

# The Scientific Status of Psychotherapies: A New Evaluative Framework for Evidence-Based Psychosocial Interventions

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**The meaning of the term *evidence-based psychotherapy* (EBP) is a moving target and is inconsistent among international organizations. To clarify the meaning of EBP and to provide guidelines for evaluating psychosocial interventions (i.e., psychological treatments), we propose that psychotherapies should be first classified into nine categories, defined by two factors: (a) theory (mechanisms of psychological change) and (b) therapeutic package derived from that theory, each factor organized by three levels: (a) empirically well supported; (b) equivocal data [(a) no, (b) preliminary data less than minimum standards, or (c) mixed data]; and (c) strong contradictory evidence. As compared to the previous classification systems, and building on them, we add the requirement that there should also be a clear relationship between a guiding theoretical base and the empirical data collected. The proposed categories are not static systems; depending on the progress of research, a form of psychotherapy could move from one category to another.**

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## PROBLEMS WITH THE PRESENT EVIDENCE-BASED PSYCHOTHERAPIES CLASSIFICATION SYSTEMS

The evidence-based movement within the psychological community strives to improve the efficacy of psychosocial/psychological interventions/treatments (i.e., psychotherapies) as a whole, as well as to provide treatment guidelines for clients, professional providers, and third-party payers alike. Recently, we have witnessed a proliferation of evaluative frameworks for evidence-based psychotherapies/psychological treatments (i.e., empirically validated therapies, empirically supported therapies). However, there is a problem associated with having multiple evaluative systems within the field. Specifically, multiple evaluative frameworks for evidence-based psychotherapies have led to conflicting views and standards regarding the status of individual psychological interventions. That is, psychological treatments may be labeled “evidence-based” in one system, but not in others. For example, the National Institute for Health and Clinical Excellence Guidelines (NICE’s Guidelines; <http://www.nice.org.uk>) are not always consistent with those of the American Psychological Association (APA/Division 12/Society for Science of Clinical Psychology/SSCP; <http://www.psychology.sunysb.edu/eklonsky-division12/>), with those of the American Psychiatric Association (<http://www.psych.org>), or with what we learn from Cochrane Reviews (<http://www.cochrane.org>). This lack of consistency generates confusion among professionals and patients alike who are looking to use empirically validated treatments and strongly supports the need of a unified, more

complex, and scientifically oriented system for categorizing psychological treatments.

Furthermore, all the current systems of evaluating evidence-based psychotherapies have a significant weakness; they restrict their focus on evidence to data supporting (psycho)therapeutic packages while ignoring whether any evidence exists to support the proposed theoretical underpinnings of these techniques (i.e., theory about psychological mechanisms of change; see David, 2004).<sup>1</sup> Therefore, by ignoring the theory, the evaluative frameworks of various health-related interventions (including psychotherapy), technically (a) allow pseudoscientific (i.e., “junk-science”) interventions to enter into the classification schemes and/or (b) bias the scientific research in a dangerous direction. For example, imagine a hypothetical intervention to manage psychological symptoms that is based on “voodoo” as its underlying theory about the mechanisms of change. Imagine this therapeutic package being supported by randomized trial data (e.g., better than waiting list [BWL]). Such an intervention could then be classified as a “probably efficacious treatment” according to current evaluation guidelines (see Chambless et al., 1996, 1998) despite the therapeutic package being based on a theory (“voodoo”) that at best is highly questionable. Closer to our field, a similar analysis has been conducted by McNally (1999), historically comparing eye movement desensitization and reprocessing (EMDR) and mesmerism. That is, a consequence of current classification schemes (which consistently do not address underlying theories about mechanisms of change) is that as long as there are randomized trial data, the validity of the underlying theory is less relevant. As concerning the issue of negatively biasing the research field, not that long ago it was commonly believed that malaria was produced by “bad air” (hence the name). Based on the “bad air” theory, an effective intervention was developed: closing room windows to prevent the circulation of bad air. In light of what we know about malaria now, it is not surprising that this intervention was partially effective. If scientists were satisfied with the “bad air” theory and its “effectiveness,” we might still be attempting to develop better windows to better control malaria. Once the flaws in the “bad air” theory were recognized (in spite of its partial “effectiveness”) and were replaced by a theory

suggesting that malaria is caused by a pathogen disseminated by the anopheles mosquito, interventions to fight malaria were dramatically improved. Based on these well-known examples, it is easy to imagine how the inclusion of “voodoo”- and/or “bad air”-based theory interventions could be damaging to the entire field of health-related interventions.

