

# How to Spot Hype in the Field of Psychotherapy: A 19-Item Checklist

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How can consumers of psychotherapies, including practitioners, students, and clients, best appraise the merits of therapies, especially those that are largely or entirely untested? We propose that clinicians, patients, and other consumers should be especially skeptical of interventions that have been substantially overhyped and overpromoted. To that end, we offer a provisional “Psychotherapy Hype Checklist,” which consists of 19 warning signs suggesting that an intervention’s efficacy and effectiveness have been substantially exaggerated. We hope that this checklist will foster a sense of healthy self-doubt in practitioners and assist them to become more discerning consumers of the bewildering psychotherapy marketplace. This checklist should also be useful in identifying the overhyping of well-established treatments.

## Public Significance Statement

Sizable pockets of the psychotherapy field are replete with exaggerated claims of efficacy and effectiveness. We provide a 19-item checklist of warning signs designed to help practitioners and others with the task of identifying psychotherapy hype. This provisional checklist should also help to nurture critical thinking, healthy self-doubt, and intellectual humility in the selection and promotion of psychotherapeutic interventions.

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The world of psychotherapy is bewildering. There are at least 600 “brands” of psychotherapy, and this figure is almost certainly growing on a virtually monthly basis (Eisner, 2000; Lilienfeld, Lynn, & Lohr, 2014). The substantial majority of these interventions have never been subjected to controlled clinical trials. Many of these largely or entirely untested treatments may very well be effective, but some may be largely or entirely ineffective, and a few may even be directly harmful (Lilienfeld, 2007). The lack of

research evidence notwithstanding, scores of untested interventions are extensively and enthusiastically promoted, often with great fanfare and accompanied by expansive claims of efficacy and effectiveness. Nevertheless, practitioners and graduate students in training receive scant guidance for how to appraise such interventions in the absence of adequate research: Should they be particularly dubious of some of them, and, if so, which ones?

## The Dodo Bird Verdict

Some scholars might contend that consumers of the psychotherapy literature need not be concerned by the challenges posed by untested interventions. To support this view, they frequently invoke the *Dodo Bird verdict* (Rosenzweig, 1936), which implies that all psychological treatments work equally well (the name of this verdict derives from the Dodo Bird in Lewis Carroll’s *Alice in Wonderland*, who declares after a race, “Everybody has won, and all must have prizes”). Hence, this reasoning continues, we should not be alarmed by the promotion and marketing of pseudoscientific and otherwise questionable treatments, because these treatments are likely to be as effective as well-established interventions. Nor should we be especially worried about the overhyping of unsubstantiated treatments given that these treatments will probably turn out to work just about as well as others.

Comparative studies of psychotherapy impart a valuable lesson, namely, that nonspecific factors (e.g., the therapeutic alliance) account for sizable proportions of variance in treatment outcomes (Wampold & Imel, 2015). In this respect, research on the Dodo Bird verdict reminds us not to advance expansive claims concern-

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ing treatment specificity. There is also little doubt that for some psychological conditions, such as major depressive disorder, a variety of different treatments are efficacious (Wampold et al., 1997).

Nevertheless, there are at least three reasons that findings concerning approximate therapeutic equivalence should not be cause for complacency with respect to untested interventions. First, the Dodo Bird verdict as originally conceptualized referred only to a broad equivalence in efficacy across different *schools* of psychotherapy (e.g., behavioral, cognitive-behavioral, humanistic, psychodynamic); it never implied that every *intervention* was equally efficacious overall, let alone equally efficacious for every psychological condition. Second, most data call into question the claim of exact equivalence of therapeutic effectiveness across all disorders (Hunsley & Di Giulio, 2002; Lilienfeld, 2014; Tolin, 2014; but see Wampold et al., 2017, for an alternative view). To take merely one example, meta-analytic evidence suggests that critical incident stress (crisis) debriefing, a widely used prophylactic treatment for trauma-exposed victims, is associated with negligible and perhaps even *negative* effect sizes (Litz, Gray, Bryant, & Adler, 2002). The same conclusion holds for several popular “get-tough” interventions for antisocial adolescents, such as Scared Straight and boot camp treatments (Lilienfeld, 2007). Third, the conclusion of approximate equivalence of psychotherapies across all major conditions applies largely or entirely to “bona-fide” interventions, that is, well-specified treatments grounded in a well-supported theoretical rationale and that have already been found to work reasonably well (Wampold et al., 1997). There are no compelling grounds for extending this verdict to psychological interventions that fall far outside of the scientific mainstream. Furthermore, the onus of evidence falls on the proponents of novel interventions to demonstrate that they are efficacious and effective, not on critics to demonstrate otherwise.

