American Journal of Clinical Hypnosis, 55: 272–290, 2013

ISSN: 0002-9157 print / 2160-0562 online
DOI: 10.1080/00029157.2012.707156

Routledge
Taylor & Francis Group

Treating Depression With Antidepressants: Drug-Placebo Efficacy Debates Limit Broader Considerations

Michael D. Yapko
Private Practice, Fallbrook, California, USA

The core issue regarding antidepressants for many clinicians is whether they perform significantly better than placebos. However, this article suggests eight additional concerns beyond drug efficacy alone to consider regarding antidepressants including: (1) formulating only a one-dimensional, biological view of depression; (2) defining the client's role as passive in treatment; (3) economic corruption of the research and reporting; (4) false or misleading consumer advertising; (5) conflicting data that confuse practitioners and consumers alike; (6) over- and under-prescription of medications; (7) drug side-effects; and (8) harm to the environment. The enhanced effects of psychotherapy utilizing hypnosis offer a means of avoiding most, if not all, of the problems associated with the use of antidepressants as a primary form of treatment.

Keywords: depression, drugs, medications, psychotherapy

On February 19, 2012, the popular American television newsmagazine program *60 Minutes* aired a segment called "Treating Depression." Correspondent Leslie Stahl opened the segment by stating, "The medical community is at war, battling over the scientific research and writings of a psychologist named Irving Kirsch. The fighting is about antidepressants, and Kirsch's questioning of whether they work." Kirsch appeared on the segment to discuss his controversial research findings suggesting antidepressant medications are little more effective than placebos. He said:

> The difference between the effect of a placebo and the effect of an antidepressant is minimal for most people. . . . People get better when they take the drug, but it's *not* the chemical ingredients of the drug that are making them better. It's largely the placebo effect.

Even before the *60 Minutes* broadcast, largely in reaction to Kirsch's controversial 2010 book, *The Emperor's New Drugs: Exploding the Antidepressant Myth* and other similarly themed books (Barber, 2008; Healy, 2004; Peterson, 2009; Whitaker, 2011), Kirsch's research has, indeed, triggered a war with nothing less at stake than how depression sufferers may be treated in the future. Following the *60 Minutes* piece, however, the argument escalated sharply as greater numbers of people jumped into the

Address correspondence to Michael D. Yapko, Ph.D., PO Box 487, Fallbrook, CA 92088-0487, USA. E-mail: michael@yapko.com

debate and voiced their opinions. Kirsch has been both glorified and vilified by a wide array of experts writing in popular media outlets such as *Medscape*, *Psychology Today*, *The New York Times*, *WebMD*, *The Huffington Post*, and many others as well. As of this writing, a simple Google search of the key words "Kirsch" and "antidepressants" yielded over 75,000 results. If newspaper and magazine articles, letters to the editor, or blogs on websites are any indication, the general public was every bit as loud and mixed in their reactions to Kirsch's conclusions as were the professionals. Did the *60 Minutes* piece provide anything beyond the mere provocation of a highly emotional debate between those who pledge their allegiance to antidepressants as effective agents of treatment and those who view them as little more than a deceptive product of greedy, lying pharmaceutical companies that sell hope to the hopeless? It is probably of no surprise that advocates of antidepressants continue to be advocates, and critics continue to be critics.

When the mental health profession itself is so divided over the merits of antidepressants, and armies of prestigious experts line up on both sides of the treatment battlefield armed with seemingly credible data supporting their position, how is it possible to evolve any realistic measure of clarity or certainty about them? How should professionals, especially those with a substantial interest in hypnosis, view the salient issues regarding antidepressants? An in-depth knowledge of hypnosis certainly highlights the roles of belief and expectancy in generating significant treatment responses with both antidepressants and psychotherapy, but the primary questions raised by Kirsch's research concern just how far belief and expectancy go in helping depression sufferers receiving treatment with antidepressants. The core issue concerning those embroiled in the controversy is whether antidepressants perform significantly better than placebos (Bloom, 2010; Kirsch, 2010; Kirsch et al., 2008; Kramer, 2011).

Kirsch's extensive background in hypnosis affords him a unique vantage point from which to see the salient issues. As a frequent and important contributor to the hypnosis literature and a widely acknowledged advocate of the sociocognitive perspective of hypnosis (Lynn & Green, 2011; Lynn & Kirsch, 2006), Kirsch's long-term research on placebo effects and his insightful framing of hypnotic suggestions as "nondeceptive placebos" (Kirsch, 1994, 2006) have had a significant impact on the field. Psychologist John Kihlstrom, however, sensibly cautioned against identifying hypnosis with placebo because hypnosis should be considered an active psychological treatment whereas placebos are inert (2012). He added, "In addition to hypnosis being an active treatment, allowing it to be lumped in with placebos is a sure ticket to professional dismissal of hypnosis for the simple reason that physicians and other therapists think of placebos as a nuisance to be eliminated. That's why we do placebo-controlled trials to get rid of placebo effects" (Kihlstrom, personal communication, May 30, 2012).

Despite different conceptualizations of hypnosis and its relationship to placebo effects, Kirsch is more aware than most of the power of belief systems to alter both

physiology and subjective phenomenology (Kirsch, 1990, 2001, 2010). Does that mean, however, that he is more likely to be correct in his assertion that "Depression is a serious problem, but drugs are not the answer. In the long run, psychotherapy is both cheaper and more effective, even for very serious levels of depression" (Kirsch, 2010, p. 177)? As the debate noisily continues, the answer is far from clear.

Hypnosis, Placebos, and Antidepressants

It can credibly be argued that hypnosis in and of itself cures *nothing*. Rather, it is what occurs *during* hypnosis that has potential therapeutic value (Yapko, 2012). Suggestions may stimulate new cognitive, affective, sensory, and other associations in the client's subjective experience. How exactly a suggestion delivered to an individual who is focused and attentive can stimulate often dramatic responses on multiple levels is still being investigated, but the fact that measurable effects arise in response to suggestion represents the heart and soul of hypnosis. Suggestions can take many different forms, and as the placebo research makes clear, some of these are disguised as inert pills, sham surgeries, and fake procedures (Harris & de Jong, 2011).

Depression is a disorder that has been shown to be highly responsive to placebo interventions (Buck, 2012; Moncrieff, 2008). What exactly does this observation tell us? It may tell us many things, but one especially plausible interpretation is that it suggests *depression is largely a disorder of perspective*. It helps explain why there are so many different forms of treatment, each introducing some suggested shift of perspective, that claim to have a significant therapeutic effect. These include widely disparate psychotherapies that may focus primarily on cognition or affect, the individual or the family, the person's past or the person's present, and so forth. They also include widely disparate drug regimens ranging from tranquilizers to stimulants, serotonin enhancers to serotonin depleters, and so forth (Bremner, 2008; Kirsch, 2010; Yapko, 2009). When depression is so highly responsive to virtually opposite types of interventions, the difficulty is in determining how much is the treatment itself versus how much it is the individual responding to the treatment that ultimately shapes treatment response. In this respect, Kirsch is conservative in his recommendation that non-chemical approaches with no potentially deleterious drug side-effects be considered the first-line treatment approach (2010). Hypnosis as a vehicle for amplifying the merits of positive expectancies and encouraging an active treatment response is a sensible and humane treatment choice on this basis (Alladin, 2006, 2010; Yapko, 1992, 2001a, 2010a, 2010b).