Therefore, to promote the field of psychotherapy, from both scientific and clinical perspectives, we propose a new evaluative framework for categorizing psychological interventions. We hope that this framework can lead to increased uniformity in evidence-based psychotherapies evaluation guidelines and also separate scientific approaches to psychotherapy from pseudoscientific ones.

Following similar articles in the field (e.g., Chambless et al., 1998), we have decided not to discuss here specific and detailed examples of psychotherapies in each category, as they would all require a detailed analysis based on the criteria in each category. Moreover, positioning into a category would depend on the disorder to which a specific treatment is applied. Such an analysis would be too long for the scope of the current article and will be conducted in an independent paper. However, we discuss here “very strong” and “very weak” treatments to clearly illustrate the proposed system.

#### **A NEW EVALUATIVE FRAMEWORK FOR EVIDENCE-BASED PSYCHOTHERAPIES**

We propose an evaluative, hierarchical framework for psychotherapy, which is based on the understanding that there are two levels in the analysis of evidence supporting psychological treatments. First, the psychological theory concerning therapeutic change (e.g., mechanisms of change) should be scientifically evaluated. Second, the therapeutic package (psychological treatment) is derived from the theory about the mechanisms of change and is scientifically evaluated (David, 2004). Interventions (e.g., acupuncture) that do not explicitly have a psychological basis (theory and techniques) are typically excluded from this analysis, although they may work in part by psychological mechanisms (e.g., expectancies); however, they can be analyzed through this classification scheme, as a more general part of health-related interventions, if they target psychological and/or psychosomatic symptoms (see above the analysis of “voodoo”). Indeed,

the proposed scheme can also be applied to other psychosocial interventions, which are not necessarily therapeutic.

Psychotherapies should be classified into nine categories, defined by two factors (see Table 1): (a) theory (i.e., about psychological mechanisms of change) and (b) therapeutic package derived from that theory, each factor organized by three levels: (a) empirically well supported; (b) equivocal/no clear data [(a) not yet been collected, (b) preliminary data (PD) less than minimum standards, or (c) mixed (both supporting and contradictory evidence) data]; and (c) strong contradictory evidence (SCE; i.e., invalidating evidence). By supporting evidence we mean evidence of benefit (beneficence). By contradictory (invalidating) evidence we mean evidence of absence of benefit (inert) and/or evidence of harm (malfeasance). The proposed categories are not static systems; depending on the progress of research, a form of psychotherapy could move from one category to another. Also, the proposed categories can separate “scientifically” from “pseudoscientifically” oriented psychotherapies, with major theoretical (e.g., what to teach and research) and practical implications (e.g., what to recommend as good scientific practices).

Scientifically oriented psychotherapies (SOPs) are those which do not have clear SCE for theory and package; the highest level of validation of a SOP is that in which both the theory about psychological mechanisms of change and the therapeutic package are well validated (i.e., Category I). A SOP seeks to investigate empirically both the therapeutic package in question and the underlying theory guiding the design and implementation of the therapeutic package (i.e., theory about mechanisms of change). In this way, the proposed framework rules out the inclusion of “voodoo”-like psychotherapy and prevents us from developing “bad air”-like theories. Theory refers to the mechanisms of change, namely the hypothesized psychological factors involved in pathology and health, which are targeted by the therapeutic package. Indeed, there should be a correspondence between the mechanisms of treatment (“mechanism/theory of change”) and the mechanisms of the disorder (“theory of disorder”). A specific treatment (and its mechanisms of change) is more scientifically legitimate if it is derived

**Table 1.** Psychotherapies Classification Framework: Categories I–IX

	Theory		
	Well Supported <sup>a</sup>	Equivocal—No, Preliminary, or MD <sup>b</sup>	SCE <sup>c</sup>
Therapeutic package			
Well Supported <sup>d</sup>	Category I	Category II	Category V
Equivocal—No, Preliminary, or MD <sup>b</sup>	Category III	Category IV	Category VII
SCE <sup>c</sup>	Category VI	Category VIII	Category IX

*Notes.* <sup>a</sup>Well-supported theories are defined as those with evidence based on (a) experimental studies (and sometimes additional/adjunctive correlational studies) and/or (b) component analyses, patient × treatment interactions, and/or mediation/moderation analyses in complex clinical trials (CCTs); thus, the theory can be tested independent of its therapeutic package (e.g., in experimental studies and sometimes their additional/adjunctive correlational studies) and/or during a CCT; “well supported” within this framework means that it has been empirically supported in at least two rigorous studies, by two different investigators or investigating teams.

