



The evidence-based practice of psychotherapy: Facing the challenges that lie ahead[☆]



Brandon A. Gaudiano^{*}, Ivan W. Miller

Alpert Medical School of Brown University, USA
Butler Hospital, USA

HIGHLIGHTS

- Psychotherapy continues to move toward prescriptive treatment guidelines.
- Traditional psychotherapy use is on the decline while medication use is rising.
- We must better address the tension between psychotherapy vs medication use.
- We also must address diagnosis, treatment development, and training issues.
- We introduce the special issue on evidence-based therapy research and practice.

ARTICLE INFO

Available online 2 May 2013

Keywords:

Evidence-based practice
Empirically supported treatment
Medicalization
Dissemination
Psychotropic medication
Diagnosis

ABSTRACT

What does the future hold for psychotherapy research and practice? We review some key influences, including declining psychotherapy utilization, increasing impact of evidence-based medical practices, over-medicalizing of mental health problems, and changing priorities from grant funding agencies. These factors hold potential opportunities but also major pitfalls that will need to be carefully navigated related to implementation/dissemination issues, interdisciplinary collaborations, and psychosocial versus biomedical perspectives related to the nature and treatment of psychopathology. In addition, we review and comment on the other articles contained in this special issue pertaining to the future of evidence-based psychotherapy.

© 2013 Elsevier Ltd. All rights reserved.

Contents

1. Introduction	814
2. Psychotherapy utilization is on the decline	814
3. Evidence-based medicine and psychotherapy practice	814
3.1. Empirically-supported treatments in psychology	815
3.2. Evidence-based practice in psychology	816
4. The medicalization of mental health treatment	816
4.1. Medicalization and anti-stigma campaigns	816
4.2. Direct-to-consumer advertising of psychotropic drugs	817
4.3. Insurance reimbursement practices	817
4.4. Focus on short-term over long-term outcomes	817
5. Research funding climate change	817
6. Overview of the special issue on the future of evidence-based psychotherapy	818
7. What might the future hold for psychotherapy research and practice?	819
7.1. Implementation and dissemination issues	819
7.2. Increasing interdisciplinary collaboration	820
7.3. Psychosocial versus biological mechanisms and treatments	820
8. Where do we go from here?	821
References	822

[☆] The preparation of this manuscript was supported in part by a grant from the National Institute of Mental Health (K23 MH076937) awarded to Dr. Gaudiano.

^{*} Corresponding author at: Butler Hospital, Psychosocial Research Program, 345 Blackstone Boulevard, Providence, RI 02906, USA.

E-mail address: Brandon_Gaudiano@brown.edu (B.A. Gaudiano).

1. Introduction

The call for evidence-based practice is increasingly influencing psychotherapy. Important early efforts were made by the [American Psychological Association \(APA\)](#) to develop a specific list of empirically-supported treatments. Most recently, APA has begun formal work to define and establish more comprehensive evidence-based practices and treatment guidelines specific to psychology. Nevertheless, both psychotherapy researchers and evidence-based practitioners face significant challenges in the years to come. Clinical psychology already is playing catch up to well-established psychiatric treatment guidelines that sometimes promote medications over psychotherapy despite evidence that the latter should be the frontline treatment. Furthermore, researchers face significant challenges as the funding climate shifts at the National Institutes of Health and other agencies with the renewed focus on developing novel drugs, establishing biological models of illness, and developing more “feasible” psychosocial interventions that could serve to push traditional psychotherapy (i.e., individual, in person, weekly sessions for a specified period of time) even more into the periphery. The purpose of this special issue is to bring together top scholars in psychotherapy research to tackle important questions that will need to be addressed for evidence-based psychosocial interventions to meet the challenges that lie ahead. The special issue covers various aspects of the discussion ranging from conceptualization to development to testing to implementation. The contributors were encouraged to “think outside the box” and to propose novel solutions to these persistent and vexing issues.

To introduce this special issue, we briefly highlight four broad factors that are forcing psychotherapy practice and research to change: 1) the increasing use of pharmacotherapy and decreasing use of psychotherapy in mental health treatment; 2) the increasing influence of evidence-based medicine in shaping mental health practices; 3) the increasing promotion of biomedical explanations and the medicalization of mental health treatment; and 3) the decreasing funding available from government and private agencies for developing and testing novel and traditional psychotherapies.

2. Psychotherapy utilization is on the decline

Many patients and their family members express clear preferences for psychotherapy over medications. For example, surveys consistently show that depressed patients prefer psychotherapy ([Prins, Verhaak, Bensing, & van der Meer, 2008](#); [van Schaik et al., 2004](#)). Nevertheless, psychotherapy use is on the decline in comparative and relative terms. Although mental health treatment utilization has increased over recent years, this has mostly been accounted for by an increased number of patients receiving pharmacotherapy ([Ilyas & Moncrieff, 2012](#); [Marcus & Olfson, 2010](#); [Olfson & Marcus, 2009](#); [Olfson, Marcus, Druss, & Pincus, 2002](#); [Olfson, Marcus, Wan, & Geissler, 2004](#); [Zuvekas, 2005](#)). For example, from 1998 to 2007, psychotherapy alone (15.9% to 10.5%) and combined psychotherapy plus medication use (40.0% to 32.1%) decreased, whereas medication use alone (44.1% to 57.4%) increased in outpatient mental health facilities ([Olfson & Marcus, 2010](#)). The average number of psychotherapy visits also has decreased over time ([Akincigil et al., 2011](#); [Olfson, Marcus, Druss, & Pincus, 2002](#)). Fewer psychiatrists are providing psychotherapy in part due to increased financial incentives for providing pharmacotherapy ([Mojtabai & Olfson, 2008b](#)). In addition, psychotropic medications are increasingly being prescribed by primary care physicians instead of psychiatrists, further increasing their use ([Mojtabai & Olfson, 2010](#)). This increase in pharmacotherapy does not necessarily represent an increase in evidence-based practice, as witnessed by the following questionable trends: increased use of antipsychotic medications for anxiety disorders ([Comer, Mojtabai, & Olfson, 2011](#)), polypharmacy with poor risk-benefit profiles ([Mojtabai & Olfson, 2010](#); [Olfson & Marcus, 2010](#)), antidepressants prescribed for subthreshold or lower

levels of depression ([Mojtabai & Olfson, 2008a](#)), and medication use alone when psychotherapy is the preferable first-line treatment.

The increased use of psychotropic medications has been particularly evident in vulnerable populations, such as in children and adolescents. For example, prescriptions of antipsychotic medications for conditions including attention-deficit/hyperactivity disorder, pervasive developmental disorders, and conduct disorder are on the rise, even though these medications have potentially serious side effects and long-term outcomes have not been adequately studied in children ([Olfson & Marcus, 2010](#)). Of those children prescribed with antipsychotic medications, only 41% received at least one psychotherapy visit during the previous year. There are few areas in which an increase in psychotherapy utilization has been witnessed. For example, there was only a small increase in psychotherapy use for children/adolescents with depression following the black box warnings concerning increased suicidality risk from selective serotonin reuptake inhibitors in this age group ([Valluri et al., 2010](#)). Instead, many prescribers simply appeared to switch from using antidepressants to other classes of medications as witnessed by the rise in antipsychotic treatment in children as described above.

Unfortunately, this escalating use of medications has coincided with questions being raised about the specific efficacy (relative to inactive placebos) of the most frequently prescribed drugs, including antidepressant medications ([Fournier et al., 2010](#); [Kirsch et al., 2008](#)), and highlighting the underappreciated problems with the potential long-term safety and efficacy of increasingly prescribed classes of drugs such as antipsychotic medications ([Chouinard & Chouinard, 2008](#); [Ho, Andreasen, Ziebell, Pierson, & Magnotta, 2011](#); [Moncrieff, 2006](#); [Moncrieff & Leo, 2010](#)). In contrast, certain psychosocial interventions (e.g., cognitive-behavioral, mindfulness, interpersonal, brief dynamic therapies) have garnered considerable support over recent decades as standalone treatments for the most common mental health conditions, including depression, anxiety disorders, and substance abuse ([Barlow, 2008](#); [Butler, Chapman, Forman, & Beck, 2006](#); [Chambless & Ollendick, 2001](#)); and also have been shown to significantly improve the outcomes of patients already receiving pharmacotherapy for severe mental illness such as bipolar disorder and schizophrenia ([Dixon et al., 2010](#); [Miklowitz, 2008](#)). One might think that this deep and expanding evidence base would have promoted a similar increase in the use of psychosocial interventions that at least would have paralleled the one witnessed over the recent years by psychotropics, but it decidedly has not. Thus, a time that should have been a relative boon for psychotherapy based on scientific standards, has become more of a bust.

3. Evidence-based medicine and psychotherapy practice

As mentioned, what is particularly disconcerting is that this increase in psychotropic medication use at the expense of psychotherapy utilization has occurred during an era when the evidence justifying psychosocial interventions have expanded dramatically. The substantial and increasing research support for certain psychotherapies should have fit nicely with the rise of evidence-practices in mental health ([Satterfield et al., 2009](#)). Unfortunately, psychology has failed to fully capitalize on this opportunity. In medicine, evidence-based practice represents “the conscientious and judicious use of current best evidence from clinical care research in the management of individual patients” ([Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996](#)). In practice, this requires clinicians to integrate overlapping “spheres” of knowledge in their decision making that include research evidence, clinical experience, and patient preferences ([Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000](#)). For years, the American Psychiatric Association has been publishing detailed treatment guidelines based on research that provide instructions to clinicians for treating all the major psychiatric disorders ([American Psychiatric Association, 2006](#)). These guidelines provide decision rules for choosing among different treatments and levels of care. Several authors have noted that psychiatric treatment guidelines tend to be biased toward promoting medications and underemphasize

the role of psychotherapy as a frontline treatment even when clearly indicated (Cosgrove, Bursztajn, Krinsky, Anaya, & Walker, 2009; Cosgrove et al., 2012; Young, Weiberger, & Beck, 2001). In contrast, the United Kingdom's National Institute for Health and Clinical Excellence (www.nice.org.uk) publishes similar treatment guidelines in medicine and psychiatry that tend to place a greater emphasis on and promotion of non-medication treatments where appropriate. Other health disciplines such as nursing and social work have developed similar evidence-based practice proposals (Gambrell, 2005; Satterfield et al., 2009). Unfortunately, clinical psychologists have come late to the table of formal evidence-based practice guidelines, much to their detriment.

3.1. Empirically-supported treatments in psychology

The historical route toward evidence-based practices in psychology has been circuitous for a myriad of practical and political reasons (Herbert & Gaudiano, 2005). In 1993, the American Psychological Association's (APA) Division of Clinical Psychology formally entered the arena by forming a Task Force to define what eventually became labeled as "empirically supported treatments" (ESTs) (Chambless & Ollendick, 2001). The Task Force developed decision rules for defining different levels of support for psychotherapies, and formulated lists of treatments meeting these criteria. Lists of ESTs were intended as a *first step* toward the promotion of evidence-based practice in psychotherapy, which was considered a longer-term, aspirational goal. Some updates and additions to EST lists have occurred over the intervening years. For example, a list of evidence-based relationship factors was developed to complement the list of ESTs (Norcross, 2002). Currently, the criteria for defining ESTs are being revised and the list is in the process of being updated and expanded (see www.psychologicaltreatments.org).

