

Integrating Outcome Research and Clinical Reasoning in Psychotherapy Planning

Jeremy P. Shapiro

Psychological and Behavioral Consultants

This article reviews the strengths and weaknesses of outcome research and clinical reasoning as bases of treatment planning and presents a synthesis in which these two types of information complement each other. The author proposes that therapy planning should begin with a review of the relevant outcome literature and also that divergence from research-based guidelines might be warranted under several conditions, including (a) when the client is demographically or culturally dissimilar to the study samples, (b) when assessment suggests a mismatch between the etiologies of the client's disturbance and the processes addressed by empirically supported treatments, and (c) when use of such treatments is followed by a lack of progress that signals the advisability of midcourse correction.

Keywords: psychotherapy, outcome research, clinical judgment

Therapists planning treatment for their clients face the fundamental question of whether to be guided by the results of outcome research, their clinical reasoning about individual cases, or some combination of both. This question is controversial. Proponents of empirically supported treatments (ESTs) have marshaled strong arguments in favor of providing clients with interventions that, on the basis of outcome research, can be expected to produce benefits for most members of well-defined client groups. These proponents have questioned the advisability and even the ethics of foregoing ESTs to provide interventions supported by nothing more well-defined than “clinical judgment” (Ollendick & Davis, 2004). The principles of evidence-based practice have been translated into policy: The National Institutes of Health and several state Medicaid programs have launched initiatives to encourage use of ESTs by practitioners in the community (Carpinello, Rosenberg, Stone, Schwager, & Felton, 2002).

However, the EST movement is not without its detractors. Some commentators, including both clinicians and researchers, have expressed concern about the possibility that government agencies and managed care companies might use official lists of ESTs to restrict practitioners' freedom to gear therapy to clients' individual needs (American Psychological Association [APA], 2002; APA Presidential Task Force on Evidence-Based Practice, 2006; Levant, 2004). Although many researchers dismiss these concerns (Thase, 2006), there are some legitimate, scientific reasons to take them seriously. Methodologic critiques of outcome research have raised questions about the external validity of many of these

studies (e.g., Westen, Novotny, & Thompson-Brenner, 2005). Also, meta-analytic reviews of the adult therapy literature by Wampold (e.g., Wampold, Minami, Baskin, & Tierney, 2002) have suggested that when outcome studies use control treatments consisting of bona fide therapies (rather than placebo activities not really intended to succeed), the results provide little evidence that ESTs are more effective than the type of nonmanualized therapy typically utilized in community settings. Research on child therapy has produced a different pattern of results; here, ESTs have consistently produced better outcomes than treatment as usual (Weisz, 2004).

The alternative to outcome research as a basis for therapy planning is generally called *clinical judgment* or *clinical reasoning*. There do not appear to be consensual definitions for these terms. Shapiro, Friedberg, and Bardenstein (2006) suggested that clinical reasoning consists of therapists' informal analysis, decision making, and planning based on a wide variety of inputs, which include research findings and also include observations of the client, assessment of etiology, theories that are considered credible, authors and trainers found to be compelling, graduate education, conversations with colleagues, and past experiences with various techniques.

While emotions sometimes run high (Carey, 2004), published discussions of the comparative value of outcome research and clinical reasoning usually do not involve extreme positions, and most of the arguing occurs somewhere in the middle of the spectrum. Major figures from both sides of the controversy have affirmed the value of developing some type of synthesis. For instance, Weisz (2004), in advocating the value of outcome research, argued that clinical judgment is vital to the effective implementation of ESTs. Westen et al. (2005), in advocating alternatives to outcome studies, acknowledged that experimental methodology has unique capabilities for producing reliable knowledge about the effects of interventions. The most recent report by an APA task force recommended evidence-based practice in psychology (EBPP)—which integrates knowledge of outcome study findings and clinical expertise—as the optimal solution to the

JEREMY P. SHAPIRO received his PhD from Case Western Reserve University in psychology. He is an adjunct faculty member of the Department of Psychology and Mandel School of Applied Social Sciences at Case Western Reserve University, research consultant, national trainer, and private practitioner. His research interests include psychotherapy outcomes, youth violence prevention, and psychosocial interventions for people with cancer. CORRESPONDENCE CONCERNING THIS ARTICLE should be addressed to Jeremy P. Shapiro, Psychological and Behavioral Consultants, 24800 Highpoint Road, Beachwood, OH 44122. E-mail: Jeremyshapiro@yahoo.com

research–clinical controversy (APA Presidential Task Force on Evidence-Based Practice, 2006). The creation of organizational structures for facilitating scientist–clinician collaboration, such as the Pennsylvania Practice Research Network (Borkovec, Echemendia, Ragusea, & Ruiz, 2001), represents an attempt to bridge the gap that often separates these two perspectives.

But despite the consensus in broad principle, there is a great deal more to discuss. First, there is substantial disagreement about the optimal scope of clinical judgment. EST proponents recommend customizing interventions for clients by tailoring the details of therapy within a framework delineated by a manual, for instance, by identifying the specific thoughts to be restructured by cognitive techniques. In nonresearch therapy, clinical reasoning has a much larger scope. For example, a practitioner might conduct a relaxation procedure and interpret an unconscious conflict in the same session, thus enacting a degree of eclecticism beyond anything contained in a single manual. Also, while EST proponents affirm the value of clinical judgment within frameworks established by research, clinical reasoning in community practice sometimes means departing, perhaps entirely, from guidelines based on outcome studies.