<sup>b</sup>Equivocal evidence for therapeutic package and/or theory means No (data not yet collected), Preliminary (there is collected data, but they supporting or contradictory, but they do not fit the minimum standards), or Mixed Data (MD; there is both supporting and contradictory evidence).

<sup>c</sup>Strong contradictory evidence (SCE) for therapeutic package and/or theory means that it has been empirically invalidated in at least two rigorous studies, by two different investigators or investigating teams.

<sup>d</sup>Well-supported therapeutic packages are defined as those with randomized clinical trial (or equivalent) evidence of their efficacy (absolute, relative, and/or specific) and/or effectiveness; “well supported” within this framework means that it has been empirically supported in at least two rigorous studies, by two different investigators or investigating teams.

• Red signifies pseudoscientifically oriented psychotherapies (POPs); the core of POPs (darker red) is represented by Category IX. Green signifies scientifically oriented psychotherapies (SOPs); the core of SOPs (darker green) is represented by Category I.

• Depending on the progress of research, a psychotherapy could move from one category to another.

• Example of Coding. A psychotherapy, X, from Category I, may be analyzed in details (i.e., within category analysis)—if necessary and relevant—by coding it according to the codes described in the article. The order of coding is Category/Theory (with nuances separated by “;”/“/”; Therapeutic package (with nuances indicated and separated by “,” “.”, “.”, “.”, “.”); the numeric codes indicate the number of studies. For example, if psychotherapy X is coded (this is a complex example) “1/2,1, ITT,E,2,1,CTT/3CTAE:BWL;RE:BST,BC:BWL;SE:BST,MM” this means that (narrative description):

- it belongs to Category I;
- its theory has been empirically supported in at least two rigorous studies, by two different investigators or investigating teams (1); the theory has been tested both independent of its therapeutic package, in two (2) experimental (E) studies, (ITT), and in two (2) complex clinical trials;
- its absolute efficacy shows (in three studies—clinical trials, CT) that it is better than a wait-list control condition (BWL);
- its relative efficacy (RE) shows that it is better than another evidence-based psychological intervention (BST) and both are better than control conditions (BC), in the form of waiting list (BWL);
- its specific efficacy (SE) shows that it is significantly better than other active/standard therapies (BST) and the underlying theory is based on analyses of mediation and/or moderation (MM).

○ Being a complex approach, the coding profile should be always accompanied by a narrative description, as presented above.

from experimental psychopathology research that has clarified the nature of the disorder.

Pseudoscientifically oriented psychotherapies (POPs) are those that claim to be scientific, or that are made to appear scientific, but that do not adhere to an appropriate scientific methodology (e.g., there is an overreliance on anecdotal evidence and testimonial rather than empirical evidence collected in controlled studies; Lilienfeld, Lynn, & Lohr, 2003). The term *pseudoscience* cannot be rigorously categorically defined; a prototypic definition, based on a number of themes, is used instead (see Lilienfeld et al., 2003). We define POPs as therapies used and promoted in the clinical field as if they were scientifically based, despite strong contrary evidence related to at least one of their two components (i.e., therapeutic package and theory). Indeed, a specific treatment may sometimes not be related to “pseudoscience-like themes,” but it is the nature and/or the degree of its promotion that outstrips the available evidence that may qualify it as pseudoscientific (Pratkanis, 1995). We also include here psychotherapies, which are based on a variety of faiths or foundations that are outside the scientific approach, and often do not seek scientific validation; we do not see pseudoscientific psychotherapies based on faith in pejorative terms, but rather different from what is considered good scientific approach.

Thus, as compared to the previous classification systems—APA/Division 12/SSCP’s list of empirically validated treatments—one of the most influential in the field, (Chambless et al., 1998), we add the requirement that there should also be a clear relationship between a guiding psychological theoretical base and the empirical data collected. We propose that in order for a therapeutic package to reach the highest level of evidence-based support—EBP—both the therapeutic package and the underlying theory must be well supported by scientific evidence.