### Healthy Self-Doubt

Rendering the evaluation of the psychotherapy outcome literature more complicated, findings point to marked variability in efficacy among psychotherapists themselves. At the risk of painting with an overly broad brush, the most successful psychotherapists average 50% better outcomes and 50% fewer dropouts than do psychotherapists in general (Wampold, 2017).

We hypothesize that one largely unappreciated characteristic of successful psychotherapists is their penchant for maintaining a skeptical attitude, both toward their own practice and toward psychological treatments in general. Although skepticism has acquired a bad name in many quarters, it refers only to a propensity to withhold judgment on assertions until adequate evidence is available (Shermer, 2002). In this respect, skepticism is merely a broader term to describe what many scholars have referred to as the *scientific attitude* (Sagan, 1995). In clinical psychology, such skepticism is well illustrated by Meehl’s (1973) classic chapter “Why I Do Not Attend Case Conferences,” which in our view should be required reading (and regular rereading!) for all mental health professionals-in-training and current mental health professionals. We can also conceptualize skepticism in terms of several closely allied concepts, such as epistemic (intellectual) humility (Leary et al., 2017; Lilienfeld, Lynn, O’Donohue, & Latzman, 2017) and the term we elect to emphasize here, *healthy self-doubt*.

By healthy self-doubt, we mean a propensity to engage in thoughtful self-reflection regarding one’s biases and limitations, as well as regarding one’s selection and interpretation of treatment and assessment techniques. Practitioners marked by healthy self-doubt are not diffident. To the contrary, they are confident, but not overconfident: Their confidence is properly calibrated to their level of knowledge and skills. Moreover, their confidence derives from an adequate appreciation of their shortcomings and of the best means of compensating for them: “Forewarned is forearmed.” In the lingo of social cognition, therapists with a sense of healthy self-doubt are characterized by a smaller *bias blind spot* (Pronin, Lin, & Ross, 2002) compared with other therapists.

Admittedly, virtually all of us are probably oblivious of our biases to some degree, but we posit that therapists with a sense of healthy self-doubt are more cognizant of their propensity toward systematic error than are other therapists. In addition, we hypothesize that therapists with a sense of healthy self-doubt are inclined to rightly turn a doubtful eye to interventions that have been substantially overhyped and overpromoted. As a consequence, they may be less likely to fall prey to the seductive charm of therapeutic fads and fallacies, as well as to psychological pseudoscience more broadly. Although excessive self-doubt may undermine the power of the expectancies that very likely drive some of the success of psychotherapy (Frank & Frank, 1993), a modest dose of self-doubt, which cultivates a nondefensive acknowledgment of the strengths and weaknesses of one’s preferred treatment approach, may foster confidence in patients.

Much of what we have written in the preceding paragraph is conjectural. Nevertheless, correlational research raises the possibility that psychotherapists’ self-doubt predicts better treatment outcomes, at least among experienced therapists (Nissen-Lie, Monsen, Ulleberg, & Rønnestad, 2013; Nissen-Lie et al., 2017; but see Odyniec, Probst, Margraf, & Willutzki, 2017, for a replication failure). In this research, endorsement of such items as “Lacking in confidence that you might have a beneficial effect on a patient” and “Unsure about how best to deal effectively with a patient” was tied to superior treatment outcomes, especially among therapists with a positive self-concept. Aptly, the title of Nissen-Lie et al.’s (2017, p. 48) article was “Love yourself as a person, doubt yourself as a therapist?” Similarly, in a small-sample ( $N = 16$ ) study of psychodynamically oriented therapists, self-criticism significantly predicted superior patient outcomes. Perhaps counterintuitively, more effective therapists rated their treatment sessions as having been *less* successful than did less effective therapists (Najavits & Strupp, 1994), probably because they were more inclined to engage in self-scrutiny. It is unknown, however, whether therapist self-doubt is trainable, and if so, whether it is causally related to better client outcomes.

