carefully ensuring that study procedures (i.e., factors under the control of the investigators) do not result in site differences. In this way, any site differences that emerge can be evaluated in relation to participant characteristics, which can then provide clinically useful information about the populations that may benefit most from a particular EBT.

Spirito et al.’s (2009) findings also have implications for the dissemination of EBTs. If each site in an MRCT is considered its own small study, then the variability across sites in outcomes may reflect the range of treatment responses that might be expected if this treatment was to be disseminated in the community. Spirito et al.’s study may serve as a “call to action” for investigators of other multisite studies to systematically examine variables that could account for site differences.

In summary, the above studies present new information that bears on the issue of predictors and moderators of treatment outcome for EBTs. Nevertheless, further steps need to be taken to translate the information about predictors and moderators into information that will be useful for clinical decision making (see Kazdin, 2008). For example, it will be important to determine whether an intervention should be altered or modified to better treat those children and families who are nonresponders; this might be accomplished by identifying and evaluating additional or alternate intervention strategies for low-responding parents and children. In addition, it would be helpful for investigators to report their findings in a way that makes them more directly applicable to clinical practice (e.g., how low of an action orientation would an adolescent need to have before a clinician might consider using a motivation-enhancing therapeutic procedure?).

It will also be important to know whether predictors and moderators are relevant only for a particular treatment or are relevant for multiple treatments (Kazdin, 2008). Moreover, future intervention research would benefit from using “treatment matching” models, such as systematic treatment selection (Beutler & Clarkin, 1990), that are designed to examine moderators of multiple treatments. Such research would reveal whether children with certain characteristics benefit most from one type of treatment and whether children with different characteristics benefit most from another treatment. For example, Karno, Beutler, and Harwood (2002) examined interactions between adult attributes and two different alcohol interventions, finding that adults high in reactivity had better drinking outcomes when therapy was nondirective, whereas adults low in reactivity improved more with directive therapy. Similar treatment matching or prescriptive treatments have been conducted with children using single-case designs in the area of anxiety (Eisen & Silverman, 1991) and school refusal behavior (Chorpita, Albano, Heimberg, & Barlow, 1996; Kearney & Silverman, 1990). Further studies are needed that examine treatment matching and other methods for tailoring treatments to individual child and family. These are the kinds of issues the next generation of EBT research will need to address if studies are going to be effective in closing or reducing the research–practice gap.

Moving Toward EB Explanations of Treatment: Mediators of Treatment Outcome

Mediation of treatment outcome is a topic that has garnered considerable attention (e.g., Kazdin & Nock, 2003; Kraemer et al., 2002; Weersing & Weisz, 2002). Mediation research focuses on questions relating to how treatment change or outcome is produced. Answering not just whether treatment change is produced, but how it is produced, is the cornerstone of advancing theoretical understanding about mechanisms of change.

Mediation research does more than advance theory. Mediation research also has the potential to lead to improved clinical care. As Kazdin and Nock (2003) have pointed out, “the study of mechanisms of treatment is probably the best short-term and long-term investment for improving clinical practice and patient care” (p. 1117). This is because having an understanding of what needs to be changed provides the practicing clinician with the flexibility to be adaptable to variations in patients’ problems, contexts, or conditions. By having empirical knowledge of the main treatment procedure(s) responsible for producing successful treatment outcomes, clinicians can ensure that that effective treatment procedure(s) are in fact being delivered to the child or adolescent client. Mediation research also has the potential to lead to the availability of alternative EB treatment approaches that draw on supplementary therapeutic resources (e.g., involving parents in treatment) when these resources are available and practical.

Three articles in the Special Section relate to the issue of therapeutic change. All three focus on parents’ involvement in their child’s treatment, but each focuses on different aspects of parenting and their mediational effects on different types of child
and adolescent behavioral and emotional difficulties. The article by Henggeler et al. (2009) examines mediators of MST in decreasing antisocial behavior, deviant sexual interest, and sexual risk behaviors of juvenile sexual offenders participating in a randomized effectiveness trial. Hypothesized mediators included measures of parenting and peer relations. In comparison with a treatment as usual condition, MST had effects on youths’ self-reports of delinquency, substance use, and involvement in deviant sexual interests and sexual risk behaviors across the 6- and 12-month postbaseline assessments.

The study’s findings revealed that favorable MST effects on youth antisocial behavior and deviant sexual interest/risk behaviors during the follow-up were mediated by increased caregiver follow-through on discipline practices as well as by decreased caregiver disapproval of and concern about the youths’ bad friends. The findings provide support for the MST theory of change, which emphasizes enabling caregivers to respond in systematic and contingent ways on youths’ behavior and on interactions with peers.