Discussions of this issue have just begun to address the challenge of specifying exactly how practitioners can most effectively combine clinical reasoning with research findings. And while the question of how to plan therapy for clients is an eminently practical one, attempts to formulate an answer confront practitioners with abstract, epistemologic issues concerning the nature and uses of two different forms of information. This article seeks to advance the discussion by considering the distinctive strengths and weaknesses of outcome research and clinical judgment and then proposing a strategy for combining these two sources of guidance in a synthesis that makes use of their complementary forms of value.

The Strengths of Outcome Research and the Weaknesses of Clinical Reasoning

The reasons for confidence in systematic empirical investigation are so well known that they need to be reviewed only briefly here. The value of outcome research derives from the power of sound scientific methodology to produce valid knowledge about the world. The randomized controlled trial (RCT), a straightforward application of the experimental method, has been the mainstay of outcome research. Well-designed RCTs involve clear definitions of client samples (usually by means of diagnosis), random assignment to treatment and control groups, detailed specification of procedures (typically by means of treatment manuals), valid measurement methods, and statistical control of extraneous sources of influence on the results. By achieving high levels of internal validity, well-designed RCTs produce solid, reliable information about the effects of clearly defined interventions on specific groups of clients (Chambless et al., 1998; Lambert & Ogles, 2004).

The strengths of outcome research correspond to the weaknesses of its main alternative, clinical reasoning (Ollendick & King, 2004). In empirical investigations, clinicians have not demonstrated high levels of reliability at the tasks of diagnosis, prediction, and case formulation (see Garb, 2005, for a review). Clinical judgment seems vulnerable to the same sources of error that often distort ordinary human judgment, including confirmatory bias,

self-enhancement bias, the availability heuristic, and a greater emphasis on personal experience than general information.

However, there are considerations that might limit the implications of these studies for everyday practice. Most research on clinical judgment has examined the tasks of diagnosis and behavior prediction, while our interest focuses on case formulation, which generally includes both diagnostic and etiologic considerations. The few studies that have been performed on clinical formulation have generally asked therapists to make judgments or ratings based on limited forms of information such as written case descriptions (Daleiden, Chorpita, Kollins, & Drabman, 1999) and videotaped interviews of students portraying clients (Felton & Nelson, 1984). In contrast, practitioners have access to the large quantity of detailed material that unfolds in multiple therapy sessions and, in addition to passively receiving information, clinicians can ask questions and elicit material in purposeful ways. Clinical formulations based on this type of information might be more valid than the formulations examined in past studies. Finally, the similar effectiveness of ESTs and community therapy for adults (Wampold et al., 1997, 2002) may represent an indirect form of evidence that the clinical reasoning of practitioners is not decisively inferior to outcome research as a basis for planning therapy. Groopman (2007) examined the research–clinical issue in medical practice and presented numerous case studies in which outcomes were better when clinical judgment overruled research-based guidelines in planning treatment.

The Limitations of Outcome Research and the Need for Clinical Reasoning

The capability of research to guide practice might be limited by two types of constraints. First, methodologic flaws might limit the validity of these investigations. Second, the studies might be as good as studies can be, but outcome research might still have inherent limitations in its capability for guiding therapy with individual clients.

Methodologic Issues

Critiques of outcome research have posited three important differences between outcome studies and therapy as practiced in community settings. Critics have argued that (a) RCTs often exclude clients with comorbid diagnoses, while such clients are common in community clinics; (b) outcome research has devoted insufficient attention to ethnic minority clients and cultural variables; and (c) RCTs occur in settings with ideal conditions for therapeutic work while, in nonresearch clinics, therapists rarely have the amount of training, supervision, and freedom from competing demands that typify outcome studies.

When these criticisms were first advanced (e.g., Kazdin, Siegal, & Bass, 1990), they seemed to substantially weaken the case for basing therapy on the outcome research that existed at the time. Since then, however, researchers have been busy conducting studies to address the problems identified by EST critics, and they have achieved considerable success. First, although most early studies excluded clients with comorbid disorders, there have been many studies of clients with multiple diagnoses since then, and ESTs have not generally been found to be less effective with these clients (Shadish, Matt, Navaro, & Phillips, 2000; Weisz, Weersing,

& Henggeler, 2005). Second, although much outcome research has been characterized by underrepresentation of minorities and insufficient analysis of ethnic and cultural variables (Bernal & Scharron-del-Rio, 2001), a number of studies have compared treatment responses in White and minority clients (especially African Americans and Hispanics). Most of these studies found no difference in treatment effects, and the few differences that have been reported were small (see Zane, Hall, Sue, Young, & Nunez, 2004, for a review). Third, although early outcome studies usually took place in highly controlled settings, recent years have seen a surge of interest in effectiveness studies conducted in community clinics, and many research-based interventions have been successfully transported to everyday settings (e.g., Merrill, Tolbert, & Wade, 2003). Overall, while the issues of comorbidity, cultural differences, and transportability certainly warrant more research, the available evidence does not suggest that these issues represent fundamental flaws in the outcome research on which the EST approach is based.

Group Results as (Imperfect) Predictors of Individual Responses to Therapy

While the methodologic problems seem manageable, the potential value of outcome studies as a basis for treatment planning seems to be constrained by an inherent characteristic of nomothetic research: Outcome studies are about groups, and clinical decision making is about individuals (Persons, 2005). No methodologic refinement can fix the imperfect correspondence that always exists between average group responses to an intervention and individual responses to the same treatment, and this imperfection has implications for clinicians.

