THE EFFECT OF HYPNOTICALLY-INDUCED MOOD ELEVATION AS 
AN ADJUNCT TO COGNITIVE TREATMENT OF DEPRESSION 

DISSERTATION 

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By 

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Cognitive therapy for the treatment of depression has generated substantial research indicating its effectiveness and it is currently considered among the most viable conceptualizations of depression. However, it has remained controversial because its methods do not directly address emotional symptoms in depressed persons. Treatment of depressed emotions is a primary focus of hypnotic mood elevating techniques. These techniques enable depressed persons to experience positive emotions during hypnosis sessions and to re-experience them daily concurrent with performance of certain specified behaviors. This study evaluated the efficacy of a multicomponent treatment which combines the techniques of cognitive therapy and hypnotic mood elevation in the treatment of depressed persons.

The three treatment conditions constructed for this investigation were cognitive therapy plus hypnotic mood elevation, cognitive therapy plus pseudo-biofeedback, and no treatment waiting list. It was hypothesized that subjects in the no treatment condition would demonstrate less reduction in depression than subjects in the two multicomponent treatment conditions. It was also hypothesized
that subjects in the cognitive therapy plus hypnotic mood elevation condition would outperform subjects in the cognitive therapy plus pseudo-biofeedback condition across several measures. These measures included rate of treatment discontinuance, degree of compliance with homework assignments, and immediate and enduring changes in levels of depression.

The hypothesized differences among subjects in the three treatment conditions of this study were not supported by results obtained for the Beck Depression Inventory, Depression Adjective Checklist, Homework Self-Rating Scale, Therapist Rating Scale, and subject drop-out rate. There was a significant effect for time obtained with the Beck Depression Inventory, and a post-hoc analysis seemed to indicate that subjects in all three treatment conditions were less depressed upon completion of the study than at its inception. Limitations of the study were discussed and avenues of further research were considered, including indications in the present study of a possible predictive relationship between the Harvard Group Scale of Hypnotic Susceptibility and the Beck Depression Inventory.
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THE EFFECT OF HYPNOTICALLY-INDUCED MOOD ELEVATION AS AN ADJUNCT TO COGNITIVE TREATMENT OF DEPRESSION

The occurrence of phenomena that today would be considered hypnotic, appears to be part of humanity's experience from its origins (Hermsmeyer, 1976). Behaviors that are accurately ascribed to hypnosis have been reported by the early histories of most cultures including Egyptian, Greek, and Hebrew recordings (Udolf, 1981). The hypnotic occurrences of those times were confined primarily to a role in religious experiences and healing.

The modern history of hypnosis is usually considered to have its origin in the work of Franz Anton Mesmer. However, the idea of the influence of magnetic forces as promoted by Mesmer can be traced through the earlier works of Paracelus, Van Helmont, and Father Maximilain Hell (Udolf, 1981). In addition, it is now commonly surmised that Mesmer plagiarized most of his theory from Richard Mead (Gorsky & Gorsky, 1981). Despite the disputed source of his theories and the questions surrounding a very theatrical method of treatment, Mesmer helped the majority of his patients experience relief from the variety of symptoms they presented (McMahon & McMahon, 1983). In addition, the fact that Mesmer proposed a "scientific" explanation of his
process in terms of pathology arising from a disequilibrium of some magnetic forces (Ellenberger, 1965), tended to place him in the proximity of the then-current scientific rage regarding electricity and magnetism (McMahon & McMahon, 1983). Mesmer's offering of a theory-based explanation served to somewhat appease medical and scientific researchers because the removal of magical or religious themes fit much better in the developing age of reason.

The uneasy acceptance of Mesmer's practices by the scientific community was severely tested by his increasing popularity among the public and the increasing questions surrounding his methods. In 1784 the French Academy of Science appointed a committee of prominent scientists (including Benjamin Franklin) to investigate Mesmerism. They concluded that it was the patient's imagination and beliefs about the treatment, rather than the actual treatment methods, that produced the cures (Pattie, 1967). Unfortunately, the zeitgeist of the scientific establishment of that time was so focused toward explaining all natural phenomena in terms of chemical or physical principles and scientific observation, that any theory involving mentalism or subjectivity was rejected. As a result, the French committee disregarded empirical evidence that Mesmerism had produced dramatic cures, solely because they correctly deduced that the theory behind the treatment was erroneous (Udolf, 1981). The committee not only concluded that
Mesmer's methods were worthless, they labeled them as potentially harmful because of associated convulsions and the "immoral" nature of the close physical contact between the therapist and patient.

The effect of the findings of the French committee were personally disastrous for Mesmer and also quite damaging to the development of hypnosis. It became very unpopular for scientists to pursue the investigations of Mesmerism.

There were fortunately disciples of Mesmer and other interested individuals who did not abandon their study of Mesmerism. An example of a less restrictive approach to science that enabled continued research was provided by the physician Charles D'Elson upon being informed of the French committee's ruling, "If Mesmer had no other secret than that of making the imagination act to produce health, would it not be a marvelous benefit?" (Pattie, 1967).

Much of the research conducted after Mesmer's fall from acceptance was conducted by physicians who used trances to control surgical pain. Among these researchers was the English physician, James Braid. It was Braid who coined the term "neurohypnology," which was soon shortened to "hypnotism" (Sarbin, 1962). Braid was a conservative and accepted member of the medical community, which served to legitimize the study of hypnosis (Watson, 1971). Perhaps Braid's largest contribution though was his theory of hypnosis which explained the hypnotist's influence on patients in terms of
suggestion rather than any direct physiological effects (Udolf, 1981). He conceptualized the hypnotic experience as a narrowing of the patient's perceptual field through concentration on a single idea and as a state that was possible to induce independent of any formal or ritualistic procedure.

Another individual credited as a major contributor to hypnosis is Jean Charcot. While his original theoretical conceptualizations of hypnosis were physicalistic, and he erroneously concluded it only occurred in hysterical patients, Charcot still contributed his considerable medical reputation to help make hypnosis a respectable area of research (Udolf, 1981).

At the time that Charcot was developing the Paris school of thought on hypnosis, Hippolyte Bernheim was developing a differing school of thought in Nancy, France. The Nancy school held that hypnosis was based upon increased suggestibility and that hysterical symptoms could be induced and removed in normals as well as hysterics (McMahon & McMahon, 1983). Eventually, Charcot became convinced by the tremendous weight of Bernheim's case evidence, and even one of Charcot's students, Pierre Janet, took the responsibility of explaining the errors contained in his mentor's theory (Hermsmeyer, 1976). Nevertheless, Charcot and his students had aided in legitimizing hypnosis and had helped establish the presence of psychogenic aspects in abnormal behavior.
The latter development supported the concept of psychological interventions for abnormal behavior.

The developmental strides that hypnosis was beginning to take during the time of the Paris and Nancy schools were greatly slowed by a physician who studied at both schools. That physician, Sigmund Freud, was intrigued by hypnosis for its potential to remove symptoms through direct suggestion and its application in uncovering developmental incidences in the patient's history (Pattie, 1967). Concurrent with his studies in hypnosis under Joseph Breur, Freud developed his method of free association. Shortly thereafter, Freud discontinued the use of hypnosis and put forth numerous objections he had to its application in analysis (Udolf, 1981). Many authors have come to question Freud's abandonment of hypnosis and have suggested that his actions were perhaps actually motivated by such factors as misunderstanding of applications (Hermsmeyer, 1976), discomfort with an unexpected sexual response by a female patient (Udolf, 1981), lack of understanding hypnotic recall (Pattie, 1967), and poor skills as a hypnotist (LeCron, 1971). Whatever the true reasons behind Freud's abandonment, the effect on hypnosis was severe because of the powerful and unchallenged position his theory and method of treatment attained.

The advent of psychology within the last century had a significant effect in repopularizing hypnosis for both
professionals and the public. Five theories that appear in contemporary literature are quite representative of modern approaches to hypnosis. Those five are stimulus-response, proposed by Pavlov and Hull; role enactment theory of Sarbin and Cole; psychoanalytic theory of Brenman and Gill; input-output/simulation theory of Barber; and the suggestibility-neodissociation theory of Hilgard (Hermsmeyer, 1976). These theories present five different explanations of what hypnosis is. At this point in the history of hypnosis, it is probably impossible to advance an explanation of the essential nature of hypnosis with which all experts would agree (Udolf, 1981). Consequently, it may be that Marcuse's (1959) proposal that we consider hypnosis's results rather than its essence and Wickramasekera's (1976) suggestion that hypnosis should be defined in terms of sets of procedures are the most effective means of definition yet developed.

**Induction of Mood States Through Hypnosis**

The application of hypnosis in the induction of various mood states is well supported by clinical and experimental research. The impetus for such research has been quite varied and includes the investigation of such issues as the relationship between physiological arousal and emotional states, the psychodynamic etiology of certain symptoms, stress reactions, psychosomatic research, and the alteration of maladaptive affective states (Fromm & Shor, 1979).
An examination of the research on hypnotic alteration of mood reveals a divergence in focus between clinical and experimental literature. Experimental research generally examines the effect of hypnotically manipulating affective states, as assessed by various cognitive, affective, physiological, and performance measures. The clinical case research is more focused upon the treatment of existing problematic affective states through mood alteration methods. The goal in such applied research is the development of a general mood adjustment intervention, rather than systematically altering moods for empirical evaluation of such interventions (Bower, Gilligan, & Monteiro, 1981).