Despite these good intentions of certain subgroups of researchers and clinicians, the effort to identify ESTs has proven quite contentious within the field. Many psychotherapists are opposed to the idea of the specification of evidence-based treatments in principle, viewing psychotherapy at least as much art as science and preferring to rely on clinical intuition and experience instead of scientific evidence (Welling, 2005). This viewpoint tends to ignore research showing that statistical information outperforms clinical judgment, and that combining clinical judgment and actuarial information tends to decrease the accuracy of predictions, not enhance them (Dawes, Faust, & Meehl, 1989). The tendency for therapists to rely on their personal experience instead of statistical information when making clinical decisions is related to common cognitive biases and heuristics found in all human beings. For example, Tversky and Kahnemann (1984) noted that individuals tend to rely more heavily on intuitive reasoning when events are characterized by uncertainty. Gaudiano, Brown, and Miller (2011b) found that intuitive thinking was associated with more negative attitudes toward research, less openness to research-based treatments, and less willingness to use them when indicated in a sample of therapists.

Others question the usefulness of scientific methods applied to clinical practice or clinical trials, in particular, for guiding psychotherapy at all. Critics are reluctant to allow evidence-based practices that they see as potentially reducing their clinical autonomy and by extension reimbursement for certain services that may not be currently supported (Cummings, 2006; Levant, 2004; Thomason, 2010; Westen, Novotny, & Thompson-Brenner, 2004). Opponents to ESTs frequently cite meta-analyses concluding that all credible psychotherapies produce essentially equivalent effects (Bardseth et al., 2013; Smith & Glass, 1977; Wampold et al., 1997), and therefore the prescription of one form of psychotherapy over another is misguided. Even though other meta-analyses indicate that there are, in fact, meaningful differences among different types of psychotherapy (Budd & Hughes, 2009; Hunsley & Di Giulio, 2002; Tolin, 2010), at least for some disorders, the so-called "Dodo bird" verdict (Luborsky, Singer, & Luborsky,

1975), in which everyone "wins" and deserves "prizes," is a convenient interpretation for continuing to use whatever practice a particular therapist prefers. Given the limitations in our knowledge base, it certainly seems prudent to proceed with caution and not recommend excessively proscriptive practices that overgeneralize beyond the data. However, even commonsense and basic attempts to move toward the process of basing practice as much as is reasonable on scientific evidence has been stymied at every turn by some factions.

Evidence-based psychologists have criticized the original EST criteria as well. For example, Herbert (2003) noted that trials comparing a psychotherapy against a waitlist control condition provide little information about efficacy beyond its basic safety; the criteria do not allow meaningful differentiation among various treatments or procedures; there are no mechanisms for identifying potentially harmful treatments or removing or refining treatments based on emerging research; and there is a lack of clear guidance regarding the methodological quality of trials considered as evidence. Furthermore, ESTs have resulted in an ever-expanding and increasingly unwieldy and impractical list of various brand-named, multi-component psychotherapies, each for different discrete conditions which make them difficult to implement. This situation has led Rosen and Davidson (2003) to argue that it would be more useful to focus on empirically supported *principles* of change (e.g., exposure for anxiety disorders) by distilling effective processes and strategies across treatment packages, rather than listing individual therapy approaches. Others have noted that there is insufficient attention given to testing and validating the underlying mechanisms of action of efficacious therapies or identifying potential moderators of treatment outcomes, which make them more or less effective for certain subgroups (Hayes, Levin, Plumb, Boulanger, & Pistorello, 2013; Kraemer, Wilson, Fairburn, & Agras, 2002; Murphy, Cooper, Hollon, & Fairburn, 2009).

Not surprisingly, then, ESTs appear to have had little influence on actual clinical practice. Research shows that many clinicians do not base their treatment decisions on the state-of-the-art in clinical research (Becker, Zayfert, & Anderson, 2004; Goisman, Warshaw, & Keller, 1999; Mussell et al., 2000; Sanderson, 2002; Stewart, Chambless, & Baron, 2012). For example, in an early national survey of 891 psychologists, Addis and Krasnow (2000) reported that 47% reported never using evidence-based treatment manuals in their clinical practice, and only 6% reported using them often. Furthermore, Freiheit, Vye, Swan, and Cady (2004) surveyed practicing psychologists and the majority were not using exposure techniques when treating anxiety disorders, which are considered essential for effective treatment. More recently, Stewart and Chambless (2007) surveyed 591 private practice psychologists and they reported primarily relying on their clinical experiences to inform treatment decisions rather than research evidence. Conversely, a significant proportion of clinicians frequently use nonempirically-supported and sometimes known iatrogenic techniques (Lilienfeld, 2007b). In their survey of 79 psychologists, Sharp, Herbert, and Redding (2008) reported that approximately 30% were using controversial and unsupported techniques at least sometimes in their practice. A survey of 191 social workers showed that 76% reported using at least one "novel unsupported therapy" within the past year (Pignotti & Thyer, 2009). Gaudiano, Brown, and Miller (2012) found that 42% of practicing therapists surveyed reported frequently using or being inclined to use unsupported "energy meridian therapies." Another complicating factor is that backgrounds and training experiences of "therapists" are more diverse than those who prescribe psychiatric medications (mainly psychiatrists, primary care physicians, nurse practitioners, and psychologists in limited locations/settings). Although prescribing medication is a highly regulated practice, anyone can use the term "therapist." Individuals providing psychotherapy can include those possessing anything from an undergraduate to a graduate degree and spanning various fields of study that have little or no relation to one another in terms of their philosophy, training model, or techniques (Singer & Lalich, 1996).

3.2. Evidence-based practice in psychology

Ultimately, EST lists can only be considered one component of the larger process of evidence-based practice (EBP), as the former provides no specific guidance as to how this information should be integrated with other knowledge (e.g., emerging research, idiographic assessment) in the clinical decision-making process, which is essential to this process (Spring, 2007). Therefore, ESTs may have proven a necessary, but perhaps stalled first step toward the future full realization of EBP in psychology. It was not until 2006 that a new APA Presidential Task Force published their formal conceptualization of EBP as it relates to the practice of psychology. Similar to the definition originally proposed by Sackett et al. (1996) in medicine, the Task Force defined EBP in psychology as “the integration of the best available research with clinical expertise in the context of patient characteristics, culture, and preferences” (APA Presidential Task Force on Evidence-Based Practice, 2006).

Some have noted that the APA's definition appears to over-emphasize the importance of clinical expertise and intuition rather than research evidence when making treatment decisions (Stuart & Lilienfeld, 2007). In contrast, others argue for a more *ideographic* compared with *nomographic* approach (e.g., EST lists, treatment guidelines), in which the specifics are left up to clinicians to sift through on their own (Spring, 2007). In this model, clinicians are trained in the principles of EBP and provided with resources outlining the research information upon which to base their decisions. Clinicians then decide for themselves and their patients which treatments to provide or not provide and in which order. In theory, this model makes sense. However, practice is a different matter entirely. In this more ideographically-oriented EBP approach, the clinician must attempt to fit research evidence with the individual characteristics of patients with little guidance as to how to do so, which may place undue burden on the treatment provider and thus prove onerous to actually implement. Furthermore, research indicates that when clinicians are left to make personalized treatment choices using statistical information combined with clinical intuition, that they tend to make poorer decisions compared with those based on actuarial predictions alone (Dawes et al., 1989; Garb, 2005). Thus, the actual utility of an ideographically-focused EBP model for changing clinicians' practices and attitudes for the better is yet to be determined. Unfortunately, the APA has been slow to propose more formal evidence-based treatment guidelines, which specify a more nomethetically-oriented EBP approach, such as those already published by the American Psychiatric Association and the National Institute for Clinical Excellence. In contrast, treatment guidelines provide specific recommendations for which treatment to use and when for different patient groups.

Unfortunately, as psychologists hem and haw about potential constraints placed on psychological practice by increasing scientific standards, and thus resist the notion of more prescriptive treatment guidelines, the healthcare system has already adopted such an approach, is implementing it, and is holding psychologists accountable to it through reimbursement restrictions (Cummings, 2006). As noted, the existing guidelines published by the medical community sometimes give short shrift to psychotherapy. The influences of evidence-based medicine and treatment guidelines are likely to only increase in the years to come. If psychology does not define treatment guidelines for itself, then by default others will do it for us, and probably not in a way that fully benefits and stays true to psychological practice and science. Fortunately, APA began developing psychology-specific treatment guidelines in 2010 and this work is in progress presently (Kurtzman & Bufka, 2011). However, the American Psychiatric Association began developing their treatment guidelines in 1991 and there will be much catching up to do.

4. The medicalization of mental health treatment

It also is not too surprising that empirically-supported psychosocial interventions often are underrepresented in mental health treatment

settings when one considers the increasing dominance of the biomedical model of treatment. Although limited money and resources are used to promote psychosocial interventions, this stands in stark contrast to the incredibly effective strategies that have been used to encourage non-psychological interventions such as medications and more recently “neuromodulation” therapies (e.g., deep brain stimulation, repetitive transcranial magnetic stimulation, vagus nerve stimulation) (Pandurangi, Fericola-Bledowski, & Bledowski, 2012) by other medical organizations and professions. A recent editorial appearing in the *British Journal of Psychiatry* warned that psychiatry is in the midst of a crisis as it focuses on an increasingly “technical paradigm” in an unwise effort to transform itself into an “applied neuroscience” (Bracken et al., 2012). The authors question this trend:

First, a growing body of empirical evidence points to the primary importance of the non-technical aspects of mental healthcare. If we are genuine about promoting ‘evidence-based’ practice, we will have to take this seriously. Second, real collaboration with the service user movement can only happen when psychiatry is ready to move beyond the primacy of the technical paradigm.

[[p. 431]]

Medicalization refers to the practice of redefining and treating non-medical problems as if they were such conditions, which tends to result in the decontextualization of problems and minimization of the importance of environmental factors (Kawachi & Conrad, 1996; Satel & Lilienfeld, 2010). There are several factors which drive the increasing medicalization of mental health problems and promotion of associated medical interventions. In this special issue, Deacon (2013) provides a comprehensive review of much of this literature; thus, we will only examine the points briefly.

4.1. Medicalization and anti-stigma campaigns

First, large-scale, public-oriented “anti-stigma,” “informational,” or “health literacy” campaigns often have promoted the reconceptualization of the causes of mental illness as biological in nature so that they will be viewed by mental health consumers and their family members as problems similar to other common illnesses such as diabetes. The idea is that redefining behavioral problems as medical ones will increase acceptance and use of medications or other invasive approaches such as electroconvulsive therapy (ECT) (Jorm, 2000; Pescosolido et al., 2010). However, data suggest that biological explanations for mental illness often produce complex and even paradoxical effects. For example, Rusch, Kanter, and Brondino (2009) found that stigma improved following the presentation of an environmental explanation for depression, but did not improve with the presentation of a biomedical model. Furthermore, preexisting beliefs about depression moderated the effects of these stigma targeting programs, such that those who started with a predominantly psychological view of depression and who received the biomedical model actually demonstrated *higher* levels of stigma post-intervention. Population-based studies also call into question the benefits of promoting a biological model of illness to reduce stigma. For example, Dietrich, Matschinger, and Angermeyer (2006) found that biological explanations for depression were associated with *increased* rates of stigma in a sample of 5025 German citizens. Other studies have found a similar relationship in other disorders, including schizophrenia (Angermeyer, Holzinger, & Matschinger, 2009; Angermeyer & Matschinger, 2005; Dietrich et al., 2004). Furthermore, in a large U.S. sample, Pescosolido et al. (2010) found that biological explanations for mental illness have increased over recent years, but have not resulted in a corresponding reduction in public stigma, and instead appear to have led to the increased desire for greater social distancing from psychiatric patients by the public.