When outcome research finds that a treatment was effective, this usually means that approximately three quarters of the clients achieved gains—and about one quarter did not (Barlow, 2004; Weisz, Hawley, & Doss, 2004). Comparisons between

bona fide alternative therapies typically do not find different effects and, when they do, these differences are never so pronounced that all of the clients in one group show greater gains than all of the clients in the other group. Generally, the two distributions of change scores overlap a great deal, as illustrated in Figure 1.

A pattern of results like this has clear implications for groups of clients: Treatment 2 was more effective than Treatment 1, in that the overall amount of improvement was greater in Group 2 than in Group 1. However, the implications of this pattern are less clear for any given, individual client. Although Treatment 2 was generally superior to Treatment 1, it was not invariably superior. Some clients in Group 2 did not get better; most clients in Group 1 did show improvement; and there were many clients in Group 1 who improved more than many clients in Group 2, as represented by Region B in Figure 1.

This graph points to one likely source of the difference in thinking between EST proponents and clinicians who resist reliance on outcome research. Researchers and practitioners should not have different views of the clients represented by Regions A and C; for these clients, the implications of research are clear, and Treatment 2 is the best option. However, the situation is less clear for clients represented by Region B because the overlap in distributions suggests a subgroup of clients who might do better with Treatment 1. If a clinician's assessment suggests that his or her client's likely responses to alternative therapies would lie in Region B, she might choose Treatment 1 over Treatment 2—that is, the therapist might choose the intervention with less empirical support—and she might be right to do so. This reasoning suggests that outcome research should be the mainstay of therapy planning for clients represented by Regions A and C of our graph, and also that clinical reasoning can make a contribution to planning for clients in Region B. Determining which region would most likely apply to a given client is an assessment issue.

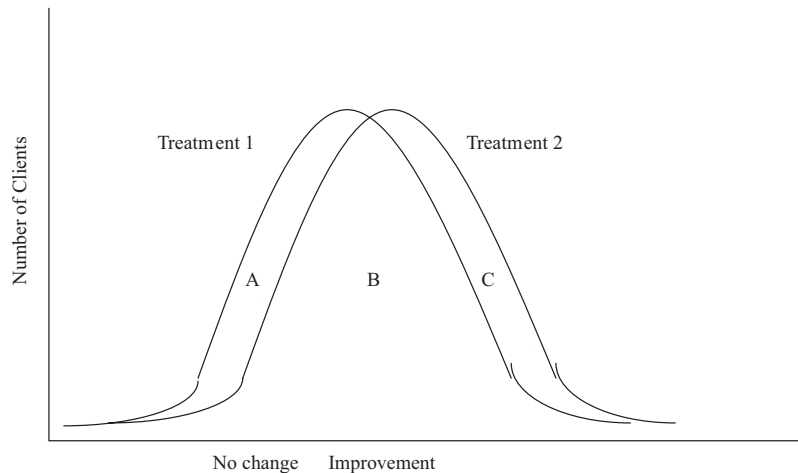


Figure 1. Typical distribution of change scores in outcome studies. Region A represents participants in Treatment 1 who received less benefit than anyone in Treatment 2. Region B represents overlap between Treatments 1 and 2 in the amount of benefit received by participants. Region C represents participants in Treatment 2 who received more benefit than anyone in Treatment 1. Adapted from *Child and Adolescent Therapy: Science and Art*, by J. P. Shapiro, R. D. Friedberg, & K. K. Bardenstein, 2006, Hoboken, NJ: Wiley. Copyright 2006 by John Wiley & Sons, Inc. Adapted with permission of John Wiley & Sons, Inc.

Another problem is that outcome research is organized almost entirely on the basis of diagnosis, and it is not clear that diagnosis provides an optimal framework for understanding client needs (APA Presidential Task Force on Evidence-Based Practice, 2006; Westen et al., 2005). A given constellation of symptoms might result from different etiologic processes, and clients with the same diagnosis might vary on a variety of dimensions that are important to therapeutic response (e.g., treatment preference, personality, and culture). This problem might limit the usefulness of the outcome research literature for predicting how clients would respond to different treatment possibilities (Wolfe, 2006).

Differences Between the Clinical and Research Perspectives

Outcome researchers are interested in the nomothetic question of what type of therapy is most helpful to most people in a well-defined client population, while clinicians are interested in the idiographic question of what type of therapy would be most helpful to the client sitting in front of them (Persons, 2005; Peterson, 2004). These two questions are related but are not the same because members of groups, while sharing the characteristic that defines the group, also differ from one another in ways that might be important. If all the clients in a treatment group obtained the same change score in response to an intervention, the nomothetic–idiographic distinction would disappear, and such a finding would provide clinicians with highly reliable guidance for treatment planning. However, this type of result has never been obtained, which leaves practitioners in the position of wondering where in the distribution of change scores their client would have been had he or she participated in the outcome study. In particular, therapists considering use of an EST must decide whether their client is probably more similar to the majority of research participants who improved in response to the intervention or to the minority who did not. If the client seems to be in the latter group, research does not provide a straightforward guide for practice.

Researchers have a much larger time frame than clinicians. The scientific process is a long-term one; evidence accumulates over the years as studies raise, address, and answer successively more sophisticated questions. However, while a statement that “future research is needed” provides a nice ending for a journal article, this statement does not suffice as a response to a distraught client in a therapist’s office. Practitioners need to make decisions quickly and, sometimes, immediately; they must decide what to say next.