Experimental investigations of hypnotic alteration of mood demonstrated early success in the inducement of anxiety (Benyamini, 1963; Ehrlich, 1965; Levitt, 1967). As research continued in mood induction, methods of training subjects to more precisely differentiate degrees of emotion enabled researchers to produce more convincing demonstrations of its effectiveness by inducing varying levels of anxiety within a subject (Blum, Graef, & Havenstein, 1968; Blum & Wohl, 1971). Other studies demonstrating hypnotically-induced anxiety have provided evidence based more on psychological measures (e.g., Taylor Manifest Anxiety Scale, Zuckerman's Affect Adjective Check-list, T.A.T. Cards, Rorschach) and physiological indices
(e.g., heart rate, respiration, GSR) than on self-report and behavioral observation (Branca & Podolnick, 1961; Reyher, 1967; Solovey & Milechnin, 1957).

The hypnotic induction of mood states has not been limited to the development of anxiety. Research in the early 1950s by Girdo-Frank and Bull (Gilligan, 1982) indicated the effectiveness of hypnotic induction for the emotions of sadness, happiness, and anger. The hypnotic induction of happiness, calm, fear, and depression has been demonstrated by extensive physiological and psychological assessments (Damaso, Shor, & Orne, 1963; Dudley, Holmes, Martin, & Ripley, 1964). Additional research indicating the effectiveness of the hypnotic induction of moods has been produced by Hepps and Brady (1967), Kehoe and Ironside (1964), Martin and Grosz (1964), and Zimbardo, Maslach, and Marshall (1972).

In two reviews of the research on hypnotic induction of mood, both Barber (1965) and Sarbin and Slagle (1972) concluded that such induction procedures are effective. To this conclusion, however, they added that research exists which demonstrates the production of similar emotional responses in some non-hypnotized individuals who were instructed to simulate a hypnotic trance (Sarbin & Slagle, 1972). The occurrence of emotional responses in subjects only "simulating" hypnosis is not surprising in that we all experience emotions repeatedly during our lives, and
hypnosis may be conceptualized as the eliciting of natural and innate reactions and behaviors of an individual (Erickson, 1980). However, hypnosis may be distinguished from simulated response by the classic suggestion effect (Weitzenhoffer, 1974; Kihlstrom, 1985). This effect appears to account for the perception of truly hypnotized persons that their hypnotic responses occur involuntarily (Perry, 1977; Zamansky, 1977). In addition, hypnosis provides the advantage of more precise, efficient, and enduring mood manipulation than that obtained with simulating subjects (Blum & Wohl, 1971; Gilligan, 1982).

A more general review of the research on the alteration of moods reveals a variety of techniques not involving the use of a formal hypnotic induction. Such techniques include covert conditioning (Cautela, 1967); the variation of failure and success to induce negative or positive moods (Isen, Shalker, Clark, & Carp, 1978); the tape-recorded descriptions of deeply emotional situations (Thompson, Cowan, & Rosehan, 1980); and a procedure in which a number of self-referential mood statements are read by the subjects (Strickland, Hale, & Anderson, 1975; Velten, 1968). Therefore, hypnosis may be viewed as one of several effective techniques for mood manipulation, but one that offers the additional advantages of being particularly effective in sustaining moods over longer periods, and in
providing a means for developing generalized, free-floating affective states (Gilligan, 1982).

The efficacy of hypnotic mood induction has led to its application as a posthypnotic modifier of behavior. Posthypnotic mood modification has usually been an adaptation of Cautela's (1967) method of covert positive reinforcement. Gaunitz, Unestahl, and Berglund (1975) employed such an adaptation within a hypnotic framework. Under hypnosis the subjects recalled an intensely happy life event and were told to concurrently reexperience that happiness. The suggestion was then given that the memory of the event would fade, but that the intense happiness would reoccur posthypnotically whenever the subjects performed certain specified behaviors. This research produced support for the efficacy of hypnotically-evoked emotion in modifying the frequency of behaviors. Matheson (1979) provides a summary of clinical case studies in which the methods employed by Gaunitz et al. (1975) were applied in treating individuals with chronic depression. The results obtained in the case studies again demonstrated that posthypnotically released emotion is effective in increasing the level of predetermined behaviors, even when those behaviors have previously occurred infrequently or not at all. In addition, the clients in the Matheson study demonstrated significant improvement in general activity level and mood (Matheson, 1979). Gindhart (1981) has also reported the effectiveness
of posthypnotically released emotions in the treatment of depressed clients. Taken together, these research and case studies provide developing support for the efficacy of hypnotic mood induction as a modifier of mood and behavior.

**Cognitive-Behavioral Treatment of Depression**

Theories regarding the etiology of depression have been, and remain, quite plentiful and diverse. The speculations of these theories have ranged from implicating biochemical deficiencies and hereditary-constitutional deficits through those involving internal psychological factors or disruptions in the patterns of interactions between individuals and their environments (Hollon & Beck, 1979).

Along with the diversity of etiological theories, there remains a lack of any single scheme of commonly agreed-upon descriptive distinctions among various subgroups of depressions (Rush, 1982). The diversity of etiological theories and the lack of any clear agreement regarding the actual syndrome has led to a variety of treatment interventions. The net effect in the midst of all this lack of agreement is that as late as 1970, there were no published studies in which any form of psychotherapy had been demonstrated to be more effective than either alternate treatments, or no treatment control groups, in any experimental comparison using a homogenously defined sample of depressives (Hollon & Beck, 1979).
During the last ten to fifteen years there has begun to emerge a significant collection of theoretical and experimental literature detailing the development of various behavioral approaches to the conceptualization and treatment of depression. In the forefront of this development has been the work of Beck (1964), Lewinsohn and Hoberman (1982), and Seligman (1974).

The cognitive therapy of depression by Aaron Beck (1967) is a cognitive-behavioral approach to treatment that is designed to identify, evaluate, and alter a client's maladaptive belief systems and dysfunctional styles of information processing. The cognitive theory of depression asserts that the depressive syndrome involves an interaction of the biochemical, behavioral, affective, and cognitive systems. Although the involvement of multiple physiological and psychological factors is recognized, depression is viewed by Beck as primarily a disturbance in cognitions. Depression is not seen primarily as a disturbance of mood, rather emotions are seen as a part of the stimulus field (Beck, Brady, & Quen, 1977). Cognition and emotion are considered to interact continuously and thus, to account for the concurrent processes of distorted thinking and dysphoria. Cognitive disturbances influence all other functions in depression, and that influence is seen in affective, motivational, behavioral, and vegetative manifestations (Rush, 1982).
A negative cognitive set is the basis for depression. This cognitive set has been conceptualized by Beck (1964) as the cognitive triad, and its components are (a) a negative view of self, (b) a negative view of one's current situation in the environment, and (c) a negative view of the future. The depressed individual maintains a belief in the validity of these negative views, despite any contradictory environmental evidence, through systematic distortions in information processing. These distortions are attributable to superordinate schemata or cognitive biases which automatically and involuntarily function to filter and alter perception and memory (Beck, 1978).

Cognitive therapy attempts to assist the client in identifying the assumptions and schemas which are supporting recurrent patterns of stereotypical negative thinking and in ferreting out specific stylistic errors in cognition (Rush & Beck, 1978). Therapy employs both behavioral and cognitive tasks, with the former typically preceding the latter. Beck believes that it is essential to restore the client's behavioral functioning quickly in order to counter withdrawal and to induce involvement in stepwise constructive activity. These activities are employed to provide successful experiences and consequent challenges to the validity of the client's negative schemas. As the client begins to experience successes, and some flexibility begins to emerge in his/her cognitions, the therapist focuses more
directly upon the cognitions and upon educating the client regarding the relationship between cognitions, feelings, and behaviors. Techniques such as self-monitoring, functional analyses, and reevaluation are used both in therapy and as part of homework assignments. Through this process the client learns that there are many ways of interpreting any given situation and that a particular interpretation will lead to particular feelings and behaviors.

Cognitive therapy for the treatment of depression has generated a great deal of research which has produced considerable evidence for its effectiveness (Lewinsohn & Hoberman, 1982). While a volume of apparently supportive research may not be taken necessarily as significant empirical support, researchers in the area of behavior therapy generally appear to have emphasized more stringent attempts at scientific validation of their techniques than researchers from some of the other theoretical viewpoints within psychology (Rimm & Masters, 1979). In a review of 20 studies, Rush (1982) notes that 17 using cognitive therapy were more effective than no treatment or waiting list and were equal to or exceeding of a contrasting active treatment.

A sampling of some of the comparative research available reveals that cognitive therapy was found to be more effective than insight therapy (Morris, 1975), supportive psychotherapy (Shipley & Fazio, 1973),
nondirective therapy and behavior therapy (Shaw, 1977), and interpersonal-perception techniques (Hodgson & Urban, 1975).

Although much of the research conducted with cognitive therapy has made use of depressed college students, there is increasing evidence accumulating regarding its effectiveness with more severely depressed clinic and hospital clients. When cognitive therapy has been applied with such populations, it has been found superior to insight-oriented therapy for a time-limited intervention period (Morris, 1975), significantly effective with outpatients from a community mental health center (Schmickley, 1976), and more effective than antidepressant medication (Blackburn & Bishop, 1980; McLean & Hakstian, 1979; Rush, Beck, Kovacs, & Hollon, 1977).