#### **Category I: Evidence-Based Psychotherapies**

A Category I EBP has both a well-supported/well-validated theory (e.g., supporting empirical data) and a well-supported/well-validated therapeutic package (derived from the validated theory). Theory refers to the mechanisms of change, namely the hypothesized psychological factors involved in pathology and health,

which are targeted by the therapeutic package. Of course, a validated theory is not an “all or nothing” decision. Rather, it is a continuing and developing process as the scientific evidence accumulates from various study designs (e.g., correlational, experimental) and types (e.g., clinical, analogue). We will not provide an epistemological discussion of what a “validated” (supported) theory or therapeutic package is; we will just mention that validating a theory refers to testing it, based on a current scientific approach (e.g., falsifiability, verifiability).

Consistent with published criteria for treatments (Chambless et al., 1998), we argue that a theory is well supported, within this framework, if it has been empirically validated in at least two rigorous studies, by two different investigators or investigating teams (I). The theory can be tested (a) independent of its therapeutic package (independent theory testing [ITT]; e.g., in experimental (E) and sometimes additional/adjunctive correlational (C) studies) and/or (b) during complex experimental clinical trials (clinical trial theory testing [CTT]; see below the case of “specific efficacy”). Similarly, in this framework, the therapeutic package is considered well supported if it has been empirically validated at various levels in at least two randomized clinical trials or equivalent designs (e.g., large series of single case experimental designs), by two different investigators or investigating teams (I) (for details, including additional criteria of manualization and sample description and the issue of “equivalence of designs,” see Chambless et al., 1998). The various levels of treatment package validation are discussed as follows (see also Wampold, 2001):

- (a) absolute efficacy (AE)—the therapeutic package is significantly better than a control condition. The control condition could be a no-treatment control condition (better than no treatment [BNT]), but more often, a waiting-list control condition (BWL), and/or
- (b) relative efficacy (RE)—the therapeutic package is equivalent to or better than another evidence-based psychological intervention (equivalent to standard treatment [EST]; better than standard treatment [BST]). That is, both the tested therapeutic package and the established psychotherapy

should be better than control (BC) conditions (i.e., AE, coded as BNT or BWL) and/or at least as good as a standard treatment in the field (as good as standard treatment [GST]), and/or

- (c) specific efficacy (SE)—involves meeting two primary criteria. First, the therapeutic package must be (a) significantly better than pill and/or medical and/or psychological placebo (e.g., attention control; better than pill [BP]; and/or better than psychological placebo [BPP]; and/or better than medical placebo), and/or (b) equivalent to active/standard psychological therapies (EST) or significantly better than other active/standard psychotherapies (BST; see “relative efficacy” above). Second, the underlying theory for specific mechanisms of change in case of the therapeutic package must be empirically supported by component analyses (CA) and/or patient by treatment interactions (PxT), and/or analyses of mediation and/or moderation (MM) (see also Wampold, 2001); it enhances the validity of the theory about the mechanisms of change and/or is a direct proof of it.

When an EBP passes—by statistical and clinical significance (see Pinteá, 2010)—both the efficacy (e.g., how it works in laboratory controlled conditions) and the effectiveness (e.g., how it works in real clinical settings) tests, including empirical support for the underlying theory as described above, it is an evidence-based bona fide psychotherapy (EBBP). The codes mentioned above (e.g., SE for “specific efficacy”) give us more information about EBPs or about psychotherapy forms in the other categories (see Table 1 for an example of coding within-category analyses).

Within the context of the preceding material, it is worth mentioning that the basic clinical skills—common/contextual factors—(see Wampold, 2001), such as the therapeutic relationship, providing rationale (clinical conceptualization), treatment expectations, etc., are important parts of any therapy, including the EBP. They are parts of the theory about the mechanisms of change, together with the specific constructs of a certain psychotherapy (e.g., irrational beliefs in cognitive-behavioral psychotherapies [CBT]).

### **Category II: Intervention-Driven Psychotherapies**

An intervention-driven psychotherapy refers to a well-supported therapeutic package but insufficiently supported/investigated underlying theory from which that package is derived. This does not mean that the theory is unscientific or wrong. It simply means that we do not yet have data regarding its validity (no data [ND]; if the theory had been disproven, then the therapy would be moved to Category V), or that we have preliminary data less than minimum standards (PD), or that we have mixed data (MD); ND, PD, and MD should be used as codes during within-category analyses. The therapeutic package should be considered well supported according to the procedure described in Category I. Category II roughly corresponds to the criteria established by Division 12 of the APA/SSCP for their list of empirically validated treatments (Chambless et al., 1998; <http://www.psychology.sunysb.edu/eklonsky-/division12/>). However, Category II has the advantage that lack of empirical support for underlying theory is made explicit.