Unfortunately, the rationale for and implementation of biologically-oriented anti-stigma approaches often amount more to rhetoric and

persuasion than science. The push to medicalize mental health (i.e., promoting a “disease” model) has, not surprisingly, appeared to reinforce the notion of “differentness” which is not effective for reducing stigma and can, in fact, increase it. For example, biological explanations appear to lead to attributions of lack of self-control, dangerousness, and unpredictability, thus producing the desire for increased social distancing (Dietrich et al., 2004). These unintended consequences were not entirely surprising given that little research was conducted prior to the implementation of mental health anti-stigma programs and they are based largely on untested assumptions. Although not effective for reducing stigma by-an-large at a population level, these public health campaigns have appeared to be effective for increasing the perceived need for more intensive and invasive treatment, such as psychotropic medications (Pescosolido et al., 2010). One must consider how much this was the desired goal in the first place. Fortunately, there are examples of anti-stigma campaigns that have learned from past mistakes and show promise for improving public attitudes about mental illness. For example, emerging research suggests that England’s “Time to Change” campaign, which did not promote biological conceptualizations of mental disorders but instead sought to facilitate social contact and inclusion of people with mental illness, may be having positive effects on public attitudes and behaviors (Evans-Lacko, Henderson, & Thornicroft, 2013).

4.2. Direct-to-consumer advertising of psychotropic drugs

A second major factor is direct-to-consumer advertising (DTCA), which is used to aggressively market brand name psychotropic medications to the public to increase their use. The pharmaceutical industry spends upwards of \$5 billion per year in the United States on DTCA (Frosch & Grande, 2010). Research suggests that patients’ requests for specific medications increase prescriptions received and can lead to unnecessary or inappropriate treatment (Gilbody, Wilson, & Watt, 2004; Hollon, 2005; Mintzes, 2002; Mintzes et al., 2002; Timko & Herbert, 2007). For example, a recent study concluded that DTCA has led to 15 times as many non-depressed patients being treated with antidepressants compared with depressed individuals (Block, 2007). Furthermore, Kravitz et al. (2005) used standardized patients and found that physicians were significantly more likely to prescribe medications when requested by the confederates (53% for specific request, 76% for general request) compared with when not requested (31%). The money and resources devoted to DTCA of psychotropic medications easily overwhelm any efforts to similarly promote psychosocial ones (Lacasse, 2005; Lacasse & Leo, 2005).

4.3. Insurance reimbursement practices

Third, reimbursement practices frequently provide financial disincentives for providing psychotherapy rather than psychotropics. In general, psychotherapy reimbursement rates have decreased over recent decades and mental health spending has remained lower than other healthcare spending (Frank, Goldman, & McGuire, 2009; Rupert & Baird, 2004). Rates of depression treatment by psychologists have declined and treatment by physicians has increased (Olfson, Marcus, Druss, Elinson, et al., 2002). As discussed, there are strong financial disincentives for psychiatrists to provide medications compared with evidence-based psychotherapies (Mojtabai & Olfson, 2008b). For example, a psychiatrist can bill up to four patients for pharmacotherapy (15 minute medication check visits) compared with one hour-long psychotherapy session. It is not surprising, then, that surveys show that fewer and fewer psychiatrists provide psychotherapy (Druss, 2010; Mojtabai & Olfson, 2008b). Also, most patients are being treated by primary care doctors who rarely offer psychosocial treatment alternatives (Mojtabai & Olfson, 2008a).

4.4. Focus on short-term over long-term outcomes

In addition, the emphasis in psychiatric treatment, at least in the U.S., is to focus on short-term outcomes often at the expense of long-term success. Therefore, treatments that are perceived to be less costly and require less time and effort upfront are generally favored over those that are more costly initially but then produce savings over the longer-term (Sava, Yates, Lupu, Szentagotai, & David, 2009). For example, compare cognitive behavior therapy (CBT) (or other evidence-based psychotherapies) versus antidepressant medications for depression. Psychosocial treatment for depression may be somewhat more expensive in the short-term compared with medications in terms of reducing overall symptoms (based on rating scales originally designed for drug trials) (McHugh et al., 2007; Revicki et al., 2005; Vos, Corry, Haby, Carter, & Andrews, 2005). However, patients receiving CBT do just as well after treatment *termination* as patients on *maintenance* antidepressant medication (Hollon, 2005), which confers a considerable economic advantage to CBT over medication as a firstline treatment for depression. Furthermore, recovered patients are at significantly increased risk of relapse following antidepressant *discontinuation* compared to those who recovered and then discontinued other treatments, such as CBT or even pill placebo (Andrews, Kornstein, Halberstadt, Gardner, & Neale, 2011). Unfortunately, antidepressants are often viewed as the “gold standard,” frontline treatment for depression, ignoring the long-term benefits of alternative treatments in terms of both outcomes and cost savings (Antonuccio, Danton, & DeNelsky, 1995; Spielmans, Berman, & Usitalo, 2011). In addition to depression, evidence-based psychotherapy is often more cost-effective than medications for anxiety disorders (Heuzenroeder et al., 2004). Psychosocial interventions are further underutilized as combination treatments in which they confer similar advantages for other disorders as well such as schizophrenia (Vos, Haby, et al., 2005).

Admittedly, the fact that practicing therapists have frequently resisted the push toward evidence-based practice has contributed to the falling reimbursement rates and increased medication prescribing. In addition, critics note that there simply are not enough competent therapists available to deliver ESTs. This is true, but then the logical course of action would be to advocate for considerable resources and funds to be spent on these services. This recently was done in the United Kingdom where the government invested hundreds of millions of dollars to train thousands of therapists to deliver CBT (Department of Health, 2011). However, valuable resources are being diverted elsewhere in the United States as described below.

5. Research funding climate change

Many speak of “Big Pharma” with its considerable money and resources spent on the development and promotion of psychotropic medications (Sharfstein, 2005). Of course, this is in stark contrast to the situation with psychotherapy. There is no “Big Psychotherapy” devoted to developing, testing, and promoting psychological interventions as there is with pharmaceuticals. Traditionally, much of the psychotherapy development process has been accomplished using minimal or “free” resources (e.g., student therapists, trainees) and conducted in clinical psychology graduate training programs. However, over the past several decades, major funding for psychosocial interventions has come through sources such as the National Institutes of Health (NIH) and to a lesser extent private foundations (Chevreul et al., 2012). The National Institute of Mental Health’s (NIMH) Depression Collaborative Research Program (Elkin et al., 1995) was a landmark study comparing psychotherapy versus medications for depression (showing basically equivalent short-term outcomes and certain longer-term advantages for psychotherapy), ushering in a new wave of funding to psychotherapy studies by governmental agencies over subsequent years. Further stimulating novel psychotherapy research, the National Institute for Drug Abuse (NIDA) developed a “Stage Model” of

behavioral treatment development, subsequently adopted by other NIH institutes, which allowed for the creation of novel psychosocial interventions that could be refined and tested over time from development to efficacy trials through effectiveness studies (Carroll & Onken, 2005; Rounsaville & Carroll, 2001). The evidence base for CBT exploded over the intervening years given this infusion of funding, and this approach has become increasingly dominant because of the data favoring CBT's proven safety, acceptability, efficacy, and effectiveness for a wide variety of significant public health problems (Butler et al., 2006; Chambless & Ollendick, 2001). However, emerging changes threaten this historical trend.

Recently, NIMH (National Advisory Mental Health Council, 2010) has strategically shifted toward devoting more funding for research and development (R&D) for novel psychotropic medications. Although R&D is traditionally the domain of private industry due to the high costs (and equally high financial payoffs), pharmaceutical companies have signaled a move away from developing new psychiatric medications due to a slew of increasingly damaging lawsuits over industry fraud (Francis, Feeley, & Voreacos, 2012) and the lack of success developing novel medications despite spending billions of dollars over decades for this purpose (Sanders, 2013). Pharmaceutical companies spend roughly half the total NIH budget on R&D alone each year, so NIH will not be able to totally take over this enterprise, nor would it want to (Insel, 2011). Nevertheless, increasing NIH funding of medication R&D will not occur in a vacuum, and thus will leave less money available for developing new psychosocial interventions. In a time of high national debt and deficits, one wonders whether members of Congress and the public fully appreciate that this proposal effectively results in government subsidizing of the pharmaceutical industry, from which big business will benefit handsomely if new medications are identified. Unfortunately, governmental agencies have failed to devote the kinds of money and resources to psychosocial interventions to help balance those being devoted to psychotropics by industry, and the trend is for this practice to continue to worsen in the years ahead with NIH's refocus on developing and testing novel drugs instead of novel psychosocial interventions. Coupled with NIMH's additional push to redefine psychiatric diagnosis in ways that artificially emphasize the biological correlates of disorders (Insel et al., 2010), an opportunity cost exists in which an increased focus on redefining mental health problems as medical diseases and developing somatic treatments will likely consume more funds, leaving less for psychosocial interventions. Other than governmental agencies, there is really no one else who can pick up the bill for this kind of needed psychosocial research endeavor.

A recent editorial in the journal *Nature* highlighted what was called the "scandalous" underfunding of psychosocial research by government agencies resulting in a "therapy deficit." The editorial concluded:

Many funding agencies around the world are too keen solely to support mechanistic investigations with potential long-term payoffs, and too unwilling to appreciate that part of their portfolio should be oriented towards identifying immediately effective psychological interventions. Success in this area would further encourage policymakers to enhance much-needed access to treatment for psychiatrically ill individuals. After all, many of these people are taxpayers who ultimately fund research into brains and minds.

[(Therapy deficit, 2012, p. 474)]

Others have urged that psychiatry return its attention to the more social aspects of medicine (Kleinman, 2012).

6. Overview of the special issue on the future of evidence-based psychotherapy

It is against this challenging backdrop that we brought together top scholars in this special issue to analyze the current state of affairs and to propose new models and recommendations for addressing

some of the challenges to psychotherapy's future. Each contributor was asked to address a particular question related to the future of evidence-based psychotherapy: 1) What are the problems with modern psychiatric diagnosis and its impact on treatment (Wakefield, 2013)? 2) How is the biomedical model impacting psychotherapy research and practice (Deacon, 2013)? 3) What should we expect and not expect psychotherapy to do for us (Goldfried, 2013)? 4) Are there new models of psychotherapy development and testing that hold more promise (Hayes, Long, Levin, & Follette, 2013)? 5) How do we train students and practitioners in evidence-based practices in psychology (Lilienfeld, Ritschel, Lynn, Cautin, & Litzman, 2013)?