Cognitive therapy has also been applied in a group treatment format. While there is evidence supporting its effectiveness (Gioe, 1975; Magers, 1978; Shaw & Hollon, 1978), more recent research comparing group versus individual cognitive therapy indicates the superiority of individual treatment (Rush & Watkins, 1981). While the issue of group versus individual formats may remain uncertain at this point, the cumulative research on cognitive therapy appears to provide strong support for its efficacy in the treatment of depression.
The Importance of a Multi-Component Treatment

The development of the cognitive theoretical and therapeutic conceptualizations of depression has progressed on the basis of substantial research support (as reviewed in Rush, 1982), and is now considered among the most viable contemporary conceptualizations of depression (Blaney, 1977). A basic assumption of cognitive theory is the primacy of cognitions in relationship to mood and behavior. The question of primacy is one with a long history of debate in psychology (Cannon, 1927; Goldstein, 1968; James, 1884; Marston, 1928; Maslach, 1979; Schachter & Singer, 1962; Singer, 1973). This debate cannot be considered resolved, and Rush (1982) concludes that while a greater emphasis on cognition has evolved over the years, the role of cognition in emotional responses remains controversial.

Beck (1976) in discussing the components of depression stated:

Conceivably, the therapist could start with any of the symptoms—emotional, motivational, cognitive, behavioral, or physiological—and concentrate his efforts on changing that symptom cluster . . . Since each of the components of depression contributes to other components, it might be anticipated that improvement in any one area would lead to improvement in others, and would finally spread to include the entire syndrome of depression (p. 265).
Implicit in such a statement appears to be the recognition of the importance of other symptoms, including emotion, in the satisfactory resolution of depression. Beck, Rush, Shaw, and Emery, (1979) acknowledge the difficulties in obtaining and maintaining a depressed client's commitment to a treatment which does not emphasize feelings and one in which, "Improved functioning frequently comes before subjective relief is apparent" (p. 121). It appears then that Beck might acknowledge the potential benefits of a treatment which more directly addresses the emotional symptoms of depressed persons, especially if greater compliance and commitment are obtained from clients.

In a review of several experimental studies on mood, Woolfolk (1976) concluded that while mood may be conceptualized as the manifestation of interactions among components, it still must be approached as a separate response system that can be worked with indirectly. It is the potential for working with the emotional component more efficiently that has led to some of the criticisms of cognitive therapy (Lazarus, 1981).

**Rationale of Current Study**

Research literature has begun to provide evidence for the efficacy of hypnotic mood induction as a modifier of emotion and behavior. Additional research has indicated that hypnotically-induced moods can bias thought processes (summarized in Bower and Cohen, 1982) and cause subjects to
rate the future in a manner congruent with the induced moods (summarized in Gilligan, 1982). It has also been demonstrated that hypnotically-induced moods can produce selective learning and recall, such that subjects will retain more material with an affective tone that is congruent with their induced mood learning (summarized in Bower, Gilligan, & Monteiro, 1981). All of these findings seem to indicate the utility of hypnotic mood induction as a treatment which more directly addresses the emotional symptoms of clients.

In light of the research demonstrating the general effectiveness of the cognitive treatment of depression, and recognizing the apparent controversies and limitations regarding its treatment of emotions, it would seem beneficial to the overall efficiency of cognitive therapy to add to it a component of hypnotic mood elevation. It must be noted, however, that some researchers and therapists view hypnosis as a type of placebo therapy with no particular effect other than that from the magical expectations perpetuated in popular culture (Kihlstrom, 1985). Such a viewpoint would attribute any therapeutic change to the shared belief of the therapist and client that hypnosis will be effective.

It is the intent of this investigation to determine what improvements may be noted by adding a hypnotic mood elevation component to the standard application of cognitive
therapy for depression. In order to attempt to control for any possible magical effects of hypnosis, a pseudo-biofeedback component will also be included in the present study. It is anticipated that this component will effectively control for the subjects' expectations because biofeedback also has many popularized misconceptions regarding its effective applications (Kroger, 1977; Rimm & Masters, 1979), and some researchers have attributed its effectiveness largely to placebo (Brady, 1975; Blanchard & Epstein, 1978).

It was hypothesized in the present study, that a treatment group which received cognitive therapy plus mood elevation would demonstrate a lower rate of subject drop-out, more compliance with homework assignments, and more immediately improved and greater enduring elevated mood states than a treatment group which received cognitive therapy plus pseudo-biofeedback. It also was hypothesized that both treatment groups would demonstrate a greater reduction in depression than a waiting list control group.

Method

Subjects

Forty six volunteers were initially recruited from undergraduate psychology courses at North Texas State University and Texas Woman's University. These students received credit toward their final course grade for participation. Subjects were administered the Beck Depression
Inventory (Beck, 1967), and those who met the criteria of mild to moderate depression (i.e., scores of 8 to 26 on the BDI; Feldman, Strong, & Danser, 1982) were retained. These subjects were then assessed for hypnotic susceptibility using the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & Orne, 1962) and then assigned to groups as explained in the procedure section. A total of 30 subjects participated in the complete study.

Interviewers

Eight advanced doctoral students in psychology from North Texas State University functioned as therapists for the present study. Prior to the initiation of any treatments, all of the doctoral students completed eight hours of training in cognitive therapy for depression based upon materials developed by Beck et al. (1979) and Emery (1982). In addition, they received six hours of training in hypnotic methods for depression.

Instruments

Beck Depression Inventory (BDI; Beck, 1967). This instrument consists of 21 attitudes or symptoms characteristic of clinical depression. Each item provides several alternatives describing manifested symptoms in varying intensities. The items are scored on a range from 0 to 3, depending upon the severity of symptom manifestation self-ascribed by the respondent. The BDI has been found to be quite reliable among clinical populations, with a
Spearman-Brown split-half coefficient of .93 being reported. Validity for the measure has been determined by relating BDI scores to clinical judgments of severity of depression. The BDI has been shown to validly assess the severity of depression in college populations with correlations between clinical ratings of severity and the BDI ranging from .60 to .77 (Beck, 1967; Bumberry, Oliver, & McClure, 1978).

The Harvard Group Scale of Hypnotic Susceptibility, Form A (HGS:HS:A; Shor & Orne, 1962). The HGS:HS:A is a group-administered version of the Stanford Hypnotic Susceptibility Scale, Form A (SHSS:A; Weitzenhoffer & Hilgard, 1959). The range of scores possible on the HGS:HS:A is from 0 to 12, with a score of 0 indicating low susceptibility and a score of 12 representing very high susceptibility. Research by Laurence and Perry (1982) supported findings reported by Shor and Orne (1963) indicating that the scale is an effective evaluation tool for determining initial ratings of hypnotic susceptibility. The normative data developed from a series of investigations employing the HGS:HS:A has yielded consistent results (Laurence & Perry, 1982). Thus the HGS:HS:A has been repeatedly demonstrated to be reliable and valid when applied in the normative evaluation of hypnotic susceptibility. It would therefore seem that the literature supports the use of the HGS:HS:A as a measure of hypnotic susceptibility and in the screening of subjects for hypnotic training.
The Depression Adjective Checklist (DACL) (Lubin, 1967). The DACL is a rapidly administered (2-3 minutes), objectively scored assessment of depressive affect which has been standardized for nonpsychiatric college students as well as hospitalized depressives. The DACL is composed of 32 descriptions of mood which the subject may endorse and is scored on the basis of the total number of items endorsed. A particular utility of this instrument is its availability in several alternate forms with robust alternate-form reliability (.80 to .93), with a minimum of redundancy either within or across forms (Lubin, 1967). This high degree of intercorrelations between alternate forms indicates sufficient equivalence for their application in research that requires an instrument for retest assessment of depression with only brief intervals between administrations (Lubin, 1965). In addition, the DACL has been associated with accepted measures of depression (r's = .56 and .49, p < .001, with the Beck Depression Inventory and Scale 2 of the MMPI, respectively; Lubin, 1967). The DACL alternate forms represent a sensitive measure of depression, including more transient depressive affect (Goldstein & McNair, as reported in Buros, 1972).

The Self-Rating Depression Scale (SDS) (Zung, 1965). The SDS is a 20 question instrument that was constructed to provide a quick (typically less than 5 minutes) and comprehensive measurement of depression. It was originally
developed for application in psychiatric research, but has subsequently been validated for use with a variety of populations and clinical settings. The scale is so constructed that half of the questions are worded symptomatically positive and half are worded symptomatically negative in order to decrease the respondent's recognition of a trend. All questions are responded to in a forced-choice manner from four options. These options are endorsed to indicate the degree to which the respondent believes each item applies to him/herself. Scoring is accomplished with an overlay which rates responses on a 1-4 basis. Research studies have indicated that the SDS correlates reliably with other current rating scales of depression (Zung, 1967).

**The Homework Self-Rating Scale.** This scale was designed for use in the current study to obtain estimates by the subjects of the amount of homework they completed for each of the homework assignments. Subjects responded by circling an estimated percentage of completion ranging from 0%, "I completed none of the assignment," to 100%, "I completed the assignment."

**The Therapist Homework Rating Scale.** This scale was designed for use in the current study to obtain estimates by the therapist of the amount of homework completed by the subject. The therapist completed a rating for each of the four homework assignments by choosing from three options
describing the degree of completion. The options included briefly: did none; did enough to benefit; did all of the homework.