Is it Time to Close the Barn Door?

For many, the fact of the widespread use of antidepressants has made it seem unnecessary to question their merits; after all, what's the point of questioning something already so deeply woven into the fabric of our society in general and mental health profession in

particular? It seems too much like questioning whether the barn door should be closed now that the horse has already escaped.

Questioning the merits of antidepressants is necessary, however. Given their current popularity as the second most commonly prescribed drug in the United States (behind cholesterol-lowering medications) with more than $11 billion in sales in 2010 (Smith, 2012), and the still rising rates of depression around the world, increasing the number of new potential consumers (World Health Organization, 2002), it is imperative that we have a more detailed consideration of just how these drugs should be prescribed and for whom. There is still time to reconsider the narrow perspective that depression is a disease requiring medication, and close enough barn doors to prevent more horses from escaping.

Many clinicians encourage taking medications or at least seeking medication evaluations for their depressed clients as standard procedure, apparently assuming that drugs are necessary and the primary intervention, while psychotherapy is merely secondary. Many people are prescribed drugs as the sole form of intervention, despite expert recommendations for so-called combined treatments of medication and psychotherapy (Thase, 2012). In fact, nearly 80% of antidepressant prescriptions are written by physicians who are not psychiatrists, and only about 20% of patients on antidepressants also received psychotherapy (Mark, Levit, & Buck, 2009; Olfson & Marcus, 2009). As a clinician who has specialized in the non-pharmacological treatment of depression sufferers who has heavily emphasized the merits of active psychotherapies and hypnosis in treatment, and the author of numerous well-researched articles and books on these subjects (Yapko, 2001a, 2001b, 2001c, 2006, 2008, 2010b), I have unequivocally and unapologetically taken a critical view of antidepressants. However, I have done so for reasons other than one might expect in light of the current debate about the efficacy of antidepressants in comparison to placebos. The issues are more complex and varied than only therapeutic efficacy, and the problem of how to think about depression and its treatment is more multi-dimensional than many seem to think. Clinicians would benefit from knowing that there is much more to consider than only whether the drug "works." There are many other levels of consideration that influence treatment response and these can provide a fuller view of the larger context in which drugs are utilized. Beyond antidepressant efficacy relative to placebo effects, there are eight other factors I address here in the form of "concerns" that can help inform clinicians' perspectives about the use of antidepressants.

Concern #1: The One-Dimensional Nature of a Purely Biological Perspective

What causes depression? How one answers this fundamental question is the single most important determinant of how one will design and deliver treatment as well as how one will respond to the data and divergent positions of experts. Is depression caused by genetics? A biochemical imbalance in the brain? Psychosocial stressors? Cognitive

distortions? A lack of environmental and social rewards? Social inequities? Cultural and/or familial influences? Dietary issues? A lack of physical exercise?

Even just a cursory review of the clinical and research literature provides substantive evidence that *each* of the factors above, as well as many others not listed, play significant roles in the onset and course of depression (Cozolino, 2006; Goodman & Gotlib, 2002; Nolen-Hoeksema, 2000; Pettit & Joiner, 2006; Reblin & Uchino, 2008; Thomas & Peterson, 2003; Yapko, 1997, 1999, 2009). Thus, it seems the best and most realistic answer to the question of what causes depression is that depression is caused by *many* contributing factors that will vary in degree across individuals.

Biology run amok has been overstated as the principal causal factor in depression when evidence for this viewpoint is equivocal at best and *psychological* and *social* factors have been shown to play an even greater role in its onset and course (Healy, 2004; Lacasse & Leo, 2005; Scott, 2006; Yapko 1997, 2010b). To simply medicate an individual as though he or she is depressed in isolation, excluding others from treatment who may affect and be affected by the client's depression, ignores the entire social dimension of depression to the detriment of the client (Yapko, 2009). Thus, prescribing medication alone is too one-dimensionally biological a treatment, an unambiguous under-treatment that may help explain the higher rate of relapse associated with purely pharmacological approaches (Alladin, 2006; Beck, personal communication, December 15, 1990). Clinicians can better view and treat depression from a multi- dimensional perspective, especially using hypnosis as a means of encouraging the client to adopt the empowering perspective that, "I am more than my biology."

Concern #2: The Passive Definition of the Client's Role

Depression is a disorder built on a foundation of passivity. "Why bother?" may well be the unofficial motto of depression. It is not a coincidence that the therapies with the greatest empirical support all emphasize taking purposeful and sensible *action* in treatment (Detweiler-Bedell & Whisman, 2005; Jacobson, Martell, & Dimidjian, 2001; Yapko, 2010b). To merely prescribe an antidepressant as a sole form of intervention is to impart the terribly unhelpful message: *You don't have to change your life, you don't have to learn any new skills; you just have to take your medication on time. The problem isn't in your outlook or circumstances—it's in your brain chemistry* (Moncrieff, 2008).

Antidepressants don't directly cause people to be passive. Depression itself does that quite well. But antidepressants, when prescribed as a sole intervention, inarguably do directly define people's *role in treatment* as passive: the client is literally instructed to take the drug and, with high hopes, patiently wait for the drug to "work." For those well-informed clinicians who strive to empower people to be proactive in managing life skillfully, medication as a sole form of passive treatment simply isn't the best means to do so.

Clinicians would do better to encourage the client to be an active partner in a collaborative treatment process. They can do so by providing active psychotherapies

which may best utilize hypnosis as a means of facilitating the client's acquisition of skills known to reduce and even *prevent* depression (Alladin, 2006, Muñoz, Beardslee, & Leykin, 2012; Yapko, 1997, 2001a, 2009). Furthermore, beyond the formal therapy session itself, the clinician can offer skill-building homework which encourages experimenting with shifting perceptions, testing beliefs, and trying new behaviors (Alladin & Alibhai, 2007; Lankton, 2006; Yapko, 2001a, 2010b). There is substantial evidence that the use of active homework assignments enhances therapy results (Detweiler-Bedell & Whisman, 2005). These can be "seeded" during hypnosis, preparing the client to act on the recommended assignments (Zeig, 1990).

Concern #3: Economic Corruption and Undue Influence of Pharmaceutical Companies on Data Dissemination

Two recent reports published in the *Journal of the American Medical Association (JAMA)* raised concerns about how drug companies influence the interpretation and publication of medical research (Psaty & Kronmal, 2008; Ross, Hill, Egilman, & Krumholz, 2008). The reports provided evidence that drug manufacturers have paid academic scientists to take credit for research articles prepared by company-hired medical writers, a practice called ghostwriting.