The first article by Wakefield (2013) critiques some of the fundamental assumptions of the Diagnostic and Statistical Manual of Mental Disorders (DSM). Wakefield demonstrates how proposed changes in the DSM-5 will further perpetuate problems related to the overpathologizing of normal behavior. To illustrate his case, Wakefield highlights the removal of the bereavement exclusion criterion from the major depressive disorder diagnosis in the DSM-5 (Living with grief, 2012). He walks the reader through the research on the bereavement exclusion, and convincingly demonstrates that not only should this criterion be kept as part of the diagnosis, but that it should also be further expanded. His program of research indicates that there are many other normal reactions to common stressors, other than the death of a loved one, that provoke similar emotional responses that do not correspond with our understanding of clinical depression as an abnormal behavior. The issues that Wakefield describes have profound implications for psychosocial treatment. The tendency of successive revisions of the DSM to "criterion creep" (Rosen, Lilienfeld, Frueh, McHugh, & Spitzer, 2010) and define increasingly diverse human behaviors as "disordered" further perpetuates the problem of the inappropriate use of medication treatments in lieu of psychotherapy and counseling. Wakefield's article also provides new insights into how psychiatric diagnosis can be transformed into a more contextual approach, based on his "harmful dysfunction" analysis (Wakefield, 2006), which would better promote the use of evidence-based psychosocial treatment where indicated.

The next article by Deacon (2013) provides a provocative analysis of the myriad negative influences of the biomedical model on psychological research and practice. He points out that the increasing rise of the biomedical model in mental health has corresponded with the notable failure to either develop diagnostically useful biological tests or more effective psychotropic medications over recent decades. Deacon argues that the increasing use of psychotropic medication has not corresponded with decreased rates of mental disorders and instead has led to common problems like depression being reconceptualized as more chronic and treatment resistant than previously thought (which he proposes may be at least partly the result of ineffective/iatrogenic treatments). He also notes that a positive influence of the biomedical model has been to foster the push within clinical psychology to promote its own empirically-supported treatments. However, he warns that balance needs to be restored to the system by a return to a true biopsychosocial model and rejection of the reductionistic biomedical model. What becomes evident through Deacon's analysis is that the practices that dominate in many psychiatric settings today have questionable adherence to the concept of "evidence-based medicine." As Bracken et al. (2012) recently noted, treating mental health problems as medical diseases does no good if it results in ignoring or brushing aside the thorny epistemological issues involved or takes us away from context or mental health consumer needs, which will only serve to hinder effective treatment efforts.

Turning from the limitations in pharmacotherapy to the limitations in psychosocial interventions, Goldfried's (2013) contribution digs deeper into the nature of psychotherapy itself, discussing what we should expect and perhaps not expect of it. He warns that we must bring more humility to our understanding of psychosocial interventions. Although much of the empirically-supported treatment

movement focuses on technical distinctions between psychotherapies, Goldfried notes that the working alliance between the therapist and client is frequently underappreciated in research and implementation efforts. He also argues that much of the psychotherapy research is not relevant to practitioners, which hinders the uptake of treatments in the community. He concludes with recommendations for fostering stronger research-practice links. Goldfried's contribution reminds us that often our expectations for psychotherapy are out of sync with the nature of the practice. Although we conduct research on DSM diagnoses and measure outcomes based on symptom scales designed for assessing the effects of medications, clients seek therapy for more diverse problems and reasons, and better respecting and developing more sensitive assessments of these processes has the potential to lead to truly improved psychological interventions.

Hayes Long, et al. (2013) turn their attention to the development of new psychotherapies, and challenge the dominant models of treatment development research by envisioning a bold new path. They argue that the current "Stage" model favored by NIH is too rigid and linear in practice and a more "reticulated" or networked approach is needed. Using examples from the development of Acceptance and Commitment Therapy (ACT) (Hayes, Strosahl, & Wilson, 2012), these authors recommend that treatment development should: 1) focus more on practical issues of dissemination and impact from the beginning; 2) better clarify underlying philosophical assumptions and links to basic science; 3) target variables that can best be manipulated by psychosocial interventions (versus pharmacological ones); 4) investigate mediators and moderators of treatment outcomes throughout the process; and 5) foster links between basic and applied researchers based on identifying mutual interests of both groups. Some may question the feasibility of Hayes et al.'s admittedly more complex treatment development model. However, the authors point out that these features already have been demonstrated in the success of ACT, the development of which occurred primarily (at least initially) outside the medically-oriented grant funding system.

Finally, Lilienfeld et al. (2013) address the challenges involved in getting clinicians to adopt an evidence-based practice model and how to address them. The authors dispel many prevalent myths about EBP, and argue that at least some of the root causes of resistance among clinicians involve too frequently ignored attitudinal and cognitive barriers that are common to all human beings. For example, Lilienfeld et al. note that clinicians (and all humans) tend to operate with a kind of "naïve realism," in which they believe that they can draw causal conclusions about the effects of a treatment based on observation and experience alone. These authors emphasize the need to focus more on training clinicians in the *process* of science and critical thinking, rather than just the *products* or content of scientific knowledge (e.g., ESTs). While acknowledging the many practical barriers to adopting EBP (e.g., time and training), they also emphasize that changes need to be made to our graduate school curricula. Lilienfeld et al. urge us to use principles from psychological science to promote behavioral changes among clinicians. It becomes obvious from Lilienfeld et al.'s discussion that these training and educational efforts will be best accomplished as far "downstream" as possible. For example, it will be important to combat myths about EBP and teach its importance while students are first forming their attitudes and developing their skills, such as at the undergraduate level (or perhaps even high school level), to impact future practice trajectories more effectively. Educating future psychologists also will entail enticing a new crop of scientifically-minded young minds into the field, which may require changes in recruitment strategies and requirements (e.g., science and math coursework). Finally, behavior change strategies may need to be implemented as part of our continuing education programs to better influence clinicians' behaviors by addressing underlying emotional and attitudinal biases that impede learning (Gaudiano et al., 2011a).

7. What might the future hold for psychotherapy research and practice?

Danish physicist, Niels Bohr once quipped: "Prediction is very difficult, especially if it's about the future." We do not claim to possess any unique divination skills that would permit us to see clearly into the future of psychotherapy. However, we do believe that there are a number of possible changes to psychotherapy research and practice that should be considered. Several authors have argued that "psychotherapy" already has been evolving as a concept and will continue to do so in various new and interesting ways. For example, Kazdin and Blase (2011) note that even though the field has made great strides toward developing effective psychological interventions, their effects on actually reducing the burden of mental illness have been surprisingly negligible. Perhaps this is the case because most development and research efforts have historically been focused on individual psychotherapy, which many consumers do not receive for a multitude of prohibitive factors (e.g., cost, availability, acceptability, feasibility, preferences, logistical challenges). Kazdin and Blase further argue that any hope to reduce mental illness at a population level will require a dramatic rethinking of how interventions are delivered, such as taking advantage of new technologies, implementing interventions in novel settings and with nontraditional providers, exploring various self-help formats, and utilizing larger-scale media campaigns. Presenting similar concerns, McHugh and Barlow (2010) point out that treatment dissemination and implementation efforts have lagged far behind our success in developing effective psychological treatments. However, they note that increasingly funds are being allocated by federal and state agencies toward improving the implementation of evidence-based practices in mental health, opening up new opportunities to get much needed psychological services to consumers. Next, we turn our attention to the potential opportunities and pitfalls for psychotherapy research and practice that lie ahead.

7.1. Implementation and dissemination issues

There are several potentially beneficial developments related to psychotherapy that may be realized in the near future if current trends continue. First, more advanced, smaller, and relatively cheaper technologies already are providing intriguing possibilities for psychotherapy delivery. For example, smart phones and other mobile devices have prompted innovative new assessment and treatment approaches (Shiffman, Stone, & Hufford, 2008; Wenzel & Miller, 2010). Although some psychosocial variables are static, others are event-cued, meaning that they change in response to daily experiences and may dynamically fluctuate. However, these fluctuations are not well understood as traditional research methods have relied mainly on retrospective self-report assessment. Ecological momentary assessment (EMA) is a dynamic procedure that collects data in natural settings in real-time through the use of brief assessments conducted via mobile electronic devices. EMA can improve our ability to target malleable psychosocial risk factors or identify novel targets for future intervention. For example, EMA has demonstrated incremental validity over traditional retrospective reports in assessing symptoms associated with schizophrenia, with one study finding that spikes in daily paranoia were captured via EMA in patients who reported low paranoia in traditional, retrospective assessments (Oorschot, Lataster, Thewissen, Wichers, & Myin-Germeys, 2011). EMA can provide the groundwork for ecological momentary interventions (EMI) that use these same personal electronic devices to deliver treatments that can be more personalized based on individuals' reports of what they are experiencing in the moment. Thus, there is great potential for these strategies to be used either as stand-alone interventions for less severe problems, or as adjunctive interventions used between treatment sessions to extend the reach of the therapist.

In addition, as noted by [McHugh and Barlow \(2012\)](#), there is a renewed focus on addressing implementation issues earlier in the development process to ensure that new treatments identified as efficacious will be more readily transportable in the near future. Efforts are underway to train therapists in the United Kingdom in CBT for depression and anxiety ([Frosch & Grande, 2010](#)); a similar project is being conducted to train therapists to implement evidence-based therapies in the U.S. Veterans Administration ([Ruzek, Karlin, & Zeiss, in press](#)). [Hayes, Long, et al. \(2013\)](#) similarly urge changes to treatment development research so that these issues are addressed earlier on in the process and not left to the end as an afterthought.

Although the aforementioned benefits may come to fruition, there are predictable downsides to some of these developments. By focusing attention on the potential drawbacks, as well as benefits, there are opportunities to prevent any unintended negative consequences. Foremost, if recent trends continue, we might see decreased influence and utilization of traditional psychotherapy, despite the substantial evidence of efficacy and effectiveness supporting its use. Although it is true that making psychological services more disseminable and feasible is a laudable goal that should continue to be pursued to improve accessibility, this effort should not come at the cost of reducing the use of traditional psychosocial interventions that are already well-supported. In other words, the goals of promoting more efficacious versus feasible/disseminable psychosocial interventions should not be mutually exclusive. For example, new technology such as EMI should not function merely to take the clinician out of the equation to reduce costs. There is ample research documenting that the interpersonal context of therapy is one of its most curative functions of psychotherapy ([Norcross, 2002](#)), as demonstrated by the findings that guided self-help is more effective than non-guided self-help ([Gellatly et al., 2007](#)). It would be unfortunate for us to prematurely abandon promising psychosocial approaches that require a greater investment of resources and time simply because they do not fit into a largely dysfunctional healthcare system that often fails to meet the true needs of consumers.

Furthermore, the over focus on implementability and cost-effectiveness of psychosocial interventions at the expense of efficacy represents a double standard that is not consistently applied to other psychiatric treatments. The cost of drug and medical device development and testing has been astronomical, even though many of these endeavors have failed to produce treatments that are superior compared with older, less costly treatments, as in the case of typical versus atypical antipsychotic medications ([Crossley, Constante, McGuire, & Power, 2010](#)) or repetitive transcranial magnetic stimulation versus ECT for depression ([Eranti et al., 2007](#)). If such a standard were actually to be applied fairly, we would largely abandon novel drug and device development and focus almost exclusively on psychosocial treatments which are less costly over time. However, as described above, the trend actually is going in the reverse direction. We need to direct money and resources into designing the best possible treatments and simultaneously work to address systematic barriers to implication as these treatments emerge.