**Apparatus**

A J. and J. model G-25 GSR/TEMP Thermal Instrument was used to measure skin temperature for the subjects who received pseudo-biofeedback training. A thermal probe was taped to the index finger of the right hand of the subject, and the other end was plugged into the Thermal Instrument. Feedback to the subject regarding skin temperature was provided by the variance in the number of red lights illuminated on the front of the Thermal Instrument, and by variance in pitch of an audio signal.

**Procedure**

The students from the undergraduate psychology courses who responded to recruitment for research on the treatment of depression were contacted and initially screened using the BDI. Those individuals who scored outside the BDI cutoffs were offered a referral to the student counseling center. Subjects meeting the BDI criteria were scheduled for a session a week later in which they were given an explanation and overview of the study, asked to complete a consent form (see Appendix A), and administered the HGSHS: A.

In order to maximize possible treatment effects, 15 subjects in the cognitive plus hypnotic mood elevation
condition were randomly selected from a pool of 18 moderately high and high susceptible subjects, i.e., scores of 7 to 12 on the HGS-S:R (Tart, 1970). Studies of correlates of hypnotic susceptibility have not indicated that personality characteristics (Barber, 1964; Hilgard, 1965; Spiegel & Spiegel, 1978; Kihlstrom, 1985) or treatment outcome (Frankel, 1982; Gruenwald, 1982) are correlated with susceptibility. Thus, this selection was not hypothesized to result in any difference among subjects in terms of initial levels of depression or response to treatment conditions.

The three subjects remaining from the moderately high and high susceptible pool, plus the 27 less susceptible subjects, were randomly assigned to a cognitive therapy plus pseudo-biofeedback condition or to a no treatment waiting list control condition.

Each therapist was randomly assigned subjects from all three groups, and the subjects were then administered the Zung Self-Rating Depression Scale (Zung, 1967) to disqualify those whose initial BDI scores were apparently indicative of a transient depressive response. The 40 subjects with a Zung score of 45 (Zung, 1967) or more were allowed to continue in the research, while five subjects whose scores fell below that cutoff were offered a referral to the student counseling center.
The treatment phase of this study consisted of five individually conducted sessions. At the beginning of each of the five sessions all subjects completed the DACL.

The first session began with the provision of a brief conceptualization of the cognitive theory of depression. This was followed by the playing of a tape adapted from Emery (1982). The tape provided an overview of cognitive theory and its component processes of treatment. The tape concluded by explaining the benefits of therapy homework and by then assigning completion of the activity schedule. The subject and experimenter then discussed the tape to insure understanding and to make the assignment of homework clear to the subject. Subjects were also given a set of written instructions for the homework (see Appendix B).

The subjects receiving the added component of hypnotic mood elevation then received a brief overview of the hypnotic process (see Appendix C). They then participated in a hypnotic induction technique as outlined in Kroger and Fezler (1976). Following the induction procedure, a post-hypnotic suggestion facilitating subsequent trance induction was employed. The subjects were then specifically instructed to recall a happy time in their lives and then to focus on the mood, rather than the event. This mood alteration technique is similar to the one used by Gilligan (1982), with the addition of direct suggestion for post-hypnotic release of positive emotions (see Appendix D). The
direct suggestion tied the revivification of moods to performance of certain behaviors that were being learned as part of the cognitive therapy and homework. The content of the direct suggestion thus varied with the content of each subsequent treatment session.

The subjects receiving the added component of pseudo-biofeedback received a brief explanation of biofeedback and how it would help improve mood, and were then familiarized with the equipment being used (see Appendix E). They were then allowed practice time with the equipment equivalent to the duration of the hypnotic inductions.

The remaining four treatment sessions followed the same basic agenda, changing only the taped material covering each successive component of the cognitive approach, and the homework assignments. Thus, sessions 2-5 all began with the completion of the DACL, and then proceeded to a review of previously assigned homework, discussion of stimulus questions based on the homework, presentation of the new taped material and any additional instruction by the experimenter, clarification and assignment of new homework, and the induction of the hypnotic procedure or provision of a biofeedback practice session.

The taped material for treatment sessions 2-5 covered planning mastery and pleasure activities, catching automatic negative thoughts, thought counting, answering negative thoughts, problems and issues related to homework,
application of the cognitive techniques to behavioral, affective, and cognitive symptoms, discovering underlying beliefs, and answering underlying negative beliefs. The homework assignments were based on these topics and emphasized application of the material to the subjects' lives.

Following the fifth treatment session, all subjects were again administered the BDI and scheduled for a two-week follow-up assessment employing the DACL and the BDI. At the follow-up assessment all subjects were debriefed and offered the opportunity for continued treatment at the counseling center.

Results

Comparison of Treatment Conditions

Four dependent measures, the Beck Depression Inventory, the Depression Adjective Checklist, Homework Self-Ratings, and Therapist Homework Ratings, were used to assess the effects of treatment conditions. Table 1 includes the means and standard deviations for each of the dependent measures for the three treatment conditions.

In order to examine group differences in hypnotic susceptibility, a $1 \times 3$ analysis of variance (susceptibility X groups) was completed. Results from this procedure, as summarized in Table 2 (Appendix F), indicated a significant
Table 1
Means and Standard Deviations of Dependent Variables by Treatment Conditions

<table>
<thead>
<tr>
<th>Dependent Measure</th>
<th>Control</th>
<th>Cognitive Biofeedback</th>
<th>Cognitive Hypnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI Pre</td>
<td>14.2 (4.49)</td>
<td>15.0 (5.52)</td>
<td>15.6 (7.79)</td>
</tr>
<tr>
<td>BDI Post</td>
<td>8.2 (6.78)</td>
<td>8.1 (4.23)</td>
<td>5.2 (2.89)</td>
</tr>
<tr>
<td>BDI Follow-up</td>
<td>8.4 (5.19)</td>
<td>9.9 (6.99)</td>
<td>4.9 (2.33)</td>
</tr>
<tr>
<td>DACL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Form A</td>
<td>13.1 (6.93)</td>
<td>11.3 (4.78)</td>
<td></td>
</tr>
<tr>
<td>Form B</td>
<td>6.9 (4.95)</td>
<td>9.2 (3.91)</td>
<td></td>
</tr>
<tr>
<td>Form C</td>
<td>13.3 (6.34)</td>
<td>11.3 (5.18)</td>
<td></td>
</tr>
<tr>
<td>Form D</td>
<td>9.8 (3.88)</td>
<td>10.9 (5.41)</td>
<td></td>
</tr>
<tr>
<td>Form E</td>
<td>9.7 (4.73)</td>
<td>9.3 (3.46)</td>
<td></td>
</tr>
<tr>
<td>Form F</td>
<td>10.8 (5.77)</td>
<td>9.2 (1.98)</td>
<td></td>
</tr>
<tr>
<td>Homework Ratings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Rating 1</td>
<td>87.5 (17.7)</td>
<td>92.5 (12.1)</td>
<td></td>
</tr>
<tr>
<td>Self-Rating 2</td>
<td>67.5 (28.9)</td>
<td>47.5 (34.2)</td>
<td></td>
</tr>
<tr>
<td>Self-Rating 3</td>
<td>65.0 (31.7)</td>
<td>67.5 (26.5)</td>
<td></td>
</tr>
<tr>
<td>Self-Rating 4</td>
<td>67.5 (39.2)</td>
<td>60.0 (31.6)</td>
<td></td>
</tr>
<tr>
<td>Therapist Rating 1</td>
<td>2.8 (0.42)</td>
<td>2.9 (0.32)</td>
<td></td>
</tr>
<tr>
<td>Therapist Rating 2</td>
<td>2.3 (0.67)</td>
<td>1.9 (0.57)</td>
<td></td>
</tr>
<tr>
<td>Therapist Rating 3</td>
<td>2.1 (0.57)</td>
<td>2.0 (0.47)</td>
<td></td>
</tr>
<tr>
<td>Therapist Rating 4</td>
<td>2.4 (0.70)</td>
<td>2.0 (0.47)</td>
<td></td>
</tr>
</tbody>
</table>

Note. Values in parenthesis are the standard deviations.
difference among the groups in hypnotic susceptibility as assessed by the HGSHS: A, $F(2, 27) = 5.10, p < .05$. A post-hoc analysis applying the Duncan multiple range test indicated a significant difference between the cognitive plus pseudo-biofeedback group and the cognitive plus hypnotic mood elevation group ($p < .05$). No other significant differences among groups were attained. Thus, it can be concluded that the methods employed to construct the three treatment groups resulted in some differences among them in hypnotic susceptibility.

A 1 x 3 analysis of variance (BDI x groups) was used to examine for pretreatment group differences in depression. As summarized in Table 3 (Appendix F), this procedure indicated no significant differences among the three groups on the BDI, $F(2, 27) = 0.13, p < .88$. Therefore, although there were initial differences among the groups in hypnotic susceptibility, they were not associated with concurrent group differences in pretreatment levels of depression.