This deceptive practice is not uncommon, according to *JAMA's* editors. In an editorial in the same issue, they urge strict reforms, including a ghostwriting crackdown and requiring all authors to spell out their specific roles in the research and reporting. Dr. Catherine DeAngelis, *JAMA's* former editor-in-chief, in a blistering editorial, wrote, "The manipulation is disgusting. I just didn't realize the extent. . . . We're the ones who have allowed this to happen. Now we've got to make it stop" (2008, p. 1833).

The problem is much bigger than ghostwriting, however. As an organization, the American Psychiatric Association receives substantial funding from the pharmaceutical industry. The Association produces *DSM* and is currently in the contentious process of preparing *DSM-V*; 100% of the individuals on *DSM-V* panels for both schizophrenia/psychotic disorders and mood disorders have financial ties to the drug industry (e.g., speaker's bureau, receiving honoraria, on the board of a drug company). Researchers studying financial conflict of interest in clinical trials of psychiatric medications found that among the 162 randomized, double-blind, placebo-controlled studies (RCTs) reviewed: (1) authors who reported an association with a drug company were 4.9 times more likely to report positive results than those who did not report such an association; (2) the severity of adverse effects of medication was not reported in 27.1% of the studies reviewed; and (3) withdrawal rates from the study because of adverse effects was not reported in 47.4% of RCT studies (Cosgrove, 2010).

Clinicians and researchers must understand the potential conflicts of interest that may arise with drug company funding of their research or clinical practices. They must actively resist those self-serving external forces that attempt to control or manipulate

how one does research or provides treatment as well as the possible temptation from financial incentives to misrepresent findings. Readers of research must likewise be aware of the potential for misrepresentation and maintain a healthy skepticism of findings when there may be a conflict of interest. Reading the fine print regarding funding is advised.

Concern #4: Pseudoscientific False Advertising

The United States is one of only two countries that allow direct-to-consumer advertising, the other being New Zealand (Weil, 2012). Virtually all Americans have been exposed to the ongoing blizzard of ads for antidepressants which declare that "depression *may* be caused by a chemical imbalance and (our drug) corrects this imbalance." The "shortage of serotonin" is a heavily touted hypothesis regarding the cause of depression that has little empirical basis but a growing mass of contradictory evidence (Carlat, 2010; Weil, 2012). But, the heavy repetition of the drug manufacturer's creed that "depression is caused by a biochemical imbalance in the brain" means people may hear it so often that they stop thinking critically about it and accept it as established fact (Peterson, 2009). It is far from that. The decline of the serotonergic hypothesis of depression has been described in many places (Angell, 2011; Scott, 2006; Whitaker 2011), but was especially well captured in an article in the science magazine *Seed* (Lehrer, 2006, p. 63):

> For the last 40 years, medical science has operated on the understanding that depression is caused by the lack of serotonin . . . the theory is appealingly simple: Sadness is simply a shortage of chemical happiness. The typical antidepressant—like Prozac or Zoloft—works by increasing the brain's access to serotonin. If depression is a hunger for neurotransmitter, then these little pills fill us up. Unfortunately, the serotonergic hypothesis is mostly wrong. After all, within hours of swallowing an antidepressant, the brain is flushed with excess serotonin. Yet, nothing happens; the patient is no less depressed. Weeks pass drearily by. Finally, after a month or two of this agony, the torpor begins to lift. But why the delay? . . . a range of antidepressants trigger a molecular pathway that has little, if anything, to do with serotonin. Instead this chemical cascade leads to an increase in the production of a class of proteins known as trophic factors. Trophic factors make neurons grow . . .

Despite the suggestion that a biochemical anomaly causes depression, a unidirectional process, life experience itself also changes biochemistry, reflecting a bidirectional even systemic process. The current neuroscience highlights the fact that *psychotherapy changes brains*, just as medication does, although in different ways (Siegel, 2007). Neuroplasticity refers to the changes in the brain as a result of experience. In fascinating descriptions of examples of neuroplasticity in his book, *The Brain That Changes Itself* (2007), neuroscientist Norman Doidge described mechanisms and consequences of neuroplasticity. The use of experiential processes such as hypnosis and mindfulness appear to encourage neurogenesis and neuroplasticity (Halsband, Mueller, Hinterberger, & Strickner, 2009; Rossi, 2003; Simpkins & Simpkins, 2010; Yapko, 2011).

Studies of brain changes as a result of psychotherapy reinforce the growing awareness for the phenomenon of neuroplasticity. In one study at UCLA (Brody et al.,

2001), comparing brain changes in a 12-week trial of antidepressants to interpersonal psychotherapy, the magnitude of brain changes were highly similar. In another study conducted in England (Martin, Martin, Rai, Richardson, & Royall, 2001), interpersonal therapy compared to the antidepressant Effexor yielded similar results. These studies showed that in response to psychotherapy alone, patients demonstrated decreases in prefrontal cortex activity, increased activity of the cingulated gyrus, and increased activity of the caudate nucleus. Such studies naturally raise more questions than they answer. But, every clinician must consider that each suggestion, delivered in or out of hypnosis, has potential effects on multiple levels, including neurological ones. Drugs aren't the only agents capable of neurological influence.

Clinicians can resist being swayed by misleading advertising by staying current with the scientific literature. More than that, they can help lobby against direct-to-consumer advertising in general and misleading advertising in particular (Angell, 2005; Healy, 2004; Weil, 2012).

Concern #5: Conflicting Data That Confuses Almost Everyone

It is all too common in the drug industry for a drug to be approved by America's Food and Drug Administration (FDA) and brought to market with the implicit assurance that the drug is safe for consumers only for the drug to later be found unsafe and then pulled from the market after lives are lost or harmed. The antidepressant Serzone, as just one example, was popularly prescribed then pulled from the market when it was shown to cause liver damage that resulted in some fatalities.

This special issue of the *American Journal of Clinical Hypnosis* came about in attempt to shed light on this very issue: Whose data do we believe when credible data conflict with each other? If professionals find it hard to answer this question, how must typical consumers feel?

Consider as an example the issue of antidepressant safety for children: In the April 18, 2007, issue of *JAMA*, researchers (Bridge et al.) claimed that the suicide threat from SSRIs for young people was exaggerated and recommended that the "black box" warning be lifted. (A "black box" warning is the strongest warning placed on medication packaging. In the case of antidepressants, a warning was given about the increased risk of suicidal ideation and behavior in children and young adults receiving antidepressants.) On May 2, 2007, just 2 weeks later, the FDA required drug manufacturers to *expand* their black box warnings! The original warning was for children and adolescents up to age 18. It is now for young adults up to age 24, as well (Friedman & Leon, 2007). In a newer contradictory study, researchers concluded that the antidepressants were indeed safe and did not increase suicidal ideation or increase the risk for suicidality (Gibbons, Brown, Hur, Davis, & Mann, 2012).