7.2. Increasing interdisciplinary collaboration

Second, there are new opportunities to consider in the trend for closer interdisciplinary collaboration among various medical and mental health treatment providers and an integration of psychosocial care with other forms of medical treatment. Changes in U.S. healthcare law, brought about by the Patient Protection and Affordable Care Act of 2010, will promote closer collaboration and integration among providers, including psychologists ([Rozensky, 2011](#)). For example, collaborative care management for patients with depression and co-occurring medical illnesses involves a team approach that includes the use of nonmedical specialists to augment traditional medical treatment. Such approaches have been found to be more beneficial and cost-effective compared with usual medical care ([Gilbody, Bower, Fletcher, Richards, & Sutton, 2006](#); [Katon et al., 2012](#)).

Although closer interdisciplinary collaboration in research and practice has certain advantages, it also may have the negative effect of pushing psychologists into more peripheral or adjunctive roles in such settings where they have traditionally been able to take the lead. As increasing numbers of patients are shepherded toward psychotropic medications, psychotherapy will likely continue to become more of an adjunctive or secondary rather than primary treatment, regardless of evidence to the contrary. As funding increasingly pushes researchers to study medications and include neuroimaging and genetics methods into psychosocial research, psychologists may find themselves more in the role of Co-Investigator instead of Principal Investigator doing “secondhand science” ([Teitelbaum & Pellis, 1992](#)) as other skills and expertise becomes more desirable by some. In a new age of “integrated” care and “interdisciplinary” research, what will happen to the study and use of psychosocial interventions for their own inherent value that stretch far beyond medical contexts? It will be essential to continue to illustrate and advocate for the unique abilities and skills that psychologists bring to the table.

7.3. Psychosocial versus biological mechanisms and treatments

Third, the future should hold an improved understanding of the interplay among psychological and biological constructs that relate to mental health disorders and outcomes. The debate over the biological bases of psychiatric disorders has become even more salient in the context of the next major revision of the DSM that recently was completed. The original goal of the DSM-5 was to develop specific criteria based on biomarkers for the major mental disorders ([Kupfer, First, & Regier, 2002](#)). However, this plan had to be abandoned early on in the process because, as [Kupfer and Regier \(2011\)](#) were forced to admit, the science simply did not support this approach as no reliable and valid biomarkers for psychiatric disorders have been identified to date. It would have seemed prudent at this point to question why billions of dollars of research conducted by the international scientific community over several decades have failed to produce clear results supporting a biological conceptualization of mental disorders. However, instead of examining the underlying assumptions of a biological research agenda that has amassed such a large amount of disconfirming evidence, the decision instead was to move diagnostic research into a different direction so that it takes place outside the confines of the current DSM system.

The NIMH recently proposed an alternative to the DSM called Research Domain Criteria (RDoC) ([Insel et al., 2010](#)). These alternative criteria are designed to move beyond the DSM classification model of symptoms and syndromes and toward developing an understanding of the purported biological mechanisms of psychiatric-related dysfunction. A key feature of the RDoC system is that it is dimensional rather than categorical and describes the range of behavior from normal to abnormal. In addition, the RDoC research framework is structured as a matrix, defining “constructs” that represent the functional dimensions of behavior (e.g., Arousal/Regulatory Systems) as well as the “units of analysis” (e.g., self-report, genes, neurotransmitters) or variables used to study these dimensions. In another departure from DSM, this approach emphasizes neural “circuitry” as the defining and limiting underlying dimension of observable behavior. As further research is conducted by NIMH using this framework, we are likely to learn more about the interaction between psychosocial variables and neurobiological ones, even though we might not always find the types of relationships that some expect ([Cowen, 2008](#)).

The potential downside to RDoC is that the biomedical model in psychiatry will dictate research agendas and decrease the study of psychological constructs in their own right. The focus on biological correlates of behavior is resource and cost-intensive, and increasingly will require that the study of psychosocial variables be linked to biological processes if they are to be studied at all. This will effectively serve to limit the amount and scope of new psychosocial research

supported in a world of finite (and ever diminishing) funding and resources. A perusal of the RDoC research matrix highlights the emerging problem. The seven “units of analysis” included in the matrix include five biologically-oriented categories (e.g., genes, molecules, cells, neural circuits, and physiology), compared with only two traditionally behavioral ones (i.e., behaviors and self-report). This clear disparity in the RDoC conceptualization has little scientific justification and appears to be more ideological in nature. Such linking of biological and psychosocial variables is costly (e.g., neuroimaging, psychophysiological measurements, genetic testing) and may not be scientifically justified or the most reasonable expenditure of limited resources in many cases.

The problem with such a biologically-skewed approach is not only practical, but also conceptual. It is important to differentiate between constitutive reductionism, which simply acknowledges that mental processes are fundamentally rooted in the brain (i.e., mind-body monism), versus eliminative reductionism, which seeks to replace psychosocial interpretations with biological ones (Dennett, 1995; Lilienfeld, 2007a). The problem comes with the latter type of reductionism, which assumes that the analysis of brain functioning is superior to and supersedes all other types of analyses of psychological phenomena. Recently, Miller (2010), a noted clinical neuroscientist, highlighted the emerging problem of eliminative reductionism witnessed in present-day psychiatry and clinical psychology. He noted the inherent philosophical confusion apparent in many current efforts that attempt to reduce complex human behaviors into simplistic biological variables without appreciating the theoretical and conceptual issues that this entails. Miller further argued that neuroimaging research attempting to localize functioning and much of present-day behavioral genetics have produced failures, or perhaps even worse, conceptually flawed conclusions not supported by the data that merely cloud thinking. Many of these endeavors may be so fundamentally flawed that they are unlikely to lead to any true scientific advancements and are more likely to needlessly waste money and time that could be better spent (Risch et al., 2009).

Finally, changing priorities in funding agencies such as NIMH, NIDA, and the National Institute of Alcohol Abuse and Alcoholism (NIAAA) will likely mean that fewer new psychosocial interventions will be in the evidence-based treatment “pipeline” and thus available in the future. Narrowing of the treatment pipeline could be a good thing if this weeds out needless interventions with few substantive differences or advantages. However, it is difficult to accomplish this goal without failing to support many truly novel and efficacious psychosocial interventions that may not be given a chance to develop and prosper in the first place. If current trends hold, psychosocial treatment development will garner less and less funding support, perhaps leading to future research increasingly being conducted in university psychology programs with more limited resources. One advantage to this is that researchers will be freer to test a broader range of treatments even if they fail to enthrone a medically-dominated scientific review committee. However, it is important to consider that the quality of the evidential support for a treatment is critical for ultimately determining its use and promotion as part of evidence-based practice and what the healthcare system will support in the future. Larger-scale, better-controlled studies are favored over smaller-scale studies in determining the evidence-based foundation for mental health treatments. Without adequate funding, traditional psychosocial interventions will be at a disadvantage compared to psychotropic medications or other medical interventions that may receive more financial support from government and industry. Consider the scenario in which NIMH had never funded large-scale research on CBT early on. Would CBT enjoy the same standing on evidence-based treatment lists and guidelines as it currently does alongside medications? What is the next form of CBT that will emerge in the upcoming decades, and will it enjoy similar standing among the

various psychiatric treatments if it fails to receive the same level of support enjoyed by its predecessors?

8. Where do we go from here?

The picture we paint is serious and challenging and will require a concerted effort. As practicing clinical psychologists and researchers, we believe that it is important to face the challenges ahead and not to bury our heads in the sand. We eschew avoidance as a strategy and instead encourage a pragmatic approach that faces realities while advocating for important mutually beneficial interests. Historically, psychology as a profession has had difficulties differentiating between true compromise and mere acquiescence to opposing influences outside the field. Psychologists often focus too much on “getting along” instead of advocating strongly for their interests and perspectives. At the same time, there has been considerable difficulty finding ways for psychology to speak as one voice given the diversity of traditions within the field itself. This tendency within psychology to fail to put forward a unified front has left room for other professions to wage aggressive media campaigns to change public thinking in ways that argue against psychology and ultimately do a disservice to consumers and their families. One issue that will be critical is the need for greater and more effective evidence-based psychotherapy advocacy efforts.

We call on the APA, Association for Psychological Science, and other allied organizations (e.g., Association for Behavioral and Cognitive Therapies, Society for Psychotherapy Research) to explore how we can effectively use counter-messaging to dispel the myths and misinformation that is in the public domain about the nature and treatment of mental health problems, as well as develop media campaigns that educate the public about psychosocial treatments as alternatives and options for consumers. Controversy surrounding the proposals regarding changes in the forthcoming DSM-5 provoked vocal criticism from inside (Frances & Widiger, 2012) and outside of psychiatry (British Psychological Society, 2011), and seemed to be effective in preventing some of the proposed changes from being adopted due to the messy and embarrassing public and professional dissent (Frances, 2012). It also appears that strong opposition voiced by some researchers (Johnson et al., 2011; Meyer, 2010) associated with NIAAA helped to prevent the proposed merging of the institute with NIDA (Kaiser, 2012), which many investigators viewed as a development that would threaten important areas of addiction research that have an profound public health impact. Similar efforts at counter-messaging hold the possibility of turning back the tide against psychotherapy under-utilization. Some have proposed that psychology needs its own form of direct to consumer advertising (Santucci, McHugh, & Barlow, 2012) to compete in an ever challenging climate of treatment choices, and we agree with these efforts. APA is starting this process, as witnessed by its media campaign called “Psychotherapy Works” to combat drug advertising (see www.apa.org/helpcenter/psychotherapy-works.aspx). At the same time, such promotion efforts must be based on sound evidence, so as not to repeat the mistakes of the past and undermine future credibility. For example, the APA’s recent “Recognition of Psychotherapy Effectiveness” (2012) statement explicitly endorsed the Dodo bird verdict, or the interpretation that there are no meaningful differences in efficacy among psychotherapies (Luborsky et al., 2002). The APA statement failed to recognize data indicating significant differences among psychotherapies for some conditions (Tolin, 2010). Furthermore, we need not only convince consumers and their family members, but members of Congress as well. Lobbying efforts in Congress and public education campaigns will help to encourage NIH and other governmental agencies to spend more money and resources on needed psychosocial research and less on psychotropic medications, which most believe have more than enough support from private industry already.

Identifying and bringing on board allies in related fields will be key, including counselors, social workers, nurses, and psychiatrists. This should not be confused with an “anti-psychiatry” campaign as some have tried to label honest criticism of inappropriate treatment practices (Whitley, 2012), but is instead a pro evidence-based medicine campaign (Bracken et al., 2012). Such efforts to promote effective psychosocial treatment in a more unified way may even help to ease the perpetual problem of the scientist–practitioner gap. In researchers and clinicians advocating strongly for their mutual interests (i.e., the promotion of appropriate psychosocial treatments when indicated), the field has the opportunity to create a superordinate goal that will facilitate greater cooperation between its various factions. The bottom line is that we need to spend much more time and energy devoted to identifying ways of conducting needed research and getting effective psychological interventions to consumers. The articles contained in this special issue are one attempt to bring this discussion to the forefront and to tackle the difficult challenges, as well as opportunities, that lie ahead.

