Published in final edited form as:
*Int J Clin Exp Hypn*. 2010 April ; 58(2): 147–164. doi:10.1080/00207140903523186.

# Hypnosis in the Treatment of Depression: Considerations in Research Design and Methods

**Barbara S. McCann, Ph.D.** and **Sara J. Landes, Ph.D.**
Department of Psychiatry and Behavioral Sciences, University of Washington School of Medicine

## Abstract

Depressive disorders constitute a serious problem in the United States. The appearance of practice guidelines and lists of evidenced based therapies suggests that adequate treatments for depression exist. However, a careful consideration of what we do and do not know about the treatment of depression leaves plenty of room for improved approaches to addressing this condition. Although there has been a dearth of research on the treatment of depression using hypnosis, there are several compelling arguments for the inclusion of hypnotic approaches in the array of strategies for dealing with depression. However, traditional "gold standard" research methods, namely randomized controlled trials (RCTs) have many potential shortcomings for identifying the potential impact of hypnosis on depression. Other strategies, notably single-case design and benchmarking approaches, may offer a more practical solution to the problem of determining "what works for depression."

Depressive disorders are among the most prevalent of mental disorders in the United States. According to recent large-scale epidemiologic surveys, the lifetime prevalence of major depressive disorder is approximately 13-16% and the 12-month prevalence is approximately 5-7% (Hasin, Goodwin, Stinson, & Grant, 2005; Kessler et al., 2003). Depression is associated with enormous costs in terms of lost work productivity, interpersonal problems, and associated substance use (Barrett & Barber, 2007; Gilman & Abraham, 2001; Stewart, Ricci, Chee, Hahn & Morganstein, 2003)

In the United States, psychopharmacological approaches and certain forms of psychotherapy, particularly cognitive behavior therapy (CBT) and interpersonal psychotherapy (IPT) are generally recommended as treatments of choice for depression. Several practice guidelines and lists of empirically validated treatments recommend antidepressant treatment, particular forms of psychotherapy, and/or both for the treatment of the major psychiatric disorders in which depression is encountered (American Psychiatric Association, 2006; Chambless & Hollon, 1998; see Alladin, Sabatini, & Amundson, 2007 for a review). Types of research support deemed appropriate for determining whether a particular form of psychotherapy has solid footing as evidence-based have been delineated by a task force of the American Psychological Association (APA Presidential Task Force on Evidence-Based Practice, 2006).

There are several caveats to the widespread recommendations regarding current "treatments of choice" for depression, however. One such caveat is we may still find ourselves in the situation in which of all forms of psychotherapy appear to be roughly equivalent - - the Dodo conclusion Jerome D. Frank reached over thirty years ago that "Everybody has one,

Address correspondence to: Barbara S. McCann, Ph.D., Department of Psychiatry, University of Washington School of Medicine, Box 359896, Seattle, WA 98195. mccann@u.washington.edu.

and all must have prizes" (Frank, 1973). In spite of the conclusions from early meta-analyses in which CBT emerged as superior in the treatment of depression (e.g., Dobson, 1989), there is room for concern that Frank may have been correct. For example, authors of a recent meta-analysis of various forms of psychotherapy for depression (cognitive-behavior therapy, nondirective supportive therapy, behavioral activation therapy, psychodynamic therapy, problem-solving therapy, interpersonal psychotherapy, and social skills training) concluded that no one particular form of psychotherapy was clearly better than another. In fact, there was a slight advantage for interpersonal psychotherapy, and nondirective supportive psychotherapy was somewhat less efficacious (Cuijpers, van Straten, Andersson, & van Oppen, 2008), although in both of these instances, the comparative effect sizes were small.

Another concern is, not all of the quantitative reviews of the data on depression treatment have supported the conclusion that antidepressants or CBT are particularly effective in treating depression, when considering outcomes beyond initial treatment effects. Rates of sustained remission from major depressive episodes are disappointing, even in the best randomized controlled trials in which more severely impaired individuals are excluded from consideration. Rates of relapse for depression are problematic. In the short term, psychotherapies for depression may reduce depressive symptomatology. However, after about one year of follow-up, only 25% of treated individuals in large scale RCTs continue to be non-depressed (Roth & Fonagy, 2005). Treatment dropout rates mitigate the overall effectiveness of therapy (e.g., Bados, Balaguer, & Saldana, 2007). The number of people in the U.S. who are able to receive treatment for depression is lower than the actual need (Mojtabai, 2009), and while access to pharmacological treatments for depression are increasing, availability of psychotherapy for depression is declining (Olfson, Marcus, Druss, Elinson, Tanielian, & Pincus, 2002). Given these concerns, it is important for clinicians and clinician-researchers to continue to develop methods of addressing depression.

Two of the more enduring findings in the literature on psychotherapy outcome are that patient expectancies (Greenberg, Constantino, & Bruce, 2006) and the strength of the therapeutic alliance (Martin, Garske, & Davis, 2000) are related to improvement. Against this rather confusing backdrop, we now turn to a consideration of the role hypnosis may play in the treatment of depression.