This difference in time frame brings with it a difference in the degree of confidence that researchers and clinicians require before they will draw an actionable conclusion. Researchers generally aspire to a high degree of confidence in a set of findings before they will consider a scientific question to be settled. Clinicians, however, cannot afford the patience required by this level of epistemological aspiration; they cannot wait for near certainty before taking action. It is as if practitioners are less concerned about Type I error and more worried about Type II error, compared to scientists.

Researchers and clinicians also differ in the unit of analysis with which they are most concerned. Outcome researchers are interested in large units of analysis such as treatment packages or, in dismantling studies, substantial components of complete interventions. Practitioners are certainly interested in packages of tech-

niques, but they also have an interest, which researchers do not share, in small, even tiny units of intervention. Clinicians are on the lookout for useful ideas that require only a few words to implement, brief techniques that can be conducted in a few minutes, and even single statements to use with some clients in some situations. Small units of therapeutic work like these are not amenable to investigation by RCTs, or even dismantling studies, because they do not compose substantial interventions by themselves and are unlikely to produce significant effects on groups of clients. Process research examines small units of intervention, but the focus is on the immediate effects of clinician actions on the flow and process of therapy, rather than outcome. For example, it is not apparent how a study could assess the treatment effectiveness of the Serenity Prayer (by itself) or of statements like “You can’t control what other people do, but you can control how you respond to them.” Nonetheless, therapists seem to have an abiding interest in small units of intervention like these.

Decision making occurs at different times in ESTs and community clinical practice. In the EST approach, the broad outline of therapy planning is established at the outset when a diagnosis is made and then is used to select an intervention that has been found effective with that diagnostic group. In community practice, assessment and treatment occur in a back-and-forth fashion throughout the course of therapy, and clinicians can make fundamental changes in their strategy at any point in the process (Persons, 2005).

Bridging the Gap Between Research and Practice

Outcome research and clinical reasoning seem to have different and complementary strengths and weaknesses. Outcome research is more reliable as a general source of information about what is more and less likely to work with groups of clients, while clinical reasoning provides more flexible and customized, although less reliable, guidance for planning therapy with individuals. The thought process of a therapist talking to a client can never approach the internal validity of a well-designed RCT, but since this reasoning focuses specifically on one individual, its applicability to the planning of his or her treatment seems unsurpassable. Because clinical reasoning is vulnerable to the effects of practitioner biases, preferences, and theoretical assumptions, consideration of research findings seems necessary for maintaining rigor and balance. Clinicians can combine the strengths of both types of information by creating a dialogue between their general knowledge of outcome research and their specific knowledge of individual clients—thus bridging the gap between research and practice.

Practitioners should use the findings of outcome research as their basis for therapy planning when the applicability of this research to a given client is clear. Clinical reasoning becomes irreplaceable as a gap-filling measure when the available research does not provide sufficient guidance for deciding what to do with a client—a situation that is apparently common (APA Presidential Task Force on Evidence-Based Practice, 2006). Such situations occur, for example, when a client exhibits a diagnosis or comes from a cultural background that has not been adequately represented in the outcome research and also when the etiology or dynamics of a client’s disturbance seems atypical and therefore unlikely to have been well represented in study samples (Ruscio & Holohan, 2006).

Because the applicability of research to individuals is not a dichotomous issue, practitioners need a basis for optimizing their relative emphasis on these two types of information in the planning of therapy. For clients whose diagnoses, cultural backgrounds, and etiologies seem to be adequately represented in study samples, outcome research should probably be the primary basis of treatment planning, and the role of clinical judgment should be to tailor ESTs to individuals. For clients whose characteristics or situations seem fundamentally different from those of typical study participants, clinical considerations might outweigh research findings and lead to a fundamentally different course of action (Ruscio & Holohan, 2006). For many clients, therapy planning should probably fall in between these two extremes by making substantial use of both research findings and clinical judgment.

Applying Research Findings to Individuals

The question for clinicians deciding whether or not to select an EST is, What is the likelihood that my client will respond to this treatment in the same way as the average participant in the outcome studies supporting the intervention? The answer to this question suggests which clients should be treated “by the book” and which have not yet had a book written about them.

To begin with relatively straightforward factors, research can be applied to practice with more confidence when the client’s age, gender, and cultural background were well represented in the study samples. In some cases, this factor might limit (although not necessarily negate) the applicability of the studies. If the client has comorbid diagnoses that were not adequately represented, the applicability of those studies might be weakened. However, because the effectiveness of ESTs seems robust with respect to comorbidity (Shadish et al., 2000; Weisz et al., 2005), it would probably be unwise to dismiss the results of outcome studies on this basis.

Theoretical Connections Between Etiology and Therapeutic Strategy

Next, we turn to the more complex, interpretive variables that are the domain of clinical assessment. Many discussions of individualized treatment planning have focused on connections between therapeutic strategy and the etiology of disturbances (with etiology construed broadly as any factor that causes, maintains, or contributes to a disorder). Acierno, Hersen, Van Hasselt, and Ammerman (1994) recommended “prescriptive matching” of techniques with the factors responsible for a client’s difficulties. Woody and Ollendick (2006) suggested basing interventions on a theoretical rationale that links the factors responsible for a disturbance with change processes that address these factors.