References

- Addis, M. E., & Krasnow, A. D. (2000). A national survey of practicing psychologists' attitudes toward psychotherapy treatment manuals. *Journal of Consulting and Clinical Psychology*, 68, 331–339.
- Akincigil, A., Olfson, M., Walkup, J. T., Siegel, M. J., Kalay, E., Amin, S., et al. (2011). Diagnosis and treatment of depression in older community-dwelling adults: 1992–2005. *Journal of the American Geriatrics Society*, 59, 1042–1051.
- American Psychiatric Association (2006). *American Psychiatric Association Practice Guidelines for the treatment of psychiatric disorders: Compendium 2006*. Arlington, VA: Author.
- American Psychological Association (2012). Recognition of psychotherapy effectiveness. <http://www.apa.org/about/policy/resolution-psychotherapy.aspx>
- Andrews, P., Kornstein, S., Halberstadt, L., Gardner, C., & Neale, M. C. (2011). Blue again: Perturbational effects of antidepressants suggest monoaminergic homeostasis in major depression. *Frontiers in Psychology*, 2 (Retrieved from http://www.frontiersin.org/Evolutionary_Psychology_and_Neuroscience/10.3389/fpsyg.2011.00159/abstract)
- Angermeyer, M. C., Holzinger, A., & Matschinger, H. (2009). Mental health literacy and attitude towards people with mental illness: A trend analysis based on population surveys in the eastern part of Germany. *European Psychiatry*, 24, 225–232.
- Angermeyer, M. C., & Matschinger, H. (2005). Causal beliefs and attitudes to people with schizophrenia. Trend analysis based on data from two population surveys in Germany. *British Journal of Psychiatry*, 186, 331–334.
- Antonuccio, D. O., Danton, W. G., & DeNelsky, G. Y. (1995). Psychotherapy versus medication for depression: Challenging the conventional wisdom with data. *Professional Psychology: Research and Practice*, 26, 574–585.
- APA Presidential Task Force on Evidence-Based Practice (2006). Evidence-based practice in psychology. *American Psychologist*, 61, 271–285.
- Baardseth, T. P., Goldberg, S. B., Pace, B. T., Wislocki, A. P., Frost, N. D., Siddiqui, J. R., et al. (2013). Cognitive-behavioral therapy versus other therapies: Redux. *Clinical Psychology Review*, 33, 395–405.
- Barlow, D. H. (2008). *Clinical handbook of psychological disorders: A step-by-step treatment manual* (4th ed.). New York: Guilford.
- Becker, C. B., Zayfert, C., & Anderson, E. (2004). A survey of psychologists' attitudes towards and utilization of exposure therapy for PTSD. *Behavior Research and Therapy*, 42, 277–292.
- Block, A. E. (2007). Costs and benefits of direct-to-consumer advertising: The case of depression. *Pharmacoeconomics*, 25, 511–521.
- Bracken, P., Thomas, P., Timimi, S., Asen, E., Behr, G., Beuster, C., et al. (2012). Psychiatry beyond the current paradigm. *The British Journal of Psychiatry*, 430–434.
- British Psychological Society (2011). Response to the American Psychiatric Association: DSM-5 Development. http://apps.bps.org.uk/_publicationfiles/consultation-responses/DSM-5%202011%20-%20BPS%20response.pdf
- Budd, R., & Hughes, I. (2009). The Dodo bird verdict—controversial, inevitable and important: A commentary on 30 years of meta-analyses. *Clinical Psychology & Psychotherapy*, 16, 510–522.
- Butler, A. C., Chapman, J. E., Forman, E. M., & Beck, A. T. (2006). The empirical status of cognitive-behavioral therapy: A review of meta-analyses. *Clinical Psychology Review*, 26, 17–31.
- Carroll, K. M., & Onken, L. S. (2005). Behavioral therapies for drug abuse. *The American Journal of Psychiatry*, 162, 1452–1460.
- Chambless, D. L., & Ollendick, T. H. (2001). Empirically supported psychological interventions: controversies and evidence. *Annual Review of Psychology*, 52, 685–716.
- Chevreul, K., McDaid, D., Farmer, C. M., Prigent, A., Park, A. L., Leboyer, M., et al. (2012). Public and nonprofit funding for research on mental disorders in France, the United Kingdom, and the United States. *The Journal of Clinical Psychiatry*, 73, e906–e912.
- Chouinard, G., & Chouinard, V. A. (2008). Atypical antipsychotics: CATIE study, drug-induced movement disorder and resulting iatrogenic psychiatric-like symptoms, supersensitivity rebound psychosis and withdrawal discontinuation syndromes. *Psychotherapy and Psychosomatics*, 77, 69–77.
- Comer, J. S., Mojtabai, R., & Olfson, M. (2011). National trends in the antipsychotic treatment of psychiatric outpatients with anxiety disorders. *The American Journal of Psychiatry*, 168, 1057–1065.
- Cosgrove, L., Bursztajn, H. J., Krinsky, S., Anaya, M., & Walker, J. (2009). Conflicts of interest and disclosure in the American Psychiatric Association's Clinical Practice Guidelines. *Psychotherapy and Psychosomatics*, 78, 228–232.
- Cosgrove, L., Shaughnessy, A. F., Wheeler, E. E., Austed, K. E., Kirsch, I., & Bursztajn, H. J. (2012). The American Psychiatric Association's guideline for major depressive disorder: A commentary. *Psychotherapy and Psychosomatics*, 81, 186–188.
- Cowen, P. J. (2008). Serotonin and depression: Pathophysiological mechanism or marketing myth? *Trends in Pharmacological Sciences*, 29, 433–436.
- Crossley, N. A., Constante, M., McGuire, P., & Power, P. (2010). Efficacy of atypical v. typical antipsychotics in the treatment of early psychosis: Meta-analysis. *The British Journal of Psychiatry*, 196, 434–439.
- Cummings, N. A. (2006). Psychology, the stalwart profession, faces new challenges and opportunities. *Professional Psychology: Research and Practice*, 37, 598–605.
- Dawes, R. M., Faust, D., & Meehl, P. E. (1989). Clinical versus actuarial judgment. *Science*, 243, 1668–1674.
- Deacon, B. J. (2013). The biomedical model of mental disorder: A critical analysis of its validity, utility, and effects on psychotherapy research. *Clinical Psychology Review*, 33, 846–861.
- Dennett, D. C. (1995). *Darwin's dangerous idea*. New York: Simon and Schuster.
- Department of Health (2011). *Talking therapies: A four-year plan of action*. London, UK: Author.
- Dietrich, S., Beck, M., Bujantugs, B., Kenzine, D., Matschinger, H., & Angermeyer, M. C. (2004). The relationship between public causal beliefs and social distance toward mentally ill people. *Australian and New Zealand Journal of Psychiatry*, 38, 348–357.
- Dietrich, S., Matschinger, H., & Angermeyer, M. C. (2006). The relationship between biogenetic causal explanations and social distance toward people with mental disorders: Results from a population survey in Germany. *The International Journal of Social Psychiatry*, 52, 166–174.
- Dixon, L. B., Dickerson, F., Bellack, A. S., Bennett, M., Dickinson, D., Goldberg, R. W., et al. (2010). The 2009 schizophrenia PORT psychosocial treatment recommendations and summary statements. *Schizophrenia Bulletin*, 36, 48–70.
- Druss, B. G. (2010). The changing face of U.S. mental health care. *The American Journal of Psychiatry*, 167, 1419–1421.
- Elkin, I., Gibbons, R. D., Shea, M. T., Sotsky, S. M., Watkins, J. T., Pilkonis, P. A., et al. (1995). Initial severity and differential treatment outcome in the National Institute of Mental Health Treatment of Depression Collaborative Research Program. *Journal of Consulting and Clinical Psychology*, 63, 841–847.
- Eranti, S., Mogg, A., Pluck, G., Landau, S., Purvis, R., Brown, R. G., et al. (2007). A randomized, controlled trial with 6-month follow-up of repetitive transcranial magnetic stimulation and electroconvulsive therapy for severe depression. *The American Journal of Psychiatry*, 164, 73–81.
- Evans-Lacko, S., Henderson, C., & Thornicroft, G. (2013). Public knowledge, attitudes and behaviour regarding people with mental illness in England 2009–2012. *The British Journal of Psychiatry*. Supplement, 55, s51–s57.
- Fournier, J. C., DeRubeis, R. J., Hollon, S. D., Dimidjian, S., Amsterdam, J. D., Shelton, R. C., et al. (2010). Antidepressant drug effects and depression severity: A patient-level meta-analysis. *Journal of the American Medical Association*, 303, 47–53.
- Frances, A. J. (2012). DSM 5 is guide not bible—Ignore its ten worst changes. Retrieved from <http://www.psychologytoday.com/blog/dsm5-in-distress/2012/12/dsm-5-is-guide-not-bible-ignore-its-ten-worst-changes>
- Frances, A. J., & Widiger, T. (2012). Psychiatric diagnosis: Lessons from the DSM-IV past and cautions for the DSM-5 future. *Annual Review of Clinical Psychology*, 8, 109–130.
- Francis, E., Feeley, J., & Voreacos, D. (2012). *J&J ordered to pay \$1.1 billion penalty over Risperdal*. Bloomberg (Retrieved from <http://www.bloomberg.com/news/2012-04-11/jnj-told-to-pay-1-1-billion-penalty-in-arkansas-risperdal-trial.html>)
- Frank, R. G., Goldman, H. H., & McGuire, T. G. (2009). Trends in mental health cost growth: An expanded role for management? *Health Affairs (Millwood)*, 28, 649–659.
- Freiheit, S. R., Vye, C., Swan, R., & Cady, M. (2004). Cognitive-behavioral therapy for anxiety: Is dissemination working? *Behavior Therapist*, 27, 25–32.
- Frosch, D. L., & Grande, D. (2010). Direct-to-consumer advertising prescription drugs. *LDI Issue Brief*, 15, 1–4.
- Gambrill, E. (2005). *Critical thinking in clinical practice: Improving the quality of judgments and decisions* (2nd ed.). Hoboken, NJ: Wiley & Sons.
- Garb, H. N. (2005). Clinical judgment and decision making. *Annual Review of Clinical Psychology*, 1, 67–89.
- Gaudiano, B. A., Brown, L. A., & Miller, I. W. (2011a). Factors associated with critical thinking abilities in psychotherapists. *Cognitive Behaviour Therapy*, 40, 137–146.
- Gaudiano, B. A., Brown, L. A., & Miller, I. W. (2011b). Let your intuition be your guide? Individual differences in the evidence-based practice attitudes of psychotherapists. *Journal of Evaluation in Clinical Practice*, 17, 628–634.
- Gaudiano, B. A., Brown, L. A., & Miller, I. W. (2012). Tapping their patients' problems away? Characteristics of psychotherapists using energy meridian techniques. *Research on Social Work Practice*, 22, 647–655.
- Gellatly, J., Bower, P., Hennessy, S., Richards, D., Gilbody, S., & Lovell, K. (2007). What makes self-help interventions effective in the management of depressive symptoms? Meta-analysis and meta-regression. *Psychological Medicine*, 37, 1217–1228.
- Gilbody, S., Bower, P., Fletcher, J., Richards, D., & Sutton, A. J. (2006). Collaborative care for depression: A cumulative meta-analysis and review of longer-term outcomes. *Archives of Internal Medicine*, 166, 2314–2321.