## Hypnosis in the Treatment of Depression

There are several compelling arguments for the use of hypnosis in the treatment of depression. For example, the editor of this special issue, Michael Yapko, has proposed that hypnosis has relevance to the treatment of depression because hypnosis can help build positive expectancy regarding treatment, address numerous depressive symptoms (including insomnia and rumination), and modify patterns of self-organization (such as cognitive, response, attentional, and perceptual styles) that contribute to depressed thinking and mood (Yapko, 2006). Other approaches to depression using hypnosis have emphasized retrieval of past positive experiences (Lankton, 2006), the development of coping skills (Burns, 2006), augmenting interpersonal psychotherapy (Lynn, Matthews, Farioli, Rhue, & Mellinger, 2006), and enhancing cognitive behavior therapy (Alladin, 2006; Lynn, Matthews, Farioli, Rhue, & Mellinger, 2006). The most extensively explicated approach to date is that described by Michael Yapko in which strategic, cognitive-behavioral, and hypnotic approaches are integrated (Yapko, 1992; 2001, 2006).

The dearth of treatment outcome research on hypnosis in the treatment of various psychiatric disorders, including the depressive disorders, has been recognized (Kirsch, Lynn, & Rhue, 1993; Schoenberger, 2000). An oft-cited meta-analysis examined whether hypnosis has an

additive effect to CBT for a range of conditions. The authors concluded that, on average, those patients who received CBT with adjunctive hypnosis fared better than 75% of patients who received therapy without hypnosis (Kirsch, Montgomery, & Saperstein, 1995). While this is at first glance encouraging, the value of this meta-analysis for appreciating the potential of hypnosis to improve psychotherapeutic outcomes in emotional disorders is limited. Only 5 of the 18 studies included in the meta-analysis addressed what could be considered psychiatric concerns: Borkovec and Fowles (1973) addressed sleep onset insomnia in female undergraduates, excluding those taking medications or "being seen by other professional services." Sullivan, Johnson, and Bratkovich (1974) studied 15-35 year olds with organic brain damage (WAIS scores between 50-75) who were "catastrophically anxious," but this term was not defined and the outcome measures were pre-test post-test improvements on the Bender Gestalt and the picture completion subtest of the WAIS. Lazarus (1973) studied individuals with mixed presentations who were interested in receiving hypnosis; his study was primarily interested in whether the use of the term "hypnosis" in this group would enhance expectancy effects. Participants in one study were snake phobics (O'Brien, Cooley, Ciotti, & Henninger, 1981). Only one of these studies, the 1993 dissertation on public speaking anxiety by Nancy Schoenberg (subsequently published as Schoenberger, Kirsch, Gearan, Montgomery, & Pastyrnak, 1997) used what would be considered a cognitive behavioral treatment, as the others used either relaxation methods, systematic desensitization, or in vivo exposure - - approaches generally deemed behavioral.

There has been relatively little research on the use of hypnosis in the treatment of depression. There may be several reasons for this state of affairs. There is a perception that we already have effective treatments for depression, using existing pharmacological or psychotherapeutic approaches, and that all that is really needed is to get more clinicians to use these highly effective approaches (e.g., Simon, 2009). Clinicians skilled in the use of hypnosis may be reluctant to treat depression based on earlier, albeit unsubstantiated concerns that hypnosis may be harmful to depressed individuals.

We now turn to a description of several research methodologies and their suitability for exploring the treatment of depression using hypnotic methods. The first of these, the randomized controlled trial (RCT), is the current "gold standard" for empirically supported treatments (ESTs) and is a resource-intense methodology generally best suited to research settings. Two additional methods, single-case design and benchmarking, are methods that can be more readily implemented within a clinical practice setting, and may address some of the shortcomings of RCT approaches.

## Randomized Controlled Trials and Empirically Supported Treatments

Meta-analyses have become a commonplace means of drawing broad conclusions from research data. Implicit in the use of meta-analysis is the assumption that the methodologies used in the studies selected are appropriate approaches to the questions being addressed, and an acceptance of the widely held view that psychotherapy either does, or does not, have empirical support. Indeed, several authors have suggested that randomized controlled trial methodology, on which the validity of meta-analyses often rests, may not be the most appropriate type of study design for providing empirical support for the use of hypnosis in treating various psychiatric problems, given that hypnosis is an adjunct to psychotherapy (e.g., Oakley, Alden, & Mather, 1997), rather than a form of psychotherapy itself (Alladin, et al, 2007; Lynn, Kirsch, Barabasz, Cardeña, & Patterson, 2000; Schoenberger, 2000).

For the past 15 years, RCTs have been the dominant paradigm in research on psychotherapy. The American Psychological Association's 1995 Task Force on Promotion and Dissemination of Psychological Procedures is often credited with sparking a movement

within the United States to encourage psychotherapy practitioners to use only empirically validated treatments in clinical practice, promoting data from RCTs as the most solid evidence (e.g., Chambless & Ollendick, 2001; Friedberg, Gorman, & Beidel, 2009; Westen, Novotny, & Thompson-Brenner, 2004). RCTs lend themselves to meta-analysis, and following the influential paper by Smith and Glass (1977), in which all forms of psychotherapy were found to be effective (with no clear superiority for one approach), subsequent meta-analyses began to parse the psychotherapy outcome literature according to type of therapy and, following publication of DSM-III, according to diagnostic category.

