Evidence Base Updates: The Evolution of the Evaluation of Psychological Treatments for Children and Adolescents

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Evidence Base Updates: The Evolution of the Evaluation of Psychological Treatments for Children and Adolescents

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This article introduces a new feature in the journal: Evidence Base Updates. Starting with this issue of the journal, there will be one such update in each issue. The updates will focus on reviewing the treatments studies focused on a specific child/adolescent problem area and identifying those treatments with the strongest evidence base. Updates will use a revised set of criteria for evaluating the evidence, based on past work, but modified to emphasize methodological rigor of studies and designed to identify those treatments with questionable efficacy. The article also places the evaluation of psychological treatments in historical context. As well, the changes made in the criteria are discussed.

In 1998, Lonigan, Elbert, and Johnson (1998) edited a special issue of the Journal of Clinical Child and Adolescent Psychology (JCCAP) that offered diagnosis-specific reviews of the empirical support for specific psychosocial interventions. Ten years later, Silverman and Hinshaw (2008) introduced a second special issue of evidence-based treatment updates, reflecting with amazement how rapidly 10 years had elapsed. Now, only 5 years later, we similarly reflect on the evidence-based treatment movement. Practitioners, policymakers, and consumers of psychological services increasingly recognize the importance of selecting evidence-based treatments to maximize therapeutic gains and reduce our nation’s youth mental health burden. The evidence concerning psychosocial treatments for children and adolescents experiencing behavioral health problems continues to amass at an impressive and somewhat daunting pace. Chorpita et al. (2011) identified 435 published papers on child and adolescent mental health approaches between 1965 and 2009.

Because of the brisk accumulation of new treatment studies, the Board of Directors for the Society of Clinical Child and Adolescent Psychology (SCCAP) determined that a decennial review of the evidence base was insufficient to keep up with the rapidly collecting evidence. Instead, the SCCAP board asked the editor (MJP) of its flagship journal, JCCAP, to identify and work with a new associate editor (MSG) to solicit and publish more updates on the evidence base for various child and adolescent problems more regularly. In concert, the SCCAP board also requested that these more frequent updates be disseminated not only through JCCAP but also via SCCAP’s web-based resource, www.effectivechildtherapy.com.

Accordingly, in this issue, we introduce a new feature of the journal, Evidence Base Update, with the first update by Freeman and colleagues (this issue) on pediatric obsessive-compulsive disorder. Evidence Base Updates will offer rigorous reviews of the treatment literature written by top scholars in each area. These articles will appear in JCCAP regularly, offering more consistent and updated reviews for each diagnosis to help readers stay current with an expanding literature. By 2018, the 10-year anniversary for the 2008 special issue, all problem areas/diagnoses will have been reviewed once and some twice.

As with the 2008 special issue, each contributor was asked to review the literature using specific criteria,
TABLE 1
Review Criteria Used for Evidence Base Updates in *Journal of Clinical Child and Adolescent Psychology* Beginning in 2013