Should pediatricians feel comfortable prescribing these drugs to children when the long-term effects (i.e., neurological, behavioral, social, developmental) are largely

unknown? Should parents feel comfortable having their children on antidepressants when it is unclear what the actual risks to them might be? Drugs are not the only effective means of helping depressed young people nor should they necessarily be prescribed as the treatment of choice.

As another example of contradictory expert feedback, consider the hotly debated issue of how long the patient should be on antidepressant medication: Some experts say 1 year, some say 5 years, some say *forever* despite the fact that no one has been on these drugs for life in order to provide any empirical evidence for such a long-term recommendation (Banov, 2010). The oldest of the newer generation antidepressants, Prozac, is only 24 years old. Most drugs are much younger than that. What is personal bias and what is science in making so important a recommendation as to how long one should expect to be on a medication?

One additional example of contradictory expert recommendations concerns the safety of antidepressant usage by women who are pregnant or may become pregnant. Some research has suggested there is no significant risk from taking antidepressants to either the mother or fetus, while other research has suggested a substantial risk, including cardiopulmonary issues and birth defects (see Rosenquist, this issue, for details).

Clinicians can better recognize the subjective biases of "experts" in areas where no such expertise can exist, simply because conclusive data aren't available yet.

Concern #6: Drugs Are Over Prescribed and, Paradoxically, Under Prescribed

Despite the overall increase in the number of people seeking help for depression, estimates are that only half of depressed people receive *any* form of treatment, and only about half of these receive adequate treatment (Kessler et al., 2003; Lynn, Malakataris, Condon, Maxwell, & Cleere, 2012). In this sense, the drugs are *under-prescribed.*

At the same time, there are some doctors eager and willing to write a prescription as soon as they discover their patient faces some stressor, such as the death of a loved one, apparently assuming the person will need the drug to cope. In a new book, *Coming of Age on Zoloft* (2012), the author, Katherine Sharpe, describes how she went to her college health center with a bad case of homesickness. There she had only a 20-minute appointment during which she received a prescription for the antidepressant Zoloft—a drug she would take for the next *10 years*. It may have been a well-intentioned gesture, or it may have been the result of an overcrowded, understaffed college health center. Either way the net effect is to pathologize normal responses to stressful circumstances and disempower the person from managing her responses to difficult but common life challenges. Furthermore, in this era of the highly questionable practice of direct-to-consumer drug advertising, there are people impressed by the ads who brazenly ask for and actually receive antidepressants for questionable reasons, ranging from the global complaint "I just wanna be happy," to wanting to lose weight or perform better on the job. Patients who requested advertised drugs were more than 16 times more likely to receive one or

more new prescriptions from their doctors than patients who did not request any drugs (Smith, 2012). In this way, these drugs are *over-prescribed.* There is evidence to indicate the proportion of inappropriate prescriptions of antidepressants is growing (Mojtabai & Olfson, 2011; Smith, 2012).

A realistic use of antidepressants has yet to develop perhaps, in part, due to the ambiguous nature of the disorder itself. Diagnostically, there are no clear dividing lines separating unhappiness from depression or separating degrees of depression. Thus, the danger exists that people may see depression where it isn't, and not see it where it exists. Helping people think more realistically about depression and its treatment is a worthwhile endeavor. Toward that end, clinicians can create and participate in outreach programs to encourage seeking help for depression (e.g., public lectures, national depression screening day participation, media participation), while encouraging people to develop a realistic sense of what the medications can and cannot do for the client.

Concern #7: Drug Side Effects Can Be More Than Just an Irritant

In a study by Gandhi and colleagues (2003), SSRIs were the class of drug most commonly found in adverse drug events. At the very least, side effects can reduce or prevent participation in treatment, complicate symptoms, and thereby unintentionally serve to *reinforce* depression. The fact that response to antidepressants is so variable can amplify the client's pessimism and fuel frustration: "At present, the most effective medication for a given patient is identified through trial and error, a long and costly process, which has a negative impact on long-term outcome" (Keers, 2012, p. 319).

Individuals may stop taking the medication and resign themselves to being depressed when they try a medication that does nothing to help them, a reflection of the lack of frustration tolerance commonly associated with depression (Moncrieff, 2008; Yapko, 1997). Furthermore, a significant number of patients stop taking the antidepressants before they have a chance to help because of an inability to tolerate the negative side effects (e.g., nausea, sedation or agitation, insomnia, headache, dizziness, fine tremor, sexual disturbance, weight gain, and bone fractures in individuals over age 50). Others fear a physical dependence on the medications because of the well-known "discontinuation syndrome," such as the physical discomfort associated with stopping the use of antidepressants (Banov, 2010; Glenmullen, 2006).

The unintended effects of antidepressants go much further than transient discomforts in the medicated individual. As Rosenquist points out in this issue, the serious unintended effects of medicating pregnant women may include neuro-developmental issues, increased pain reactivity, neonatal pulmonary hypertension, neonatal cardiac malformations, and other potentially serious anomalies affecting the physical and mental health of the developing fetus and neonate.

Another unintended—and perhaps unexpected—side-effect is the ease with which some doctors can self-medicate with antidepressants. In a survey of Michigan

psychiatrists listed by the Michigan Psychiatric Society, over 15% revealed they have self-medicated for depression, 43% say they would do so for mild depression, 7% for severe depression. Those who were more biologically oriented in their views and practice were more likely to either self-medicate or consider doing so (Balon, 2007). What does this suggest about a presumed objectivity and clinical judgment in prescribing?

Drug manufacturers have paid out huge sums of money in lawsuit settlements for causing a wide array of health-related problems, reinforcing the recognition that these medications are not innately benign no matter how well intentioned their purpose (Banov, 2010; Glenmullen, 2006; Peterson, 2009). Clinicians can highlight at every opportunity that psychotherapy's treatment success rate matches and, in some specific ways, even exceeds antidepressants *without* side effects. This is one of Kirsch's primary points in pointing out the presence of a placebo effect in the drug treatment of depression, one that can be matched with psychotherapies that do not generate potentially hazardous side-effects (Kirsch, 2010). Well considered therapeutic interventions utilizing hypnosis can benefit the body, mind, and mood of the depressed client (Alladin, 2012; Yapko, 2001a, 2006, 2010b).

Concern #8: Ecological Concerns About Drugs

Ecological scientists have raised an unexpected concern regarding the harmful effects of medications on the environment: The presence of drugs in our drinking water. Traces of more than 100 different pharmaceuticals, or their byproducts, were found in the drinking water supplies of at least 41 million Americans, including medicines for pain, infection, high cholesterol, asthma, epilepsy, mental illness, and heart problems (Donn, Mendoza, & Pritchard, 2008).

