

# PUBLICATION SERIES

Office of Mental Health and Substance Abuse Services

## EVIDENCE-BASED TREATMENT: What It Is and How It Can Help Children

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## PUBLICATION SERIES

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## Table of Contents

<b>KEY CONCEPTS</b>	<b>4</b>
• What is Evidence-Based Treatment?	
• A Brief History of Looking at What Works: The Recent Study of Psychotherapy Outcomes	
• Criteria Used to Establish Evidence-Based Treatments	
Box 1: How Do We Know What We Know?	5
<b>WHY EVIDENCE-BASED TREATMENT IS A GOOD IDEA</b>	<b>6</b>
• The High Prevalence of Psychiatric Disorders Among Children and Adolescents	
• No Evidence of Efficacy in Most Specific Treatments Now Provided	
• Bringing Respect to the Study and Application of Psychotherapy and Replacing Opinion with Knowledge	
• Doing the Right Thing: The Ethical Obligation to Those Whom We Serve	
• The Vulnerable Status of Children	
• Putting Limited Resources Where They Will Do the Most Good	
• Making Training More Effective and More Useful	
• Extra Challenges of Providing Mental Health Services to Children	
<b>RESISTANCE TO AND LIMITATIONS OF THE EVIDENCE-BASED TREATMENT APPROACH</b>	<b>8</b>
• Decisions About What the Standards Will Be	
• Concern About Rigid Adherence to Treatment Manuals: Adapting Evidence-Based Treatment to Individual Clinical Needs	
• Treatment Approaches That Might Work But Have Not Been Evaluated	
• Differences Between Efficacy and Effectiveness Research: The Research Clinic vs. the Real World of Treatment	
• Lack of Consideration of Cultural Factors	
• Importance of Relationship Factors in Psychotherapy That May Be Ignored in Current Evidence-Based Treatment Research	
Box 2: Definition of Therapeutic Alliance	12
Box 3: Arguments Against Evidence-Based Treatment	12
<b>VALUES, EVIDENCE-BASED TREATMENT AND CASSP</b>	<b>13</b>
<b>THE CASE FOR THE EVIDENCE-BASED TREATMENT APPROACH</b>	<b>14</b>

<b>CURRENT STATE OF THE EVIDENCE</b>	<b>14</b>
<b>WHAT A PRACTITIONER CAN DO</b>	<b>15</b>
<ul style="list-style-type: none"><li>• Stay Informed</li><li>• Have a Healthy Skeptical Attitude</li></ul>	
Box 4: When It Comes to Mental Health Treatment, Be a Skeptic: Look for the “Baloney Factors”	16
<ul style="list-style-type: none"><li>• Evaluate Your Own Work</li><li>• Advocate for Effectiveness Research</li><li>• If You Work in an Applied Setting, Ask Questions About Evidence</li><li>• If You Provide Treatment for Which There Is No or Limited Data About Treatment Effectives, Develop a Realistic and Humble Attitude</li></ul>	
<b>CONCLUSION</b>	<b>17</b>
<b>APPENDIX</b>	<b>19</b>
<b>REFERENCES</b>	<b>23</b>

## EVIDENCE-BASED TREATMENT: What It Is and How It Can Help Children

### KEY CONCEPTS

#### What is Evidence-based Treatment?

The goal of an evidence-based treatment approach is to improve care (Sackett et al., 1996). This approach has been receiving more widespread support among researchers and clinicians in the past two decades (Christophersen & Mortweet, 2001, Kazdin & Weisz, 2003). In fact, the recommendations from the recently completed President's New Freedom Commission on Mental Health illustrate this. One of the six recommendations is to provide the "best care science can offer" (Thomas, 2003).

Evidence-based treatment is treatment that can answer the following questions:

- What are we doing? Can we describe our procedure(s) to someone else so they can do it too?
- For whom are we doing it?
- Does it work better than doing nothing at all?
- Does it work as well as or better than providing some other type of treatment?

Several terms have been used to describe this work, including "empirically supported treatments," "empirically validated treatments," "treatments that work," and "evidence-based practice." Throughout this article we will use the term "evidence-based treatments" to represent the emphasis of using scientific evidence to guide treatment decisions.

#### A Brief History of Looking at What Works: The Recent Study of Psychotherapy Outcomes

Conducting "outcome research" involves trying to answer questions such as "What are you doing?" and "Does it work?" This is a relatively new

endeavor in the field of psychotherapy, and especially new in the area of psychotherapy with children. Interestingly, early reviews of psychotherapy outcome research with children and adolescents suggested that psychotherapy was not effective (Levitt, 1957, 1963). Treatment provided at that time worked as effectively as no treatment, or simply the passage of time. It was also Levitt's observation that clinicians most frequently treated children who had problems that would improve simply with time and less frequently treated children whose problems were more persistent such as conduct problems or aggression.

Fortunately, since that time a large body of research supports the conclusion that psychotherapy for children and adolescents is "efficacious," meaning that when studied under controlled conditions, treatment produces improvement in the child's symptoms (Weisz et al., 1987; Weisz et al., 1995; Casey & Berman, 1985; Kazdin et al., 1990). A recent summary of multiple outcome studies indicates that children and adolescents who receive psychotherapy improve more than approximately 75% of children and adolescents who do not receive treatment or receive alternative comparison treatments (Kazdin & Weisz, 2003). This is a very important conclusion for practitioners because we can say with confidence that psychotherapy produces meaningful changes for children and adolescents with behavior and emotional problems. Additionally, this general conclusion allows the researcher to now ask about which specific treatments work most effectively for which specific childhood disorders. For many *specific* disorders of childhood there is a lack of evidence of treatments that work (Kazdin & Weisz, 2003). Currently only a limited number of treatments applied to a limited number of childhood disorders have been formally evaluated.