<table>
<thead>
<tr>
<th>Methods criteria</th>
<th>Evidence criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.1. Group design: Study involved a randomized controlled design</td>
<td>1. There must be at least two good experiments showing the treatment is superior (statistically significantly so) to a wait-list control group</td>
</tr>
<tr>
<td>M.2. Independent variable defined: Treatment manuals or logical equivalent were used for the treatment</td>
<td>OR 2. One (or more) experiments meeting the Well-Established Treatment level except for criterion 1.1.c. (i.e., Level 2 treatments will not involve independent investigatory teams)</td>
</tr>
<tr>
<td>M.3. Population clarified: Conducted with a population, treated for specified problems, for whom inclusion criteria have been clearly delineated</td>
<td>AND 2.3 All five (5) of the Methods Criteria</td>
</tr>
<tr>
<td>M.4. Outcomes assessed: Reliable and valid outcome assessment measures gauging the problems targeted (at a minimum) were used</td>
<td>Level 3: Possibly Efficacious Treatments</td>
</tr>
<tr>
<td>M.5. Analysis adequacy: Appropriate data analyses were used and sample size was sufficient to detect expected effects</td>
<td>Evidence criteria</td>
</tr>
<tr>
<td>Level 1: Well-Established Treatments</td>
<td>3.1 At least one good randomized controlled trial showing the treatment is superior to a wait list or no-treatment control group</td>
</tr>
<tr>
<td>1. Efficacy demonstrated for the treatment by showing the treatment to be either:</td>
<td>OR 3.2 One (or more) experiments meeting the Well-Established Treatment level except for criterion 1.1.c. (i.e., Level 2 treatments will not involve independent investigatory teams)</td>
</tr>
<tr>
<td>1.1.a. Statistically significantly superior to pill or psychological placebo or to another active treatment</td>
<td>AND 2.3 All five (5) of the Methods Criteria</td>
</tr>
<tr>
<td>1.1.b. Equivalent (or not significantly different) to an already well-established treatment in experiments</td>
<td>Level 3: Possibly Efficacious Treatments</td>
</tr>
<tr>
<td>1.1.c. In at least two (2) independent research settings and by two (2) independent investigatory teams demonstrating efficacy</td>
<td>Evidence criteria</td>
</tr>
<tr>
<td>Level 2: Probably Efficacious Treatments</td>
<td>3.3 Two or more clinical studies showing the treatment to be efficacious, with two or more meeting the last four (of five) Methods Criteria, but none being randomized controlled trials.</td>
</tr>
<tr>
<td>Evidence criteria</td>
<td>Level 4: Experimental Treatments</td>
</tr>
<tr>
<td>3.1 At least one good randomized controlled trial showing the treatment to be superior to a wait-list control group</td>
<td>Evidence criteria</td>
</tr>
<tr>
<td>AND 3.2 All five (5) of the Methods Criteria</td>
<td>4.1 Not yet tested in a randomized controlled trial</td>
</tr>
<tr>
<td>OR 3.3 Two or more clinical studies showing the treatment to be efficacious, with two or more meeting the last four (of five) Methods Criteria, but none being randomized controlled trials.</td>
<td>OR 4.2 Tested in 1 or more clinical studies but not sufficient to meet level 3 criteria.</td>
</tr>
<tr>
<td>Level 5: Treatments of Questionable Efficacy</td>
<td>Level 5: Treatments of Questionable Efficacy</td>
</tr>
<tr>
<td>5.1 Tested in good group-design experiments and found to be inferior to other treatment group and/or wait-list control group; i.e., only evidence available from experimental studies suggests the treatment produces no beneficial effect.</td>
<td>Evidence criteria</td>
</tr>
</tbody>
</table>

provided in Table 1. The primary task was to update the previous review, using the articles from the 2008 special issue (when available) as the starting point. So the focus of most of the Evidence Base Updates will be incorporating more recent studies into the conclusions from the 2008 article. Of course, the authors are also tasked with ensuring that previous relevant studies were not overlooked. As a result, the articles will re-cover ground from the 2008 special issue. In some cases, there was not a 2008 article to use as a basis. For those articles, a more thorough review of the literature was needed, and those articles will be more extensive. Also worth noting, as with past efforts by the journal, we chose leaders in the substantive area as the lead authors on the Evidence Base Updates.

For the most part, the Evidence Base Updates will follow past convention and standards as described in the 2008 issue. For example, most of the labels have remained the same, with “well-established” and “probably efficacious” representing the top two levels of evidence support. Some changes were made, however. A brief discussion and rationale is offered next.

**BRIEF HISTORY**

In their interesting article, Strupp and Howard (1992) traced some of the earliest efforts to study the efficacy of psychotherapy to the first half of the 20th century. The “modern era” of such research began with the seminal writings of Eysenck (1952), who famously opined on the basis of a small number of studies that most neurotics would improve without treatment. His criticism of psychotherapy was an indicator of the tension between proponents and skeptics of the relatively new technology.

By the late 1970s, Smith and Glass (1977) published one of the first (and arguably the best known) meta-analysis suggesting that psychotherapy produced positive effects (see also Smith, Glass, & Miller, 1980). Shapiro and Shapiro (1982) used more restrictive criteria in their meta-analysis (e.g., requiring rigorous research design) and yet came to the same basic conclusion—that psychotherapy, broadly construed, produced positive outcomes in published studies. Casey and Berman (1985) published a meta-analysis of psychotherapy studies with children, concluding that “the evidence from this review suggests that previous doubts about the overall efficacy of psychotherapy with children can be laid to rest” (p. 388).

The conclusions that psychotherapy “works” contrasted with earlier calls for researchers to demonstrate the specific effects of treatments, epitomized by the famous statement by Paul (1967): “What treatment, by
whom, is most effective for this individual with that specific problem, and under which set of circumstances?” (p. 111; cf. Kiesler, 1966). Along these lines, John Weisz and colleagues conducted two separate meta-analyses of child treatment studies in the 1980s and 1990s (Weisz, Weiss, Alicke, & Klotz, 1987; Weisz, Weiss, Han, Granger, & Morton, 1995), work that began to demonstrate empirically that the effects of child psychotherapy appear to differ depending on a variety of factors including the child problem and the therapy type (i.e., in more modern parlance, moderators and mediators of treatments are critical to identify and understand). More recently, Chorpita et al.’s (2011) extensive review supports the basic conclusion that the effects of specific treatments are moderated by problem type, age, gender, and ethnicity, to name a few factors. As noted by Weersing and Weisz (2002), less is known about specific mediators of treatment.