Although no group differences were obtained in the analysis of pretreatment BDI scores, the subsequent analyses of that dependent measure and the DACL were conducted employing the HGSHS: A as a covariate. This more conservative analysis was applied in order that any group differences after treatment might be interpreted apart from the initial differences in suggestibility.
In order to examine the hypothesis that both of the treatment groups would demonstrate a greater reduction in depression than the waiting list control group, a 3 x 3 analysis of covariance with repeated measures (groups x time) was applied. The dependent variable was the BDI scores (pretreatment, post-treatment, and two week follow-up after treatment), the HGSHS: A scores functioned as the covariate. As indicated in Table 4 (Appendix F), significance was obtained across time, F(2, 54) = 36.28, p < .000, but significance was not obtained among groups, F(2, 26) = 0.12, p < .89. The groups by time interaction also failed to reach significance, F(2, 54) = 1.71, p < .16. A Duncan analysis was performed on the significant time effect. This analysis indicated a significant reduction in depression for all subjects combined from pretreatment to post-treatment, (p < .01), and from pretreatment to follow-up (p < .01). There was no significant change, for all subjects combined, from their post-treatment to follow-up levels of self-reported depression. These results seem to indicate that subjects in general demonstrated significant reductions in depression, and maintained them, independent of group membership. Some additional analyses of these variables were completed and are summarized in Table 5 (Appendix F). They did not appear to develop any important new results.
Analyses of Treatment Group Differences

The comparison of treatment effectiveness between the cognitive-biofeedback group and the cognitive-hypnosis group was performed using four measures. Initial and enduring changes in mood were assessed with the DACL. Compliance with treatment homework assignments was evaluated with the homework self-rating scale and the therapist homework rating scale. The rate of subject drop-out was simply tallied.

To assess whether the cognitive-hypnosis group obtained more immediate and more enduring elevation of mood states than the cognitive-biofeedback group, a 2 X 6 analysis of covariance with the repeated measures was performed (groups X DACL, HGSHS:A as the covariate). The results of this analysis, as summarized in Table 6 (Appendix F), indicated no significant differences between the cognitive-hypnosis and cognitive-biofeedback groups in immediate or enduring self-reported mood, $F(1, 17) = 0.22, p < .65$. The groups by trial interaction also failed to reach significance, $F(5, 90) = .82, p < .53$. The trial effect was significant, $F(5, 90) = 2.83, p < .02)$. However, a post-hoc analysis of trials did not appear to yield a pattern among the differences in mood ratings across time.

Compliance with homework assignments was evaluated with the Homework Self-Ratings and the Therapist Homework Ratings. Significant correlations among the four Self-Ratings and four Therapist Ratings were obtained between
the measures for each homework assignment except the first, which approached significance, as summarized in Table 7 (Appendix F). Thus it appears that there was fairly consistent agreement on homework completion ratings for subjects and therapists.

To determine whether the Cognitive-Hypnosis group was more compliant with the homework assignments than the Cognitive-Biofeedback group, $t$-tests were completed on the Self-Ratings and Therapist Ratings. As indicated in Table 8 (Appendix F), the $t$-test comparing the Self-Ratings for the groups did not produce a significant difference, $t(18) = 0.5332, p < .60$. In Table 9 (Appendix F) it can be seen that the groups did not differ significantly on the Therapist Ratings, $t(18) = 1.17, p < .26$. Therefore, it can be concluded that the Cognitive-Hypnosis group did not evidence more compliance with homework assignments than the Cognitive-Biofeedback group.

Some additional analyses of homework compliance measures were completed and are summarized in Tables 10 and 11 (Appendix F). Two findings of interest emerged. Both Self-Ratings and Therapist Ratings showed substantial variability across the treatment time. Also, both measures revealed that subjects completed substantially more of their homework after the first treatment session than they did after subsequent sessions.
In comparing subject drop-out rates, the data summarized in Table 12 (Appendix F) was obtained. Briefly, this data indicated that once the actual treatment phase had begun, the Cognitive-Hypnosis group had a drop-out rate of 17 percent while the Cognitive-Biofeedback group and Waiting List Control group each had a rate of 23 percent. However, as the table indicates, the difference was actually only one subject. So it seems that the Cognitive-Hypnosis group did not prove to reflect a significantly lower subject drop-out rate.

Differences Due To Gender

In order to assess the possible effects of gender, a series of t-tests was run which compared males to females across all dependent variables in the experiment. These procedures failed to yield any significant t values.

Analysis of Possible Predictors of Outcome

As part of the statistical analysis of this experiment, a correlation matrix across all variables was produced. In Table 13 the significant correlations of interest are summarized. As Table 13 indicates, both the BDI post-treatment and BDI follow-up scores are significantly negatively correlated with the HGSHS: A, Post $r(28) = -.44$, Follow-up $r(28) = -.46$. However, the HGSHS: A is not significantly correlated with the Beck pretreatment scores, $r(28) = -.095$. 
Two additional analyses were subsequently completed to further pursue the statistical observation that higher HGSHS: A scores appeared to be associated with lower BDI scores for all subjects after completion of the treatment phase of the study. Three variables were reasoned to potentially be capable of predicting the BDI post-treatment and BDI follow-up scores. Those three were BDI pretreatment scores, HGSHS: A scores, and the group membership of a subject.

Table 13
Correlations Among BDI's and HGSHS: A

<table>
<thead>
<tr>
<th></th>
<th>BDI Pre</th>
<th>BDI Post</th>
<th>BDI Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI Post</td>
<td>0.2827</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BDI Follow-up</td>
<td>0.3353</td>
<td>0.7880**</td>
<td></td>
</tr>
<tr>
<td>HGSHS: A</td>
<td>-0.0949</td>
<td>-0.4464*</td>
<td>-0.4603*</td>
</tr>
</tbody>
</table>

Note. df = 28, BDI = Beck Depression Inventory
HGSHS: A = Harvard Group Scale of Hypnotic Susceptibility, Form A.

*P < .05.

**P < .01.

The two additional analyses that were run to assess the possible predictor variables, were stepwise multiple regressions (Kerlinger & Pedhazur, 1973). A forward
stepping, then backward stepping procedure was applied in these analyses. During forward stepping, the regression equation initially contains none of the three independent variables. Then, in the first step the independent variable which accounts for the most variance of the dependent variable is entered into the regression equation. At each successive forward step, other independent variables are entered into the regression equation in the order of their contribution to prediction of the dependent variable. This process continues until the next entering of an independent variable would not significantly improve the regression equation (Dixon & Jennrich, 1983). Backward stepping involves the same process except that it begins with all three of the independent variables in the regression equation. It then removes them stepwise on the basis of most significant prediction, until further removal would no longer affect the significance of the regression equation. Two stepwise multiple regressions were performed, with the BDI post-treatment scores as the dependent variable in the first, and the BDI follow-up scores as the dependent variable in the second.

The stepwise multiple regression with forward and backward stepping for the BDI post scores was completed and the results are summarized in Table 14. These results indicated that among the independent variables of BDI
Table 14

Stepwise Multiple Regression Analysis: BDI Post-Treatment Scores As a Function of BDI Pretreatment Scores, Group Membership, and HGSHS: A Scores

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>HGSHS: A</td>
<td>HGSHS: A, BDI Pre</td>
<td>HGSHS: A, BDI Pre, and Groups</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Multiple R</th>
<th>Multiple R-square</th>
<th>F-ratio of equation</th>
<th>F-ratio with added variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.446</td>
<td>0.199</td>
<td>6.97*</td>
<td>2.12</td>
</tr>
<tr>
<td>0.507</td>
<td>0.547</td>
<td>4.68*</td>
<td>1.57</td>
</tr>
<tr>
<td>0.547</td>
<td>0.300</td>
<td>3.71*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(df 1, 28)</td>
<td>(df 2, 27)</td>
<td>(df 3, 26)</td>
</tr>
</tbody>
</table>

Note. BDI = Beck Depression Inventory; HGSHS: A = Harvard Group Scale of Hypnotic Susceptibility, Form A.

*p < .05.

pretreatment scores, HGSHS: A scores, and group membership, the HGSHS: A scores were the strongest and only statistically significant predictor of BDI post-treatment scores for all subjects, $F(1, 28) = 6.97$, $p < .05$. The addition of the other two independent variables failed to significantly improve the prediction of the regression equation.

The stepwise multiple regression with forward and backward stepping for the BDI follow-up scores was run and the results are summarized in Table 15. These results indicated that the HGSHS: A scores were the strongest and only statistically significant predictor of BDI post-
Table 15

Stepwise Multiple Regression Analysis: BDI Follow-up Scores As a Function of BDI Pretreatment Scores, Group Membership, and HGSHS: A Scores

<table>
<thead>
<tr>
<th></th>
<th>Step 1</th>
<th>Step 2: HGSHS: A and BDI Pretreatment</th>
<th>HGSHS: A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.460</td>
<td>0.545</td>
<td></td>
</tr>
<tr>
<td>Multiple R-square</td>
<td>0.211</td>
<td>0.297</td>
<td></td>
</tr>
<tr>
<td>F-ratio of the equation</td>
<td>7.53*</td>
<td>5.72*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(df 1, 28)</td>
<td>(df 2, 27)</td>
<td></td>
</tr>
<tr>
<td>F-ratio with added variable</td>
<td></td>
<td>3.30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(df 1, 28)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. BDI = Beck Depression Inventory; HGSHS: A = Harvard Group Scale of Hypnotic Susceptibility, Form A.

*p < .05.

treatment scores for all subjects, F(1, 28) = 7.53, p < .05. The addition of the other two independent variables again failed to improve the prediction of the regression equation.