Although RCTs have dominated the research on psychotherapeutic efficacy, they have several limitations that are particularly relevant to the question of whether hypnosis is a useful therapeutic strategy in treating depression. It is particularly important to evaluate the utility of RCTs in studying the therapeutic effects of hypnosis, given the prominence of RCT methodology as a "gold standard" for providing empirical support for "what works" in psychotherapy (Chambless & Hollon, 1998). Critiques and arguments for and against supporting RCT methods and the concept of ESTs have been described in a thorough analysis (Westen, Novotny, & Thompson-Brenner, 2004a) and subsequent commentaries (Ablon & Marci, 2004; Crits-Christoph, Wilson, & Hollon, 2005; Goldfried & Eubanks-Carter, 2004; Haaga, 2004; Weisz, Weersing, & Henggeler, 2005; Westen, Novotny, & Thompson-Brenner, 2004b; Westen, Notovny, & Thompson-Brenner, 2005). Several of the shortcomings identified by Westen et al (2004a) and others (e.g., Bohart, O'Hara, & Leitner, 1998) have particular bearing on the clinical use of hypnosis in treating depression.[1]

Many of the concerns regarding the dominance of the RCT-EST movement have bearing on all forms of psychotherapy, regardless of whether hypnosis is used. One particularly important concern is whether results from RCTs can be generalized to actual clinical practice.

## Generalizability to clinical practice

The psychotherapeutic interventions tested in RCTs are usually designed to address a single, specific Axis I disorder. Inclusion and exclusion criteria are restrictive, often exclude patients who are suicidal (even in studies of depression), and as a consequence result in relatively few patients qualifying for the research studies (Westen, Novotny, & Thompson-Brenner, 2004). This limits the extent to which the findings will generalize to practice.

In addition to generalizability concerns, several issues have particular bearing on whether hypnosis can be deemed useful based on RCT methodology. These issues include the requirements of treatment manuals, practical considerations in evaluating specific therapeutic components (e.g., use of hypnosis to "catalyze" empirically supported psychotherapies, as suggested by Lynn and Kirsch, 2006), and the potentially erroneous assumption that progress in therapy is linear.

[1]RCTs themselves have been subjected to science-by-consensus thinking. In the mid-1990's, an international group of scientists including experts in clinical trials, statisticians, epidemiologists, and journal editors convened and developed standards for the reporting of RCTs (Moher, Schulz, & Altman 2001). The resulting statement, Consolidated Standards of Reporting Trials (CONSORT), includes a checklist and flow diagram for reporting RCTs. While initially developed for RCTs of medications, a subsequent statement was revised and reported to include additional guidelines for the reporting of RCTs using nonpharmacological interventions (Boutron, Moher, Altman, Schulz, & Ravaud, 2008). The initial CONSORT and subsequent revisions have had a measureable impact on the reporting of RCTs (Han et al., 2009). While the CONSORT was designed primarily to impact how RCTs are reported, reviewed, and evaluated, attention to these guidelines during the planning stages of RCTs is now considered prudent. Ironically, the inclusion of additional guidelines for RCTs of nonpharmacological interventions grew out of the recognition that for such therapies, blinding is difficult, provider expertise has a role in outcome, and the complex interventions involved in nonpharmacological approaches are "…difficult to describe, standardize, reproduce, and administer consistently to all patients…[and] these variations could have an important impact on the estimate of the treatment effect." (Boutron et al., p. 295).

### Reliance on treatment manuals

Randomized clinical trials require treatment manuals so that the independent variable in such studies can be clearly specified. Treatment manuals in RCTs serve several functions: specification of the independent variable, define standards and criteria for evaluating adherence and competence in delivering treatment, facilitate training of study therapists and reduce therapist variability in treatment delivery, provide quality assurance standards, make it possible for others to replicate studies, and encourage dissemination of effective therapies from research to clinical practice (Carroll & Rounsaville, 2008). The confluence of DSM-III and its subsequent permutations, RCTs, meta-analyses, and practice guidelines has rarified treatment manuals. Partly in response to this, treatment manuals have met with considerable criticism regarding their applicability to patients seen in clinical practice, and their technique-oriented nature (see Carroll & Rounsaville, 2008; Westen, Novotny, & Thompson-Brunner, 2004 for reviews).

How readily can hypnosis been manualized? Clearly, if one is following standardized scripts or using taped sessions to conduct hypnosis, this is not problematic. Some researchers have taken this approach. For example, in a meta-analysis of 26 RCTs examining the impact of hypnosis in reducing distress from medical procedures, a large (.88) effect size was found for hypnosis (Schnur, Kafer, Marcus, & Montgomery, 2008). Many of the studies included in this meta-analysis delivered hypnotic interventions via audiotape. Most of the remaining studies used scripted hypnotic sessions, although in some cases, therapists delivering the interventions did make use of the unique histories and interests of study participants in crafting and delivering hypnosis (e.g., Calipel, Lucas-Polomeni, Wodey, & Ecoffey, 2005; Massarini et al., 2005; Saadat et al., 2006). Interestingly, a further analysis of moderating variables revealed that hypnotic sessions delivered “live” were more effective than sessions delivered via audio recording. Westen et al (2004a) made an interesting point regarding treatment manuals and clinician judgment: “The extent to which a treatment requires a competent clinical decision maker who must decide how and where to intervene on the basis of principles (even principles delineated in a manual) is the extent to which that treatment will not be able to come under experimental control in the laboratory. This places a premium on development of treatment packages that minimize clinical judgment because such treatments are the only ones that allow researchers to draw firm causal conclusions (p. 638).” This point can be appreciated when we consider the empirical support, based on RCTs, for hypnosis to reduce distress related to medical procedures.