As Paul’s general proposition became instantiated in the field, extensive efforts were made to organize the burgeoning treatment literature and to help guide provider decision making in the selection of the appropriate treatment for a given client problem. For example, Kazdin and Wilson (1978) proposed a set of criteria to use in evaluating the evidence for psychological treatments. Arguably the most influential effort to formalize evaluation of treatments was promulgated by the American Psychological Association’s Division 12, the Society of Clinical Psychology. A task force was appointed in the early 1990s to “consider methods for educating clinical psychologists, third party payers, and the public about effective psychotherapies” (p. 1). The task force, chaired by Chambless, began what has been a long-term, ongoing process of identifying criteria to use for determining which treatments have demonstrated potency. In the initial report, Chambless (1993) noted that they “recognize[d] that these criteria are somewhat arbitrary, and that other criteria might be equally important” (p. 1), a statement that is no doubt still true today.

The initial criteria posited by Chambless included two levels, well-established and probably efficacious, with treatments not meeting either of the two referred to as “experimental” (p. 1). The same basic criteria were used in JCCAP’s 1998 special issue on child treatments (Lonigan et al., 1998). For the 2008 special issue, Silverman and Hinshaw (2008) described four levels: (a) well-established, (b) probably efficacious, (c) possibly efficacious, and (d) experimental; the additional possibly efficacious level provided a more nuanced choice between experimental and probably efficacious.

Upon this initial foundation, we offer some modest changes to the criteria used to evaluate psychological treatments. These updated criteria guide the forthcoming Evidence Base Updates. As stated by Chambless (1993), Chambless et al. (1998), and others (e.g., Silverman & Hinshaw, 2008), the goal of these various evaluation criteria are to inform professionals and consumers about the state of the science. That is, the goal is to help therapists and clients make good choices about the treatments they provide or request. Our changes have this “usability” factor foremost in mind. In short, there are four changes: We have (a) added a fifth level, (b) provided additional methodological criteria, (c) opted not to list “brand-name” therapies, and (d) included a few more minor (cosmetic) changes. We discuss each of these in turn.

NEW LEVEL

First, an additional (and lower) level of evidentiary support has been added. This new level is for treatments that have been the subject of one or more study in which all of the evidence has been negative. That is, Level 5 treatments are tested treatments that have failed to produce outcomes compared to any comparison group, including waitlist. These treatments are classified “treatments of questionable efficacy.” Future studies may produce more positive support for some of these treatments, of course. The choice to include a Level 5 has two different bases. First, the inclusion of a “does not work” level is consistent with other recent efforts to classify treatments based on evidence (e.g., Chorpita et al., 2011). Second, given SCCAP’s mission of informing the general public about treatments via its website (www.effectivechildtherapy.com), including a category of treatments about which to be wary was an important addition to help guide consumer choices.

MORE SPECIFIC METHODOLOGY CRITERIA

Evidence supporting a particular therapeutic approach is suggested by not only the presence of statistically significant results but also the methods used to obtain these results. This change is actually reflective of a few related trends. First, at the outset of the endeavor to organize the treatment literature, the number of studies available to review was relatively modest. As a result, using a higher number of methodological criteria would have reduced the pool studies even further. However, as evidence has amassed, the literature has matured to the point that more sophisticated methods in treatment studies are more common. As a result, the criteria we used to evaluate the strength of evidence for a particular treatment can and should involve consideration of the methods used to test the treatment. Furthermore, and as a result of this maturation of the science, reviewers of the literature began to develop and apply additional
methodological criteria beyond those found in the earliest efforts by Chambless and others (e.g., Chambless et al., 1996). For example, Silverman and Hinshaw (2008) emphasized the Nathan and Gorman (2007) criteria for evaluating the quality of evidence for treatments. In the Nathan and Gorman system, treatment studies are placed into one of six categories, with Level 1 studies being the most rigorous and Level 6 studies being the least. In short, our emphasis on methodological sophistication is consistent with past efforts in this journal as well as general trends in the field. The methodological criteria used for the Evidence Base Updates, based largely on past work (e.g., Nathan & Gorman, 2007) are offered (see Table 1) and have specified the criteria that must be met to be placed into each of the five levels.

Using methodology to inform the evaluation of treatments is likely to be an area of future change as there are emerging methodologies for testing treatments that warrant consideration. For example, some have used benchmarking as a way to quantify the potency of a treatment when a randomized controlled trial is not feasible (e.g., Shirk, Kaplinski, & Gudmundsen, 2009; Weersing, Iyengar, Kolko, Birmaher, & Brent, 2006; Weersing & Weisz, 2002). At this point, benchmarking studies are not considered better than open trial evidence in our current approach, though the method involves comparison with previous and rigorous randomized controlled trial studies. In addition, as effectiveness trials become more common, it may be desirable to differentiate between efficacy and effectiveness trials when evaluating treatments (e.g., Barlow, 1996; Donenberg, Lyons, & Howard, 1999; Southam-Gerow, Arnold, Tully, & Cox, in press). Although efficacy trials represent a gold standard for identifying strongly performing treatments, evidence from effectiveness trials warrant special attention given the likelihood of their enhanced generalizability. Thus, consideration of research design and methodology when evaluating the strength of the evidence base for specific treatments is likely to expand in the future.