The results of these two regression analyses support a significant predictive relationship for the HGSHS: A with BDI outcome in this study. This would seem to indicate that irrespective of which of the three treatment conditions the subjects were in, the more hypnotically susceptible the subjects were, the lower their self-reported depression levels became after the treatment phase. It was observed that this prediction was apparently even stronger at follow-up.
Discussion

The intention of this investigation was to examine what benefits might be derived from the combination of two treatment methods for depression. Substantial evidence was cited that appears to establish the effectiveness of cognitive behavioral therapy in the treatment of depression. Evidence was also cited that seems to encourage the perception of hypnotic mood elevation as an effective method in treating depression. It therefore appeared that this experiment would involve an attempt to improve on an already effective and well accepted treatment method, by adding a less investigated but promising method. However, the results obtained make a judgement about the effects of the added hypnotic component rather unclear and quite interesting.

Consideration of the hypothesized improvements that were assessed in this study would seem to indicate a clear failure of the Cognitive-Hypnosis group to significantly outperform the Cognitive-Biofeedback group in any of the outcome measures. However, the meaning of this conclusion is clouded by the failure of both the Cognitive-Hypnosis group and the Cognitive-Biofeedback group to produce significantly greater improvement in depression than the Waiting List Control group. This result might lead to the conclusion that the Cognitive-Hypnosis and Cognitive-Biofeedback treatments were no more effective than the no
treatment control group in resolving depression in this sample of university students. Given the research support for cognitive therapy, this outcome is certainly unexpected. Obtaining results contrary to the hypotheses of this study, and seemingly contrary to a body of research, necessitates consideration of possible explanations of such an outcome.

Limitations

A possible factor influencing the ineffectiveness of both the Cognitive-Hypnosis and Cognitive-Biofeedback treatments, is the interactive effects of the two components within each of the treatments. Consequently, it is possible that the singular effectiveness of any of the components may have been comprised by interactive effects between components, or by the failure of one of the individual components. Such a compromising of treatment effectiveness may have occurred in this study.

Cognitive therapy might be characterized largely as reactivating the analytic capacities of depressed persons and encouraging them to intensely work at countering their depressed thoughts and feelings. Hypnotic mood elevation in this study involves a more passive-affective process of recalling happier times and imagining them occurring again in the context of future behaviors. In a parallel way, the pseudo-biofeedback training with its purported benefits of relaxing to ease depression, may have shared a more passive-affective orientation with hypnotic mood elevation. It seems possible that the subjects were confronted with
somewhat contrary strategies within both the Cognitive-Hypnosis and Cognitive-Biofeedback treatments, and that this may have severely limited the potential effectiveness of the treatments. Thus, the interactive effects of the treatment components in this study may have served to lessen the effectiveness of the overall treatments. It is also possible that one or more of the individual components was itself ineffective.

The effectiveness of the cognitive component in both treatments may have been compromised by the fact that homework completion declined substantially after the first assignment. Beck, et al. (1979) repeatedly emphasize the necessity of homework completion for successful cognitive therapy. It is interesting to note that mood, as measured by the DACL, indicated more depression in the session before the first homework, less after the good homework compliance, and more depression after poor compliance on the second homework assignment. A conclusion based on this limited observation is rather speculative; however it is safe to assume that Beck would directly tie expected treatment outcome to homework compliance. It might be hypothesized that the variable homework compliance is related to subjects' confusion and consequent decreased motivation resulting from the passive-affective/cognitive conflict within the treatments that was discussed earlier.
A possible effect related to assessment procedures in this study, is based on research into usage of the BDI with depressed university students. Oliver and Burkham (1979) reported that recruitment for repeated administrations of the BDI, and a second administration of the BDI, were associated with significant declines in scores, without any intervening treatment. Among the possible explanations offered by these authors is the high face validity of the BDI, which opens the likelihood of reactive, sensitized responses by subjects to the inventory. This could lead to "faking good" on either administration, and to a possible "flight into health" reaction on the second administration. Another possible explanation is the effect that simply knowing one's adjustment is being assessed over time, might have a therapeutic effect. These difficulties associated with repeated administrations of the BDI highlight the need for more covert measures of depression which might eliminate some of the instability of self-report measures.

Two additional factors to be considered in evaluating the results of this study, are provided by Hollon (1985). These factors are the cautions regarding cognitive therapy research. Hollon reports that continued research has discerned the need for cognitive therapy to work with persons with initial BDI levels of depression higher than have typically been employed, and that were utilized in the present study. Differential treatment effects have proven
quite difficult to obtain in persons with milder levels of depression, apparently due to "spontaneous remission" effects that occur in even non-treated individuals. Another caution is based on the emerging realization of Hollon and other cognitive researchers that the effectiveness of cognitive therapy for depression was overstated in the past. Continuing research is producing more conservative conclusions regarding its treatment effectiveness. Thus, it may be that the research support backing the cognitive component of the present study is in fact less robust than is commonly accepted.

A final consideration limiting the interpretation of this study is its reliance upon self-report paper and pencil measures of depression. It would seem preferable to obtain additional measures and indicators of the subjects' mood status (e.g., behavioral measures) to provide a more complete assessment. The inclusion of a cognitive only treatment group could have provided an additional control to evaluate the specific effect of hypnosis.

Prediction of Outcome

The results obtained in the multiple regression analyses of the data are not related to the hypotheses or purpose of the present study. Nevertheless, the statistical discernment of a predictive relationship between HGSHS:A scores and reduction in BDI scores is a finding of considerable interest. It would be premature and probably beyond the parameters of this study to speculate regarding the meaning of this finding.
Yet, there is certainly important potential in being able to use a stable trait like hypnotic susceptibility (Morgan, Johnson, & Hilgard, 1974) as a predictor of changes in self-reported depression. As reviewed earlier, researchers have achieved at best, only mixed results in attempts to relate susceptibility to treatment outcome or personality characteristics (Kihlstrom, 1985), with success confined primarily to studies involving hypnotic treatment of medical conditions (Heide, Wadlington, & Lundy, 1980; Spanos, McNeil, Gwynn, & Henderikus, 1984).

The present study provides no data regarding personality characteristics other than hypnotic susceptibility. The present study does appear to provide data predictive of treatment outcome. However, such a conclusion is tempered by many of the previously discussed potential limitations of this study, as well as by the fact that this study was not designed to examine the predictive aspects of hypnotic susceptibility.

Further research seems warranted for both the primary hypotheses of this study, and for the susceptibility and depression relationship. Future attempts to examine the effects of a combined Cognitive-Hypnosis treatment would perhaps be aided by assessing the subjects' perceptions regarding the active/passive discrepancy, which was posited to be potentially disruptive to treatment. In addition, it may be fruitful to test a Cognitive-Hypnosis treatment
against two groups, each receiving only half of the combined treatment. It would also seem advisable to employ higher BDI qualifying scores, and to attempt to match subjects on hypnotic susceptibility across all groups. The latter may prove somewhat difficult given the relative minority of highly susceptible persons in the general population (Spiegel, 1974).

Future research on the potential predictive relationship between hypnotic susceptibility and changes in self-reported depression would best be conducted separately from the context of the present study. It would be advisable to then match subjects across treatment conditions on susceptibility and initial levels of depression. Measures of depression in addition to the BDI would be important for generalizing any results obtained.

The hypothesized differences among the subjects in the three treatment conditions of this study were not supported by the results obtained for the BDI, DACL, Homework Self-Rating Scale, Therapist Rating Scale, and subject drop-out rate. However, a relationship was established that indicated that the subjects' post-treatment and follow-up BDI ratings of depression were significantly predicted by the subjects' HGSHS:A scores.
Appendix A

Informed Consent Agreement and Introduction

This is a study concerning depression. The purpose is to develop a better understanding of thoughts and moods as related to depression.

You will be asked to complete short questionnaires at each session. After the initial group session, you will be scheduled to meet five times for individual sessions with a person well trained in treating depressions. Each session will take less than an hour, and they will be conducted over a 2 1/2 week period of time. The treatment will involve very well-established methods of countering depression. It will include self-help exercises and instruction that will help decrease the probability of future depressions and provide skills to deal more effectively with those that might occur.

All treatment sessions and any questionnaire material will be kept completely confidential. At the conclusion of this study those of you in undergraduate psychology classes who are eligible for extra credit points will receive such credit.

I have seen a clear explanation and understand the nature and purpose of the procedure and any possible discomfort or risks that might arise. I have also seen a clear explanation and understand the benefits to be
Appendix A--Continued

expected. I understand that the procedure to be performed is investigational and that I may withdraw my consent at any time. With my understanding of this, having received this information and satisfactory answers to questions I have asked, I voluntarily consent to the procedure designated in the paragraphs above.

Signed: ___________________________  Signed: ___________________________
  Subject                                           Witness

______________________________  ______________________________
  Date                                           Date
Appendix B

Instructions for Homework Assignments

Session One (Taking Stock and Activity Recording)

Task:

1. Write down what you do hour by hour on the Activity Schedule.

2. Do not be too specific (if it will not fit in the time box, it is too specific). Do not be too general ("worked 9 - noon"). Try for something in between.

3. Rate your degree of mastery for each activity from 0 to 5. "Mastery" refers to your sense of accomplishment.

4. Rate your degree of pleasure for each activity from 0 to 5. "Pleasure refers to your feelings of enjoyment, amusement, or fun.