Some aspects of hypnosis may lend themselves to manualization. Hypnosis sessions follow an almost universally accepted session structure, including orienting the patient to hypnosis and addressing misconceptions and other concerns, induction, deepening, therapeutic use of the hypnotic state, posthypnotic suggestion, and termination of the session (Kirsch, Lynn, & Rhue, 1993; Yapko, 1995). In a study of hypnosis as an adjunct to CBT in the treatment of bulimia nervosa (Barga, 2005), for example, the investigator used an existing well-known CBT treatment manual (Fairburn Marcus, & Wilson, 1993) coupled with hypnosis. The hypnotic procedures themselves consisted of scripted components (induction and deepening), followed by tailored posthypnotic suggestions to enhance awareness of important factors that maintain binge/purge episodes.

The cognitive-behavioral and strategic approach to treating depression using hypnosis outlined by Michael Yapko (Yapko, 1992, 2001) is outlined in considerable detail. These publications could constitute treatment manuals, but would require a high level of therapist training and supervision to be appropriate for use in an RCT.

### Hypnosis is an adjunct to various forms of psychotherapy, not a stand-alone psychotherapy

Another challenge in examining hypnosis with RCT methodology stems from its generally accepted position as an adjunct to existing forms of therapy, rather than a therapy in and of itself. The use of hypnosis in psychotherapy has been described within a psychodynamic framework (e.g., Hawkins, 2006), as part of the eclectic, multimodal approach crafted by Lazarus (1999), and of course, as an adjunct to behavioral and cognitive-behavioral approaches as noted throughout this paper.

Due to these considerations, hypnosis will generally be added to a treatment already deemed to be better than no treatment, as, for example, in an RCT comparing cognitive behavioral-therapy with “cognitive hypnotherapy” in the treatment of depression (Alladin & Alibhai, 2007). The effect size associated with adding one additional, useful psychotherapeutic component to an existing efficacious treatment is likely to be small, thereby requiring a very large sample size in order to achieve statistical significance. In the aforementioned study, 42 subjects were in each condition, resulting in a statistically significant Group × Time interaction on the Beck Depression Inventory II (BDI-II; Beck, Steer, & Brown, 1996) during 16 weeks of treatment and at 6- and 12-month follow-up. In terms of clinical significance, however, the differences between the two groups were small. Data on whether patient's depressive episodes had remitted by the end of treatment, and had remained so at follow-up, would have added to our understanding of the clinical significance of the treatment effects.

### Expectation that progress in psychotherapy is linear

RCT methodology is predicated on the assumption, largely derived from the medical model, which may be summarized and elaborated upon, as: a specific pathological condition, when properly diagnosed and exposed to the appropriate drug, will be cured. Once the cure is complete, the drug can be discontinued. Early drug discontinuation leads to incomplete cure and the condition remains. Some have argued, rather convincingly, that the medical model is a poor fit for how psychotherapy truly proceeds (Elkins, 2009).

Psychotherapy rarely, if ever, proceeds in this linear fashion. Research on sudden gains in psychotherapy for depression nicely illustrates this point. In one of the first studies on sudden gains in psychotherapy (Tang & DeRubeis, 1999), approximately 39% of patients in two widely publicized clinical trials experienced at least one sudden gain between two consecutive sessions of CBT, averaging a gain of 11.2 points on the Beck Depression Inventory. These gains amounted to approximately 50% of the overall improvement for these patients, and generally occurred between sessions 5 and 6, although such gains were seen throughout therapy.

## Case Studies and Single Subject Design

Most published reports regarding the use of hypnosis in the treatment of depression consist of narrative reports of treatment of a single individual – the case study (e.g., German, 2003; Yexley, 2007). Case studies are useful for hypothesis generation, and in a limited sense can test hypotheses, but have drawbacks in terms of the extent to which inferences can be derived from them (Kazdin, 2003).

Single subject design is a methodology that can be useful as a means of building the case for the use of hypnosis for depression. Indeed, single subject design methodology is also touted as ideal for demonstrating treatment efficacy (Chambless & Hollon, 1998). Single subject design is referred to by many terms, including single case experimental design, case-based time series design, single participant research design, time series analysis, and interrupted

time series design. Single subject design is different than a case study, where one writes an in-depth qualitative description of a case. Single subject design improves over writing a case study or report because it allows for experimental control and demonstrates a functional relationship between the independent and dependent variables. A number of authors have encouraged clinicians and researchers to utilize this often overlooked methodology (e.g., Borckardt, Nash, Murphy, Moore, Shaw, & O'Neil, 2008; Hayes, 1981; Morgan & Morgan, 2001).

A recent issue of the American Psychologist presented a case and “user's guide” for using single subject design in a practice setting. They noted that “the APA's Division 12 Task Force on Promotion and Dissemination of Psychological Procedures has explicitly recognized time-series designs as important methodologies that can fairly test treatment efficacy and/or effectiveness (Chambless & Ollendick, 2001). The APA Task Force on Evidence-Based Practice (2005) has endorsed systematic single-case studies as contributing to effective psychological practice…” (Borckardt et al., 2008, p. 78). Single subject design has been used to examine new treatments and existing treatments applied to different populations or problems. For example, it was used to examine an abbreviated form of Acceptance and Commitment Therapy for marijuana dependence (Twohig, Schoenberger, & Hayes, 2007), Functional Analytic Psychotherapy (FAP) for depression and personality disorders (Kanter, Landes, Busch, Rusch, Brown, & Baruch, 2006; Landes, 2008), and mindfulness training for reducing aggression in individuals with mild mental retardation (Singh, Lancioni, Winton, Adkins, Singh, & Singh, 2007).