- Gilbody, S., Wilson, P., & Watt, I. (2004). Direct-to-consumer advertising of psychotropics. An emerging and evolving form of pharmaceutical company influence. *British Journal of Psychiatry*, *185*, 1–2.
- Goisman, R. M., Warshaw, M. G., & Keller, M. B. (1999). Psychosocial treatment prescriptions for generalized anxiety disorder, panic disorder, and social phobia, 1991–1996. *The American Journal of Psychiatry*, *156*, 1819–1821.
- Goldfried, M. R. (2013). What should we expect from psychotherapy? *Clinical Psychology Review*, *33*, 862–869.
- Hayes, S. C., Levin, M., Plumb, J., Boulanger, J., & Pistorello, J. (2013). Acceptance and commitment therapy and contextual behavioral science: Examining the progress of a distinctive model of behavioral and cognitive therapy. *Behavior Therapy*, *44*, 180–198.
- Hayes, S. C., Long, D. M., Levin, M. E., & Follette, W. C. (2013). Treatment development: Can we find a better way? *Clinical Psychology Review*, *33*, 870–882.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2012). *Acceptance and commitment therapy: The process and practice of mindful change* (2nd ed.). New York, NY: The Guilford Press.
- Herbert, J. D. (2003). The science and practice of empirically supported treatments. *Behavior Modification*, *27*, 412–430.
- Herbert, J. D., & Gaudiano, B. A. (2005). Moving from empirically supported treatment lists to practice guidelines in psychotherapy: The role of the placebo concept. *Journal of Clinical Psychology*, *61*, 893–908.
- Heuzenroeder, L., Donnelly, M., Haby, M. M., Mihalopoulos, C., Rossell, R., Carter, R., et al. (2004). Cost-effectiveness of psychological and pharmacological interventions for generalized anxiety disorder and panic disorder. *Australian and New Zealand Journal of Psychiatry*, *38*, 602–612.
- Ho, B. C., Andreasen, N. C., Ziebell, S., Pierson, R., & Magnotta, V. (2011). Long-term antipsychotic treatment and brain volumes: A longitudinal study of first-episode schizophrenia. *Archives of General Psychiatry*, *68*, 128–137.
- Hollon, M. F. (2005). Direct-to-consumer advertising: A haphazard approach to health promotion. *Journal of the American Medical Association*, *293*, 2030–2033.
- Hunsley, J., & Di Giulio, G. (2002). Dodo bird, phoenix, or urban legend? The question of psychotherapy equivalence. *Scientific Review of Mental Health Practice*, *1*.
- Ilyas, S., & Moncrieff, J. (2012). Trends in prescriptions and costs of drugs for mental disorders in England, 1998–2010. *The British Journal of Psychiatry*, *200*, 393–398.
- Insel, T. (2011). *Treatment development: The past 50 years*. Director's Blog (Retrieved from <http://www.nimh.nih.gov/about/director/2011/treatment-development-the-past-50-years.shtml>)
- Insel, T., Cuthbert, B., Garvey, M., Heinssen, R., Pine, D. S., Quinn, K., et al. (2010). Research domain criteria (RDoC): Toward a new classification framework for research on mental disorders. *The American Journal of Psychiatry*, *167*, 748–751.
- Johnson, B. A., Messing, R. O., Charness, M. E., Crabbe, J. C., Goldman, M. S., Harris, R. A., et al. (2011). Should the reorganizing of addiction-related research across all the National Institutes of Health be structural?—The devil is truly in the details. *Alcoholism, Clinical and Experimental Research*, *35*, 572–580.
- Jorm, A. F. (2000). Mental health literacy. Public knowledge and beliefs about mental disorders. *British Journal of Psychiatry*, *177*, 396–401.
- Kaiser, J. (2012). *NIH backs off plan to merge addiction institutes*. ScienceInsider (Retrieved from <http://news.sciencemag.org/scienceinsider/2012/11/nih-backs-off-plan-to-merge-addi.html>)
- Katon, W., Russo, J., Lin, E. H., Schmittdiel, J., Ciechanowski, P., Ludman, E., et al. (2012). Cost-effectiveness of a multicondition collaborative care intervention: A randomized controlled trial. *Archives of General Psychiatry*, *69*, 506–514.
- Kawachi, I., & Conrad, P. (1996). Medicalization and the pharmacological treatment of blood pressure. In P. Davis (Ed.), *Contested ground. Public purpose and private interests in the regulation of prescription drugs*. New York: Oxford University Press.
- Kazdin, A. E., & Blase, S. L. (2011). Rebooting psychotherapy research and practice to reduce the burden of mental illness. *Perspectives on Psychological Science*, *6*, 21–37.
- Kirsch, I., Deacon, B. J., Huedo-Medina, T. B., Scoboria, A., Moore, T. J., & Johnson, B. T. (2008). Initial severity and antidepressant benefits: A meta-analysis of data submitted to the Food and Drug Administration. *PLoS Medicine*, *5*, e45.
- Kleinman, A. (2012). Rebalancing academic psychiatry: Why it needs to happen—And soon. *The British Journal of Psychiatry*, *201*, 421–422.
- Kraemer, H. C., Wilson, G. T., Fairburn, C. G., & Agras, W. S. (2002). Mediators and moderators of treatment effects in randomized clinical trials. *Archives of General Psychiatry*, *59*, 877–883.
- Kravitz, R. L., Epstein, R. M., Feldman, M. D., Franz, C. E., Azari, R., Wilkes, M. S., et al. (2005). Influence of patients' requests for direct-to-consumer advertised antidepressants: A randomized controlled trial. *Journal of the American Medical Association*, *293*, 1995–2002.
- Kupfer, D. J., First, M., & Regier, D. A. (Eds.). (2002). *A research agenda for DSM-V*. Arlington, VA: American Psychiatric Association.
- Kupfer, D. J., & Regier, D. A. (2011). Neuroscience, clinical evidence, and the future of psychiatric classification in DSM-5. *The American Journal of Psychiatry*, *168*, 672–674.
- Kurtzman, H., & Bufka, L. (2011). APA moves forward on developing clinical treatment guidelines. *Practice Update*, *8*(13) (Retrieved from <http://www.apapracticecentral.org/update/2011/07-14/clinical-treatment.aspx>)
- Lacasse, J. R. (2005). Consumer advertising of psychiatric medications biases the public against nonpharmacological treatment. *Ethical Human Psychology and Psychiatry*, *7*, 175–179.
- Lacasse, J. R., & Leo, J. (2005). Serotonin and depression: A disconnect between the advertisements and the scientific literature. *PLoS Medicine*, *2*, e392.
- Levant, R. F. (2004). The empirically validated treatments movement: A practitioner/educator perspective. *Clinical Psychology: Science and Practice*, *11*, 219–224.
- Lilienfeld, S. O. (2007a). Cognitive neuroscience and depression: Legitimate versus illegitimate reductionism and five challenges. *Cognitive Therapy and Research*, *31*, 263–272.
- Lilienfeld, S. O. (2007b). Psychological treatments that cause harm. *Perspectives on Psychological Science*, *2*, 53–70.
- Lilienfeld, S. O., Ritschel, L. A., Lynn, S. J., Cautin, R. L., & Latzman, R. D. (2013). Why many clinical psychologists are resistant to evidence-based practice: Root causes and constructive remedies. *Clinical Psychology Review*, *33*, 883–900.
- Living with grief (2012). *Lancet*, *379*, 589.
- Luborsky, L., Rosenthal, R., Diguier, L., Andrusyna, T. P., Berman, J. S., Levitt, J. T., et al. (2002). The Dodo bird verdict is alive and well—mostly. *Clinical Psychology: Science and Practice*, *9*, 1–12.
- Luborsky, L., Singer, B., & Luborsky, L. (1975). Comparative studies of psychotherapies. Is it true that "everybody has one and all must have prizes"? *Archives of General Psychiatry*, *32*, 995–1008.
- Marcus, S. C., & Olfson, M. (2010). National trends in the treatment for depression from 1998 to 2007. *Archives of General Psychiatry*, *67*, 1265–1273.
- McHugh, R. K., & Barlow, D. H. (2010). The dissemination and implementation of evidence-based psychological treatments. A review of current efforts. *American Psychologist*, *65*, 73–84.
- McHugh, R. K., & Barlow, D. H. (Eds.). (2012). *The dissemination and implementation of evidence-based psychological treatments*. New York: Oxford University.
- McHugh, R. K., Otto, M. W., Barlow, D. H., Gorman, J. M., Shear, M. K., & Woods, S. W. (2007). Cost-efficacy of individual and combined treatments for panic disorder. *The Journal of Clinical Psychiatry*, *68*, 1038–1044.
- Meyer, R. E. (2010). A dissenting view from one who has known both NIDA and NIAAA. *Addiction*, *105*, 2051–2053.
- Miklowitz, D. J. (2008). Adjunctive psychotherapy for bipolar disorder: State of the evidence. *The American Journal of Psychiatry*, *165*, 1408–1419.
- Miller, G. A. (2010). Mistreating psychology in the decades of the brain. *Perspectives on Psychological Science*, *5*, 716–743.
- Mintzes, B. (2002). For and against: Direct to consumer advertising in medicalising normal human experience. *For. British Medical Journal*, *324*, 908–909.
- Mintzes, B., Barer, M. L., Kravitz, R. L., Kazanjian, A., Bassett, K., Lexchin, J., et al. (2002). Influence of direct to consumer pharmaceutical advertising and patients' requests on prescribing decisions: Two site cross sectional survey. *British Medical Journal*, *324*, 278–279.
- Mojtabai, R., & Olfson, M. (2008a). National patterns in antidepressant treatment by psychiatrists and general medical providers: Results from the national comorbidity survey replication. *The Journal of Clinical Psychiatry*, *69*, 1064–1074.
- Mojtabai, R., & Olfson, M. (2008b). National trends in psychotherapy by office-based psychiatrists. *Archives of General Psychiatry*, *65*, 962–970.
- Mojtabai, R., & Olfson, M. (2010). National trends in psychotropic medication polypharmacy in office-based psychiatry. *Archives of General Psychiatry*, *67*, 26–36.
- Moncrieff, J. (2006). Does antipsychotic withdrawal provoke psychosis? Review of the literature on rapid onset psychosis (supersensitivity psychosis) and withdrawal-related relapse. *Acta Psychiatrica Scandinavica*, *114*, 3–13.
- Moncrieff, J., & Leo, J. (2010). A systematic review of the effects of antipsychotic drugs on brain volume. *Psychological Medicine*, *40*, 1409–1422.
- Murphy, R., Cooper, Z., Hollon, S. D., & Fairburn, C. G. (2009). How do psychological treatments work? Investigating mediators of change. *Behavior Research and Therapy*, *47*, 1–5.
- Mussell, M. P., Crosby, R. D., Crow, S. J., Knopke, A. J., Peterson, C. B., Wonderlich, S. A., et al. (2000). Utilization of empirically supported psychotherapy treatments for individuals with eating disorders: A survey of psychologists. *International Journal of Eating Disorders*, *27*, 230–237.
- National Advisory Mental Health Council (2010). *From discovery to cure: Accelerating the development of new and personalized interventions for mental illnesses*. Bethesda, MD: National Institute of Mental Health.
- Norcross, J. C. (Ed.). (2002). *Psychotherapy relationships that work: Therapist contributions and responsiveness of patients*. New York, NY: Oxford University Press.
- Olfson, M., & Marcus, S. C. (2009). National patterns in antidepressant medication treatment. *Archives of General Psychiatry*, *66*, 848–856.
- Olfson, M., & Marcus, S. C. (2010). National trends in outpatient psychotherapy. *The American Journal of Psychiatry*, *167*, 1456–1463.
- Olfson, M., Marcus, S. C., Druss, B., Elinson, L., Tanielian, T., & Pincus, H. A. (2002a). National trends in the outpatient treatment of depression. *Journal of the American Medical Association*, *287*, 203–209.
- Olfson, M., Marcus, S. C., Druss, B., & Pincus, H. A. (2002b). National trends in the use of outpatient psychotherapy. *American Journal of Psychiatry*, *159*, 1914–1920.
- Olfson, M., Marcus, S. C., Wan, G. J., & Geissler, E. C. (2004). National trends in the outpatient treatments of anxiety disorders. *The Journal of Clinical Psychiatry*, *65*, 1166–1173.
- Oorschot, M., Lataster, T., Thewissen, V., Wichers, M., & Myin-Germeys, I. (2011). Mobile assessment in schizophrenia: A data-driven momentary approach. *Schizophrenia Bulletin*, *38*.
- Pandurang, A. K., Fernicola-Bledowski, C., & Bledowski, J. (2012). Brain stimulation therapies for psychiatric disorders: The first decade of the new millennium—A review. *Asian Journal of Psychiatry*, *5*, 3–10.
- Pescosolido, B. A., Martin, J. K., Long, J. S., Medina, T. R., Phelan, J. C., & Link, B. G. (2010). "A disease like any other"? A decade of change in public reactions to schizophrenia, depression, and alcohol dependence. *The American Journal of Psychiatry*, *167*, 1321–1330.
- Pignotti, M., & Thyer, B. A. (2009). Use of novel unsupported and empirically supported therapies by licensed clinical social workers: An exploratory study. *Social Work Research*, *33*, 5–17.