Human excretions are the major factor in spreading pharmaceuticals through the waste stream. Drugs that are thrown away end up at landfills, where they can slowly seep into the groundwater (Daughton, 2008). Additionally, U.S. manufacturers, including major drug makers, have legally released at least 271 million pounds of pharmaceuticals into waterways that often provide drinking water—contamination the federal government has consistently overlooked, according to an Associated Press (AP) investigation. The AP also found that an estimated 250 million pounds of pharmaceuticals and contaminated packaging are thrown away each year by hospitals and long-term care facilities (Donn, 2009).

At a 2007 conference, Mary Buzby, the Director of Environmental Technology for drug maker Merck & Co., quoted in the *The Collaborative on Health and the Environment eNewsletter* (March 13, 2008) said:

> . . . there is genuine concern that these compounds, in the small concentrations that they're at, could be causing impacts to human health or to aquatic organisms. . . . There's growing concern in the scientific community, meanwhile, that certain drugs or combinations of drugs may harm humans over decades because water, unlike most specific foods, is consumed in sizable amounts every day. . . .

> Our bodies may shrug off a relatively big one-time dose, yet suffer from a smaller amount delivered continuously over a half century, perhaps subtly stirring allergies or nerve damage. Pregnant women, the elderly and the very ill might be more sensitive.

Small amounts of medication have been shown to have an adverse human impact. This includes researcher's discovery of affected human embryonic kidney cells growing too slowly, human blood cells showing signs of inflammation, and human breast cancer cells growing too quickly (Donn, 2009).

They are also damaging wildlife; for example, male fish are being feminized, evidenced by the anomaly of their creating egg yolk proteins, a process usually restricted to females. In an article published in *Environmental Science and Technology*, it was reported that elevated concentrations of commonly prescribed antidepressants were found in the neural tissue of fish in two tested streams, Boulder Creek near Boulder, Colorado, and Fourmile Creek near Ankeny, Iowa (Schultz et al., 2010). The antidepressants were found in fish collected over 5 miles downstream of the location of the wastewater discharge from water treatment plants. The scientists detected several commonly used antidepressants in the water, streambed sediment, as well as the brain tissue of white suckers, a native fish species. Fish collected upstream from the wastewater discharge did not have antidepressants present in their brain tissues. The implications have yet to be determined, but there is a basis for concern when water and fish are contaminated in this way.

Though pharmaceutical sales are rising, plants that cleanse sewage or drinking water are not currently required to remove drugs; in fact, there has been no national strategy to deal with them—no effective mandates to test, treat, or limit drug waste or even advise the public about the potential hazards. Recently, however, government regulators are beginning to move toward dealing with pharmaceuticals as environmental pollutants: (1) The Environmental Protection Agency (EPA) has listed some pharmaceuticals as candidates for regulation in drinking water. The agency also has launched a survey to check for scores of drugs at water treatment plants across the nation; (2) The FDA has updated its list of waste drugs that should be flushed down the toilet, but the agency has also declared a goal of working toward the return of all unused medicines; and (3) The National Toxicology Program is conducting research to clarify how human health may be harmed by drugs at low environmental levels (Dodd, 2009).

The unintended consequences for the environment and for human health which depends on a healthy environment will likely yield long-term effects we can't realistically even imagine right now. Clinicians can provide sensible, "green" treatments in the form of psychotherapy utilizing hypnosis. Talking doesn't pollute the environment.

Concern #9: The Arguable Therapeutic Efficacy of Antidepressants

The issue giving rise to this special issue of the *American Journal of Clinical Hypnosis* regarding just how effective antidepressants really are makes all the other concerns

secondary, though still very important. If antidepressants were highly and unequivocally successful as safe therapeutic agents, the other concerns might seem considerably less significant to some. Just how successful are they? We don't really know, but there is ample evidence their merits have been overstated.

In January 2008, the *New England Journal of Medicine* published an article (Turner, Matthews, Linardatos, Tell, & Rosenthal, 2008) that was staggering in its implications for how science is done and how the results of research studies in general and antidepressant studies in particular are published and released to both professionals and the general public alike. The article documented the fact that research on antidepressant medications was, for *years*, published selectively, a point Kirsch alluded to in his *60 Minutes* appearance. Erick Turner, himself a former reviewer for the FDA, and his colleagues, wrote that when a study showed a finding favorable to the drug company, it was highly likely (94% chance) to be published. But, if a study *wasn't* favorable to a drug, that study was very unlikely (only a 14% chance) to be published. Studies with negative findings were essentially hidden from view, never analyzed in order to get a more objective view of the merits of the antidepressant being tested.

One doesn't have to go very far in one's thinking to wonder why negative studies would be omitted from consideration and who benefits from such exclusion. After including these omitted data to their study of antidepressants' effectiveness, the authors stated:

> We found a bias toward the publication of positive results. Not only were positive results more likely to be published, but studies that were not positive, in our opinion, were often published in a way that conveyed a positive outcome. We analyzed these data in terms of the proportion of positive studies and in terms of the effect size associated with drug treatment. Using both approaches, we found that the efficacy of this drug class is less than would be gleaned from an examination of the published literature alone. . . . As a result of selective reporting, the published literature conveyed an effect size nearly one third larger than the effect size derived from the FDA data. (Turner et al., 2008, p. 258)

In February, 2008, Kirsch and colleagues reported on data they had acquired from the FDA through the Freedom of Information Act regarding the licensing of the six most popularly prescribed antidepressants approved between 1987 and 1999 (Prozac, Paxil, Effexor, Serzone, Zoloft, and Celexa). Their analysis of the data that led to FDA approval of these drugs showed that these antidepressants had a minimal benefit beyond a placebo effect. The authors concluded, "Meta-analyses of ADMs have reported only modest benefits over placebo treatment, and when unpublished trial data are included, the benefit falls below accepted criteria for clinical significance." This was the research, in part, which gave rise to the *60 Minutes* story which, in turn, gave rise to this special issue of the *American Journal of Clinical Hypnosis*.

Most recently, the conflict over the efficacy of antidepressants reached new heights in contradictory considerations in the scientific literature. The 2010 article in *JAMA* by Fournier and colleagues was summarized in a *MedScape* article titled, "Efficacy of Antidepressant Medication vs. Placebo Increases With Severity of Depression" (Barclay,

2010). The authors suggested that antidepressant efficacy was a function of the severity of the depression. More recently, a contradictory article, also posted on *MedScape*, boldly carried the title, "Antidepressants Work, and Depression Severity Does Not Matter" (Roy-Byrne, 2012). Do antidepressants work and are they more effective than placebos? The answer is still clearly yes and no.