More broadly, overconfidence is linked to suboptimal decision-making in medicine and allied health fields (Berner & Graber, 2008; Croskerry & Norman, 2008), raising the possibility that instilling a well-calibrated sense of self-confidence—one that balances appropriate self-assurance with healthy self-doubt—will enhance therapeutic outcomes. This goal is important for several reasons, not the least of which is that many therapists, like most people in general (Kruger, 1999), appear to substantially overestimate their abilities (Miller, Hubble, Seidel, Chow, & Bargmann, 2014). For example, among 129 independent practice psychotherapists, the average clinician rated him- or herself at the 80th

percentile of all therapists in effectiveness and skills; 25% rated themselves at the 90th percentile. *None* rated themselves below average (Walfish, McAlister, O'Donnell, & Lambert, 2012). Further, data demonstrate that most therapists markedly overestimate the percentage of their clients who are getting better and underestimate the percentage of their clients who are getting worse (Hannan et al., 2005). To minimize the risk of therapeutic error, psychotherapists need to steer clear of the hazards of overconfidence, both with respect to their own therapeutic skills and with respect to their enthusiasm for embracing unsubstantiated or overhyped interventions.

### A Checklist of Psychotherapy Hype Warning Signs

In the following section, we present an admittedly provisional checklist of 19 “Psychotherapy Hype Warning Signs” (see Table 1, for a capsule summary). In the spirit of our own humility, we provide this list merely as a first approximation, and we welcome suggestions and constructive criticisms from readers. We have drawn the items on this list from academic publications and presentations, trade books, claims advanced at continuing education workshops, inspection of printed and online advertisements of treatments, promotional emails, informal consultations with colleagues inside and outside of academia, and other sources. Some of these warning signs (especially 1–13) bear primarily on the promotion and marketing of treatments, whereas others (especially 14–19) bear primarily on the quality of research ostensibly supporting them, although there is some overlap between these two broad categories. Although we do not provide specific references for each warning sign, we encourage interested readers to consult the following sources for examples of the overhyping of interventions (Dawes, 1994; Eisner, 2000; Herbert et al., 2000; Jacobson, Foxx, & Mulick, 2005; Lilienfeld et al., 2014; Lilienfeld, Marshall, Todd, & Shane, 2014; Mercer, 2015; Norcross, Koocher, & Ga-

rafalo, 2006; Overholser, 2014; Thyer & Pignotti, 2015; Singer & Lalich, 1996; Witkowski, 2015).

Several items on this checklist mirror commonly proposed indicators (“warning signs”) of pseudoscience (e.g., Bunge, 1984; Hines, 2003; Lilienfeld et al., 2014). Nevertheless, our considerably more extensive checklist goes well beyond previous lists of pseudoscientific indicators in its focus on psychotherapeutic claims in particular rather than scientific claims more broadly. Moreover, our checklist applies not merely to the marketing of pseudoscientific or otherwise questionable interventions, but also to the overpromotion of claims concerning all psychological treatments, even those underpinned by a solid evidentiary base (e.g., cognitive-behavioral therapy, acceptance and commitment therapy, dialectical behavior therapy).

We offer this checklist primarily for mental health practitioners and practitioners-in-training who are attempting to navigate the often-confusing maze of mental health treatments. This checklist is intended to plant the seeds of healthy self-doubt in practitioners and trainees, and to help to nurture in them a sense of humility in treatment selection and delivery. In the long term, this checklist may also enhance treatment outcomes by dissuading practitioners from embracing overhyped and pseudoscientific interventions, although this conjecture awaits formal research corroboration. Ideally, nonclinician readers, especially (a) mental health consumers, their friends, and loved ones, (b) psychology instructors, and (c) science journalists should also find this checklist helpful as a field guide to spotting overhyped and dubious interventions.