#### Criteria Used to Establish Evidence-based Treatments

What determines if a specific treatment is considered to be “evidence-based”? The following are accepted as necessary criteria

(<http://www.nimh.nih.gov/publicat/nimhblueprint.pdf>; Christophersen & Mortweet, 2001; Fonagy et al., 2002; Kazdin & Weisz, 2003):

1. The technique has well defined treatment procedures that can be taught to other therapists,
2. The evaluation of the technique uses well controlled studies, usually involving random assignment of participants to treatment conditions,
3. There is a clear definition of the selection criteria for treatment participants in the study (that is, the people who will be included in the study are carefully described),
4. There is use of multiple outcome measures, so one does not base judgment of treatment outcome with a person on only one measure, and
5. There is replication of results in multiple settings: other researchers repeat the procedures and get similar results.

An American Psychological Association Task Force on Empirically Supported Treatments, using criteria like those listed above, categorized treatment procedures for children and adolescents as “well-established” or “probably efficacious” (Chambless et al., 1996). “Well established treatments” met all of the key criteria, and “probably efficacious treatments” met some but not all of the key criteria.

## BOX 1

### How Do We Know What We Know?

Human beings make decisions and draw conclusions every day based on thinking styles and on available information. But to err is human! People who treat children are no exception. Some mistakes that are made in assessing and treating children are due to lack of information about child development, biases, heuristics, and/or memory processes (Garb & Boyle, 2003). While it is easy to give someone information they may not be aware of, it is sometimes not so easy to influence thinking biases. These kinds of mistakes are made by therapists and by the parents of children we work with.

#### **Some Examples of Types of Thinking Biases or Errors:**

**Proof by authority error:** Believing something is true, such as how effective a certain therapy is, simply because someone “important” says it is so. Many times we worry that we do not know enough to question, that others will think we are lacking in some way if we ask how they know what they say they know. You should know this: Intelligence and education do not inoculate a person from faulty thinking. If the person whose data or observations you are questioning does not answer your question, they may not have the answer. Further, if they criticize your need for more support to understand why a procedure or treatment works, you may conclude that his type of authority is a pseudo-authority.

**Confirmatory bias, or Filtering:** Paying attention only to information that confirms your hypothesis. This human tendency to filter can be seen in the reactive attachment disorder controversy. A child in foster care is not affectionate to her foster parents and has a myriad of other behavior problems. Knowing the child had an attachment disruption, we discount, or filter out, information about the child’s affection for her mother (or aunt

who raised her) and focus instead on her inability to show affection to her new caretakers, concluding that there is an attachment ‘problem’ rather than look for other explanations for her disruptive behavior.

Misattribution of causality: Attributing cause to things that systematically or inadvertently co-occur (e.g., superstitions). This is the error you may have learned in an introductory psychology class: “Correlation does not equal causation.” A little girl’s mother dies and she begins to have sleep problems. If we assume the mother’s death (co-occurring) is the cause, we might overlook other possible causes such as an allergic reaction from sleeping at her grandmother’s house with a cat, and the resulting sleep apnea.

Single cause assumption: explaining *complex* phenomena using *one* explanation. Applied to reactive attachment disorder, some clinicians conclude that *one* factor in a child’s history (attachment disruption) is the cause for all of the presenting problems, when other factors might be more important (intelligence, family biological predisposition to certain behaviors, normal developmental variation, caretaker-child mismatch, etc.).

Hindsight bias error: What we might call, continuing with the examples above, the Foster Care assumption—thinking that one event caused the subsequent event. This is *post hoc* reasoning, explaining something in the present by knowledge of something in the past. If a child comes from foster care (had an attachment disruption), or was in a car accident, we cannot predict (*a priori*) any particular behavior or symptom. But, IF a clinician hears the child is having behavior problems, the clinician might assume, in hindsight, that the behavior is due to the earlier experience, and might miss other causes and provide incorrect treatment.



Be careful about assuming you know what caused which behavior in a child, by explaining things after the fact. Human behavior is immensely complex and the result of many influences. No one has yet been able to predict a child’s outcome from earlier events; we have as yet no direct cause-effect relationships established. It is always easier to explain behavior than to predict behavior. Making predictions and testing those predictions against the idea that your prediction might be completely wrong represent central features of the scientific approach. In contrast, explanations can appear reasonable and still demonstrate a thinking bias or error because explanations are seldom tested scientifically.

## WHY EVIDENCE-BASED TREATMENT IS A GOOD IDEA

In this section we discuss some of the benefits and advantages of using an evidence-based treatment approach.

### The High Prevalence of Psychiatric Disorders among Children and Adolescents

The incidence of behavioral and emotional disorders among children and adolescents is substantial. Prevalence studies indicate that approximately 20% of children and adolescents experience identifiable psychiatric disorders (WHO, 2001). Many children who do not meet full criteria

for a specific psychiatric disorder can still experience significant distress or impairment. This significant number of children and adolescents with psychiatric disorders provides a clear mandate to find treatments that work. Furthermore, children in distress means there are families in distress. The cost is high to each community due to loss of work time or inefficient workers as a result of extra care for children who have serious behavioral or emotional disorders.

### No Evidence of Efficacy in Most Specific Treatments Now Provided

Although there is evidence supporting the efficacy of some treatments, it is important to

acknowledge that by far the largest proportion of specific therapies now used in applied settings *have not been proven under controlled or uncontrolled conditions* (Garske & Anderson, 2003; Kazdin & Weisz, 2003). Furthermore, most outcome research is conducted with adults. Only about 7% of the total psychotherapy outcome research is conducted with children or adolescents (Allen et al., 1991; Kazdin et al., 1990). As clinicians, we need to encourage research on treatment procedures we can use with confidence.

### **Bringing Respect to the Study and Application of Psychotherapy and Replacing Opinion with Knowledge**

The evidence-based treatment approach adds to the integrity and quality of the field of psychotherapeutic treatment for children and adolescents. It does so by introducing the scientific method to replace general impressions or biased observations. (See Box 1, “How do we know what we know?”) As our base of evidence about psychotherapy effectiveness advances, there will be better acceptance of psychological interventions, from those who receive these services and also from our colleagues in other areas of health care.

