As attested in the pages of this handbook, the applied field of clinical child and adolescent psychology continues to witness tremendous growth. Even since the publication of the first edition of *Evidence-based Therapies for Children and Adolescents* (Steele, Elkin, & Roberts, 2008), the empirical support for a range of therapeutic approaches for behavioral, developmental, and emotional problems in children and adolescents has evolved and expanded in response to changes in diagnostic systems, methodological approaches, and new evidence regarding treatment efficacy and effectiveness. And yet, even with the proliferation of more clinical research aimed at preventing or ameliorating mental health problems in children and adolescents, the rates of mental and substance use disorders among
children and adolescents are increasing (Polanczyk, Salum, Sugaya, Caye, & Rohde, 2015) and the number of youth in need of mental health services appears greater than ever (e.g., Merikangas et al., 2011; Offson, Druss, & Marcus, 2015). The juxtaposition of the proliferation of clinical research with the increased need for services necessitates that we revisit the questions with which we concluded the last edition of this handbook: “What works? For whom? And, under what circumstances?” (Elkin, Steele, & Roberts, 2008, p. 569; cf. Paul, 1967) and reiterated in the opening chapter of the present handbook.

Earlier conceptualizations of evidence-based therapies utilized criteria based on the number of high-quality randomized clinical trials (RCTs) that have demonstrated superiority of one therapy over a control condition (or non-inferiority to an alternative treatment; e.g., Chambless & Hollon, 1998; Silverman & Hinshaw, 2008; Southam-Gerow & Prinstein, 2014). As the professional and scientific evidence base advances, criteria and standards have also become more sophisticated and nuanced. As a result, the chapter authors for the present volume were requested to focus their work on observed effect sizes obtained from published meta-analyses of interventions for specific disorders or conditions across samples of children and adolescents. The rationale for this focus is articulated in Chap. 1 (Roberts, Steele, and Cushing, this volume), but can be summarized succinctly by noting that an intervention can demonstrate *p*-value superiority in two (or more) well-controlled and valid studies (corresponding to a “well established” intervention) but still not evidence the ability to effect clinically significant improvement (see Cook, Cook, & Therrien, 2018; Newnham & Page, 2010). By focusing on effect sizes and principles of change, this volume was intended to be responsive to recent calls in the literature for more patient-centered methods of selecting interventions (e.g., Beidas et al., 2014; Cook et al., 2018; Lindhiem, Bennett, Beidas, Grasso, Sakolsky, & Druzdzel, 2018).

So, what does the current volume say about what works? An informal summary of published effect sizes presented in this handbook suggests that, almost without exception, the conditions or disorders covered in this handbook have one or more interventions or therapeutic approaches with at least medium and sometimes large effects in comparison to no-treatment, attention control, or “treatment as usual” (TAU) conditions. This informal observation is generally consistent with a recent formal meta-analysis of treatment efficacy for major diagnostic groups in children across 50 years of study (i.e., Weisz et al., 2019). However, in acknowledging these generally moderate effect sizes, Weisz and colleagues noted that there has been little change in observed effect sizes across time: Psychological interventions, as a rule, do not appear to be getting better as our science proliferates. Further, Jones, Mair, Kuppens, and Weisz (2019) estimated that if psychological interventions for children and adolescents were delivered *perfectly* (i.e., perfect content plus perfect common factors), our average effect size would reach about *d* = 0.83; a statistically large effect that, nevertheless, leaves something to be desired in terms of clinical outcomes (see Fig. 1). As noted by Weisz et al. (2019), “although beneficial therapies have been identified, there is room for improvement” (p. 217).

Thus, we conclude this volume with some potential avenues on how we can improve our science, and/or the application of our science to the children and families that need it. We couch these recommendations in the context of the previously noted need for continued research development of all three legs of EBPP (Fig. 3 in Chap. 1) as well as in the context of pending organizational guidelines (e.g., American Psychological Association [APA], 2019). These pending guidelines offer commentary and suggestions on how a psychologist can “integrate research evidence with clinical expertise while attending to patient characteristics, culture, and preferences in the delivery of psychological services” (lines 54–56).