Some doubts have been cast on theoretical connections between etiology and treatment strategy by studies that failed to demonstrate the moderator and mediator effects predicted by theory, leading commentators to acknowledge substantial limitations to therapists’ understanding of how and why therapy works (Kazdin & Nock, 2003; Weersing & Weisz, 2002). Nonetheless, research on mediators and moderators of treatment outcome has produced some evidence that the major therapeutic approaches work at least partly through the mechanisms of theoretical importance to these approaches (see Whisman, 1993, for a review of cognitive therapy

studies and Shapiro et al., 2006, for a review of research on child and adolescent therapy). Clinically, the question for the therapist is, What have I observed in my client’s presentation that suggests the operation of a recognizable etiologic process? Identification of such processes often has clear implications for treatment.

Although empirically supported treatment was once nearly synonymous with cognitive-behavioral therapy (CBT), this is no longer the case. There are many more outcome studies supporting CBT than any other approach, but this is primarily because more investigations of CBT have been performed, not because it has outperformed alternative therapies in direct comparisons. Meta-analyses comparing short-term dynamic therapy to other approaches with adult clients have not found significant differences (Anderson & Lambert, 1995; Crits-Christoph, 1992), and a meta-analysis of six studies directly comparing CBT and dynamic therapy for depressed adults found no difference in outcomes (Leichsenring, 2001). Meta-analyses examining studies of family systems therapy have found effect sizes similar to those produced by CBT (Shadish & Baldwin, 2003; Shadish et al., 1993).

The major theories of psychotherapy—behavioral, cognitive, psychodynamic, and family systems—posit connections between etiologic factors that cause and/or maintain disturbances and therapeutic strategies that address these factors. Behavior therapy emphasizes various types of learning, namely, operant, Pavlovian, avoidance, observational, and skill learning; cognitive therapy emphasizes self-talk, interpretations, beliefs, and schemas; psychodynamic therapy emphasizes early development, motivational conflict, internal representations of self and others, and unconscious mental functioning; and systems-oriented therapy emphasizes emergent properties in families, reciprocal causality, communication patterns, and feedback loops.

Given that phenotypically similar symptom constellations (i.e., diagnoses) may have different genotypes (APA Presidential Task Force on Evidence-Based Practice, 2006; Wolfe, 2006), one factor contributing to the overlap in outcomes in comparisons of alternative therapies might be that different interventions produce change in different etiologic processes. (Common therapeutic factors are undoubtedly another source of this overlap.) The treatment that addressed the etiology that was most common in a sample would probably produce the largest quantity of change in the group as a whole, but the alternative intervention that lost the head-to-head comparison might have been more helpful to a subset of clients whose etiologies (or preferred avenues to change) it most directly addressed. The intervention that is most effective for a group might not be most effective for every individual in that group; this is the possibility that highlights the difference between research and practice.

Although, historically, the different theoretical orientations have had their passionate adherents, the existence of etiologic processes proposed by one theory does not constitute an argument against the existence of other etiologies, either in different clients or in the same person. As a medical analogy, the health of the body depends on a number of different physiologic systems, any of which can go awry, and it might make no more sense for behavioral and dynamic therapists to argue about which approach is better than for cardiologists and orthopedists to debate whether the heart or skeleton is more important to health and illness.

Individual Case Formulation

If the major theoretical orientations all have a respectable standing nomothetically, then idiographic questions become especially salient, particularly the old, venerable question of what works best for whom. To clinicians, comparing the group effects of alternative treatments might be less important than assessing the etiology of disturbance in a given client. Treatment planning based on individual case formulation has the potential to link the nomothetic and idiographic levels of psychotherapy (Persons, 2005; Wolfe, 2006).

Work on this linkage is proceeding apace in the field of CBT. CBT outcome research has identified a number of interventions that are effective across a wide range of diagnoses, suggesting that the appropriateness of the techniques depends more on the mechanisms responsible for the client's disturbance than on the forms taken by this disturbance (Barlow, Allen, & Choate, 2004). For example, relaxation training is an empirically supported treatment for anxiety, depression, and aggression, and cognitive restructuring has received support as an intervention for numerous disorders. Accordingly, Barlow et al. (2004) developed a protocol for selecting techniques based not on diagnosis but on assessed etiology. Persons (2005) described a mix-and-match strategy for individualizing CBT based on salient etiological processes. In a naturalistic study, Persons, Roberts, Zalecki, and Brechwald (2005) obtained preliminary results that supported this formulation-driven approach. Chorpita, Taylor, Francis, Moffitt, and Austin (2004) reported encouraging preliminary results for an etiology-based, modular CBT protocol for children with anxiety disorders. In the few RCTs that have compared standardized and formulation-driven treatments, the individualized approach was supported by a study of social skills training for children (Schneider & Byrne, 1987) and an investigation of behavioral marital therapy (Jacobson et al., 1989) but not by a study of CBT for phobia (Schulte et al., 1992).

Although CBT has led the way in developing protocols to match etiologies to interventions, it seems possible that other therapeutic approaches, too, will become more systematic in making these connections. Also, there is no apparent reason why a formulation-based approach could not cross boundaries between theories. In my book with Friedberg and Bardenstein (Shapiro, Friedberg, & Bardenstein, 2006), we presented case material that illustrates etiology–technique connections of this type.