The study by Mendenhall, Fristad, and Early (2009) investigates the impact of psychoeducation on service utilization and mood symptom severity in children with mood disorders. Parents’ knowledge of mood disorders, beliefs about treatment, and perceptions of their children’s need for treatment were hypothesized to moderate the relationship between psychoeducation and both service utilization and mood symptom severity. Results indicate that participation in multi-family psychoeducation groups (MFPGs) significantly improved quality of services utilized, which was mediated by parents’ beliefs about their child’s treatment.

Participation in MFPGs also significantly improved severity of a child’s mood symptoms, and this effect was mediated by quality of services utilized. These findings suggest that parents’ knowledge and attitudes about their child’s treatment influence the quality of services they seek for their children. These findings also underscore the importance of family education when treating children with mood disorders. Specifically, the more knowledge parents have about mood disorders and the more accurate their beliefs about treatment, the better able they are to handle these challenges for their children and their families.

The study by Silverman, Kurtines, Jaccard, and Pina (2009) illustrates the value of healthy skepticism when pursuing questions relating to how treatment change is produced, and how the testing of alternative, plausible assumptions can sometime yield findings that suggest intriguing new research possibilities. When involving parents in children’s anxiety treatments, for example, a common assumption is that targeting or training parents in certain skills can produce positive treatment outcomes for youths. However, there is scant empirical evidence to support this assumption.

Silverman et al.’s (2009) study represents an initial effort to test this assumption by examining directionality of change in child and adolescent CBT anxiety treatment. In one condition, parents were minimally involved in their child’s treatment; in the other condition, parents were extensively involved, and parent variables (those most often targeted in youth-anxiety CBT programs) also were targeted. In addition to confirming what other child anxiety treatment studies have shown (e.g., Kendall et al., 2008), that adding parents does not lead to enhanced treatment effects beyond individual CBT, the study is the first to suggest that the direction of change may not be from parent to child, but instead may be from child to parent.

All together, the findings relating to mediation reported in this Special Section set the stage for future research that focuses not only on evaluating treatment efficacy or effectiveness but also on issues that relate to parent involvement in their children’s treatments. These include determining the diverse contributions that parents can play in the treatment process as a receiver of education, as a trainer in their children’s treatment, or as co-client along with their child, among other possibilities. Overall, determining the specific facets of parental involvement that optimize child and adolescent change and outcome, and how parental involvement might need to vary across treatments, disorders, and child characteristics (e.g., age, sex) are relatively unexplored areas.

The articles’ findings also highlight the need to disentangle the complexities involved in associations of change between children and their parents in youth psychosocial treatment programs. Of course, parent variables represent just one set of likely mediators of change. There are a host of other variables that are likely to be part of any theoretical formulation relating to mechanisms of change. Developing and testing such theoretical formulations will likely prove to be a fruitful way to bridge clinical research and practice (Kazdin, 2008; Silverman & Kurtines, 1997).

Summary and Conclusions

In summary, each of the articles in this Special Section on moving beyond efficacy and effectiveness provides intriguing new avenues for clinical practice and future research, and we encourage readers to review these articles carefully, as well as others that appear in this issue of JCPP. The text below touches briefly on several broad themes raised across the Special Section articles that will be important for future research efforts on EB treatments and preventive interventions for children and adolescents.

Measurement Issues

Child and adolescent intervention research has demonstrated that EBTs can produce positive mental health outcomes for youths. In future studies, however, it will be important to expand the range of EBT outcomes studied to determine whether an intervention had a clinically meaningful impact on children’s day-to-day lives. Specifically, it would be helpful for future EBT trials to include measures that assess primary and secondary outcome variables, as well as outcomes that are relevant to the lives of youths, such as their functioning in school settings and in peer and family relationships. It would also be helpful to measure the financial costs associated with EBTs, as that may facilitate their adoption if they are proven to be cost-effective. Furthermore, as discussed by Blanton and Jaccard (2006), many of the outcome measures used to evaluate EBTs have arbitrary metrics, which raises a host of important issues for clinical research (see the January 2006 issue of American Psychologist). Of particular relevance is that statistical changes on most common outcome measures used in intervention research may not translate to actual and meaningful changes in youths’ everyday functioning. As the field moves beyond efficacy and effectiveness, efforts to tackle these and other critical measurement issues, including clinical significance (e.g., Kendall, 1999), will be important.
Statistical Power and Analyses