We do not have to look far in the field of mental health to see the application of treatments that seem illogical, are totally without empirical support, or are even harmful (Singer & Nievod, 2003). Tarvis (2003) identified an example of the increasing use of a “re-birthing” technique to help children who have been adopted or neglected form more secure attachments to parents. This approach involves expecting a child to struggle through a “birth canal” of blankets and pillows, simulating a re-birth. A 10-year-old Colorado girl died in this process. Tarvis reported that attempts to eliminate this type of treatment in Colorado were stopped by “attachment therapists” who claim the treatment has benefits. Where is the scientific evidence to support the theory or application of this technique? As our science related to treatment outcome advances, our field will gain more respect and successfully

distance itself from inappropriate, ineffective or harmful treatments.

### **Doing the Right Thing: The Ethical Obligation to Those Whom We Serve**

Professions such as psychology, medicine, and social work provide ethical guidelines for their members’ activities. These guidelines specifically outline their obligations to behave in responsible and ethical ways. Three examples of ethical principles are especially relevant to this discussion: the principle of “beneficence,” “nonmaleficence,” and “fidelity.” “Beneficence” or “doing good” involves clinicians’ obligations to benefit those whom they assess or treat. The principle of “nonmaleficence” involves the obligation to do no harm. Although in the context of treatment outcome research the term “fidelity” represents faithfulness in adhering to a specific treatment approach, in the context of ethics the principle of “fidelity” involves the obligation to demonstrate faithfulness to a client including *representing accurately the information about services being offered* (Bersoff, 1995). The evidence-based treatment approach begins with these guidelines and permits us to better advocate for those in our care.

### **The Vulnerable Status of Children**

Many examples exist of children in the behavioral health system who clearly need protection and advocacy, including those placed in foster care, those whose parents display serious psychopathology, and those from families with serious conflict. Because of their dependent and vulnerable status, these children especially need our advocacy and protection. We have a responsibility, when working with children and adolescents, to use treatments that work, and to select the most effective treatments. The phrase, *caveat emptor*, “let the buyer beware,” conveys to consumers that they have a responsibility to protect themselves in financial transactions. We would suggest use of the phrase “provider beware,” indicating that providers of psychotherapeutic services to children and adolescents have an additional responsibility to act

in the best interests of a child or adolescent who presents for mental health services, and further, to use caution in their acquisition and use of therapies. The use of scientific evidence about treatment effectiveness helps clinicians provide a higher level of protection for children and helps clinicians carry out their work with more confidence.

### **Putting Limited Resources Where They Will Do the Most Good**

The recent budget deficits in many areas in the United States, including Pennsylvania, have resulted in reductions in many social service and mental health service programs. The National Mental Health Association reported that 29 states cut spending on mental health care during 2003 (Pear, 2003). These actions impact the delivery of mental health services to children and adolescents and highlight the critical need to use the limited resources available for the maximum benefit. We simply have an obligation to be good stewards of the resources available for services and provide the most effective treatments available. Being knowledgeable about treatment outcome research is vital to the process of selecting a treatment approach and using resources wisely.

### **Making Training More Effective and More Useful**

Another clear benefit of the evidence-based treatment paradigm is the expectation that treatments have clearly described procedures. These procedures are teachable and can be carried out by others. This expectation increases the likelihood of replication of treatment methods by clinicians in other settings. All practitioners are fully aware that there are elements of art as well as science in conducting psychotherapy. Nevertheless, even the techniques and mechanics of art can be taught and learned. Using explicit treatment procedures takes some of the “mystery” out of learning to become a psychotherapist, an important issue to trainees (Christophersen & Mortweet, 2001). Kazdin and Weisz (2003) point out that currently most training programs for psychologists, psychiatrists, social

workers and other mental health profession could benefit by including training in evidence-based approaches.

### **Extra Challenges of Providing Mental Health Services to Children**

Practicing child clinicians are aware that the vast majority of children and adolescents who present for mental health services are not self-referred. Many of these referred children and adolescents demonstrate behavioral or emotional problems that are evident to others but the child or adolescent is often resistant to receiving treatment. Furthermore, drop-out rates for outpatient treatment of children are often as high as 40% to 60% (Wierzbicki & Pekarik, 1993; Kazdin, 1996). If the child does not want to participate and if the amount of time he or she will be working with us is so limited, there is even more urgency for clinicians to use treatments that work.

### **RESISTANCE TO AND LIMITATIONS OF THE EVIDENCE-BASED TREATMENT APPROACH**

Given all these arguments to support the evidence-based treatment approach, why isn't there more support for this work? Not everyone is enthused about evidence-based treatments and there are legitimate concerns regarding the current evidence-based treatment approach. Some concerns are logical, some are based on fear and misunderstanding of this field of study, and some are based on normal human resistance to change. We will try to address some of those concerns in the following discussion.

### **Decisions about What the Standards Will Be**

Whenever practice standards are established, questions arise. Who is deciding what we will study and what we will use as standards to decide what works? Who will set the standards? What process will be used in establishing those standards? What

types of evidence will be included? How much evidence is sufficient to set a treatment standard? Practice standards, guidelines and recommendations have been made by various groups, including the American Psychological Association Task Force on Empirically Supported Treatments (Chambless, 1996), The American Academy of Child and Adolescent Psychiatry (e.g., Bernet, 2002; Dunne, 1997), the National Association of Social Workers Standards for the Practice of Social Work with Adolescents (2003), and the American Psychological Association Division of Psychotherapy Task Force (Norcross, 2001). Central to this debate is the concern that non-scientific factors will play a role in the establishment of practice standards.

Two examples from medical science illustrate this concern: research on medication and guidelines for the management of concussions. A substantial amount of research on medications has some degree of pharmaceutical company support or sponsorship. Evidence indicates that this financial support contributes to more favorable (biased) research results for the drug represented by the sponsoring pharmaceutical company (Moynihan, 2003). Another example involves the controversy surrounding the establishment of treatment standards or guidelines in the management of concussions. There are 19 different sets of guidelines for assessing the presence of concussion and making a decision about an individual's readiness to return to physical activities after a concussion. The various sets of guidelines are inconsistent with one another and are based largely on theory and "clinical experience" rather than science (Collins, 2003). Furthermore, these guidelines fail to take age-related differences into account (Collins, 2003). In fact, the guidelines of the American Academy of Neurology are inconsistent with research demonstrating adolescent athletes require more recovery time than adult athletes after a concussion (Collins, 2003).