One principle of the formulation-based approach is expressed by the saying that “If it ain't broke, don't fix it.” For example, although pleasant event scheduling is an empirically supported intervention for depression (e.g., Rohde, Lewinsohn, Clarke, Hops, & Seeley, 2005), if a depressed client already engages in numerous recreational activities, this technique probably cannot contribute much to his or her treatment. Unrealistically pessimistic thinking is a well-documented characteristic of depression (Beck, 1995), but if careful assessment fails to reveal significant irrational thoughts, cognitive therapy might not have much to offer. On the other hand, if assessment does reveal unrealistic beliefs that seem to be making the client miserable, attempting to change those thoughts would be a more direct route to change than searching for unconscious conflicts or disturbances in the client's family relationships.

Research in developmental psychopathology indicates that maladaptive parenting is an important etiologic factor in child and adolescent conduct disturbances (see Raine, 2002, for a review).

Accordingly, ESTs for these disturbances consist largely of parent training programs. But what if, to the best of a therapist's knowledge following careful assessment, the parents of a client with oppositional-defiant disorder do not engage in dysfunctional child management practices? Should the clinician implement behavioral parent training anyway, on the grounds that it is the most empirically well-supported treatment for this disorder? Flexible, eclectic therapists can respond to a mismatch between ESTs and client etiologies by finding techniques that address problems the client actually has, even if the empirical support for those techniques is comparatively weak. Disturbed conduct in the context of appropriate parenting suggests that the clinician should look elsewhere for an explanation of the child's difficulties and should, perhaps, assess possible cognitive, systemic, unconscious, and neurophysiologic etiologies.

In children, irrational beliefs sometimes seem to be modeled and reinforced by parents. When this is the case, individual cognitive therapy might be an ineffective means of ameliorating problems that are continually fueled in the home. Use of cognitive techniques in a family therapy or parent counseling modality might be the solution to this problem. In other cases, parents are well aware of the unrealistic nature of their child's thinking and have been trying, unsuccessfully, to change it. Individual child therapy seems more appropriate for these clients.

If examination of the readily apparent content of the client's life—his or her conscious thoughts, social environment, reinforcement contingencies, and stressors—does not reveal significant etiologic factors, the best available option might be to explore beneath this surface. Clinically, it seems that unconscious, psychodynamic factors sometimes block the progress of cognitive-behavioral interventions (Wolfe, 2006). For example, in some clients, poor self-esteem seems based less on inaccurate beliefs about specific personal characteristics than on negative feelings about the self that do not seem tied to conscious thoughts. Such clients might say things like “It's just a feeling” or “I don't know why, but I've never felt good about myself.” In cognitive work, the therapist would challenge self-derogating thoughts, but as soon as one point seems established, such clients might find something else about themselves to disparage. If the salient etiological processes involve unconscious conflict, guilt, or discomfort with impulses, psychodynamic therapy offers theoretical principles and treatment techniques for uncovering and addressing factors such as these.

As therapists listen to clients, the details of their presentations sometimes cohere into patterns described by the major theories of psychopathology, and this makes prescriptive matching possible. When the details of my clients' presentations seem to fall into place, and I recognize a pattern that seems “right out of the book,” I have an “Aha” experience accompanied by grateful appreciation that past clinicians and researchers really have described processes that occur in nature. My strategy is to be responsive, and my subjective experience is almost one of passivity—I go where the client takes me. If a client presents data in a pattern described by behavior theory, I respond with techniques based on this approach; if he or she presents a pattern described by psychodynamic theory, I respond with interventions structured in those terms; and so forth.

One of the potential advantages of clinical practice over research therapy is that practitioners can engage in midcourse correction; they can change their strategies any time they want to,

even in the middle of a session. When clients have poor initial responses to interventions, their eventual outcomes are likely to be poor (Lutz, Martinovich, Howard, & Leon, 2002). Therapists can improve such outcomes by changing their strategies in response to early indications of a lack of progress (Lambert, Harmon, Slade, Whipple, & Hawkins, 2005). Clinical practice involves an ongoing dialogue between assessment and intervention in which therapists try techniques, assess the client's response, and proceed accordingly (Persons, 2005). For example, in my use of relaxation training, I think I have noticed a bimodal distribution in client responses to their first experience of progressive muscle relaxation with deep breathing: Some people open their eyes, blink slowly, and say something like, "Wow, that was relaxing," while others seem to find the exercise strange and pointless. Regardless of the mean group differences found in RCTs, it seems inadvisable to persist with relaxation training in work with clients who repeatedly have the latter response. Trial and error is not an elegant method of making this determination, but since relaxation procedures do not take much time to conduct, this crude version of the experimental method is sometimes practical and useful.

Moving back and forth between research-based considerations and clinical reasoning enables practitioners to connect the nomothetic knowledge produced by outcome studies with their idiographic understanding of clients. This synthesis of science and art allows practitioners to anchor their planning in the general knowledge provided by research while customizing their interventions for their clients' specific characteristics, internal processes, and situations. The present formulation might help researchers and therapists to understand each other better and, for those of us who do both, the synthesis might help bridge the divide within ourselves.