In terms of improving the research base for EBPP, Weisz et al. (2019) suggested that more focused work on understanding the mechanisms of therapeutic change, or on optimizing treatment structure might yield further improvements in our intervention outcomes. For example, within the anxiety disorders treatment literature, changes to treatment structure (e.g., *brief, intensive, and condensed*...
treatment; Öst & Ollendick, 2017; stepped care, Ollendick, Öst, & Farrell, 2018) have yielded favorable results, perhaps because of reduced dropout/attrition, concentrated exposure (i.e., increased contact with the active ingredient), increased personalization of the therapy experience (to match client expectations/needs), or decreased interference with competing demands. Further, and as noted by several authors in this volume (e.g., Stoll, Mendes, Pina, and Silverman, Chap. 5; Curry and Meyer, Chap. 9), additional clarification of mechanisms of change could help improve clinical outcomes across a range of disorders. Perhaps relatedly, a number of chapters in this handbook call for further research into transdiagnostic approaches for a range of disorders. The call for such approaches is not new; nearly two decades ago Rosen and Davison (2003) called for the identification of empirically supported principles of change (ESPs) rather than the identification of empirically supported treatments or trademarked (or “named”) therapies and packages—which are typically tied to one or more specific conditions. More recently, the value of transdiagnostic approaches that address underlying etiological or maintaining mechanisms (e.g., emotion dysregulation) have come into focus (Chu, 2012; Weisz, Bearman, Santucci, & Jensen-Doss, 2017). Although we have organized this volume around specific diagnostic categories, we suspect that clinicians’ attention to underlying processes, principles of change, and specific mechanisms of action will facilitate their ability to more effectively respond to clients’ presenting needs, particularly those clients with significant comorbidities.

A common concern raised across many chapters in this volume is “To what extent does the current empirical literature apply to diverse populations?” Although the number of interventions that have been examined across cultural contexts seems to have increased since the last edition of this handbook (viz., Huey & Polo, 2017; Piña et al., this volume), more work remains. As noted by various authors in this volume (e.g., Deas and Cooper, Chap. 21; McMahon and Pasalich, Chap. 13; Piña et al., Chap. 24), culturally tailored evidence-based interventions have shown superiority over non-tailored interventions for a number of conditions among children and adolescents from underrepresented groups. However, in the absence of culturally tailored interventions with a strong evidence base, the use of non-tailored evidence-based interventions with careful attention to context, setting, delivery, structure, and content while maintaining adherence to the active ingredients of the

![Figure 1](image_url)  
**Fig. 1** Distribution of outcomes with an effect size of $d = 0.83$. Note the overlap (68%) between treatment and control conditions, and the estimated number of treated individuals with poorer outcomes than untreated control participants. Please see Magnusson (2014) for an interactive visualization of effect sizes.
intervention is recommended (Chu, Leino, Pf lum & Sue, 2016; Huey & Polo, 2017). With continued attention and emphasis applied to these issues, we expect to see improvements based on a developing research base regarding cultural and patient variables as moderators to effective treatments, and improved clinician expertise and cultural competence in clinical decision-making.

Given the renewed emphasis on integrated care models in recent years (e.g., Conroy & Logan, 2014; Roberts & Brown, 2004; Stancin, Sturm, & Ramirez, 2014), we should expect that clinical investigators will examine how care teams in different settings implement and adapt evidence-based practice (e.g., in primary care such as pediatric clinics, in tertiary care such as children’s hospital units). Such questions will include how can treatments be optimized by incorporating the expertise of multiple disciplines? How do these teams function as an integrative unit? What are the critical elements of team functioning to produce optimal outcomes for patients? Similarly, community-based research has been recast as “implementation science” to emphasize its focus on moving research findings from the bench to the bedside” (Mervis, 2019, p. 165, quoting Molly Carnes).