### **Concern about Rigid Adherence to Treatment Manuals: Adapting Evidence Based Treatment to Individual Clinical Needs**

One of the features of evidence-based treatments is the establishment and application of well-defined treatment procedures. Treatment manuals are often developed to define the treatment procedures ("What are we doing?") and guide clinicians using this model. Yet, some of the resistance to evidence-based treatments rests on the idea that use of a treatment manual requires rigid "paint-by-number" adherence to a manual, allows for no creativity or individuality by the psychotherapist, and especially does not allow for flexible adaptations to be made based on the needs of the individual patient. Those resistant to use of manuals argue that the manuals oversimplify the complexities of conducting psychotherapy.

The benefits of treatment manuals include improvements in training of clinicians and better communication of empirically supported treatment techniques (Monacher & Prinz, 1991). Kendall, who has developed an evidence-based treatment for children with anxiety disorders, suggested that there is a middle ground between the freedom of unstructured treatment and the rigid adherence to manuals (Kendall et al., 1998). Balancing flexibility and predictability of treatment is an important area of discussion.

### **Treatment Approaches That Might Work but Have Not Been Evaluated**

During the past two decades significant advances have been made in the number and quality of treatment outcome studies of child and adolescent psychotherapy, although the vast majority of treatment techniques used by clinicians have not been evaluated (Kazdin & Weisz, 2003). Garske and Anderson (2003) indicate that there are now at least 250 distinct psychotherapy approaches or treatment techniques. It is quite possible that some of those treatment techniques produce genuine positive treatment benefits with children. Some

worry that restrictions might be placed on the application of these not yet evaluated yet possibly worthwhile treatments.

Additionally, some treatments are more easily represented in treatment outcome studies than others. Cognitive and behavioral treatments are represented more easily than, say, object relations therapy. Outcome variables related to cognitive-behavioral theory may be more readily identified and measured, or cognitive-behavioral researchers may have more quickly accepted the critical need to conduct outcome research. After all, cognitive behavior therapy works for behavior changes that are observable and measurable. Other therapies may work for an internal, non-observable change such as “greater self awareness” or stronger feelings of attachment, security or confidence. Some worry that there will be pressure to use only the treatment approaches “officially” identified as being empirically supported or only those that measure observable behavior.

We acknowledge that some treatment for children, especially those involving a family systems approach, may be more difficult to evaluate because of the complexity of defining the treatment techniques, of selecting outcome variables that adequately reflect treatment change, or of tracking and analyzing so much more information associated with the child’s social context. With further research such treatment approaches may be found to be efficacious or superior to other approaches for the same clinical problems. We look forward to the results that will come from more research in this area. Work in this area will benefit from those participating in family-based treatments sharing their observation in, for example, case study discussions, and developing collaborative relationships with researchers.

Proponents of treatments that have not been adequately evaluated are encouraged to advocate for their treatments by supporting the work of researchers conducting outcome studies in those areas and collaborating when possible with those researchers. On the other hand, we believe it is

irresponsible to use a treatment that has been carefully evaluated but demonstrates either no positive effects or demonstrates negative effects.

### **Differences between Efficacy and Effectiveness Research: The Research Clinic vs. the Real World of Treatment**

Efficacy research is specifically designed to exert a great deal of control over factors that might make it difficult to make clear conclusions about treatment effects. A high degree of control is exerted over factors such as inclusion criteria (what characteristics you want patients to have, such as diagnosis, symptoms, age), exclusion criteria (what characteristics you do not want them to have), existence of co-morbid conditions (such as depression *and* drug abuse, or depression *and* ADHD), specific ways in which treatment is provided, number of treatment sessions, the extent of other family psychopathology, and qualifications and training of therapists. In some efficacy research, participants are recruited with advertisements rather than being self-referred to clinics. The primary question being asked in efficacy research is this: Under highly controlled and ideal conditions, does this treatment work?

In contrast, effectiveness studies try to ask: Does the treatment work in a real world setting? Effectiveness studies are conducted in community settings (e.g., outpatient clinics, schools, and homes) and are purposefully less controlled than the efficacy studies. Factors such as patient characteristics and the way in which treatment is delivered are less controlled. These conditions make effectiveness studies more closely resemble real world treatment settings with typical patients.

The results of efficacy studies and the results of effectiveness studies of child psychotherapy are quite different. Meta-analyses (group analyses of several similar studies) of *efficacy* studies of child psychotherapy demonstrate very positive outcomes for child psychotherapy with effect sizes considered in the “large” range (Casey & Berman, 1985; Cohen, 1988; Weisz et al., 1987; Kazdin et al.,

1990; and Weisz et al., 1995b). In contrast, meta-analyses of *effectiveness* research indicate effect sizes that are small or negative (Weisz et al., 1995a). One could conclude that that we have treatments that have been identified as efficacious in highly controlled settings with specific populations, but we have yet to consistently demonstrate effects in applied settings. Why is this so? Are clinicians less exact about adhering to procedures? Should there be flexibility in the procedure when children have multiple problem areas for treatment? These are questions addressed in effectiveness studies.

Even though evidence for the successful application of efficacious treatments in applied settings is limited, practitioners still can use the information available from efficacy research to guide treatment decisions and help close the gap between research and practice. There is a substantial research base to guide practitioners in making practical treatment decisions for many childhood disorders (a second part of this paper may be published at a later time).

The suggestion that many efficacy studies exclude patients with co-morbid conditions strikes many clinicians as possibly being appropriate for the initial investigations, but unrealistic for applied settings because many patients demonstrate co-morbid conditions. It is estimated that approximately half of all people with mental disorders have more than one diagnosable disorder (Clark, Watson & Reynolds, 1995; Weisz et al., 1998; Hufford, 2000). Effectiveness research in real world settings is critical for finding ways to make efficacious treatments work effectively in applied settings.