The basic elements of single subject design are most easily illustrated with an AB design, where A denotes the baseline phase and B denotes the treatment or intervention phase. A brief primer on this methodology has been well articulated by Rizvi and Nock (2008). The first step in using this methodology is determining what target will be monitored. Targets should be specific behaviors that an individual can measure reliably over time. Behaviors can be measured in terms of frequency, duration, or intensity. For example, a clinician using hypnosis to target depression would work with the client to assess behaviors associated with depression that they would like to change. Targets could include frequency of behaviors related to being active (e.g., times left the house, social activities attended), duration of time spent engaged in depressive behaviors (e.g., crying, ruminating), or intensity of emotion (e.g., rating of depression). Monitoring of targets should occur on a regular basis (e.g., hourly, daily, weekly).

Once targets have been defined, monitoring should occur to establish a baseline. Before implementing the intervention, the baseline should be stable so that changes in the target behavior can be more clearly attributed to the intervention and not other factors, such as passage of time. In instances where stability does not occur, it is also acceptable to implement the intervention if the target is moving in the opposite of the desired direction (e.g., hours spent crying increasing each week). A minimum of 3 data points are required to establish a baseline (Barlow & Hersen, 1973). In addition to needing a stable baseline to attribute change to the intervention, the intervention must be applied only after the baseline phase. In therapy, this could look like conducting assessment about a client's depression, gathering history, and establishing a therapeutic relationship during the baseline phase and only implementing the intervention (e.g., hypnosis) after stability is established.

Traditional analysis of change in single subject design is visual inspection of graphed data, per guidelines outlined by Bailey and Burch (2002) and Barlow and Hersen (1984). Data can be easily graphed using a program such as Microsoft Excel (see Carr & Burkholder, 1998 for a technical article on creating graphs). If the intervention had the intended effect, change

in the data should be in the desired direction, immediate, discernible, and maintained over time.

In single subject design, confirmation of a finding (e.g., hypnosis alleviates depression) is achieved through replication. In a clinic setting, replication can be demonstrated across clients. Conducting this methodology with consecutive cases is preferred over selective choice of cases as the latter leads to greater bias. Replication can increase confidence in findings (direct replication) and establish generality of findings (systematic replication) (Barlow, Nock, & Hersen, 2009; Sidman, 1960). Barlow and colleagues (2009) have updated one of the best references for single subject design in which they clearly describe the procedures for conducting such research.

## Benchmarking

Benchmarking has been used to test the effectiveness of treatment in clinical settings. In this method, the effect size for treatment in a clinical setting is compared with effect sizes from "gold standard" RCTs (Merrill, Tolbert, & Wade, 2003; Minami, Wampold, Serlin, Hamilton, Brown, & Kircher, 2008; Wade, Treat, & Stuart, 1998). Although this method has been used primarily to address whether empirically supported therapies from RCTs can be successfully implemented in clinical practice settings, there is no reason, in principle, why this method cannot be used to determine whether the treatment of depression using hypnosis can produce effects comparable to those seen in RCTs of depression in which other forms of psychotherapy are used.

Procedurally, benchmarking is relatively straightforward. Outcome data from a clinical setting are compared to data from one or more clinical trials, using effect size estimates derived from measures comparable across settings. Minami and colleagues (2009) recently provided benchmarks of psychotherapy efficacy for adult depression. Their benchmarks were based on 35 published clinical trials that met stringent inclusion criteria: study participants had clinically significant symptoms of unipolar depression, allocation to treatment was random, a bona fide outpatient psychotherapy was used in the treatment condition, sufficient data were available to calculate effects sizes, and study participants were not on concurrent medication or placebo.

A recent study used a benchmarking approach in combination with a partially randomized preference design to examine the feasibility of using self-hypnosis to treat depression in a primary care setting (Dobbin, Maxwell, & Elton, 2009). Fifty of 58 recruited patients from a primary-care setting chose self-hypnosis for the treatment of their depressive symptoms. Hypnosis was delivered via CDs taken home by the patients. Nurses made regular phone calls to check for problems and monitor for suicidal thoughts. The studies chosen as benchmarks had been carried out in similar settings using similar patients (Bedi et al., 2000; Proudfoot et al., 2004; Ward et al., 2000). Patients provided with self-hypnosis instruction exhibited pre- and post-treatment self-reported depressive symptoms comparable to patients enrolled in the benchmark studies. While this study is encouraging, the results would have been strengthened by the inclusion of actual effect sizes for comparison (rather than treatment means).

## Conclusion

We have much to learn about depression and how to treat it. Practice guidelines, calls for the dissemination of empirically validated treatments to clinicians, compilations of lists of treatments that are supported versus unsupported, and over reliance on randomized controlled trials with their inherent methodological limitations threaten to constrain the development of novel and effective approaches to alleviate human suffering attributable to

depression. Fortunately, a wide range of research methodologies can be deployed to advance the treatment of depression. Clinicians and researchers who use hypnosis are in a unique position to be able to test some of the underlying assumptions about how depression leads to dysfunction, and how brief or even single-session interventions can contribute to rapid early responses or sudden treatment gains.