We discourage readers from implementing this checklist in a cookbook, DSM-style fashion. There is almost certainly no categorical cut-off that demarcates largely pseudoscientific from largely scientific therapies, so we are reluctant to suggest a specific “number” of warning signs for a treatment to acquire “overhyped status.” Furthermore, even many well-established psychotherapies,

Table 1  
*Psychotherapy “Hype” Checklist*

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- (1) Substantial exaggeration of claims of treatment effectiveness
  - (2) Conveying of powerful and unfounded expectancy effects
  - (3) Excessive appeal to authorities or “gurus”
  - (4) Heavy reliance on endorsements from presumed experts
  - (5) Use of a slick sales pitch and the use of extensive promotional efforts, including sale of paraphernalia
  - (6) Establishment of accreditation and credentialing procedures
  - (7) Tendency of treatment followers to insulate themselves from criticism
  - (8) Extensive use of “psychobabble”
  - (9) Extensive use of “neurobabble”
  - (10) Tendency of advocates to be defensive and dismissive of critics; selective reporting of contradictory findings, such as the results of dismantling studies
  - (11) Extensive reliance on anecdotal evidence
  - (12) Claims that treatment “fits all”
  - (13) Claims that treatment is “evidence-based” on the basis of informal clinical observations
  - (14) Inadequate empirical support: Limited reports or omission of treatment outcome information, such as patient selection criteria, drop-out rates, and follow-up data
  - (15) No proposed scientific basis for change mechanisms; proposed theoretical treatment mechanism lacks “connectivity” with extant science
  - (16) Repeated use of implausible ad hoc maneuvers to explain away negative findings
  - (17) Comparison of treatment with weak and “intent to fail” treatment groups, or with only partial (incomplete) treatment conditions
  - (18) Failure to consider or acknowledge potential allegiance and decline effects
  - (19) Failure to consider differential credibility checks across treatment groups; failure to consider the role of non-specific factors, such as the therapeutic alliance
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including some cognitive-behavioral and acceptance-based interventions, have at times been substantially overhyped (see Rosen & Lilienfeld, 2016).

Nevertheless, it seems safe to conclude that the more warning signs a given psychological treatment displays, the more alarm bells should ring in therapists' and other consumers' minds. Such overpromotion can be misleading to both practitioners and patients, both of whom may come to expect dramatic or even miraculous cures. Patients in particular may become demoralized and disillusioned after receiving overhyped interventions that are largely ineffective or substantially less effective than promised. Furthermore, because a presumably small minority of psychological interventions appear to be iatrogenic (Dimidjian & Hollon, 2010; Lilienfeld, 2007), these warning signs may help to safeguard mental health consumers against psychological harm.

As Marcello Truzzi (1978) and later, Carl Sagan (1980), reminded us, extraordinary claims require extraordinary evidence. Hence, proponents of interventions who advance remarkable claims of efficacy and effectiveness in the absence of equally convincing data are opening themselves to justifiable criticism.

### Psychotherapy Hype Warning Signs: A 19-Item Checklist

#### Promotion and Marketing Red Flags

(1) Advocates of a therapeutic approach routinely advance greatly exaggerated and often unsubstantiated claims. They may assert that their treatment is "revolutionary," "ground-breaking," or that it is a "gold standard." For example, the developer of psychodrama described his method as launching a third psychiatric revolution, the first two revolutions being initiated by Pinel and Freud (Moreno, 1964). More recently, the developer of Thought Field Therapy (TFT), a prominent energy therapy, claimed to be able to cure specific phobias in 5 min or less (Callahan, 1985), and several websites assert that hypnosis is 30 times more effective for weight loss compared with no treatment (e.g., see <http://johnmongiovi.com/pages/weightloss>).

Proponents may further assure clients and practitioners that their "complete satisfaction" will be guaranteed. It is perhaps worth noting that there have been few or no changes in the overall effect sizes in psychotherapy outcome over the past three decades (Budd & Hughes, 2009), suggesting that humility with respect to the prospect of treatment breakthroughs is in order.