This is where clinicians can play a role in research and approach a scientist-practitioner model. By encouraging studies of treatment in situations that reflect more accurately a clinic or agency office, we will eventually receive more information on tools and procedures that will more accurately apply to our work. Furthermore, we have an *obligation* to conduct treatment outcome research ourselves, even

in modest ways, especially for treatments for which no or little data about effectiveness exist. Large expenditure of funds supports a variety of mental health services for children for which no or very limited data about effectiveness exists. For example, in 2003, a total of \$218 million was spent on behavioral health rehabilitation services (BHRS) for approximately 18,500 children in the Commonwealth of Pennsylvania through HealthChoices, resulting in an average expenditure of approximately \$11,780 per recipient (OMHSAS, 2005). Yet, although we have some data about individual treatment plan outcomes, no aggregate data exists to determine if children who receive these services improve at all, or if they improve as well as children receiving other services, or no services at all. Is this a good use of limited mental health resources? We cannot answer that question without outcome research and without collaborating with those who would study these important questions.

### **Lack of Consideration of Cultural Factors**

Little attention has been given to consideration of cultural factors as variables that might influence treatment outcome. Inclusion of cultural factors in the design and application of treatment may influence whether a treatment is effective. For example, few if any outcome studies evaluate whether a particular treatment is equally efficacious with different cultural or ethnic groups. Similarly, few if any outcome studies evaluate whether treatment outcome is enhanced for a particular treatment if a therapist and child/family share similar ethnic or cultural backgrounds. These factors need to be addressed in future outcome studies.

### **Importance of Relationship Factors in Psychotherapy That May Be Ignored in Current Evidence-Based Treatment Research**

An important issue when discussing evidence-based treatment is the research finding that relationship factors are as important as or more

important than treatment techniques in determining treatment outcome (Wampold, 2001; Norcross, 2002). Measuring the quality of a relationship may be more difficult than measuring behavior change. The American Psychological Association Division of Psychotherapy designated a task force to evaluate research on effective elements of the therapy relationship and on effective means of tailoring the relationship to the individual patient (Norcross, 2001). Their report attempts to enrich the discussion of evidence-based treatments by emphasizing the finding that relationship factors account for at least as much of the outcome variance in psychotherapy as treatment technique or school of therapy (Orlinsky, Grawe, & Parks, 1994; Gelso & Hayes, 1998; Hill & O'Brien, 1999; Wampold, 2001; Norcross, 2002). In a manner similar to the APA Task Force on Empirically Supported Treatments, the Division of Psychotherapy Task Force identified relationship factors considered as "demonstrably effective" and those considered as "promising and probably effective." Among those considered as demonstrably effective are the "therapeutic alliance" and "goal consensus and collaboration."

**Box 2**

**Definition of "Therapeutic Alliance"**

The term "therapeutic alliance" refers to the strength of the relationship and trust between the therapist and the child or adult client. Conveying to the child an understanding of his experience and needs contributes to the development of the therapeutic alliance. Other factors are "goal consensus and collaboration", that is, agreement between the therapist and the child or adult client on goals of treatment and on how to achieve the goals. A recent article by Shirk and Karver (2003) adds empirical support to the argument that relationship variables contribute significantly to the prediction of treatment outcome in child and adolescent psychotherapy.

It is important to note that even this Task Force *studying relationships* uses scientific evidence to guide practice. Furthermore, one of their four practical recommendations is this: "Concurrent use of empirically supported relationships and empirically supported treatments tailored to the patient's disorder and characteristics is likely to generate the best outcomes" (Norcross, 2001). We could not agree more. The quality of the relationship between the therapist and client is highly predictive of treatment outcome and is a starting point for any technique discussed here.

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**BOX 3**

***Why do we use so many unproven treatments and so few evidence-based treatments?***

**Three Arguments against Using EBT**

1) *Not all treatments are easy to study. Cognitive therapy and behavior therapy are easier to use in an experimental setting than some other therapies.*

True, it is easier to study a well-described treatment such as cognitive therapy or exposure and response prevention from behavior therapy, than, say, art therapy or what is called insight-oriented therapy. However, while some treatments might be hard to describe, the *results* of those treatments should be clear and subject to examination: What difficulty in the child or the family are we trying to help mend? Have things changed

in any way for the better? Would someone who doesn't know if we provided any treatment or not agree that there had been change in the child or the family? No matter how difficult it is to define what it is we are doing in treatment, we still have an obligation to the children and families we work with to use methods that will work, that will not be harmful, that will be cost-effective, and will work better than other methods available.

2) *Some treatments haven't been studied well enough to make a decision about their effectiveness. After all, cognitive therapy and behavior therapy were new at one point, too, before studies showed their effectiveness.*

True, and we would not want to eliminate the development and discussion of new treatment or dismiss ideas that are new and untested. However, it would be irresponsible to use treatments that lack evidence or a sound theoretical basis. When a practitioner wants to use an unsupported treatment when an evidence-based treatment exists, it would be appropriate to discuss the treatment options with the family before proceeding with treatment. Even then, we would need to be very careful about telling the child and family what we would consider to be a successful outcome from treatment, that is, how we would decide if the method was successful or not *before we begin treatment*. Otherwise, we risk the hindsight bias: assuming a link between some change in the child and our intervention, even though we could not predict such a change in advance.

3) *I spent years getting trained. Many people respect what I do. I don't have the time or the money to retrain.*

This is a very exciting time in the field of psychology. We have many fine researchers who want to investigate claims being made and help us develop and refine the tools we need to do our work well. We all must keep up with changes in science and knowledge (even if it is costly to us). For many years well-educated people believed and taught that the earth was flat and by sailing for any distance, one risked certain death. Based on observations from shore, it became clear to some that the view of ships sailing away was of a gradual disappearance, from the bottom up, suggesting a curved globe. It took courage to sail out, challenging the old view. In our own clinical work, we often ask people to take a chance, try new things, take the time to examine their behavior and change it based on new information. If we cannot do this ourselves, how can we ask others to do so? Why would we not want to acquire new skills available and change? Yes, there is a cost to change, but the benefits of being able to do our jobs more effectively and with greater confidence far outweigh that cost.

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## **VALUES, EVIDENCE-BASED TREATMENT AND CASSP**

In the Declaration of Independence, Thomas Jefferson wrote the now frequently recognized words, "We hold these truths to be self-evident..." Are there some "self-evident" truths, guiding principles, or values that we believe are vital to providing high quality behavioral health services to children? In this discussion we have chosen to emphasize the value of using scientific evidence to

guide treatment for children. Are there other basic assumptions or values that are equally important?