## References


Ablon JS, Marci C. Psychotherapy process: The Missing Link. Comment on Westen, Novotny, and Thompson-Brenner, 2004. Psychological Bulletin 2004;130:664–668. [PubMed: 15250816]

Alladin A, Alibhai A. Cognitive hypnotherapy for depression: An empirical investigation. The International Journal of Clinical and Experimental Hypnosis 2007;55:147–166. [PubMed: 17365072]

Alladin A, Sabatini L, Amundson JK. What should we mean by empirical validation in hypnotherapy: Evidence-based practice in clinical hypnosis. International Journal of Clinical and Experimental Hypnosis 2007;55:115–130. [PubMed: 17365070]

American Psychiatric Association. Practice Guidelines for the Treatment of Psychiatric Disorders. 2006.

APA Presidential Task Force on Evidence-Based Practice. Evidence-based practice in psychology. American Psychologist 2006;61:271–285. [PubMed: 16719673]

Bailey, JS.; Burch, MR. Research methods in applied behavior analysis. Thousand Oaks, CA: Sage Publications; 2002.

Bados A, Balaguer G, Saldana C. The efficacy of cognitive-behavioral therapy and the problem of drop-out. Journal of Clinical Psychology 2007;63:585–592. [PubMed: 17457848]

Barlow DH, Hersen M. Single-case experimental designs: Uses in applied clinical research. Archives of General Psychiatry 1973;29:319–325. [PubMed: 4724141]

Barlow, DH.; Hersen, M. Single case experimental designs. 2nd. New York: Pergamon; 1984.

Barlow, DH.; Nock, MK.; Hersen, M. Single case experimental designs: Strategies for studying behavior change. 3rd. Boston: Pearson; 2009.

Barrett MS, Barber JP. Interpersonal profiles in major depressive disorder. Journal of Clinical Psychology 2007;63:247–266. [PubMed: 17211875]

Bohart AC, O'Hara M, Leitner LM. Empirically violated treatments: Disenfranchisement of humanistic and other psychotherapies. Psychotherapy Research 1998;8:141–157.

Borckardt JJ, Nash MR, Murphy MD, Moore M, Shaw D, O'Neil P. Clinical practice as natural laboratory for psychotherapy research: A guide to case-based time-series analysis. American Psychologist 2008;63:77–95. [PubMed: 18284277]

Borkovec TD, Fowles DC. Controlled investigation of the effects of progressive and hypnotic relaxation on insomnia. Journal of Abnormal Psychology 1973;82:153–158. [PubMed: 4730647]

Boutron I, Moher D, Altman DG, Schulz KF, Ravaud P. Extending the CONSORT statement to randomized trials of nonpharmacologic treatment: Explanation and elaboration. Annals of Internal Medicine 2008;148:295–309. [PubMed: 18283207]

Burns, GW. Building coping skills with metaphors. In: Yapko, MD., editor. Hypnosis and treating depression: applications in clinical practice. New York: Routledge; 2006. p. 49-69.

Calipel S, Lucas-Polomeni M, Wodey E, Ecoffey C. Premedication in children: Hypnosis versus midazolam. Pediatric Anesthesia 2005;15:275–281. [PubMed: 15787917]

Carr JE, Burkholder EO. Creating single subject design graphs with microsoft excel. Journal of Applied Behavior Analysis 1998;31:245–251.

Carroll, KM.; Rounsaville, BJ. Efficacy and effectiveness in developing treatment manuals. In: Nezu, AM.; Nezu, CM., editors. Evidence-based outcome research: A practical guide to conducting randomized controlled trials for psychosocial interventions. New York: Oxford University Press; 2008. p. 219-243.

Chambless DL, Hollon SD. Defining empirically supported therapies. Journal of Consulting and Clinical Psychology 1998;66:7–18. [PubMed: 9489259]

Chambless DL, Ollendick TH. Empirically supported psychological interventions: Controversies and evidence. Annual Review of Psychology 2001;52:685–716.

Crits-Christoph P, Wilson GT, Hollon SD. Empirically supported psychotherapies: Comment on Westen, Novotny, and Thompson-Brenner (2004). Psychological Bulletin 2005;131:412–417. [PubMed: 15869337]

Cuijpers P, van Straten A, Andersson G, van Oppen P. Psychotherapy for depression in adults: a meta-analysis of comparative outcome studies. Journal of Consulting and Clinical Psychology 2008;76:909–922. [PubMed: 19045960]

Dobbin A, Maxwell M, Elton R. A benchmarked feasibility study of a self-hypnosis treatment for depression in primary care. International Journal of Clinical and Experimental Hypnosis 2009;57:293–318. [PubMed: 19459090]

Dobson KS. A meta-analysis of the efficacy of cognitive therapy for depression. Journal of Consulting and Clinical Psychology 1989;57:414–419. [PubMed: 2738214]

Elkins DN. The medical model in psychotherapy: Its limitations and failures. Journal of Humanistic Psychology 2009;49:66–84.

Frank, JD. Persuasion and Healing: A Comparative Study of Psychotherapy. New York: Schocken Books; 1973.

German E. Hypnosis and CBT with depression and anxiety. Australian Journal of Clinical and Experimental Hypnosis 2003;31:71–85.