- Prins, M. A., Verhaak, P. F., Bensing, J. M., & van der Meer, K. (2008). Health beliefs and perceived need for mental health care of anxiety and depression—The patients' perspective explored. *Clinical Psychology Review*, 28, 1038–1058.
- Revicki, D. A., Siddique, J., Frank, L., Chung, J. Y., Green, B. L., Krupnick, J., et al. (2005). Cost-effectiveness of evidence-based pharmacotherapy or cognitive behavior therapy compared with community referral for major depression in predominantly low-income minority women. *Archives of General Psychiatry*, 62, 868–875.
- Risch, N., Herrell, R., Lehner, T., Liang, K. Y., Eaves, L., Hoh, J., et al. (2009). Interaction between the serotonin transporter gene (5-HTTLPR), stressful life events, and risk of depression: A meta-analysis. *Journal of the American Medical Association*, 301, 2462–2471.
- Rosen, G. M., & Davidson, G. C. (2003). Psychology should list empirically supported principles of change (ESPs) and not credential trademarked therapies or other treatment packages. *Behavior Modification*, 27, 300–312.
- Rosen, G. M., Lilienfeld, S. O., Frueh, B. C., McHugh, P. R., & Spitzer, R. L. (2010). Reflections on PTSD's future in DSM-V. *The British Journal of Psychiatry*, 197, 343–344.
- Rounsaville, B. J., & Carroll, K. M. (2001). A stage model of behavioral therapies research: Getting started and moving on from Stage I. *Clinical Psychology: Science and Practice*, 8, 133–142.
- Rozensky, R. H. (2011). The institution of the institutional practice of psychology: Health care reform and psychology's future workforce. *American Psychologist*, 66, 797–808.
- Rupert, P. A., & Baird, K. A. (2004). Managed care and the independent practice of psychology. *Professional Psychology: Research and Practice*, 35, 185–193.
- Rusch, L. C., Kanter, J. W., & Brondino, M. J. (2009). A comparison of contextual and biomedical models of stigma reduction for depression with a nonclinical undergraduate sample. *The Journal of Nervous and Mental Disease*, 197, 104–110.
- Ruzek, J. I., Karlin, B. E., & Zeiss, A. M. (in press). Implementation of evidence-based psychological treatments in Veterans Health Administration. In R. K. McHugh, & D. H. Barlow (Eds.), *Dissemination of evidence-based psychological treatments*. New York, NY: Oxford University Press (in press).
- Sackett, D. L., Rosenberg, W. M., Gray, J. A., Haynes, R. B., & Richardson, W. S. (1996). Evidence based medicine: What it is and what it isn't. *British Medical Journal*, 312, 71–72.
- Sackett, D. L., Straus, S., Richardson, S., Rosenberg, W., & Haynes, R. B. (2000). *Evidence-based medicine: How to practice and teach EBM* (2nd ed.). London, U.K.: Churchill Livingstone.
- Sanders, L. (2013). No new meds. *ScienceNews*, 183, 26.
- Sanderson, W. C. (2002). Are evidence-based psychological interventions practiced by clinicians in the field? *Medscape General Medicine*, 4 (Retrieved from <http://www.medscape.com/viewarticle/414948>)
- Santucci, L. C., McHugh, R. K., & Barlow, D. H. (2012). Direct-to-consumer marketing of evidence-based psychological interventions: Introduction. *Behavior Therapy*, 43, 231–235.
- Satel, S., & Lilienfeld, S. O. (2010). Singing the brain disease blues. *AJOB Neuroscience*, 1, 46–54.
- Satterfield, J. M., Spring, B., Brownson, R. C., Mullen, E. J., Newhouse, R. P., Walker, B. B., et al. (2009). Toward a transdisciplinary model of evidence-based practice. *The Milbank Quarterly*, 87, 368–390.
- Sava, F. A., Yates, B. T., Lupu, V., Szentagotai, A., & David, D. (2009). Cost-effectiveness and cost-utility of cognitive therapy, rational emotive behavioral therapy, and fluoxetine (Prozac) in treating depression: A randomized clinical trial. *Journal of Clinical Psychology*, 65, 36–52.
- Sharfstein, S. S. (2005). Big Pharma and American psychiatry: The good, the bad, and the ugly. *Psychiatric News*, 40, 3–5.
- Sharp, I. R., Herbert, J. D., & Redding, R. (2008). The role of critical thinking in practicing psychologists' theoretical orientation and choice of intervention techniques. *The Scientific Review of Mental Health Practice*, 6, 21–30.
- Shiffman, P., Stone, A. A., & Hufford, M. R. (2008). Ecological momentary assessment. *Annual Review of Clinical Psychology*, 4, 1–32.
- Singer, M. T., & Lalich, J. (1996). "Crazy" therapies: What are they? Do they work? San Francisco: Jossey-Bass.
- Smith, M. L., & Glass, G. V. (1977). Meta-analysis of psychotherapy outcome studies. *American Psychologist*, 32, 752–760.
- Spielmann, G. I., Berman, M. L., & Usitalo, A. N. (2011). Psychotherapy versus second-generation antidepressants in the treatment of depression: A meta-analysis. *The Journal of Nervous and Mental Disease*, 199, 142–149.
- Spring, B. (2007). Evidence-based practice in clinical psychology: What it is, why it matters; what you need to know. *Journal of Clinical Psychology*, 63, 611–631.
- Stewart, R. E., & Chambless, D. L. (2007). Does psychotherapy research inform treatment decisions in private practice? *The Journal of Clinical Psychiatry*, 63, 267–281.
- Stewart, R. E., Chambless, D. L., & Baron, J. (2012). Theoretical and practical barriers to practitioners' willingness to seek training in empirically supported treatments. *Journal of Clinical Psychology*, 68, 8–23.
- Stuart, R. B., & Lilienfeld, S. O. (2007). The evidence missing from evidence-based practice. *American Psychologist*, 62, 615–616.
- Teitelbaum, P., & Pellis, S. M. (1992). Toward a synthetic psychology. *Psychological Science*, 3, 4–20.
- Therapy deficit (2012). *Nature*, 489, 473–474.
- Thomason, T. C. (2010). The trend toward evidence-based practice and the future of psychotherapy. *American Journal of Psychotherapy*, 64, 29–38.
- Timko, C. A., & Herbert, J. D. (2007). Physician self-reported experiences with direct-to-consumer advertising of psychotropic medication. *Scientific Review of Mental Health Practice*, 5, 3–7.
- Tolin, D. F. (2010). Is cognitive-behavioral therapy more effective than other therapies? A meta-analytic review. *Clinical Psychology Review*, 30, 710–720.
- Tversky, A., & Kahnemann, D. (1984). Extensional versus intuitive reasoning: The conjunction fallacy in probability judgment. *Psychological Review*, 91, 293–315.
- Valluri, S., Zito, J. M., Safer, D. J., Zuckerman, I. H., Mullins, C. D., & Korelitz, J. J. (2010). Impact of the 2004 Food and Drug Administration pediatric suicidality warning on antidepressant and psychotherapy treatment for new-onset depression. *Medical Care*, 48, 947–954.
- van Schaik, D. J., Klijn, A. F., van Hout, H. P., van Marwijk, H. W., Beekman, A. T., de Haan, M., et al. (2004). Patients' preferences in the treatment of depressive disorder in primary care. *General Hospital Psychiatry*, 26, 184–189.
- Vos, T., Corry, J., Haby, M. M., Carter, R., & Andrews, G. (2005a). Cost-effectiveness of cognitive-behavioural therapy and drug interventions for major depression. *The Australian and New Zealand Journal of Psychiatry*, 39, 683–692.
- Vos, T., Haby, M. M., Magnus, A., Mihalopoulos, C., Andrews, G., & Carter, R. (2005b). Assessing cost-effectiveness in mental health: Helping policy-makers prioritize and plan health services. *The Australian and New Zealand Journal of Psychiatry*, 39, 701–712.
- Wakefield, J. C. (2006). The concept of mental disorder: Diagnostic implications of the harmful dysfunction analysis. *World Psychiatry*, 6, 149–156.
- Wakefield, J. C. (2013). The DSM-5 debate over the bereavement exclusion: Psychiatric diagnosis and the future of empirically supported treatment. *Clinical Psychology Review*, 33, 825–845.
- Wampold, B. E., Mondin, G. W., Moody, M., Stich, F., Benson, K., & Ahn, H. (1997). A meta-analysis of outcome studies comparing bona fide psychotherapies: Empirically, "all must have prizes". *Psychological Bulletin*, 122.
- Welling, H. (2005). The intuitive process: The case of psychotherapy. *Journal of Psychotherapy Integration*, 15.
- Wenze, S. J., & Miller, I. W. (2010). Use of ecological momentary assessment in mood disorders research. *Clinical Psychology Review*, 30, 794–804.
- Westen, D., Novotny, C. M., & Thompson-Brenner, H. (2004). The empirical status of empirically supported psychotherapies: Assumptions, findings, and reporting in controlled clinical trials. *Psychological Bulletin*, 130, 631–663.
- Whitley, R. (2012). The antipsychiatry movement: Dead, diminishing, or developing? *Psychiatric Services*, 63, 1039–1041.
- Young, J. E., Weiberger, A. D., & Beck, A. T. (2001). Cognitive therapy for depression. In D. H. Barlow (Ed.), *Clinical handbook of psychological disorders* (pp. 264–308) (3rd ed.). New York, NY: Guilford.
- Zuvekas, S. H. (2005). Prescription drugs and the changing patterns of treatment for mental disorders, 1996–2001. *Health Affairs (Millwood)*, 24, 195–205.