Let us examine Pennsylvania's guidelines for working with children—the six CASSP principles (Hansen, 2002) that are drawn from general system of care principles (Stroul and Friedman, 1986):

1. *Child-centered*: Treatment interventions meet the individual needs of the child, consider the child's and family's community contexts, and are developmentally

appropriate, strengths-based and child-specific.

2. *Family-focused*: Treatment interventions recognize that the family is the primary support system for the child and participates as a full partner in all stages of the decision-making and treatment-planning process.
3. *Community-based*: Whenever possible, treatment is delivered in the child's home community, drawing on formal and informal resources to promote the child's successful participation in the community.
4. *Multi-system*: Treatment interventions are planned in collaboration with all the child-serving systems involved in the child's life.
5. *Culturally competent*: Interventions recognize and respect the behavior, ideas, attitudes, values, beliefs, customs, language, rituals, ceremonies and practices characteristics of the child's cultural group.
6. *Least restrictive/least intrusive*: Treatment takes place in settings that are the least restrictive and intrusive available to meet the needs of the child and family.

Recently, Kettlewell and Hansen (2003) suggested using evidence-based clinical standards as another important value in addition to these six core principles. One could easily make an argument that each of the six Pennsylvania CASSP principles is "self-evident." For example, most of us would argue that in treating a child with a behavioral/emotional disorder, some involvement of family members in treatment is vital to contribute to such things as getting guidance about and consensus on treatment goals as well as including them as part of the treatment team.

Do we need empirical support to fully endorse a value, such that when we adhere to that value we have evidence that better outcomes for children occur? That might be a bonus. For example, if we have verifiable evidence that including training for therapists in cultural competence would result in better outcomes than identical treatment programs without such training, then a stronger case for including such training could be made. We are

unaware that any such evidence currently exists related to cultural competence; nevertheless, respecting a child and family's cultural or religious beliefs is considered important enough that although empirical evidence would be ideal, evidence is not necessary for justification because such a value is considered "self-evident" by many of us.

We wish to emphasize that using scientific evidence to guide treatment is not contradictory to other "self-evident" values such as CASSP principles, nor is it necessarily more important than others. We identify it as at least one of the vital assumptions about how to provide the highest quality behavioral health services to children and how to advance the field of child services. One could argue that some values, important to our work with children, such as community-based treatment and cultural competence, deserve advocacy even if no current empirical evidence for them exists, although we would encourage awareness of the necessity for exploration and testing of these ideas.

## **THE CASE FOR THE EVIDENCE-BASED TREATMENT APPROACH**

The most compelling arguments for using the scientific method to study and evaluate treatment for children and adolescents are these:

1. Children will be better served.
2. The use of science will encourage advances in knowledge so that children will be even better served in the future.
3. We have a social, moral, and ethical obligation to provide the best available treatments.
4. We must put limited mental health resources for children to the best use possible.

## **CURRENT STATE OF THE EVIDENCE**

Evidence-based treatments can be placed into categories based on the strength of the scientific evidence that supports their efficacy. Because outcome research continues to be conducted and published, the accuracy of any review of evidence-

based treatment is limited to a particular period in time. Although a complete and definitive review of evidence about treatments for children and adolescents is beyond the scope of this article, we are aware that finding accurate and easily accessible information about evidence-based treatment can be a challenge for practitioners. Therefore, we have also written a summary of current support (or lack of support) for psychosocial treatments in four categories: Established, Promising, Unclear, and Unsupported. This summary will be available from the Institute at a later point. In this second article, “Current State of the Evidence,” we provide a summary of the evidence about psychiatric medication for children and adolescents. This summary is intended to be illustrative rather than exhaustive. Key references for each problem domain are provided in parentheses to assist the reader in locating additional information. In this section we also provide a summary of the current evidence about psychiatric medication for children and adolescents.

## **WHAT A PRACTITIONER CAN DO**

It is easy for practitioners to feel overwhelmed because the gap between our science and how we practice in applied settings can be substantial. Evidence-based treatments for children and adolescents with behavior and emotional problems demonstrate both promise and controversy. We hope that this article has revealed the benefit of practitioners of using techniques and strategies that are evidence-based, including those strategies that focus on establishing the client-therapist relationship.

What, then, are some reasonable steps that practitioners can and should take to become practitioners-guided-by-science?

## **Stay Informed**

Not all sources of mental health information are equally valid. Websites are notoriously unpredictable in level of quality. Books and book chapters or other publications that are not *peer reviewed*, that is, they have not been subject to review and criticism by other professionals in the field, should be used with great caution. In this manuscript we provide citations of reputable web sites and references to help keep clinicians informed. Consult them with confidence. Additionally, continue to commit to an ongoing process of staying informed about evidence-based treatments and evidence-based therapeutic factors.

## **Have a Healthy Skeptical Attitude**

Knowledge and science have always been served well by those with a skeptical attitude. Basic assumptions need to be challenged, whether they are assumptions about the world being flat or assumptions that traumatic experiences result in repressed memories. A central concept of the scientific method is the principle of “falsifiability”: scientific experiments need to be established that can falsify or disprove a particular viewpoint or idea (Popper, 1959). Clinicians reviewing or selecting treatment approaches need to develop an attitude of “show me the evidence.” Examples abound of important questions that require data. Where is the evidence that a newer medication produces better clinical results for children with ADHD than stimulant medication? Where is the evidence that a particular educational approach like whole language instruction contributes to improved reading achievement? Where is the evidence that inpatient treatment for adolescent drug abusers works better than outpatient treatment? The process of continuing to ask these questions (having a healthy skeptical attitude) is as important as which questions are asked and what the answers are.

### Box 4

#### When It Comes to Mental Health Treatment, Be a Skeptic: Look for the “Baloney Factors”

##### Always ask: “What do you mean?”

- Watch out for scientific sounding jargon (sometimes called “obscurantist language”), because it tries to obscure the truth. If it sounds fancy, but you just can’t see the meaning behind it, ask. If you still don’t follow, and the presenter implies that there is a problem with you for asking, be very suspicious.
- Always ask, “Is there any link to any accepted theory or practice?”