Gilman SE, Abraham HD. A longitudinal study of the order of onset of alcohol dependence and major depression. Drug and Alcohol Dependence 2001;63:277–286. [PubMed: 11418232]

Goldfried and Eubanks-Carter. On the need for a new psychotherapy research paradigm: Comment on Westen, Novotny, and Thompson-Brenner, 2004. Psychological Bulletin 2004;130:669–673. [PubMed: 15250818]

Greenberg RP, Constantino MJ, Bruce N. Are patient expectations still relevant for psychotherapy process and outcome? Clinical Psychology Review 2006;26:657–678. [PubMed: 15908088]

Haaga DA. A healthy dose of criticism for randomized trials: Comment on Westen, Novotny, & Thompson-Brenner. Psychological Bulletin 2004;130:674–676. [PubMed: 15250819]

Han C, Kwak K, Marks DM, Pae CU, Wu LT, Bhatia KS, Masand PS, Patkar AA. The impact of the CONSORT statement on reporting of randomized clinical trials in psychiatry. Contemporary Clinical Trials 2009;30:116–122. [PubMed: 19070681]

Hasin DS, Goodwin RD, Stinson FS, Grant BF. Epidemiology of major depressive disorder: results from the National Epidemiologic Survey on Alcoholism and Related Conditions. Archives of General Psychiatry 2005;62:1097–1106. [PubMed: 16203955]

Hawkins, PJ. Hypnoanalysis: An integration of clinical hypnosis and psychodynamic therapy. In: O'Leary, E.; Murphy, M., editors. New Approaches to Integration in Psychotherapy. New York: Routledge Taylor; 2006. p. 61-73.

Hayes SC. Single case experimental design and empirical clinical practice. Journal of Consulting and Clinical Practice 1981;49:193–211.

Kanter JW, Landes SJ, Busch AM, Rusch LC, Brown KR, Baruch DE, Holman GI. The effect of contingent reinforcement on target variables in outpatient psychotherapy for depression: An investigation of functional analytic psychotherapy. Journal of Applied Behavior Analysis 2006;29:463–467. [PubMed: 17236346]

Kazdin, AE. Research design in clinical psychology. 4th. Boston: Allyn & Bacon; 2003.

Kessler RC, Berglund P, Demler O, Jin R, Koretz D, Merikangas KR, Rush AJ, Walters EE, Wang PS. The epidemiology of major depressive disorder: result from the National Comorbidity Survey Replication (NCS-R). JAMA 2003;289:3095–3105. [PubMed: 12813115]

Kirsch, I.; Lynn, SJ.; Rhue, JW. Introduction to clinical hypnosis. In: Rhue, JW.; Lynn, SJ.; Kirsch, I., editors. Handbook of clinical hypnosis. Washington, D.C.: American Psychological Association; 1993. p. 3-22.

Kirsch I, Montgomery G, Sapirstein G. Hypnosis as an adjunct to cognitive-behavioral psychotherapy: A meta-analysis. Journal of Consulting and Clinical Psychology 1995;63:214–220. [PubMed: 7751482]

Landes SJ. Functional analytic psychotherapy for comorbid depression and personality disorders (Doctoral dissertation, University of Wisconsin, Milwaukee, 2008). Dissertation Abstracts International 2008;69:3852.

Lankton, SR. Four brief hypnotic interventions in the treatment of depression. In: Yapko, MD., editor. Hypnosis and treating depression: applications in clinical practice. New York: Routledge; 2006. p. 25-47.

Lazarus AA. 'Hypnosis' as a facilitator in behavior therapy. International Journal of Clinical and Experimental Hypnosis 1973;21:25–31. [PubMed: 4682145]

Lazarus, AA. A multimodal framework for clinical hypnosis. In: Kirsch, I.; Capafons, A.; Cardena-Buelna, E.; Amigó, S., editors. Clinical Hypnosis and self-regulation: Cognitive-behavioral perspectives. Washington, D.C.: American Psychological Association; 1999. p. 181-210.

Lynn, SJ.; Kirsch, I. Techniques for catalyzing empirically supported treatments. In: Lynn, SJ.; Kirsch, I., editors. Essentials of Clinical Hypnosis: An Evidence-Based Approach. Washington, D.C.: American Psychological Association; 2006. p. 67-78.

Lynn SJ, Kirsch I, Barabasz A, Cardeña E, Patterson D. Hypnosis as an empirically supported clinical intervention: The state of the evidence and a look to the future. International Journal of Clinical and Experimental Hypnosis 2000;48:239–258. [PubMed: 10769986]

Lynn, SJ.; Matthews, A.; Fraioli, SM.; Rhue, JW.; Mellinger, DI. Hypnosis and treating depression: applications in clinical practice. Yapko, MD., editor. New York: Routledge; 2006. p. 71-94.

Martin DJ, Garske JP, Davis MK. Relation of the therapeutic alliance with outcome and other variables: A meta-analytic review. Journal of Consulting and Clinical Psychology 2000;68:438–450. [PubMed: 10883561]

Massarini M, Rovetto F, Tagliaferri C, Leddi G, Montecorboli U, Orifiammi P, Rebecchi F, Lucchini S, Larini L, Parvoli G. Preoperative hypnosis: A controlled study to assess the effects on anxiety and pain in the postoperative period. European Journal of Clinical Hypnosis 2005;6:8–15.

Merrill KA, Tolbert VE, Wade WA. Effectiveness of cognitive therapy for depression in a community mental health center: A benchmarking study. Journal of Consulting and Clinical Psychology 2003;71:404–409. [PubMed: 12699035]

Minami T, Wampold BE, Serlin RC, Hamilton EG, Brown GS, Kircher JC. Benchmarking the effectiveness of psychotherapy treatment for adult depression in a managed care environment: A preliminary study. Journal of Consulting and Clinical Psychology 2008;76:116–124. [PubMed: 18229989]

Moher D, Schulz KF, Altman D. The CONSORT statement: revised recommendations for improving the quality of reports of parallel-group randomized trials. JAMA 2001;285:1987–1991. [PubMed: 11308435]

Morgan DL, Morgan RK. Single-participant research design: Bringing science to managed care. American Psychologist 2001;56:119–127. [PubMed: 11279805]

Mojtabai R. Unmet need for treatment of major depression in the United States. Psychiatric Services 2009;60:297–305. [PubMed: 19252041]

Oakley D, Alden P, Mather MD. The use of hypnosis in therapy with adults. Australian Journal of Clinical and Experimental Hypnosis 1997;25:108–117.