Other commonly used terms and phrases to beware of include "simple, but powerful method"; "breakthrough"; "remarkable advance"; "paradigm shift"; "miracle cure"; "transformative," "life-changing" or "uniquely effective" treatment; "dramatic" or "remarkable" improvements; "unique and ultimate training"; "life-changing benefits"; and "deep psychological healing." One should also be wary of such terms as "proof" or "cure." These two terms, although widely used, are suspect given that virtually all scientific claims are provisional and that few if any psychological treatments are associated with close to 100% symptom remission.

In other cases, the hyped claims may be subtler, but arguably just as problematic. For example, some proponents of mindfulness interventions, a heterogeneous class of treatments that holds some promise for treating mood and anxiety disorders, have asserted that

mindfulness is markedly superior to extant interventions for depression and other conditions (see Coyne, 2017, and Van Dam et al., 2017, for discussions of the overpromotion of mindfulness techniques relative to the strength of the scientific evidence). Nevertheless, meta-analyses offer at best mixed and largely negative evidence for this claim (e.g., Khoury et al., 2013).

(2) Advocates inform patients that "If this treatment does not help you, then nothing else will." They strive to convey a powerful expectancy that reinforces treatment outcomes at the expense of sound scientific information that informs patients. This propensity may engender unrealistic hopes among patients. In addition, it may undermine practitioners' ethical obligations to describe interventions accurately and provide patients with fully informed consent (see also Blease, Lilienfeld, & Kelley, 2016).

(3) Advocates advance claims that one can—or needs to—learn the technique from a "master," a "leading expert," a "renowned specialist," and so on. In this regard, Meehl (1992) warned of the *guru omniscience fantasy*, the temptation to believe that one glorified expert can provide most or all of the answers to exceedingly complex psychological questions. As one example, Arthur Janov, founder of primal therapy (colloquially called primal scream therapy), was widely viewed as a guru and virtual messiah by many of his therapeutic acolytes, as well as by celebrities, such as ex-Beatle John Lennon and his wife Yoko Ono (Fox, 2017). Nevertheless, even recognized academicians can be elevated by their followers to "guru" status. In some cases, the treatment developer may have discovered the approach in a sudden personal epiphany, which may contribute to the mystique of the approach.

(4) Advocates rely heavily on the endorsements of presumed leaders in the field, often without offering references to support such endorsements. For example, many therapists in the trauma field cite Bessel van der Kolk as an advocate and endorser of their approach. Although the endorsements of well-established experts can sometimes be informative for consumers, this practice should never substitute for systematic research evidence.

(5) Advocates establish a coterie of trainers and perhaps an international organization to promote the treatment. They often use public media (TV, blogs, magazine articles) to oversell their treatment approach. In addition, they are "slick salespersons," setting up clinics, training settings, workshops, and in-house conferences. Treatment proponents may also promote advanced, multilevel training, and sell paraphernalia and tapes that accompany their treatment approaches. For example, some advocates of eye movement desensitization and reprocessing (EMDR) sell wands and "Megapulsars" to assist them with providing bilateral stimulation (see <https://www.colleenwest.com/for-therapists/what-equipment-do-i-use/>). Proponents may require that trainees sign confidentiality statements that they will not share treatment protocols with others.

(6) Advocates provide a certificate or diploma indicating that one has taken the training and can now call oneself an X therapist. They may offer to place clinicians' names on a referral list of Certified X practitioners.

(7) Followers of the treatment are insular. They create specialized listservs and Facebook pages for advocates of the intervention to share their positive experiences and to criticize skeptics of their perspectives, newsletters for treatment acolytes, and special interest groups at conventions.



(8) Advocates make frequent use of “psychobabble,” psychological verbiage that sounds scientific but in fact contains little or no content, to market their treatment approach (Rosen, 1977). Consumers should be especially dubious of advertisements or courses that make extensive and uncritical use of such terms as “inner child,” “internal family systems,” “closure,” “codependency,” “attachment wounds,” “sex addiction,” “holistic healing,” “synergy,” and so on, or that invoke concepts from quantum mechanics to explain psychological change principles (see Hummler, 2017, for a critique of the use of quantum mechanisms to explain everyday phenomena).