Statistical power is another broad theme, and a challenging problem, emerging from the articles in this Special Section; several investigators noted insufficient power as a study limitation. There are longstanding concerns about the power needed to detect small or medium effects when comparing two active treatments (Kazdin & Bass, 1989). The issue of statistical power is even more acute when it comes to studies that address moderators and mediators of treatment effects, as well as issues relevant to the transportability of EBTs (e.g., therapist effects, supervisor effects, contextual issues). The move toward multisite trials will not completely solve the issue of insufficient power in individual randomized trials, as MRCTs are rarely, if ever, powered a priori to detect site differences in outcomes. Most MRCTs find only a few, if any, Site × Treatment interactions in outcomes; however, this may be due to the fact that the studies are not powered to detect such interactions (Kraemer, 2000).

Because statistical power is influenced not only by sample size but also by issues such as sample heterogeneity, investigators may be able to improve statistical power by attending to this and other relevant issues. By limiting sample heterogeneity and using particular statistical procedures, such as incorporating covariates in study analyses, investigators can help mitigate the limits associated with relatively small sample sizes (see Rausch, Maxwell, & Kelly, 2003).

On a related point, many of the articles in this Special Section report complex, state of the art, data analytic strategies. Given the growing sophistication of the research questions that are posed and the corresponding, complex analyses, it becomes important to ensure that the next generation of clinical scientists is expertly trained in advanced statistical methods, techniques, and computer software, and that such training is integrated into existing graduate and postgraduate programs. This will help to produce a generation of scientists who are prepared to advance the field in ways that heretofore have been relatively unexplored.

Issues of Diversity and Development

Several of the articles in this Special Section included participants that were diverse with respect to ethnicity. Greater attention to issues of diversity is critical for psychological intervention research. This includes improving efforts to increase minority representation in child and adolescent intervention research, advancing understanding about observed ethnic and cultural disparities in access to care, and narrowing these disparities.

A recent review and meta-analysis of EBTs for ethnic minority youths suggested some reason for optimism with respect to EBT’s applicability to ethnically diverse youths (Huey & Polo, 2008). As Huey and Polo (2008) have documented, along with the accumulation of child and adolescent intervention research studies, there has been a concomitant rise in treatment outcome research with ethnic minority youths and in study samples that include ethnic minority youths. Findings from their review and analyses indicated that EBTs exist for ethnic minority youths with diverse mental health problems, and effect sizes are generally of medium magnitude. A similar optimistic note was struck in a review by Miranda et al. (2005). These investigators concluded “...that evidence-based care is likely appropriate for most ethnic minority individu-
Conclusion

This is an exciting new era for child and adolescent intervention research. The progress that has been made these past few decades is nothing short of astonishing. Yet, despite the progress, there is an urgent need to broaden youth treatment and prevention research in ways that will help ensure that the substantial number of youths currently suffering from mental health problems is dramatically reduced. The studies included in this Special Section represent just a sampling of the types of studies that we believe will increasingly define the field in the years to come. This includes studies that aim to close the research–practice gap by focusing on issues relating to implementation; studies that aim to develop more personalized treatments by focusing on variables that predict and moderate outcome; and studies that aim to develop treatments that are “packed” with the most essential therapeutic ingredients, because they focus on mediators of outcome.

Despite continuing advances in child and adolescent intervention research, as reflected in this Special Section, we also believe that clinical science will need to boldly move beyond current intervention models to substantially reduce the burden of mental illness in youths—a critical problem noted at the beginning of this article. Further efforts to conduct theory-based intervention research that has direct and practical implications for clinical decision making; is cost-effective and sensitive to the realities of delivering care in community settings; addresses mental health care disparities; and considers the diversity and complex needs of children, adolescents, and families will be of utmost importance.

At this point in time, it is not possible to know all the possible directions for moving beyond efficacy and effectiveness in child and adolescent intervention research. New directions will unfold as new research findings emerge, as clinical scientists ponder alternative ways of interpreting these findings and “push the envelope” with respect to theory, methods, and innovative models of EB practice. By so doing, the likelihood is high that critical new findings will emerge to help move the field beyond efficacy and effectiveness. Our hope is that this Special Section and the studies summarized herein serve as starting points, not end points, by which the field as a whole can move.

References


Acknowledgment of Reviewers

The following people reviewed and evaluated manuscripts submitted to the *Journal of Consulting and Clinical Psychology* for possible inclusion in the Special Section on “Moving Beyond Efficacy and Effectiveness in Evidence-Based Psychological Interventions for Children and Adolescents,” edited by Drs. Annette La Greca, Wendy Silverman, and John Lochman.

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