##### Always ask “How do you know?”

- Is there an over-reliance on testimonial and anecdotal evidence?
- Is there an over-application of the treatment to lots of disorders, regardless of how they might or might not be related to each other?
- Is there an avoidance of review or criticism by colleagues or other professionals?
- Will you be ostracized by the presenter or other therapists for criticizing some aspect of the theory or practice?
- Is there an overemphasis on confirmation (agreeing with), instead of refutation (arguing against)? Good science will go out of its way to try to prove a theory or idea wrong. Bad science only looks for information that supports its theory.
- Is there more of an emphasis on you, the questioner, to prove the theory or claim wrong, instead of on the presenter to prove the claim?

(Lilienfeld, et al. 2002, Garb & Boyle, 2002)

If you answered one or more of the second set of questions with “yes,” be *very* skeptical about the claims for using the treatment.

### Evaluate Your Own Work

Most clinicians do not conduct research, for good reason. We do not typically have the time or the support to do so. However, even if some of us choose to be full time clinicians and not scientists, we should make at least a modest effort to collect some data about the services we provide. It could be in the form of quasi-experimental or single case designs rather than randomly controlled trials, or it could be descriptive data collection. Examples include collecting information about which types of children and families enter treatment with you (ages, diagnoses, whether they are receiving other services, if they have developmental or learning

problems, etc.), stay in treatment, and which drop out, or asking children and their families about what things were most helpful and least helpful in a particular therapy session. These types of rather straight-forward methods could be conducted by individual clinicians or small groups of clinicians. The Pennsylvania Psychological Association is currently developing a model of support for research with clinicians in its Practice Research Network activities ([www.papsy.com](http://www.papsy.com)).

### Advocate for Effectiveness Research

In addition to evaluating our own work, we need to advocate for others to conduct effectiveness

research (Kettlewell, 2004). This could be in the form of helping establish a policy in an agency that conducting outcome research should be a component of every specific program an agency offers. Other ways to advocate would be to encourage legislators and program administrators to include money for effectiveness research as a percentage (such as 5%) of the allocation of funds for services. Providing this type of funding will help assure that we are spending money wisely in our efforts to serve children and adolescents.

### **If You Work in an Applied Setting, Ask Questions about Evidence**

All areas of health care face serious financial challenges. While revenue is critical to the survival of any treatment program, we must ask questions about evidence to support the effectiveness of specific clinical services being offered. Be the person who is known to ask at administrative meetings or lectures the questions such as, “What evidence exists to support that what we’re doing is a good idea, is helpful, or is effective?” We can affiliate with professional organizations that encourage research about treatment and its dissemination.

In the Appendix we list websites and organization that value research about treatments for children and adolescents and encourage its dissemination. We can join or participate in one or more of those groups and support this agenda.

### **If We Provide Treatment for Which There Is No or Limited Data about Treatment Effectiveness, Develop a Realistic and Humble Attitude**

Levitt’s assertion that psychotherapy for children and adolescents was no better than the passage of time (Levitt, 1957, 1963) was a sobering message to clinicians at that time. Even though substantial advances in both research and the development of therapeutic interventions (such as cognitive and behavior therapy) have occurred since

that time, we still need more evidence that clinical services provided in applied settings are effective (Weisz et al, 1995a). It would be nice if we could attribute positive change to our interventions, but what if we’re just along for the ride and the child would have improved on his or her own? In other words, we are still working on the answer to the question: What procedures and techniques work for which children and which ones work better than nothing at all? We would all be wise to remember Levitt’s conclusion and be cautious and humble about claims regarding the effectiveness of the services we provide. The children and adolescents we treat will be better served if we adopt that attitude.

### **CONCLUSION**

Those of us practitioners who strongly support the importance of using scientific evidence to guide practice are also acutely aware that it is unrealistic for practitioners to provide only evidence-based treatments because of several complicating factors that exist in applied settings. Among those complicating factors are multiple diagnoses of children and adolescents, complex family factors, and limited information being available about effective treatment for many disorders. Nevertheless, we have an obligation to stay informed about research findings and apply that information as best we can to serve children and adolescents in need of care. Providing an experimental or unproven treatment instead of a known efficacious treatment (for example, recommending play therapy over parent management training for a child with oppositional defiant disorder) would be irresponsible. We must maintain a healthy degree of skepticism toward unsupported treatment and seek out and apply evidence-based techniques within the context of a solid therapeutic alliance. As practitioners-guided-by-science we will promote the science and integrity of mental health services, and more importantly, better and more confidently serve children, adolescents, and their families.

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## APPENDIX

### Where to Find Information on Evidence-Based Treatment for Children and Adolescents

#### Websites

**American Psychological Association Division 53:** <http://www.ClinicalChildPsychology.org>  
Society of Clinical Child and Adolescent Psychology

**American Psychological Association Division 54:** <http://www.Apa.org/divisions/div54>  
Society of Pediatric Psychology

**Biennial Conference on Empirically Supported Treatments for Child and Adolescent Mental Health Problems:** <http://www.specialevents.buffalo.edu/niagara>  
Co-sponsored by the University of Buffalo and APA Division 53

**Kansas Conference in Clinical Child and Adolescent Psychology:** [www.kuce.org/](http://www.kuce.org/)  
Co-sponsored by the University of Kansas Clinical Child Psychology Program and APA Division 53  
(This conference, usually held in the fall annually or biennially, is a forum for research presentations that help translate science for clinical practice. The most recent Kansas conference occurred in October 2004.)

**Blueprints for Violence Prevention:**  
Center for the Study and Prevention of Violence  
University of Colorado  
<http://www.colorado.edu/cspv/>

(This site provides information on evidence-based approaches for preventing substance abuse, delinquency, and associated mental health problems. This information should be especially meaningful to professionals working at a systems level to implement evidence-based and cost-effective approaches. Some of the interventions discussed below, e.g., the Incredible Years Program and Multisystemic Therapy, are included in this list.)