5. Record your activity and pleasure and mastery ratings as soon after the event as you can.

6. Recognize that you are always doing something. A passive activity (sitting in a chair) is still an activity.

7. Carry the Activity Schedule with you. If for some reason you forget it, jot down the information on a slip of paper and transfer it later.

Session Two (Planning Activities)

Task:

1. Schedule one day at a time.
2. Plan flexibly—you can change plans if the unexpected happens.
3. Schedule activities at one-hour and half-hour intervals.
4. Plan the amount of time you will spend on an activity, not the amount you will get done.
5. If you fail to do an activity, do not go back and try to make it up.
6. Schedule activities that are normal for you—pick ways you acted before you were depressed.
7. Schedule activities likely to bring you pleasure and mastery.
8. Break complicated tasks into small parts and do the easiest first.
9. Approach each activity as an experiment to see what will happen.
10. After you have completed a planned day, write down what you accomplished.

Session Two (Catching Automatic Negative Thoughts)

Task:
1. On the Thought Record, write down a situation where you experienced one of the symptoms of depression.
2. Write out the automatic thoughts that led to these feelings.
3. Use an instant-replay technique. If you have some negative feelings and cannot quite catch the thoughts,
replay the feelings over and over until you can.

4. Look for the meaning of the situation. Ask yourself, "What is the significance of the situation to me?"; "What are the consequences?"

5. Set aside a specific time to collect negative thoughts. During this period, write out some of the negative thoughts you had during the day.

Session Two (Answering Your Negative Thoughts)

Task:

1. Write out the answers to your automatic thoughts on the Thought Record.

2. Use the following questions as guidelines to searching out more realistic alternatives:
   a. What is the evidence?
   b. Am I making a mistake in assuming what causes what?
   c. Am I confusing a thought with a fact?
   d. Am I close enough to the situation to really know what is happening?
   e. Am I thinking in all-or-none terms?
   f. Am I using ultimatum words in my thinking, for example, "I always should be nice or no one will like me?"
   g. Am I taking examples out of context?
   h. Am I confusing a low probability (rare occurrence) with a high probability?
   i. Am I assuming every situation is the same?
   j. Am I overlooking my strengths?
Appendix B—Continued

k. How would I look at this if I were not depressed?

l. What can I do to solve the problem?

m. Am I asking myself questions that have no answers?

n. What are the distortions in my thinking?

o. What are the advantages and disadvantages of thinking this way?

p. What difference will this make in a week, a year, or 10 years?

Session Two (Counting Automatic Negative Thoughts)

Task:

1. Develop a method for counting your thoughts. Here are some options.

   a. Use a wrist golf counter.

   b. Use a plastic grocery price counter.

   c. Use a small stitch counter (sold in knitting shops).

   d. Change money from one pocket to another; a penny is one thought, a dime ten thoughts, and so on.

   e. Make dashes on a 3 x 5 card.

2. Count each time you have a negative thought.

Session Three (How to Target Problems to Change)

Task:

1. Pick one of the following problems to work on:

   procrastination (putting off activities), lack of pleasure, lack of mastery over everyday affairs, lack of energy, avoidance of friends, self-criticism, self-doubting,
problems in concentration, problems in remembering, difficulty in making decisions, problem sleeping, excessive crying, difficulty with sex, weight problems, anxiety (e.g., fear of illness or money problems), anger, guilt, sadness, shame, loneliness.

2. Find out what thoughts and behaviors are maintaining the problem.

3. Apply one of the three techniques—activity schedule, thought record, or thought counting—to the problem.

4. After one problem is under control, move on to another one.

Session Four (How to Identify Underlying Beliefs)

Task:

1. Look for themes among your automatic thoughts.

2. Note key repetitive words in your automatic thoughts, for example, "stupid," "ugly," "rejected."

3. See what traits in others are important in how you evaluate them.

4. Examine your beliefs when you are exceptionally happy. Often these beliefs are the other side of depression beliefs.

5. Look for common types of thinking errors, for example, unrealistic standards, either/or thinking.

Session Four (How to Change Underlying Beliefs)

Task:
1. Trace your beliefs back to where you first learned them.

2. Question whether you had the right information and capabilities at that time to form these beliefs.

3. List the advantages and disadvantages of holding each belief.

4. Act against the belief; for example, purposely make mistakes if you believe you always have to be perfect.

5. Trace your automatic thoughts back to the beliefs and question their validity.

6. Contrast the short-term payoff of your belief—for example, you are elated when people say you are attractive—to the long term results.
Appendix C

Preinduction Talk

In addition to systematically learning new ways to think and counter depression, you will be given the opportunity to learn how hypnosis can also help in that process.

"Physicians, dentists, and psychologists are becoming more and more interested in hypnosis, which is not a state of 'trance,' 'sleep,' or 'unconsciousness.' Rather, it is an exaggerated state of being awake. More simply, it is selective attention to my words, with selective inattention to distracting noise and everything else around you. Now, if you wish to relax, imagine and feel all of my suggestions. Do not try too hard. Just try to concentrate on my suggestions to the best of your ability. Don't press, just relax, the better you will concentrate on what I am saying. As a result, you will respond more effectively to those suggestions which are for your benefit.

This hypnosis is different from entertainment hypnosis. The entertainer-hypnotist makes you think that he hypnotizes you because he is a powerful person. Expert-hypnotists know that hypnosis is effective because of the person's desire and expectant attitude. We use this tool with respect, realizing that every person is an individual
personality who should be treated with dignity both in and out of hypnosis.

"I really do not hypnotize you, and I have never hypnotized a single human being in my life. However, many individuals have entered into deep hypnosis because they really wanted to do so. I cannot make you close your eyes by suggesting eye closure unless you wish to close your eyes. I cannot make you count to yourself if you do not wish to count. And I have no way of knowing whether or not you are counting to yourself. Our relationship, therefore, is a cooperative one and not a mental 'tug of war.' May I repeat, you will not really be in a trance, even though we refer to it as such for want of a better term.

"Actually, we are being hypnotized continually as a part of everyday life. When I sit in a rowboat, fishing, the monotonous ripples relax me and time passes by rapidly. The first thing I am apt to say is, 'Have I been here for 3 hours?' It seemed like 3 hours, because a part of that time I was in reverie. Or how many times have you been in a theater, engrossed in a movie? As you looked at that screen, you became fixated on the movie and registered all types of emotions just as if it was real. You forgot who was sitting on your left and who was sitting on your right. Because you identified with the picture on the screen, you may even have forgotten what city you were in at the time. Next time you are at the theater, turn around and notice the
'glassy' stare in everyone's eyes. Of course, after it was over, you realized that what made you cry and laugh was not reality. Yet, for an hour and a half, you reacted to what you saw and heard as if it was real—yet it was an illusion. In other words, you were 'entranced,' but you did not think of this as hypnosis.

"Attainment of deep relaxation is easy, if you follow my suggestions. The capacity to be deeply relaxed is already present within you. I merely bring it to the surface, and only act as a guide. Is that clear?"

"You will do nothing to violate your moral code; you will not reveal information of a personal nature unless you wish to do so; you will be completely aware of what is said; and you will not act contrary to your wishes. And every suggestion will be for your benefit and to help you to overcome depression."
Appendix D

Hypnotic Mood Alteration

Okay, just sit back and let yourself get comfortable. If you are wearing contact lenses, you need to remove them. Just settle back into the chair—good. Now, just take three slow and complete breaths. You may allow your eyes to just slowly and easily close—and allow yourself to passively listen, as you like.

We have all experienced happiness in so many different ways. For example, the happiness of the young child mastering the skill of riding a bike or rollerskating, the happiness of a birthday party, the exuberance of a wild success, the satisfaction of a warm friendship, the pleasant feeling of a tired body after a good workout or game, and so happiness can be experienced at different levels of intensity. What I would like you to do right now is allow yourself to remember a mildly happy experience, one in which you feel very happy and yet very calm, at a low level of arousal. I do not know and you do not know exactly which memory you will begin to become aware of, but I do know you really can enjoy that memory, letting yourself begin to experience that sense of calm happiness once again. Because as you remember that memory, all the happy feelings that were then become now again an utter actuality. And when you have remembered such an experience, you can signal by
nodding your head. But just allow yourself to take your
time in revivifying that memory, knowing it can develop
gradually over the next minute or so.

You can really enjoy that memory. And as you do, you
can imagine an emotional intensity scale from 1 to 10, with
1 being the low end and 10 being the high end. And on that
1 to 10 intensity scale, you can imagine that the low end is
one of very low arousal, very little emotional excitement,
yet one at which you can experience an emotion quite
undeniably. And the high end—9 and 10—can represent a
very intense, incredibly intense emotional arousal level.
And the numbers in between can represent different levels of
arousal, with 5 and 6 being the midrange on that sliding
scale. And what I would like you to do is let yourself
adjust the emotional arousal level of that happy experience
you are now enjoying to about 1 or 2 on that sliding
scale—a very calm, very relaxing, very pleasant state of
happiness, with very low arousal. Very relaxed, very
peaceful—to about a 1 or a 2 on that 1-10 scale.

And you really can continue to enjoy that state of calm
and peaceful, low-level arousal state of happiness. But why
confine yourself to any particular experience? What a nice
thing to know that in here you can let go of attaching to
any single experience and simply let that state of low-
arousal happiness continue in a very generalized fashion. A
general, free-floating, secure state of calm and peaceful
Appendix D—Continued

happiness, without any need to attach it to this experience or that experience. And as you continue to attend to that feeling of mild, peaceful happiness, and you can shift back to it easily later on when I ask you to do so. When I ask you to develop it again later on, you will be able to not only develop it fully, but sustain and maintain it until I ask you to do otherwise.