### **Category III: Theory-Driven Psychotherapies**

A Category III theory-driven psychotherapy refers to the circumstance of a well supported theory (e.g., see Category I above), but an insufficiently supported therapeutic package (no [ND], PD less than minimum standards [PD], or MD); ND, PD, and MD should be used as codes during within category analyses. The therapeutic package is still in need of empirical testing in randomized clinical trials for clear documentation of absolute, relative, and/or specific efficacy.

### **Category IV: Investigational Psychotherapy**

A Category IV therapy is characterized by an insufficiently supported theory and an insufficiently supported therapeutic package. A Category IV therapy is still in an early investigational phase, where ideas for both theory and therapeutic package are developing, but have not yet been tested (ND), or have been generated PD less than minimum standards (PD), or mixed results (MD); ND, PD, and MD should be used as codes during within-category analyses. This is not to say that either the theory or therapeutic package is somehow wrong or ineffective, but rather that the scientific testing and validation remain to be completed.

**Category V: Good Intervention and Bad Theory-Driven Psychotherapies**

A Category V psychotherapy is defined by a well-supported therapeutic package (see Category I) and a theory about mechanisms of change for which SCE exists. The theory should be considered as having SCE within this framework if it has been empirically invalidated in at least two rigorous studies, by two different investigators or investigating teams. It raises important ethical questions and asks for guidelines about how to frame this therapeutic package to clients to avoid the meaning of the invalidated theory of change, if the clinician decides to use it in lack of other available treatments. It can stimulate further research to find out the real mechanism of change for the already validated treatment package. If presented and used in clinical practice as a form of scientifically based psychotherapy, it would be an example of pseudoscientifically oriented psychotherapy.

**Category VI: Good Theory and Bad Intervention-Driven Psychotherapies**

A Category VI psychotherapy means that its theory is well supported, but there is SCE for its therapeutic package (SCEP). The therapeutic package should be considered as having SCE within this framework if it has been empirically invalidated in at least two rigorous studies, by two different investigators or investigating teams. It might be the case that the therapeutic package was not correctly derived from the theory about the mechanisms of change and/or its test was not properly designed (e.g., adherence to the protocol, therapists' competency, etc.). If presented and used in clinical practice as a form of scientifically based psychotherapy, this should be a case of ethical concern, and it would be an example of pseudoscientifically oriented psychotherapy. However, it can stimulate further research to develop new treatment packages based on the validated theory and test them.

**Category VII: Bad Theory-Driven Psychotherapies**

A psychotherapy included in Category VII is defined by no (ND), PD less than minimum standards (PD), or MD regarding the efficacy and/or effectiveness of its therapeutic package and SCE for its theory; ND, PD, MD, and SCE should be used as codes during within-

category analyses. This indicates that more theoretical clarifications are needed before running major trials to test the therapeutic package. If presented and used in clinical practice as a form of scientifically based psychotherapy, it would be an example of pseudoscientifically oriented psychotherapy.

**Category VIII: Bad Intervention-Driven Psychotherapies**

A Category VIII psychotherapy is defined by equivocal data (no [ND], PD less than minimum standards [PD], or MD) for its theory and SCEP; ND, PD, MD, and SCEP should be used as codes during within-category analyses. If presented and used in clinical practice as a form of scientifically based psychotherapy, it is an example of pseudoscientifically oriented psychotherapy.

**Category IX: Bad Theory and Bad Intervention-Driven Psychotherapies**

A Category IX psychotherapy is defined by SCE for its theory (SCET) and SCEP. If presented and used in clinical practice and scientific settings as a form of scientifically based psychotherapy, this would be a very good example of pseudoscientifically oriented psychotherapy.

Table 1 synthesizes the above described categories.

**IMPLICATIONS OF THE NEW EVALUATIVE FRAMEWORK FOR EVIDENCE-BASED PSYCHOTHERAPIES**

The proposed evaluative framework for evidence-based psychotherapies has multiple implications.