(9) Advocates liberally use “neurobabble” and naïve biological reductionism (often accompanied by brightly colored functional imaging figures or diagrams of the brain) to promote their treatment approach. Such neurobabble may involve the use of such terms as “neuro-networks,” “synaptic networks,” “hemispheric synchronization,” “right brain attachment,” “sensorimotor integration,” “memory integration,” “body memories,” “reptilian brain,” or “neuroplasticity,” especially when they are detached from their original meanings. A further and largely unappreciated problem is that many and arguably most “brain-based therapies” are not ready for application to patients given our present lack of understanding of how to bridge the vast gulf between the neural and psychological levels of analysis (Francken & Slors, 2017). In other cases, proponents may overinterpret weak or ambiguous brain imaging data in the service of making strong claims. For example, psychiatrist Daniel Amen (2001), who is a regular fixture on public TV, has argued that the brains of a well-defined subset of individuals with attention-deficit/hyperactivity disorder are marked by a “ring of fire” characterized by pronounced overactivation in multiple brain regions. Nevertheless, the scientific evidence for the “ring of fire” activation pattern is feeble (Hall, 2013).

Exacerbating this problem, proponents of brain-based treatments often resort to dubious neurological hypotheses to explain the apparent success of their approach. Such hypotheses are frequently couched in neuroscientific terminology (see Schwartz, Lilienfeld, Meca, & Sauvigne, 2016). For example, consider the following passage from a scholar’s effort to offer a neurobiological basis for the effectiveness of EMDR:

... the constant reorienting of attention demanded by the alternating, bilateral visual, auditory, or tactile stimuli of EMDR automatically activates brain mechanisms which facilitate this reorienting. Activation of these systems simultaneously shifts the brain into a memory processing mode similar to that of REM sleep. This REM-like state permits the integration of traumatic memories into associative cortical networks without interference from hippocampally mediated episodic recall. . . . Once successfully integrated, corticohippocampal circuits induce the weakening of the traumatic episodic memory and its associated affect. (Stickgold, 2002, pp. 71–72)

Although this explanation may or may not be correct, it is premature in light of intense scientific controversy over whether the eye movements of EMDR are even relevant to its efficacy (Deville, Ono, & Lohr, 2014; Lee & Cuipers, 2014). In this regard, practitioners should bear in mind “Hyman’s maxim,” named after psychologist Ray Hyman: Before trying to explain *how* something works, one should first verify *that* it works (Hall, 2014).

(10) Advocates are defensive and thin-skinned about their approach. They often question the motives, background, and training

of those who have raised concerns regarding the efficacy or theoretical basis of their treatment approach. They may argue that “outsiders” are not qualified to evaluate their approach, because they have not administered the treatment themselves.

In addition, such advocates frequently neglect to discuss or even acknowledge legitimate criticisms of their treatment approach. When they do mention criticisms, they frequently present them in straw-person form that can be easily rebutted. Advocates fail to mention the results of dismantling studies that question the ostensible theoretical basis of their treatment approach, or the absence of such studies.

(11) Advocates rely extensively on anecdotal evidence at the expense of controlled outcome data (e.g., “Read these testimonials from three people who claim that treatment X helped them”). Anecdotal evidence from multiple satisfied patients sometimes provides sufficient grounds for *investigating* a novel treatment in greater depth, but it rarely if ever provides sufficient grounds for concluding that the treatment is effective (Davison & Lazarus, 2007; Lilienfeld et al., 2014). Putting it somewhat differently, anecdotal evidence can often be enormously helpful in the context of discovery—hypothesis generation—but it is rarely informative in the context of justification—hypothesis testing (see Reichenbach, 1938). As the old saw reminds us, “the plural of anecdote is not evidence” (Ratzan, 2002, p. 169).

(12) The treatment claims are marked by an absence of clear *boundary conditions* (Hines, 2003). Advocates may claim that the treatment approach can be applied successfully with patients who suffer from a wide variety of psychiatric and physical conditions, as well as across multiple age groups, without any supportive clinical trial evidence. Some may even claim that their approach works for pets. Advocates may imply that their treatment “fits all” or “cures all” (“One size fits all”). For example, the developer of TFT insisted that this treatment is efficacious not only for adults but for “horses, dogs, cats, infants, and very young children” (Callahan, 2001, p. 1255).