**Center for Substance Abuse Prevention:** <http://www.modelprograms.samhsa.gov>  
U.S. Department of Health and Human Services  
(This site provides information on programs that have prevented or reduced substance abuse and other related high-risk behaviors. Programs included have been reviewed by SAMHSA's National Registry of Effective Programs (NREP). This website serves as a comprehensive resource for anyone interested in learning about and/or implementing these programs.)

**National Institute of Mental Health:** <http://www.nimh.gov>

**National Guideline Clearinghouse:** <http://guideline.gov>  
(NGC is a public resource for evidence-based clinical practice guidelines. NGC is sponsored by the Agency for Healthcare Research and Quality (AHRQ), U.S. Department of Health and Human Services, in partnership with the American Medical Association and the American Association of Health Plans.)

**American Association of Behavior Therapy:** [www.aabt.org](http://www.aabt.org)

**The Society of Behavioral Medicine:** [www.sbm.org](http://www.sbm.org)

**The Pennsylvania Psychological Association:** [www.papsy.org](http://www.papsy.org)

**Zero to Three:** [www.zerotothree.org](http://www.zerotothree.org)

**Council for Exceptional Children:** [www.cec.sped.org](http://www.cec.sped.org)

**National Association for the Education of Young Children (NAEYC):** [www.naeyc.org](http://www.naeyc.org)

**The Interdisciplinary Council on Developmental and Learning Disorders (ICDL):** [www.icdl.com](http://www.icdl.com)

**Medscape:** [www.medscape.com](http://www.medscape.com)

**National Association of Social Workers:** [www.naswdc.org](http://www.naswdc.org)

## **Books**

Christopherson, E. R. & Mortswet, S. L. (2001). Treatments That Work With Children: Empirically Supported Strategies for Managing Childhood Problems. Washington, DC: American Psychological Association.

Fonagy, P., Target, M., Cottrell, D., Phillips, J., & Kurtz, Z. (2002). What Works for Whom? A Critical Review of Treatments for Children and Adolescents. New York: Guilford Press.

Hibbs, E. D., & Jensen, P. (Eds.), (1996). Psychological Treatment Research of Child and Adolescent Disorders: Empirically Based Strategies for Clinical Practice. Washington, DC: American Psychological Association.

Hughes, J. N., La Greca, A. M., and Conoley, J. C. (Eds.). (2001). Handbook of Psychological Services for Children and Adolescents. New York: Oxford University Press.

The Incredible Years Parent and Teacher Training Program Treatment Manuals and videos can be ordered at: <http://www.incredibleyears.com>

Kazdin, A. E. (2000). Psychotherapy for Children and Adolescents: Directions for Research and Practice. New York: Oxford University Press.

Kazdin, A. E., & Weisz, J. R. (2003). Evidence-Based Psychotherapies for Children and Adolescents. New York: Guilford Press.

Kendall, P. C. (Ed.), (2000). Child and Adolescent Therapy: Cognitive-Behavioral Procedures (2<sup>nd</sup> ed.). New York: Guilford Press.

Lilienfeld, S., Lynn, S., & Lohr, J. (2003). Science and Pseudoscience in Clinical Psychology. New York: Guilford Press.

Nathan, P. E. & Gorman, J. M. (Eds.). (2002). A Guide to Treatments that Work (2<sup>nd</sup> ed.). New York: Oxford University Press.

Patterson's Living With Children book can be ordered at: <http://www.childswork.com>

Phelps, L., Brown, R. T., & Power, T. J. (2002). Pediatric Psychopharmacology: Combining Medical and Psychosocial Interventions. Washington, DC: American Psychological Association.

Schroeder, C. S., & Gordon, B. N. (2002). Assessment and Treatment of Common Childhood Problems (2<sup>nd</sup> ed.). New York: Guilford Press.

Wampold, E. E. (2001). The Great Psychotherapy Debate: Models, Methods, and Findings. Mahway, New York: Erlbaum.

The following training materials can be ordered at <http://www.guilford.com>

(1) Helping the Noncompliant Child: Family-Based Treatment for Oppositional Behavior. (2003). 2<sup>nd</sup> ed. Robert J. McMahon and Rex L. Forehand.

(2) Defiant Children: A Clinician's Manual for Assessment and Parent Training (2<sup>nd</sup> Edition). (1997). Russell A. Barkley.

(3) Defiant Teens: A Clinician's Manual for Assessment and Family Intervention (1999). Russell Barkley, Gwenth H. Edwards, and Arthur L. Robin.

### **Journal articles (Selected listing of comprehensive reviews; see reference list for more)**

Burns, B. J., Hoagwood, K., & Mrazek, P. J. (1999). Effective treatment for mental disorders in children and adolescents. Clinical Child and Family Psychology Review, 2 (4), 199-254.

Chorpita, B. F., Yim, L. M., Donkervoet, J. C., Arensdorf, A., Amundsen, M. J., McGee, C., Serrano, A., Yates, A., Burns, J. A., & Morelli, P. (2002). Toward large-scale implementation of empirically supported treatments for children: A review and observations by the Hawaii empirical basis to services task force. Clinical Psychology: Science and Practice, 9 (2), 165-190.

Lonigan, C. J., & Elbert, J. C. (Eds.). (1998). Special issue on empirically supported psychosocial interventions for children. Journal of Clinical Child Psychology, 27 (2), 138-145. [See Journal of Clinical Child Psychology (1998), Vol. 27, **entire issue**]

U.S. Department of Health and Human Services (1999). Mental Health: A Report of the Surgeon General, Chapter 3: Children and Mental Health. U. S. Public Health Service: [Author].

### **Journals regularly publishing articles on treatment outcome for children and adolescents with mental health problems**

Clinical Child and Family Psychology Review

Clinical Psychology: Science and Practice

Journal of the American Academy of Child and Adolescent Psychiatry

Journal of Clinical Child and Adolescent Psychology

Journal of Consulting and Clinical Psychology

Current Directions in Psychological Science ([www.psychologicalscience.org](http://www.psychologicalscience.org))

The Complete Practitioner ([www.completepractitioner.com](http://www.completepractitioner.com))

Annual Review of Psychology

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