At the practical level, the proposed evaluative framework addresses two current problems within the psychotherapy field. First, by adding the requirement of testing theory to the evaluative framework, in addition to testing therapeutic packages, the framework rules out the possibility of designating interventions with false theoretical underpinnings as scientific psychotherapies. This change protects the integrity of the field of psychotherapy, and perhaps more importantly, protects potential clients from bogus interventions. The proposed classification framework defines POPs (Categories V–IX), and it clearly distinguishes such approaches from scientifically oriented approaches to psychotherapy (SOPs—Categories I–IV). This framework does not rule out the possibility of therapeutic packages moving from the POPs to the SOPs categories (or vice versa), but it highlights the necessary step

of adopting scientific methods for this to occur. In this context, rather than talking about “scientific” versus “pseudoscientific” psychotherapy, maybe it would be better to make and promote a distinction between “scientific (conventional) psychotherapy” (Categories I–IV) and alternative/complementary psychotherapy” (Categories V–IX), following a similar distinction in medicine: “scientific (conventional) medicine” versus “alternative/complementary medicine” (for definitions, see <http://nccam.nih.gov/health/whatiscam/#defining-cam>). Obviously, what is alternative at a certain point can become mainstream later (scientific/conventional), if we get data for its efficacy/effectiveness, following the model proposed in this article. This idea deserves to be explored in future analyses.

The history of hypnosis is an excellent example of the movement from POPs to SOPs. Many scholars attribute the origins of hypnosis to mesmerism. In the 18th century, mesmerism was used to treat what we would now refer to as hysterical symptoms in Austria and France. The theory underlying mesmerism was that “animal magnetism” was responsible for beneficial effects. Using an elegant experimental design, Ben Franklin disproved the underlying theory. As flawed as the underlying theory was, under an evaluative framework that does not address the validity of theoretical underpinnings, mesmerism could today be considered a scientifically based psychotherapy. More modern studies of hypnosis highlight the development of a psychological intervention according to the proposed evaluative system. From its roots in mesmerism (POPs), hypnosis has developed into a scientifically oriented psychological intervention. There are now strong randomized clinical trials to support its efficacy as a therapeutic package consistent with Category II (Lang et al., 2006; Montgomery et al., 2007; Schnur et al., 2008), as well as empirical data supporting the underlying theory (e.g., Montgomery et al., 2010) consistent with Category III. Together, these data can place hypnosis squarely in Category I for side effects of medical treatments, highlighting the implication of movement from Category IV to Category I as the scientific process is applied.

An interesting shift from SOPs to POPs is illustrated by neurolinguistic programming. Once an interesting system (e.g., Category IV of SOPs, according to our classification), it is now seen largely as a POP (Category

VII) because although its theory was invalidated by a series of studies (for details, see Heap, 1988; Lilienfeld et al., 2003), it continues to be promoted in practice based on the same theory, as if it were valid.

An additional practical advantage of theoretically informed interventions is that they allow clinical flexibility. Modern treatment manuals allow for tailoring of interventions to individual client needs and include a foundation based on common therapeutic factors (e.g., therapeutic relationship, providing a rationale [clinical conceptualization], and setting appropriate treatment expectations). For example, within CBT treatment of depression, theory guides clinicians to help clients change irrational beliefs into rational beliefs to alleviate depressed mood. CBT theory (Beck, 1995) does prescribe specific techniques to do that, but it also provides options (e.g., empirical, logical, pragmatic, and metaphorical disputations) on how to accomplish this goal based on individual patient needs and styles, all in a therapeutic setting (e.g., therapeutic relationship, cognitive conceptualization/rationale, and positive treatment expectations).

At the theoretical level, the proposed framework has major implications for current debates within the field of psychotherapy. Two of the main aspects of the “evidence-based versus common factors” debate are discussed.

First, championed by Wampold (2001), the common factor movement within the field of psychotherapy takes the position that common factors (e.g., the therapeutic relationship, providing clinical rationale for disorders, and providing therapeutic strategies related to the clinical rationale) are responsible for most of the therapeutic change. Specific therapeutic factors (e.g., changing irrational beliefs into rational ones in CBT) are not viewed as responsible for an important therapeutic benefit. Thus, the underlying theory of change is relegated to an irrelevant status, as there is only one theory of change—common factors, and all therapeutic packages can be viewed as equivalent in regard to effectiveness. Not surprisingly, the common factors movement is often at odds with the current EBP movement (Chambless et al., 1998), which is striving to validate specific therapeutic packages and approaches. Overall, we agree that common factors have a clear role in the application and effectiveness of psychological interven-