In a remarkable study—the first of its kind—biological evidence was found to support the hypothesis that much of the therapeutic effect generated by antidepressants is attributable to the placebo effect. Dr. Aimee Hunter and her colleagues at the UCLA Neuropsychiatric Institute studied the relationship between EEG changes and clinical outcome on patients taking Effexor and Prozac. Changes in prefrontal EEG patterns were recorded during a placebo lead-in phase, often conducted before randomization to drug treatment in clinical trials. The authors stated "Brain changes during the placebo lead-in phase may confound apparent medication effects associated with clinical outcomes in medication-treated subjects. . . . Some neurophysiological changes that are associated with endpoint antidepressant outcome reflect nonpharmacodynamic factors" (Hunter, Leuchter, Morgan, & Cook, 2006, p. 1429).

Simply put, brains changed when no active drug was administered, and these changes predicted response to antidepressant treatment in depressed patients. Do antidepressants provide some benefit beyond placebo? Perhaps so, but perhaps not to the degree or in the way we may have been led to believe. The enthusiasm for antidepressants is not justified by the science, and routinely making them the foundation of depression treatment can be reasonably considered a questionable practice.

Clinical Implications for Clinicians Utilizing Hypnosis

Even the strongest advocate for antidepressants must admit there are limits regarding what antidepressants can realistically be expected to do for someone. Antidepressants not only will not but *cannot* teach the depressed client the kinds of personal and interpersonal skills that can empower him or her to better manage mood-related issues. To be specific, medication cannot teach depressed individuals better problem-solving skills, more adaptive coping skills, more sophisticated social skills, better and more realistic cognitive processes, or more flexible and effective behavior. Furthermore, medication cannot enhance one's spiritual life or help the client build a positive support network. Finally, they cannot be used preventively to forestall a first episode's onset, unlike therapy and education which have great preventive potential (Muñoz et al., 2012). This is especially important to consider given the evidence that as depression crosses generations, it becomes more pervasive and also more severe (Weissman, 2005; Yapko, 1999, 2009).

Thus, one immediate guideline for any clinician to adopt would be to help impart realistic expectations for what an antidepressant can and cannot do by avoiding the framing of depression as a medical disease needing exclusively biological treatment. This alone

would greatly influence the quality of client expectancy, a key ingredient affecting treatment response. Well beyond that, though, the clinician utilizing hypnosis can focus the client on other psychological and social issues that are key ingredients of successful therapy, such as evolving flexibility, experimenting with beliefs and perceptions, learning to recognize and tolerate ambiguity, building positive social skills, and much more. These have been described in substantial detail in previous writings (Yapko, 1997, 1999, 2001a, 2006, 2008, 2009, 2010b).

Conclusion

Given the rising rate of depression in the United States and around the world, and the evidence that depression intensifies from one generation to the next, how this generation of clinicians thinks about depression and its treatment will have consequences that go far beyond this discussion. The issues addressed here are complicated and there is no single, clear conclusion to be drawn about the merits of antidepressants.

Americans too readily look for quick solutions based on what's easiest or most convenient rather than what's best. The ease with which people put powerful chemicals in their body on the basis of too little good research and too much exaggerated advertising is a legitimate cause for concern. Likewise, the ease with which many clinicians routinely advocate the use of medications without considering the range of factors presented in this short article is also a legitimate basis for concern. There's simply too much we don't yet know about antidepressants to embrace them enthusiastically, and there is too much about them we have ignored by getting sidetracked by ill-founded one-dimensional arguments one way or the other. The concerns raised in this article can help broaden the discussion beyond only whether the drugs work to include other important factors that everyone in positions of authority making treatment recommendations should consider.

References

Alladin, A. (2006). Experiential cognitive hypnotherapy: Strategies for relapse prevention in depression. In M. Yapko (Ed.), *Hypnosis and treating depression: Advances in clinical practice* (pp. 281–313). New York, NY: Routledge.

Alladin, A. (2010). Evidence-based hypnotherapy for depression. *International Journal of Clinical and Experimental Hypnosis*, *58*, 165–184.

Alladin, A. (2012). Cognitive hypnotherapy for major depressive disorder. *American Journal of Clinical Hypnosis*, *54*, 275–293.

Alladin, A., & Alibhai, A. (2007). Cognitive hypnotherapy for depression. *International Journal of Clinical and Experimental Hypnosis*, *55*, 147–166.

Angell, M. (2005). *The truth about the drug companies: How they deceive us and what to do about it*. New York, NY: Random House.

Angell, M. (2011, June 23). The epidemic of mental illness: Why? *The New York Review of Books.* Retrieved from www.nybooks.com/articles/archives/2011/jun/23/epidemic-mental-illness-why/?pagination=false.

Balon, R. (2007). Psychiatrist attitudes toward self-treatment of their own depression. *Psychotherapy and Psychosomatics*, *76*, 306–310.

Banov, M. (2010). *Taking antidepressants: Your comprehensive guide to starting, staying on,and safely quitting*. North Branch, MN: Sunrise River Press.

Barber, C. (2008). *Comfortably numb: How psychiatry is medicating a nation*. New York, NY: Pantheon.

Barclay, L. (2010, January 27). Efficacy of antidepressant medication vs. placebo increases with severity of depression. Retrieved from www.medscape.com/viewarticle/715585.

Bloom, F. (2010, June 8). Placebo versus antidepressant: Review of the emperor's new drugs. Retrieved from http://dana.org/news/cerebrum/detail.aspx?id=28024.

Bremner, J. (2008). *Before you take that pill: Why the drug industry may be bad for your health*. New York, NY: Avery.

Bridge, J., Iyengar, S., Salary, C., Barbe, R., Birmaher, B., Pincus, H., . . . Brent, D. (2007). Clinical response and risk for reported suicidal ideation and suicide attempts in pediatric antidepressant treatment: A meta-analysis of randomized controlled trials. *Journal of the American Medical Association*, *297*, 1683–1696.

Brody, A., Saxena, S., Stoessel, P., Gillies, L., Fairbanks, L., Alborzian, S., . . . Baxter, L. (2001). Regional brain metabolic changes in patients with major depression treated with either paroxetine or interpersonal therapy: Preliminary findings. *Archives of General Psychiatry*, *58*, 631–640.

Buck, M. (2012). The placebo response in pediatric clinical trials. *Pediatric Pharmacology, 18*, 3. Retrieved from http://www.medscape.com/viewarticle/761908_7.

Buzby, M. (2008, March 13). Drugs in our drinking water. *The Collaborative on Health and the Environment E-Newsletter.* Retrieved from http://www.healthandenvironment.org/articles/newsletters/3349

Carlat, D. (2010). *Unhinged: The trouble with psychiatry—A doctor's revelations about a profession in crisis*. New York, NY: Free Press.

Cozolino, L. (2006). *The neuroscience of human relationships: Attachments and the developing social brain*. New York, NY: Norton.

Cosgrove, L. (2010, November). Psychiatric taxonomy, psychopharmacology and big pharma. *The Tablet*, *11*,60–67.

Daughton, C. G. (2008). Pharmaceuticals as environmental pollutants: The ramifications for human exposure. *International Encyclopedia of Public Health*, *5*, 66–122.