(13) Advocates maintain that their intervention is “evidence-based,” “empirically supported,” or “empirically validated,” but they define “evidence” broadly and subjectively, referring largely or exclusively to their informal clinical observations (e.g., “I saw it work with my clients, and that is my evidence”) or to informal reports from clients rather than systematic sources of evidence obtained from well-controlled studies.

## Research Evidence Red Flags

(14) Advocates maintain that their treatment approach is “evidence-based” because it has met a low criterion for evidence, such as two randomized controlled trials demonstrating significant differences from no treatment. Nevertheless, advocates do not discuss effect sizes, nor provide details about the exclusionary criteria of the patients. They also do not report on drop-out rates or follow-up data. Advocates may also advance vague claims without referencing them, such as “More than X number of studies have consistently demonstrated efficacy and superiority,” without citing or critically evaluating them.

(15) Advocates do not present a critical account of the scientific validity, or theoretical basis, for the effectiveness of the proposed treatment. They frequently offer little or no scientific basis for the proposed change mechanisms for the treatment. Many energy

interventions, such as Emotional Freedom Techniques (EFT) and TFT, exemplify this problem. The intervention may “work” (in the weak sense of outperforming a no-treatment control group), but this success probably has little or nothing to do with the proposed treatment model. In particular, the intervention may perform better than no treatment or than weak control groups largely or entirely because of nonspecific factors, such as placebo effects or the beneficial influence of therapeutic support (Frank & Frank, 1993).

In other cases, however, advocates *do* supply a theoretical rationale, but it conflicts overwhelmingly with known scientific evidence. That is, the treatment rationale lacks “connectivity” with well-established science (Stanovich, 2012). For example, proponents of energy therapies claim that psychopathology is produced by blockages in invisible, unmeasurable energy fields that violate the known laws of physics. Proponents of hypnotic regression therapy claim that hypnosis can recover distinct and detailed memories that date prior to the onset of infantile amnesia. Some maintain that they can bring back memories from before birth, or even from past lives (Singer & Lalich, 1996).

(16) Advocates routinely resort to multiple implausible “ad hoc hypotheses” (after-the-fact excuses or loopholes) to explain away negative findings. This indiscriminate use of ad hoc explanations for unsupportive findings renders the key treatment claims difficult or impossible to falsify. As a consequence, the theoretical rationale for the intervention becomes a “moving target.” For example, when advocates of EMDR were confronted with controlled research evidence that their intervention did not outperform a fixed eye movement condition, some responded that it did not disconfirm the intervention’s theoretical rationale because the eyes “wanted” to move (see Lilienfeld et al., 2014). As another example, in response to a published study of EFT that demonstrated comparable effects on phobic fear from tapping on a doll as from tapping on oneself (Waite & Holder, 2003), the creator of the method contended that because the fingertips themselves contain energy meridians, this control condition was invalid (Craig, 2003). In other cases, advocates of a therapy may claim, without adequate justification, that unsuccessful replications of their positive treatment results are attributable to failures to implement the treatment protocol with adequate fidelity (see DeBell & Jones, 1997 and Rosen, 1999, for critiques of such ad hoc reasoning by proponents of EMDR).

(17) Advocates compare their favored approach with “weak” comparison groups, that is, “intent- to-fail” conditions, which are virtually guaranteed to yield null or weak effects (Westen & Bradley, 2005). They do not compare their treatment with “bonafide” conditions that are intended to be efficacious or effective (see Wampold et al., 1997). In other cases, advocates may compare their proposed treatment with a diluted or weaker version of a comparative treatment. For an example, see Foa et al.’s (1991) comparison of Prolonged Exposure versus Stress Inoculation Training (SIT), in which the third application phase of SIT was omitted (Meichenbaum, 2017).