tions. Common factors are, in part, responsible for the benefits of psychological therapies (Wampold, 2001). However, we also argue that specific therapeutic packages have demonstrated benefit above and beyond the contribution of common factors (for discussions, see Wampold, 2001). Some could say that this specific effect is small as compared to that of common factors. However, this is similar to the effect of an active substance compared to a placebo in pharmacotherapy (e.g., 20% vs. 80% in case of fluoxetine; Kirsch, Moore, Scoboria, & Nicholls, 2002). The hope is that while placebo (or common factors in the psychotherapy field) has reached its maximum potential, the improvement for a large percentage of patients who do not or do respond well to placebo (or common factors) will come from development of these specific factors (active substance in pharmacotherapy or specific psychological mechanisms in psychotherapy). That is, the adherence to the scientific method has and will continue to demonstrate the additive benefit of specific therapies. Thus, as concerning this issue, the psychotherapy field behaves in a manner consistent with that of the pharmacotherapy field. Simply put, the available data support the position that both common and specific factors contribute to the effectiveness of psychological interventions, and both should be maximized to promote the greatest patient benefit.

Second, according to the common factors movement, the research of the specific factors in psychotherapy (e.g., in cognitive therapies) is seen as less relevant, by saying that noncognitive psychological interventions and drug treatments, for example, change cognitions in a manner indistinguishable from cognitive therapy. Wampold (2001) stated that this detracts from a specific ingredient argument for the efficacy of cognitive therapy (or any other psychotherapy), as the therapeutic changes to cognitions could be achieved by a variety of means. However, this argument appears to be based on a false assumption regarding the unique and essential factors of cognitive therapy. That is, changes in cognitions are the mediator of cognitive therapies that produce therapeutic benefit. This does not mean that changes in cognitions are the exclusive domain of cognitive therapies. Cognitions can be altered incidentally, indirectly, or directly by many approaches, which is not contrary to cognitive theories

underlying cognitive therapies (see David, 2004; David & Szentagotai, 2006). If we understand this and we see the theory of the mechanisms of change as incorporating both common and specific factors, then the debate is futile and we can focus our effort on exploring the interactions between common and specific factors in an empirically supported theory of mechanisms of change (see also Ilardi & Craighead, 1994, for a similar argument in the case of CBT treatment for depression).

Thus, the proposed evaluative framework can accommodate the contribution of both specific and common factors to both the therapeutic package and the underlying theory. We believe that this framework lays an important foundation for the continued growth of applied and theoretical psychotherapy research and according to our model, the “evidence-based versus common factors” debate is, at times, futile and a potentially misguided one.

At the ethical level, the proposed framework also has some implications. For example, a therapeutic package validated in clinical trials could have (a) a well-validated theory, (b) a theory with equivocal evidence, or (c) an invalidated theory. While it would be ethical of a clinician to use the hypothetical package in clinical practice in conditions (1) and (2), it is ethically problematic to use it in condition 3 (e.g., “voodoo” and/or mesmerism like psychotherapy). An analogy can also be made to old-time “snake oil” salesmen. The snake oil might provide some benefit to its users, but it is unethical to prescribe such a (placebo) treatment when one clearly considers the underlying mechanism of change to be a sham.

#### **FURTHER CLARIFICATIONS OF THE NEW EVALUATIVE FRAMEWORK FOR EVIDENCE-BASED PSYCHOTHERAPIES**

When one proposes a new classification scheme, the limitations and their implications should be discussed explicitly. We focus on the most important ones.

How do we define (a) “well-supported” theory and/or therapeutic package and (b) “SCE”? Basically, all therapies have some findings that are less strong than others or mixed results. The fact that all therapies have some findings that are less strong than others or mixed results is also true for the “classic” classification scheme (see Chambless et al., 1998). Therefore, we propose to



deal with this issue in a similar manner, by asking for explicit, minimum standards (see Chambless et al., 1998). For example “well supported” within this framework means that it has been empirically supported in at least two rigorous studies, by two different investigators or investigating teams. For theory, evidence could come from (a) experimental studies and/or (b) clinical trials; thus, the theory can be tested independent of its therapeutic package (e.g., in experimental studies) and/or during CTT. We only extend these standards by including and applying them not only to the therapeutic package (as Chambless et al., 1998), but also to the theory underlying the therapeutic package, with clear-cut positive consequences, as discussed above. In the same line of argument, “SCE” for theory and/or therapeutic package means that it has been empirically invalidated (in relationship to the advanced hypotheses and/or objectives) in at least two rigorous studies, by two different investigators or investigating teams. For example, the lack of efficacy of a new treatment package, as compared to a standard treatment, may be seen as (a) invalidating evidence—if the hypotheses and/or the objectives postulated a better efficacy for the new treatment, or (b) validating evidence—if the hypotheses and/or the objectives argued for the same efficacy for the new and the standard treatment.