DeAngelis, C. (2008). Impugning the integrity of medical science: The adverse effects of industry influence. *Journal of the American Medical Association*, *299*, 1833–1835.

Detweiler-Bedell, J., & Whisman, M. (2005). A lesson in assigning homework: Therapist, client, and task characteristics in cognitive therapy for depression. *Professional Psychology: Research and Practice*, *36*, 219–223.

Doidge, N. (2007). *The brain that changes itself: Stories of personal triumph from the frontiers of brain science*. New York, NY: Penguin.

Dodd, S. (2009, December 23). Feds take first steps to regulate drugs in drinking water. *Sustainable Cities Collective*. Retrieved from http://sustainablecitiescollective.com/index.php?q=scottdodd/7633/feds-take-first-steps-regulate-drugs-drinking-water.

Donn, J. (2009, April 19). Tons of released drugs taint U.S. water. *US News & World Report Science*. Retrieved from http://www.usnews.com/science/articles/2009/04/19/tons-of-released-drugs-taint-us-water.

Donn, J., Mendoza, M., & Pritchard, J. (2008). AP probe finds drugs in drinking water. Associated Press National Investigative Team. Syndicated nationally March 10, 2008.

Fournier, J., DeRubeis, R., Hollon, S., Dimidjian, S., Amsterdam, J., Shelton, R., & Fawcett, J. (2010). Antidepressant drug effects and depression severity: A patient-level meta-analysis. *Journal of the American Medical Association*, *303*, 47–53.

Friedman, R., & Leon, A. (2007). Expanding the black box—Depression, antidepressants, and the risk of suicide. *New England Journal of Medicine*, *356*, 2343–2346.

Gandhi, T., Weingart, S., Borus, J., Seger, A., Peterson, J., Burdick, E., . . . Bates, D. (2003). Adverse drug events: Ambulatory care visits for treatment. *New England Journal of Medicine*, *348*, 1556–1564.

Gibbons, R., Brown, C., Hur, K., Davis, J., & Mann, J. (2012). Suicidal thoughts and behavior with antidepressant treatment: Reanalysis of the randomized placebo—Controlled studies of Fluoxetine and Venlafaxine. *Archives of General Psychiatry*, online first. doi:10.1001/archgenpsychiatry.2011.2048

Glenmullen, J. (2006). *The antidepressant solution: A step-by-step guide to safely overcoming antidepressant withdrawal, dependence, and "addiction."* New York, NY: Free Press.

Goodman, S., & Gotlib, I. (Eds.)(2002). *Children of depressed parents: Mechanisms of risk and implications for treatment*. Washington, DC: American Psychological Association.

Halsband, U., Mueller, S., Hinterberger, T., & Strickner, S. (2009). Plasticity changes in the brain in hypnosis and meditation. *Contemporary Hypnosis*, *26*, 194–215.

Harris, C., & de Jong, V. (2011). Perspectives on placebo. *The Journal of Mind-Body Regulation*, *1*, 110–111.

Healy, D. (2004). *Let them eat Prozac: The unhealthy relationship between the pharmaceutical companies and depression*. New York, NY: New York University.

Hunter, A., Leuchter, A., Morgan, M., & Cook, I. (2006). Changes in brain function (Quantitative EEG concordance) during placebo lead-in and treatment outcomes in clinical trials for major depression. *American Journal of Psychiatry*, *163*, 1426–1432.

Jacobson, N., Martell, C., & Dimidjian, S. (2001). Behavioral activation treatment for depression: Returning to contextual roots. *Clinical Psychology: Science and Practice*, *8*, 255–270.

Keers, R. (2012). Will gene-environment interactions explain differential antidepressant response? *Personalized Medicine*, *9*, 319–322.

Kessler, R., Berglund, P., Demler, D., Jin, R., Koretz, D., Merikangas, K., . . . Wang, P. (2003), The epidemiology of major depressive disorder: Results from the National Comorbidity Survey Replication (NCS-R). *Journal of the American Medical Association*, *289*, 3095–3105.

Kihlstrom, J. (2012, February 21). Comments on Kirsch, antidepressants and placebos. Comment posted on *Hypnosis Digest*, a listserv for members of the American Society of Clinical Hypnosis.

Kirsch, I. (1990). *How expectancies shape experience*. Washington, DC: American Psychological Association.

Kirsch, I. (1994). Clinical hypnosis as a nondeceptive placebo: Empirically derived techniques. *American Journal of Clinical Hypnosis*, *37*, 95–106.

Kirsch, I. (2001). The response set theory of hypnosis: Expectancy and physiology. *American Journal of Clinical Hypnosis*, *44*, 69–73.

Kirsch, I. (2006). Medication and suggestion in the treatment of depression. In M. Yapko (Ed.), *Hypnosis and treating depression: Applications in clinical practice* (pp. 271–280). New York, NY: Routledge.

Kirsch, I. (2010). *The emperor's new drugs: Exploding the antidepressant myth*. New York, NY: Basic Books.

Kirsch, I., Deacon, B., Huedo-Medina, T., Scoboria, A., Moore, T., & Johnson, R. (2008). Initial severity and antidepressant benefits: A meta-analysis of data submitted to the Food and Drug Administration. *PLoS Medicine*, *5*, e45. doi:10.1371/journal.pmed.0050045

Kramer, P. (2011, July 9). In defense of antidepressants. *The New York Times*. Retrieved from http://www.nytimes.com/2011/07/10/opinion/sunday/10antidepressants.html?pagewanted=all.

Lacasse, J., & Leo, J. (2005). Serotonin and depression: A disconnect between the advertisements and the scientific literature. *PLoS Medicine*, *2*, e392. doi:10.1371/journal.pmed.0020392

Lankton, S. (2006). Four brief hypnotic interventions in the treatment of depression. In M. Yapko (Ed.), *Hypnosis and treating depression: Applications in clinical practice* (pp. 25–47). New York, NY: Routledge.

Lehrer. (2006). The reinvention of the self. *Seed*, *2*, 62–63.

Lynn, S., & Green, J. (2011). The sociocognitive and dissociation theories of hypnosis: Toward a rapprochement. *International Journal of Clinical and Experimental Hypnosis*, *59*, 277–293.

Lynn, S., & Kirsch, I. (2006). *Essentials of clinical hypnosis: An evidence-based approach*. Washington, DC: American Psychological Association.

Lynn, S., Malakataris, A., Condon, L., Maxwell, R., & Cleere, C. (2012). Post-traumatic stress disorder: Cognitive hypnotherapy, mindfulness, and acceptance-based treatment approaches. *American Journal of Clinical Hypnosis*, *54*, 311–330.

Mark, T., Levit, K., & Buck, J. (2009). Datapoint: Psychotropic drug prescriptions by medical specialty. *Psychiatric Services*, *60*, 1167.