“BRAND-NAME” PROGRAMS NOT LISTED IN LEVELS

A final “new” choice we made concerns how treatments are reviewed and discussed. Past reviews have included a mix of what have been called treatment families (see, e.g., Chorpita et al., 2011), such as individual cognitive-behavioral therapy or parent management training, and what could be called brand-name therapies such as Coping Cat (Kendall, 1994) and Parent-Child Interaction Therapy (e.g., Schuhmann, Foote, Eyberg, Boggs, & Algina, 1998). Again, following recent trends away from identifying brand-name therapies toward the emphasis of broader treatment families (e.g., Chorpita et al., 2011; Rogers & Vismara, 2008), we have chosen to list the treatment families only under each level. This choice is likely to be somewhat controversial. Clinical scientists who have developed treatments have invested tremendous effort into formulating and testing their programs. As a result, there is a reasonable expectation that the specific named treatment program will be identified in these evidence-based updates.

We made the choice to not specifically identify name-brand treatments for a few reasons. First, it has been rare that specific-named treatments relying on similar theoretical mechanisms have been tested against each other in treatment studies. For example, there are numerous parent training programs that rely on behavioral principles. Although these programs individually and as a whole have support across many studies, they are rarely (if ever) tested directly against each other. Thus, a few conclusions follow. First, given the similarities across parent training programs, for example, a larger evidence base supports parent training programs in general versus specific parent training programs. Second, given that we have almost no guidance for how to select among the different parent training programs, given the lack of comparative studies, listing one specific named parent training program at a higher level than another has the potential to be misleading.

A second reason for not listing name-brand treatments is that the replication studies for those name-brand treatments rarely involve the testing of the same exact protocol. That is, the treatment developer often revises and augments the treatment program based on findings from the previous study. Although this is a natural aspect of treatment studies, the alteration of the protocol from trial to trial undermines the argument that the same treatment program has been tested across multiple studies. That is, there is reason to distrust the notion that a specific program has reached a particular evidentiary level when that program has been changed each time it was tested. As a result, we felt more confident that by aggregating treatment programs at the treatment family level, that is organizing treatments into groups that share very similar putative treatment mechanisms, stronger conclusions could be drawn.

Finally, it has been argued that focusing on broader treatment families rather than specific treatment programs is more likely to have broader public health benefits. In fact, some have argued that pitting name-brand therapies that apply similar theoretical principles of change against each other may confuse providers who might seek to learn new treatments and families who wait seek to request specific therapies. In fact, stakeholder input has recommended this more “generic” approach to reporting what works and what does not
work (Chorpita & Daleiden, 2009; Chorpita & Regan, 2009). Despite not listing these brand name programs in the tables, the Evidence Base Updates will list brand-name treatment programs when reviewing the literature.

OTHER CHANGES

The perceptive reader will find a few other more minor changes in the Evidence Base Updates when compared to past reviews of evidence-based treatment. For example, each update now has a standardized summary table. A copy of this table will also be found on the www.effectivechildtherapy.com website. In addition, each contributor was asked to address the evidence (if available) regarding differential effects for treatments by age, gender, and ethnicity. Finally, Evidence Base Updates contributors were all asked to clarify the state of the research on mediators for the approach(es) that met Level 1 or 2 criteria. As many have lamented, although we have a strong evidence base for treatments that produce outcomes, our knowledge about why and how those outcomes are produced is quite sparse.

In sum, the Evidence Base Updates feature of the journal retains much of what was done in the 1998 and 2008 special issues while also adding several new dimensions. We have added a new level of evidence, one that emphasizes that some treatments may not work well, a particularly important addition for consumers. Second, we have continued to emphasize methodology when evaluating treatments, a trend we expect will expand in the future. Finally, we have moved away from identifying name-brand therapies, instead emphasizing more generic, mechanism of change related treatment family monikers. Thus, the new Evidence Base Updates continue the evolution of our evaluation of what works to help children, adolescents, and families with the mental health problems they face.

In conclusion, on behalf of the SCCAP board, we are thrilled to introduce this new feature for the journal. We hope this series of articles will offer a useful resource for scientists, for practitioners, and for more generally enhancing a dialogue about the psychological treatments that have most promise for ameliorating youths’ mental health symptoms.

REFERENCES