O'Brien RM, Cooley LE, Ciotti J, Henninger KM. Augmentation of systematic desensitization of snake phobia through posthypnotic dream suggestion. American Journal of Clinical Hypnosis 1981;23:231–238. [PubMed: 6116426]

Olfson M, Marcus SC, Druss B, Elinson L, Tanielian T, Pincus HA. National trends in the outpatient treatment of depression. JAMA 2002;287:203–209. [PubMed: 11779262]

Roth, A.; Fonagy, P. What Works for Whom? A Critical Review of Psychotherapy Research. New York: Guilford; 2005.

Saadat H, Drummond-Lewis J, Maranets I, Kaplan D, Saadat A, Wang S, Kain ZN. Hypnosis reduces preoperative anxiety in adult patients. Anesthesia and Analgesia 2006;102:1394–1396. [PubMed: 16632816]

Schnur JB, Kafer I, Marcus C, Montgomery GH. Hypnosis to manage distress related to medical procedures: A meta-analysis. Contemporary Hypnosis 2008;25:114–128. [PubMed: 19746190]

Schoenberger NE. Research on hypnosis as an adjunct to cognitive behavioral therapy. International Journal of Clinical and Experimental Hypnosis 2000;48:154–169. [PubMed: 10769982]

Schoenberger NE, Kirsch I, Gearan P, Montgomery G, Pastyrnak S. Hypnotic enhancement of a cognitive behavioral treatment for public speaking anxiety. Behavior Therapy 1997;28:127–140.

Singh NN, Lancioni GE, Winton ASW, Adkins AD, Singh J, Singh AN. Mindfulness training assists individuals with moderate mental retardation to maintain their community placements. Behavior Modification 2007;31:800–814. [PubMed: 17932236]

Simon G. Collaborative care for mood disorders. Current Opinion in Psychiatry 2009;22:37–41. [PubMed: 19122533]

Smith ML, Glass GV. Meta-analysis of psychotherapy outcome studies. American Psychologist 1977;32:752–760. [PubMed: 921048]

Stewart WF, Ricci JA, Chee E, Hahn SR, Morganstein D. Cost of lost productive work time among US workers with depression. JAMA 2003;289:3135–3144. [PubMed: 12813119]

Sullivan DS, Johnson A, Bratkovitch J. Reduction of behavioral deficit in organic brain damage by use of hypnosis. Journal of Clinical Psychology 1974;30:96–98. [PubMed: 4811938]

Twohig MP, Schoenberger D, Hayes SC. A preliminary investigation of acceptance and commitment therapy as a treatment for marijuana dependence in adults. Journal of Applied Behavioral Analysis 2007;40:619–632.

Wade WA, Treat TA, Stuart GL. Transporting an empirically supported treatment for panic disorder to a service clinic setting: A benchmarking strategy. Journal of Consulting and Clinical Psychology 1998;66:231–239. [PubMed: 9583326]

Ward E, King M, Lloyd M, Bower P, Sibbald B, Farrelly S, Gabbay M, Tarrier N, Addington-Hall J. Randomised controlled trial of non-directive counselling, cognitive-behaviour therapy, and usual general practitioner care for patients with depression. I: Clinical effectiveness. British Medical Journal 2000;321:1383–1388. [PubMed: 11099284]

Weisz JR, Weersing VR, Henggeler SW. Jousting with straw men: Comment on Westen, Novotny, and Thompson-Brenner (2004). Psychological Bulletin 2005;131:418–426. [PubMed: 15869338]

Westen D, Notovny CM, Thompson-Brenner H. The empirical status of empirically supported psychotherapies: Assumptions, findings, and reporting in controlled clinical trials. Psychological Bulletin 2004a;130:631–663. [PubMed: 15250817]

Westen D, Notovny CM, Thompson-Brenner H. The next generation of psychotherapy research: Reply to Ablon and Marci (2004), Goldfried and Eubanks-Carter (2004), and Haaga (2004). Psychological Bulletin 2004b;130:677–683.

Westen D, Notovny CM, Thompson-Brenner H. EBP ≠ EST: Reply to Crits-Christoph et al. (2005) and Weisz et al. (2005). Psychological Bulletin 2005;131:427–433.

Yapko, MD. Hypnosis and the treatment of depressions: Strategies for change. New York: Brunner/Mazel; 1992.

Yapko, MD. Essentials of hypnosis. New York: Brunner/Mazel; 1995.

Yapko, MD. Treating depression with hypnosis: Integrating cognitive-behavioral and strategic approaches. New York: Brunner/Routledge; 2001.

Yapko, MD. Hypnosis in treating symptoms and risk factors of major depression. In: Yapko, MD., editor. Hypnosis and Treating Depression: Applications in Clinical Practice. New York: Routledge; 2006. p. 3-24.

Yexley MJ. Treating postpartum depression with hypnosis: Addressing specific symptoms presented by the client. American Journal of Clinical Hypnosis 2007;49:219–223. [PubMed: 17265979]