“Equivocal data” is an interesting case in our classification. We include three situations in this category: (a) ND available (yet), (b) PD less than minimum standards for either “well-supported” or “SCE” conditions, or (c) MD. Other “classical” classification schemes (e.g., Chambless et al., 1998) would accept a therapeutic package with only one supportive clinical trial (i.e., PD less than minimum standards in our terms) as “probably efficacious.” In our scheme, this case would fit one of the categories III, IV, or VII, depending on the status of its theory. Thus, our system allows for more nuances, and is more conservative, protecting the field and the patients from including too easily in the league of evidence-based psychotherapies (or more general: evidence-based health-related interventions) potentially dangerous therapeutic packages, designated as “probably efficacious” based solely on one supporting clinical trial (see the cases of “voodoo” and “mesmerism”).

A criticism could also be related to the definition of “theory.” As we said before, when we talk about the-

ory, we refer to the mechanisms of change, namely the hypothesized psychological factors involved in pathology and health, which are targeted by the therapeutic package. A specific treatment is more scientifically legitimate if it is derived from experimental psychopathology research that has clarified the nature of the disorder, and, thus, there should be a correspondence between the mechanisms of treatment (“mechanism/theory of change”) and the mechanisms of the disorder (“theory of disorder”). For example, if irrational beliefs are hypothesized to be involved in psychopathology and rational beliefs in health states, then they should mediate the impact of CBT on various outcomes. Thus, the theory can be tested independent of its therapeutic package (e.g., “theory of the disorder” in experimental studies: see, for example, the experimental designs in the “emotional self-regulation” paradigm) and/or during CTT (“theory of change”; see David & Szentagotai, 2006). Only correlational studies (e.g., between irrational beliefs and psychopathology), be they clinical or analogue, are important, but adjunctive. The definitive test is related to CTT and/or experimental studies, following the “theory of change” strategy. For example, in considering cognitive therapy for panic disorder, correlational studies reflecting the relationship between catastrophic cognitions and panic would not be sufficient. Support for the cognitive theory of panic must demonstrate the relationship between a reduction in catastrophic cognitions and a reduction in panic (see Clark et al., 1999).

Sometimes there are competing and mutually exclusive theories that data suggest support the same therapeutic package. This would be a case that asks for a “crucial experiment” in Popperian terms (Popper, 1959), but all could be considered valid theories until we run this crucial experiment.

A form of psychotherapy could be analyzed in detail by explicitly coding the evidence for its theory and/or therapeutic package (see Table 1). Although this may seem a very difficult and complex process, it is not mandatory, and one can use only the general classification, based on the nine categories (i.e., between-category analyses). However, a within-category analysis can be performed if this process is necessary and/or relevant in complex comparisons of various psychotherapies for research, practice, and/or health insurance goals; in this

case we suggest using a narrative description accompanying the coding profile (see Table 1).

Finally, we may have situations in which a theory and/or a therapeutic package could simultaneously fit both the criteria for “well-validated” and “SCE” conditions. In this case, it is the responsibility of an expert panel to analyze the data and to decide whether this is a case of MD or one of the two conditions has a stronger impact (e.g., depending on the quality of studies, etc.). This “expert”-based solution is used today by various international organizations dealing with evidence-based psychotherapies (see the NICE procedures).

### CONCLUSIONS

The consistent lack of consideration of underlying theory is a significant weakness of current evaluative psychotherapy frameworks. To clarify the meaning of EBP, provide guidelines for evaluating psychological interventions, and promote growth in the field, we propose a new evaluative framework. The main contribution of this framework is to stress the importance of underlying theory when defining evidence-based psychotherapies. Theory not only allows differentiation of SOPs and POPs, but also is the engine driving therapeutic package development and improvement, and without it, we can easily drift down false paths.

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### NOTE

1. Although, recently, the APA added the label “controversial” (a) to treatments that generate conflicting results or (b) to efficacious treatments whose claims about why they work are conflicting with the research evidence, this is not elaborated and/or considered an independent criterion, as we propose in this article.

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