References

- Acierno, R., Hersen, M., Van Hasselt, V. B., & Ammerman, R. T. (1994). Remediating the Achilles heel of behaviour research and therapy: Prescriptive matching of intervention and psychopathology. *Journal of Behaviour Therapy and Experimental Psychiatry*, 25, 179–188.
- American Psychological Association. (2002). Criteria for evaluating treatment guidelines. *American Psychologist*, 57, 1052–1059.
- Anderson, E. M., & Lambert, M. J. (1995). Short-term dynamically oriented psychotherapy: A review and meta-analysis. *Clinical Psychology Review*, 15, 503–514.
- APA Presidential Task Force on Evidence-Based Practice. (2006). Evidence-based practice in psychology. *American Psychologist*, 61, 271–285.
- Barlow, D. H. (2004). Psychological treatments. *American Psychologist*, 59, 869–879.
- Barlow, D. H., Allen, L. B., & Choate, M. L. (2004). Toward a unified treatment for emotional disorders. *Behavior Therapy*, 35, 205–230.
- Beck, J. S. (1995). *Cognitive therapy: Basics and beyond*. New York: Guilford Press.
- Bernal, M. E., & Scharron-del-Rio, M. R. (2001). Are empirically supported treatments valid for ethnic minorities? Toward an alternative approach for treatment research. *Cultural Diversity and Ethnic Minority Psychology*, 7, 328–342.
- Borkovec, T. D., Echemendia, R. J., Ragusea, S. A., & Ruiz, M. (2001). The Pennsylvania Practice Research Network and future possibilities for clinically meaningful and scientifically rigorous psychotherapy effectiveness research. *Clinical Psychology: Science and Practice*, 8, 155–167.
- Carey, B. (2004, August 10). For psychotherapy's claims, skeptics demand proof. *The New York Times*.
- Carpinello, S. E., Rosenberg, L., Stone, J., Schwager, M., & Felton, C. J. (2002). New York State's campaign to implement evidence-based practices for people with serious mental disorders. *Psychiatric Services*, 53, 153–155.
- Chambless, D. L., Baker, M. J., Baucom, D. H., Beutler, L. E., Calhoun, K. S., Crits-Christoph, P., et al. (1998). Update on empirically validated therapies: II. *Clinical Psychologist*, 51, 3–17.
- Chorpita, B. F., Taylor, A. A., Francis, S. E., Moffitt, C., & Austin, A. A. (2004). Efficacy of modular cognitive behavior therapy for childhood anxiety disorders. *Behavior Therapy*, 35, 263–287.
- Crits-Christoph, P. (1992). The efficacy of brief dynamic psychotherapy: A meta-analysis. *American Journal of Psychiatry*, 149, 151–158.
- Daleiden, E. L., Chorpita, B. F., Kollins, S. H., & Drabman, R. S. (1999). Factors affecting the reliability of clinical judgments about the function of children's school-refusal behavior. *Journal of Clinical Child Psychology*, 28, 396–406.
- Felton, J. L., & Nelson, R. O. (1984). Inter-assessor agreement on hypothesized controlling variables and treatment proposals. *Behavioral Assessment*, 6, 199–208.
- Garb, H. N. (2005). Clinical judgment and decision making. *Annual Review of Clinical Psychology*, 1, 67–89.
- Groopman, J. (2007). *How doctors think*. Boston: Houghton Mifflin.
- Jacobson, N. S., Schmalings, K. B., Holtzworth-Munroe, A., Katt, J. L., Wood, L. F., & Follette, V. M. (1989). Research-structured vs. clinically flexible versions of social learning-based, marital therapy. *Behaviour Research and Therapy*, 27, 173–180.
- Kazdin, A. E., & Nock, M. K. (2003). Delineating mechanisms of change in child and adolescent therapy: Methodological issues and research recommendations. *Journal of Child Psychology and Psychiatry*, 44, 1116–1129.
- Kazdin, A. E., Siegal, T. C., & Bass, D. (1990). Drawing on clinical practice to inform research on child and adolescent psychotherapy: Survey of practitioners. *Professional Psychology: Research and Practice*, 21, 189–198.
- Lambert, M. J., Harmon, C., Slade, K., Whipple, J. L., & Hawkins, E. J. (2005). Providing feedback to psychotherapists on their patients' progress: Clinical results and practice suggestions. *Journal of Clinical Psychology/In Session*, 61, 165–174.
- Lambert, M. J., & Ogles, B. M. (2004). The efficacy and effectiveness of psychotherapy. In M. J. Lambert (Ed.), *Bergin and Garfield's handbook of psychotherapy and behavior change* (5th ed., pp. 139–193). Hoboken, NJ: Wiley.
- Leichsenring, F. (2001). Comparative effects of short-term psychodynamic psychotherapy and cognitive-behavioral therapy in depression: A meta-analytic approach. *Clinical Psychology Review*, 21, 401–419.
- Levant, R. F. (2004). The empirically validated treatments movement: A practitioner/educator perspective. *Clinical Psychology: Science and Practice*, 11, 219–224.
- Lutz, W., Martinovich, Z., Howard, K. I., & Leon, S. C. (2002). Outcomes management, expected treatment response, and severity-adjusted provider profiling in outpatient psychotherapy. *Journal of Clinical Psychology*, 58, 1291–1304.
- Merrill, K., Tolbert, V., & Wade, W. (2003). Effectiveness of cognitive therapy for depression in a community mental health center: A benchmarking study. *Journal of Consulting and Clinical Psychology*, 71, 404–409.
- Ollendick, T. H., & Davis, T. E., III. (2004). Empirically supported treatments for children and adolescents: Where to from here? *Clinical Psychology: Science and Practice*, 11, 289–293.
- Ollendick, T. H., & King, N. J. (2004). Empirically supported treatments for children and adolescents: Advances toward evidence-based practice. In P. M. Barrett & T. H. Ollendick (Eds.), *Handbook of interventions that work with children and adolescents: Prevention and treatment* (pp. 3–25). Chichester, West Sussex, England: Wiley.