Although not a new issue for the mental health community (or for the medical health disciplines), translational research, implementation strategies, and examining how to improve adoption of EBP remain important and necessary for improvements in outcomes. The “penetration” of evidence-based treatments among provider networks, and the relationship with patient outcomes remain significant issues (Malcolm, Taylor, Mitchell, Saile, Healy, & Alpert-Gill is, 2019; Nelson & Steele, 2008). However, since the last edition of this handbook, eHealth and mHealth modalities of evidence-based intervention have further enhanced the penetration of effective therapies among children and adolescents for a wider range of conditions. Although electronically delivered interventions do not eliminate all structural or perceptual barriers to mental health care (see Poznanski, Silva, Conroy, Georgiadis, and Comer, this volume), a range of behavioral intervention technologies offer the potential of further improvements in the reach and efficacy of treatment.

Similarly not a “new” issue for the mental health professions, the questions of how best to train clinicians and how to maintain competence over a career will be important to empirically investigate, especially in relation to the leg of EBP dealing with clinician’s expertise (Beidas & Kendall, 2010; Health Service Psychology Education Collaborative, 2013; Jackson, Wu, Aylward, & Roberts, 2012; Roberts, Borden, Christiansen, & Lopez, 2005; Rodolfa, Bent, Eisman, Nelson, Rehm, & Ritchie, 2005). Recent changes in accreditation standards have reinforced requirements for training programs to include the selection and use of evidence- or science-based interventions in their curricula, as well as mechanisms for the evaluation of such competencies. Unfortunately, however, although considerable effort and resources are given to continuing education and training in the healthcare professions, including psychology, much less empirical research attention has examined the process of professional education and evaluated outcomes resulting in any improved effects for patients. As an initial step to improve the efficacy of professional education, Washburn et al. (2019) recommended transitioning to a competency-based evaluation system for professional education.

The concepts of prevention of psychological disorders, physical illness, and injury are certainly not new in psychology or mental health care (or in health care in general; Roberts & Brown, 2004; Roberts & Peterson, 1984). The APA position statement on evidence-based practice in psychology focused on treatments and psychotherapy; this handbook takes a similar focus. The position statement did minimally acknowledge that prevention was included in its coverage of psychological interventions (American Psychological Association Presidential Task Force on Evidence-Based Practice, 2006, p. 273). The Proposed Guidelines for the Implementation of Evidence-Based Psychological Practice (APA, 2019) mention prevention and health promotion efforts with examples of applications in childhood of reducing risk factors and enhancing protective factors, utilizing screening and early detection, collaborative interventions and in public health initiatives (lines: 642+). Prevention of psychosocial problems and physical disorders and promotion of healthy development and functioning
remains a highly underdeveloped area of research, professional training, and applications for psychologists. Despite repeated calls for greater emphasis on prevention and promotion, numerous barriers to such an emphasis obstruct much advancements, such as financing hurdles, the orientation and culture of the profession toward remediation and intervention, and higher standards of proof for effectiveness for implementation. Some progress might be discerned in some areas such as for pediatric overweight and obesity (e.g., Steele and Christoffersen, this volume). Nonetheless, each of the problems and disorders covered in this book for evidence-based therapies, perhaps, should have parallel coverage of prevention of those conditions and promotion of healthy development.

A greater emphasis on establishing and disseminating scientifically based information about effective treatment has been observed with the formation of the Patient Center Outcomes Research Institute (PCORI; www.pcori.org) as part of the 2010 Affordable Care Act. PCORI facilitates the production and organization of evidence-based information for healthcare decision-making through research support and informational materials. In many ways, PCORI and related activities and agencies (e.g., the Agency for Healthcare Research and Quality) are the natural development of the evidence-based practice movement in the professions serving the public (starting with original articulation of evidence-based practice by the Institute of Medicine, 2001) coupled with concepts of personalized or individualized medicine. Within PCORI and other scientific-based initiatives, these advances represent the tailoring of treatments to the patient’s variables or characteristics in medical and psychological applications. In this way, research on the multiple aspects of medical treatments and psychological interventions continues with an orientation to answering, in essence, the significant question outlined for psychotherapy by Gordon Paul (1967, noted in Chap. 1).