(18) Advocates do not report on or acknowledge potential *allegiance effects* (see Luborsky et al., 1999), that is, positive outcomes that depend on whether the primary investigator was favorably disposed to the intervention, or on who conducted the outcome studies. Allegiance effects may help to account in part for another phenomenon, namely, the *decline effect* (“the law of initial results”), in which effect sizes from treatment studies in early trials

tend to drop off over time (Lehrer, 2010; Schooler, 2011). Initial positive effects for a given psychotherapy may sometimes be inflated because early studies were conducted by enthusiastic adherents of the intervention (“strike while the iron is hot”); these effect sizes may shrink when the intervention is later examined by impartial investigators (see Johnsen & Friborg, 2015, for potential evidence of decline effects for cognitive-behavioral therapy; but see Ljótsson, Hedman, Mattsson, & Andersson, 2017 and Waltman, Creed, & Beck, 2016; for alternative views). The same principle holds in some domains of psychiatry, where an old adage holds that one should “use the new drugs while they still work.” For example, the efficacy of antipsychotic medication appears to have decreased in recent decades (Leucht et al., 2009), although some of this decline may also reflect more rigorous methodology in more recent studies.

(19) Advocates do not independently determine whether the treatment rationale offered to the alternative treatment and control groups was as credible as for the advocated treatment. This potential confound can lead to differences in expectancy effects across groups. Such advocates also do not acknowledge the potential role of nonspecific treatment factors, such as the therapeutic alliance, expectancy effects, and other placebo-related effects. For example, their studies do not include measures of the ongoing quality of the therapeutic alliance, such as the Therapeutic Alliance Scales, or the Quality of Relationship Measures, or session-by-session treatment-informed feedback (Prescott, Mareschalack, & Miller, 2017).

## Conclusions

David Shakow (1969), one of the founders of modern clinical psychology, wrote that “psychology is immodest” (p. 146). By this, he was referring largely to the habitual propensity of psychologists to promise far more than they can deliver. Yet science, including clinical science, is fundamentally a prescription for intellectual humility, as it reminds us that we can all fool ourselves and be fooled by others (Lilienfeld et al., 2017; McFall, 1991; Tavris & Aronson, 2007). Such humility should extend to all domains of clinical practice, including the marketing, promotion, evaluation, selection, and administration of treatments.

We expect this provisional 19-item checklist to evolve in response to constructive feedback. This checklist is itself a modest step toward safeguarding practitioners and other consumers of psychotherapy against exaggerated claims and ideally, toward instilling a sense of healthy self-doubt in clinicians. Although our checklist is designed primarily for professionals who are knowledgeable regarding research design, many of the warning signs and red flags for identifying hype, especially the first 13, can be profitably used by members of the general public and media resource outlets. More broadly, a number of the checklist items may also be helpful for spotting hype in (a) clinical assessment, and (b) other domains of psychological science, such as social psychology, developmental psychology, and neuroscience (e.g., see Ferguson, 2015, and Lilienfeld, Marshall, Aslinger, & Satel, 2017, for discussions).

We encourage consumers of interventions, especially those that are largely or entirely untested, to bear this checklist in mind when appraising the scientific status of treatment claims. We also believe, however, that users will find this checklist helpful even

when evaluating claims concerning well-established therapies, including those on lists of empirically supported treatments. Many proponents of such interventions have hardly been immune to hype, and practitioners should not fall prey to the error of concluding that a treatment is a “gold standard” or is “highly effective” merely because it is included on a list of empirically supported therapies.

We should be clear that we are not discouraging creativity. This checklist does not preclude or diminish the importance of developing novel techniques, including those for which the evidence base is presently minimal or nonexistent. Clinical innovation is an essential driving force in the scientific progress of psychotherapy (Lazarus & Davison, 1971; Simon & Ludman, 2009). Therapists should not hesitate to invent or discuss new and largely untested interventions so long as they openly acknowledge the limitations of the evidence base (Blease et al., 2016).

As noted earlier, an overriding objective of the checklist is to cultivate an enduring habit of healthy self-doubt among clinicians. As Carl Sagan (1995) observed, we can think of science as a little voice in our heads that incessantly intones, “You might be mistaken. You’ve been wrong before” (p. 39). Once readers have perused the checklist, they may wish to ask themselves the following question: Am I open to questioning and modifying any of my beliefs, claims, or clinical practices?

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