- Persons, J. B. (2005). Empiricism, mechanism, and the practice of cognitive-behavior therapy. *Behavior Therapy, 36*, 107–118.
- Persons, J. B., Roberts, N. A., Zalecki, C. A., & Brechwald, W. A. G. (2005). Naturalistic outcome of case formulation-driven cognitive-behavior therapy for anxious depressed outpatients. *Behaviour Research and Therapy, 44*, 1041–1051.
- Peterson, D. R. (2004). Science, scientism, and professional responsibility. *Clinical Psychology: Science and Practice, 11*, 196–210.
- Raine, A. (2002). Biosocial studies of antisocial and violent behavior in children and adults: A review. *Journal of Abnormal Child Psychology, 30*, 311–326.
- Rohde, P., Lewinsohn, P. M., Clarke, G. N., Hops, H., & Seeley, J. R. (2005). The adolescent coping with depression course: A cognitive-behavioral approach to the treatment of adolescent depression. In E. D. Hibbs & P. S. Jensen (Eds.), *Psychosocial treatments for child and adolescent disorders: Empirically based strategies for clinical practice* (2nd ed., pp. 219–237). Washington, DC: American Psychological Association.
- Ruscio, A. M., & Holohan, D. R. (2006). Applying empirically supported treatments to complex cases: Ethical, empirical, and practical considerations. *Clinical Psychology: Science and Practice, 13*, 146–162.
- Schneider, B. H., & Byrne, B. M. (1987). Individualizing social skills training for behavior-disordered children. *Journal of Consulting and Clinical Psychology, 55*, 444–445.
- Schulte, D., Kunzel, R., Pepping, G., & Schulte-Bahrenberg, T. (1992). Tailor-made versus standardized therapy of phobic patients. *Advances in Behaviour Research and Therapy, 14*, 67–92.
- Shadish, W. R., & Baldwin, S. A. (2003). Meta-analysis of MFT interventions. *Journal of Marital and Family Therapy, 29*, 547–570.
- Shadish, W. R., Matt, G. E., Navaro, A. M., & Phillips, G. (2000). The effects of psychological therapies under clinically representative conditions: A meta-analysis. *Psychological Bulletin, 126*, 512–529.
- Shadish, W. R., Montgomery, L. M., Wilson, P. Wilson, M. R., Bright, I., & Okwumabus, T. (1993). Effects of family and marital psychotherapies: A meta-analysis. *Journal of Consulting and Clinical Psychology, 61*, 992–1002.
- Shapiro, J. P., Friedberg, R. D., & Bardenstein, K. K. (2006). *Child and adolescent therapy: Science and art*. New York: Wiley.
- Thase, M. E. (2006). A tale of two paradigms. *Clinical Psychology: Science and Practice, 13*, 94–98.
- Wampold, B. E., Minami, T., Baskin, T. W., & Tierney, S. C. (2002). A meta-(re)analysis of the effects of cognitive therapy versus “other therapies” for depression. *Journal of Affective Disorders, 68*, 159–165.
- Wampold, B. E., Mondin, G. W., Moody, M., Stich, F., Benson, K., & Ahn, H. N. (1997). A meta-analysis of outcome studies comparing bona fide psychotherapies: Empirically, “All must have prizes.” *Psychological Bulletin, 122*, 203–215.
- Weersing, V. R., & Weisz, J. R. (2002). Mechanisms of action in youth psychotherapy. *Journal of Child Psychology and Psychiatry, 43*, 3–29.
- Weisz, J. R. (2004). *Psychotherapy for children and adolescents: Evidence-based treatments and case examples*. New York: Cambridge University Press.
- Weisz, J. R., Hawley, K. M., & Doss, A. J. (2004). Empirically tested psychotherapies for youth internalizing and externalizing problems and disorders. *Child and Adolescent Psychiatric Clinics of North America, 13*, 729–815.
- Weisz, J. R., Weersing, V. R., & Henggeler, S. W. (2005). Jousting with straw men: Comment on Westen, Novotny, and Thompson-Brenner (2004). *Psychological Bulletin, 131*, 418–426.
- Westen, D., Novotny, C. M., & Thompson-Brenner, H. (2005). EBP ≠ EST: Reply to Crits-Christoph et al. (2005) and Weisz et al. (2005). *Psychological Bulletin, 131*, 427–433.
- Whisman, M. A. (1993). Mediators and moderators of change in cognitive therapy of depression. *Psychological Bulletin, 114*, 248–265.
- Wolfe, B. E. (2006). Employing empirically supported treatments: A research-informed clinical practitioner perspective. *Clinical Psychology: Science and Practice, 13*, 171–178.
- Woody, S. R., & Ollendick, T. H. (2006). Principles of effective psychosocial interventions with anxiety and its disorders. In L. E. Beutler & L. G. Castonguay (Eds.), *Principles of change in effective psychotherapies* (pp. 167–186). New York: Oxford University Press.
- Zane, N., Hall, N. G. C., Sue, S., Young, K., & Nunez, J. (2004). Research on psychotherapy with culturally diverse populations. In W. J. Lambert (Ed.), *Bergin and Garfield's handbook of psychotherapy and behavior change* (5th ed., pp. 767–804). Hoboken, NJ: Wiley.

Received February 27, 2007

Revision received March 31, 2008

Accepted April 14, 2008 ■