Of course, much valuable research in mental health also occurs outside the PCORI agency as psychological clinical researchers conduct rigorous outcome studies to establish the evidence “bona fides” for psychotherapeutic interventions and treatments. In particular, some innovative research findings increasingly address the question posed by Paul in finding the best treatment related to the patient’s characteristics consistent with the EBP framework. The “Probability of Treatment Benefit” (PTB) analysis and resulting informational charts for decision-making as developed by Lindhiem and colleagues (e.g., Lindhiem, Kolko, & Cheng, 2012) represent one significant example of this approach. The PTB approach “…is a decision-support tool that quantifies, in absolute terms, the probability that an individual patient will benefit from a psychological treatment based on the individual’s pre-treatment characteristics” (Grasso, Ford, & Lindhiem, 2016, p. 465). As noted by Beidas et al. (2014), “PTB data can help clinicians decide which evidence-based practice they should implement with which client in a more personalized manner” (p. 134).

Other advances in fulfilling the potential benefit of the full three-legged model of evidence-based treatment include the SMART methodology, the acronym for “Sequential, Multiple Assignment, Randomized Trials” (e.g., Lei, Nahum-Shani, Lynch, Oslin, & Murphy, 2012). SMART is a research design that creates and evaluates interventions that are more real-world-like than previously used designs. The SMART model is “adaptive” to the changes in patient’s adherence and responsiveness to treatment components and, thus, individualizes to the patient’s relevant characteristics and preferences (fulfilling the need for informational support in the leg of the EBP for patient characteristics in clinical decision-making) (e.g., Naar-King et al., 2016; Nahum-Shani et al., 2012). These characteristics might include pretreatment symptomatology such as severity, as well as ongoing modifications indicated by the response as treatment progresses. Nahum-Shani et al. (2012) note that: “In adaptive interventions the type or the dosage of the intervention offered to participants is individualized based on participants’ characteristics or clinical presentation and then repeatedly adjusted over time in response to their ongoing performance …This approach is based on the notion that individuals differ in their responses to interventions: In order for an intervention to be most effective, it should be individualized and, over time, repeatedly adapted to individual progress” (p. 457).
These topics are a sampling of examples of where the health professions are making innovation and producing potential advancements in knowledge and applications. The database on which to build these models needs further development and refined application so that they can accommodate a greater range of diagnoses, treatments, clinician and patient characteristics, clinical practice settings, service delivery organizations, and financial arrangements. Only then can a highly sophisticated fulfillment of the promise of evidence-based practice be accomplished. These types of advances in psychotherapy and interventions research and applications with the public will assist clinicians, patients, and families in making well-informed decisions and helping reduce the burden of mental health problems. Paul, in his succinct articulation in 1967, put in motion the evolution of research questions and scientific methodology and clinical applications. Although the question remains quite current, the approaches are quite different now. We can expect further advances in the future to improve professional understanding and knowledge, clinical decision-making, and practice.

Although most of the effective therapies presented in this volume continue to rely on evidence-based principles that have their roots in the mid-to-late twentieth century, the evidence demonstrates that the field has responded to the mental health care needs of children and adolescents with therapies that can reduce symptoms at a population level. But despite these successes, we still have work left to do (cf. Weisz et al., 2019). The extension and application of these evidence-based principles to larger and more diverse populations of children and youth, as well as the more efficient, creative, and/or efficacious evaluation and application of these principles represent positive developments that we can expect to develop and evolve to improve the human condition. Indeed, recent events (e.g., the 2019-2020 COVID-19 pandemic) underscore the need to further examine the effects of negative life events on children and families, and how evidence-based treatments can be effectively delivered. Despite the challenges that the field and society may encounter, we conclude this volume on an optimistic note: The field is well-positioned to continue the process of refining its technologies in the hopes that all children in need might be served. The current volume is a snapshot at the outset of this task, and we imagine the next volume will have much to report on how tailored treatments expand the net of evidenced-based therapies.

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