Martin, S., Martin, E., Rai, S., Richardson, M., & Royall, R. (2001). Brain blood flow changes in depressed patients treated with interpersonal psychotherapy or venlafaxine hydrochloride: Preliminary findings. *Archives of General Psychiatry*, *58*, 641–649.

Mojtabai, R., & Olfson, M. (2011, August). Proportion of antidepressants prescribed without a psychiatric diagnosis is growing. *Health Affairs*, *30*, 1434–1442.

Moncrieff, J. (2008). *The myth of the chemical cure*. Basingstoke, UK: Palgrave Macmillan.

Muñoz, R., Beardslee, W., & Leykin, Y. (2012). Major depression can be prevented. *American Psychologist*, *67*, 285–295.

Nolen-Hoeksema, S. (2000). The role of rumination in depressive disorders and mixed anxiety/depressive symptoms. *Journal of Abnormal Psychology*, *109*, 504–511.

Olfson, M., & Marcus, S. (2009). National patterns in antidepressant medication treatment. *Archives of General Psychiatry*, *66*, 848–856.

Peterson, M. (2009). *Our daily meds: How the pharmaceutical companies transformed themselves into slick marketing machines and hooked the nation on prescription drugs*. New York, NY: Picador.

Pettit, J., & Joiner, T. (Eds.). (2006). *Chronic depression: Interpersonal sources, therapeutic solutions*. Washington, DC: American Psychological Association.

Psaty, B., & Kronmal, R. (2008). Reporting mortality findings in trials of Rofecoxib for Alzheimer disease or cognitive impairment: A case study based on documents from Rofecoxib litigation. *Journal of the American Medical Association*, *299*, 1813–1817.

Reblin, M., & Uchino, B. (2008). Social and emotional support and its implication for health. *Current Opinions in Psychiatry*, *21*, 201–205.

Rosenquist, S. E. (this issue). When the bough breaks: Rethinking treatment strategies for perinatal depression. *American Journal of Clinical Hypnosis*, *55*, 291–323.

Ross, J., Hill, K., Egilman, D., & Krumholz, H. (2008). Guest authorship and ghostwriting in publications related to Rofecoxib: A case study of industry documents from Rofecoxib litigation. *Journal of the American Medical Association*, *299*, 1800–1812.

Rossi, E. (2003). Gene expression, neurogenesis, and healing: Psychosocial genomics and therapeutic hypnosis. *American Journal of clinical Hypnosis*, *45*, 197–216.

Roy-Byrne, P. (2012, May 9). Antidepressants work, and depression severity does not matter. *Medscape*. Retrieved from http://www.medscape.com/viewarticle/761656?src=emailthis.

Schultz, M., Furlong, E., Kolpin, D., Weiner, S., Schoenfuss, H., Barber, L., . . . Vajda, A. (2010). Antidepressant pharmaceuticals in two U.S. effluent-impacted streams: Occurrence and fate in water and sediment, and selective uptake in fish neural tissue. *Environmental and Science Technology*, *44*, 1918–1925.

Scott, T. (2006). *America fooled: The truth about antidepressants, antipsychotics and how we've been deceived*. Victoria, TX: Argo Publishing.

Sharpe, K. (2012). *Coming of age on Zoloft: How antidepressants cheered us up, let us down, and changed who we are*. New York, NY: Harper Perennial.

Siegel, D. (2007). *The mindful brain*. New York, NY: Norton.

Simpkins, C., & Simpkins, A. (2010). *Neuro-hypnosis: Using self-hypnosis to activate the brain for change*. New York, NY: W. W. Norton.

Smith, B. (2012). Inappropriate prescribing. *Monitor on Psychology*, *43*, 36–40.

Thase, M. (2012, May 23). Three depression therapies to watch. *Medscape*. Retrieved from www.medscape.com/viewarticle/764271.

Thomas, R., & Peterson, D. (2003). A neurogenic theory of depression gains momentum. *Molecular Interventions*, *3*, 441–444.

Turner, E., Matthews, A., Linardatos, E., Tell, R., & Rosenthal, R. (2008). Selective publication of antidepressant trials and its influence on apparent efficacy. *The New England Journal of Medicine*, *358*, 252–260.

Weil, A. (2012, March 23). Spontaneous happiness: The vision of integrative mental health. Presentation at the *Psychotherapy Networker Symposium*, Washington, DC.

Weissman, M. (2005). Families at high and low risk for depression: A 3 generation study. *Archives of General Psychiatry*, *62*, 29–36.

Whitaker, R. (2011). *Anatomy of an epidemic: Magic bullets, psychiatric drugs, and the astonishing rise of mental illness in America*. New York, NY: Broadway.

World Health Organization (2002). *The world health report 2002: Reducing risks, promoting healthy life*. Geneva, Switzerland: Author.

Yapko, M. (1992). *Hypnosis and the treatment of depressions: Strategies for change*. New York, NY: Brunner/Mazel.

Yapko, M. (1997). *Breaking the patterns of depression*. New York, NY: Random House/Doubleday.

Yapko, M. (1999). *Hand-me-down blues: How to stop depression from spreading in families*. New York, NY: St. Martins Griffin.

Yapko, M. (2001a). *Treating depression with hypnosis: Integrating cognitive-behavioral and strategic approaches*. New York, NY: Brunner/Routledge.

Yapko, M. (2001b). Hypnosis in treating symptoms and risk factors of major depression. *American Journal of Clinical Hypnosis*, *44*, 97–108.

Yapko, M. (2001c). Hypnotic intervention for ambiguity as a depressive risk factor. *American Journal of Clinical Hypnosis*, *44*, 109–117.

Yapko, M. (Ed.) (2006). *Hypnosis and treating depression: Applications in clinical practice*. New York, NY: Routledge.

Yapko, M. (2008). Hypnotic approaches to treating depression. In M. Nash & A. Barnier (Eds.), *The Oxford handbook of hypnosis: Theory, research and practice* (pp. 549–567) Oxford, UK: Oxford University Press.

Yapko M. (2009). *Depression is contagious: How the most common mood disorder is spreading around the world and how to stop it*. New York, NY: Free Press.

Yapko M. (2010a). Hypnosis in the treatment of depression: An overdue approach for encouraging skillful mood management. *International Journal of Clinical and Experimental Hypnosis*, *58*, 137–146.

Yapko M. (2010b). Hypnotically catalyzing experiential learning across treatments for depression: Actions can speak louder than moods. *International Journal of Clinical and Experimental Hypnosis*, *58*, 186–201.

Yapko, M. (2011). *Mindfulness and hypnosis: The power of suggestion to transform experience*. New York, NY: Norton.

Yapko, M. (2012). *Trancework: An introduction to the practice of clinical hypnosis* (4th ed.), New York, NY: Routledge.

Zeig, J. (1990). Seeding. In J. Zeig & S. Gilligan (Eds.), *Brief therapy: Myths, methods, and metaphors* (pp. 221–246). New York, NY: Brunner/Mazel.