But for right now, what I'd like you to do is let yourself remember a different happy memory, this one involving a medium level of arousal—about a 5 or 6 on the sliding scale. You do not have to try to remember—just let your unconscious do the work for you, accessing a happy memory from the past, one in which you were quite happy and pretty excited, but not overly excited. Take all the time in the world in the next minute to let those feelings from that memory become revivified. And as that memory becomes revivified, so do the feelings associated. Feel that growing sense of happiness. Let it happen—why deny it? You really can feel that happiness growing, growing to about a 5 or 6 on the sliding intensity scale, to about mid-range.

In experiencing that sense of undeniable happiness, you need not confine yourself to just one specific experience. Why not let that happiness become generalized? Let yourself develop a state of happiness without any attachment to a particular or specific memory, a state of unabashed good feeling at about 5 or 6 on the scale. Let that particular
memory drift away for now, and simply involve yourself in that generalized state of medium-arousal happiness. And you can remember this intensity level of happiness also and return back to it later on when I ask you to do so, knowing you can maintain and sustain it until I ask you to do otherwise.

But for right now, what I would like you to do is recognize that there are so many other happy memories stored in your unconscious, some being intensely happy in nature. So what I would like you to do is let yourself call to mind a memory from your past that was filled with incredibly ecstatic and blissful happiness. You do not have to use any effort, just let your unconscious bring back to mind an incident in which you really felt euphoric, an intensity that was at least a 9 or 10 on that 1-10 scale. Take all the time in the world over the next minute to let that memory develop. I do not exactly know when and how you will begin to revivify it in the coming moments, but you can really recognize that intense happiness that once and is now once again an undeniable reality. You can feel it, you can feel it beginning to develop. Because as you remember that experience, those intensely happy feelings become active once again. You can feel it, the intensity of the happiness rising to a 9, perhaps a 10, perhaps even beyond--because why limit yourself. Feel the intense state of arousal, let yourself revel in that sense of unabashed, ecstatic bliss.
And just as you do not have to limit that intensity level, you do not have to confine yourself to any specific memory. Let that intense feeling of happiness generalize. Let that specific memory drift away for now and simply let yourself develop a generalized state of undeniably intense happiness. With an intensity level at about 9 or 10 on the scale. Really let yourself feel that generalized state. And you can remember this feeling of intense happiness, knowing you can return to it later on, maintaining it until I ask you to do otherwise.

And so you really do have the ability to experience happiness at different levels of happiness. You are learning to let your emotional intensity alter in accord with the needs of the situation.

(At this point of the induction, direct suggestions were inserted that tied the posthypnotic increase in mood to the specific new behaviors the subject learned in the cognitive treatment. These suggestions varied in content across sessions and were based specifically on the cognitive tape and homework for each session.)

You can develop a low-level of arousal level of happiness, a mild, calm, yet undeniably happy state which you can maintain during various learning processes in which I ask you to engage. And you can develop also a medium-level, medium-arousal level of generalized happiness, and know equally well that you can maintain it without any
conscious awareness while doing some things I ask you to learn. And so why not congratulate yourself on a job well done. And in doing so let yourself orient back to an emotional stage and an intensity level appropriate for you. You can feel quite good, quite relaxed, knowing that you can choose that emotional state and intensity level that you select as natural and appropriate.
Appendix E

Biofeedback Introduction for First Session

In addition to systematically learning new ways to think and counter depression, you will be given the opportunity to learn how biofeedback can also help in that process. As you may know, biofeedback is the use of monitoring instruments to give a person a continuous flow of information about his or her own biological state. An example would be using a stethoscope to listen to your heart rate and then using that to help you learn to speed it up or slow it down. Another example would be attaching electrodes over your forehead to detect tension in muscles that leads to a headache. So whatever the type of equipment that is used, it provides feedback that allows the person to change how he/she responds physically to psychological stressors.
Appendix F

Analyses of the Dependent Variables: Beck Depression Inventory; Depression Adjective Checklist; Homework Self-Rating Scale; Therapist Homework Rating Scale; and Subject Drop-Out Rate
Table 2

One-way Analysis of Variance with HGS HS: A as Dependent Variable and Groups as Independent Variable

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>62.60</td>
<td>2</td>
<td>31.30</td>
<td>0.013*</td>
</tr>
<tr>
<td>Within Groups</td>
<td>165.70</td>
<td>27</td>
<td>6.13</td>
<td></td>
</tr>
</tbody>
</table>

Note. HGS HS: A = Harvard Group Scale of Hypnotic Susceptibility, Form A.

*p < .05.
Table 3
One-way Analysis of Variance with BDI Pretreatment as Dependent Variable and Groups as Independent Variable

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
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<td>2</td>
<td>4.93</td>
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<tr>
<td>Within Groups</td>
<td>1002.00</td>
<td>27</td>
<td>37.11</td>
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</tr>
</tbody>
</table>

Note. BDI = Beck Depression Inventory.
## Table 4

### Analysis of Covariance with BDI as Dependent Variable, Groups as Independent Variable, and HGSHS: A as Covariate

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>12.64</td>
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<td>6.32</td>
<td>.12</td>
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<tr>
<td>HGSHS: A</td>
<td>188.48</td>
<td>1</td>
<td>188.48</td>
<td>3.61</td>
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<tr>
<td>Error</td>
<td>1358.74</td>
<td>26</td>
<td>52.26</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>1124.82</td>
<td>2</td>
<td>562.41</td>
<td>36.28*</td>
</tr>
<tr>
<td>Groups x Time</td>
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<td>4</td>
<td>26.53</td>
<td>1.71</td>
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<tr>
<td>Error</td>
<td>837.07</td>
<td>54</td>
<td>15.50</td>
<td></td>
</tr>
</tbody>
</table>

Note. BDI = Beck Depression Inventory; HGSHS: A = Harvard Group Scale of Hypnotic Susceptibility, Form A.

*p < .0001.

### Duncan Multiple Range Test

<table>
<thead>
<tr>
<th>Trial</th>
<th>N</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretreatment</td>
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<td>14.93a</td>
</tr>
<tr>
<td>post-treatment</td>
<td>30</td>
<td>7.17b</td>
</tr>
<tr>
<td>Follow-up</td>
<td>30</td>
<td>7.73b</td>
</tr>
</tbody>
</table>

Note. Means with the same subscript (a, b) do not differ significantly (p < .05).
Table 5

Additional Analyses with the BDI as Dependent Variable and Groups as Independent Variable

The following analyses were run in addition to the main analysis. None of these analyses produced results which reached statistical significance.

1 X 3 ANOVAS

BDI Post by Groups
BDI Follow-up by Groups
BDI Post Difference (Pre - Post) by Groups
BDI Follow-up Difference (Pre - Follow-up) by Groups

3 X 3 ANOVA
Groups by BDI with repeated measures

2 X 3 ANCOVA
- BDI (Pre - Post and Pre - Follow-up) by Groups

2 X 3 ANOVA
- BDI by Groups

Note. BDI = Beck Depression Inventory.
Table 6

Analysis of Covariance with DACL as Dependent Variable, Groups as Independent Variable, and HGSHS: A as Covariate

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
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<th>Mean Square</th>
<th>F</th>
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<td>1</td>
<td>11.66</td>
<td>0.22</td>
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<tr>
<td>HGSHS: A</td>
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<td>1</td>
<td>7.80</td>
<td>0.15</td>
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<tr>
<td>Error</td>
<td>911.53</td>
<td>17</td>
<td>53.62</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>266.89</td>
<td>5</td>
<td>53.38</td>
<td>2.83*</td>
</tr>
<tr>
<td>Groups x Time</td>
<td>77.50</td>
<td>5</td>
<td>15.50</td>
<td>0.82</td>
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<tr>
<td>Error</td>
<td>1696.27</td>
<td>90</td>
<td>10.84</td>
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Note. HGSHS: A = Harvard Group Scale of Hypnotic Susceptibility, Form A.

*p < .02.

Duncan's Multiple Range Test

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<thead>
<tr>
<th>Trial</th>
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<td>DACL-C</td>
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<tr>
<td>DACL-A</td>
<td>20</td>
<td>12.20&lt;sub&gt;a&lt;/sub&gt;</td>
</tr>
<tr>
<td>DACL-D</td>
<td>20</td>
<td>10.35&lt;sub&gt;b&lt;/sub&gt;</td>
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<td>DACL-F</td>
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<tr>
<td>DACL-E</td>
<td>20</td>
<td>9.50&lt;sub&gt;a b&lt;/sub&gt;</td>
</tr>
<tr>
<td>DACL-B</td>
<td>20</td>
<td>8.05&lt;sub&gt;b&lt;/sub&gt;</td>
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</table>

Note. Means with the same subscript (a, b) do not differ significantly (*p < .05). DACL = Depression Adjective Checklist.
Table 7
Univariate Pearson Correlations Among Homework Self-Ratings and Therapist Homework Ratings

<table>
<thead>
<tr>
<th></th>
<th>THR-1</th>
<th>THR-2</th>
<th>THR-3</th>
<th>THR-4</th>
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</thead>
<tbody>
<tr>
<td>HSR-1</td>
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<td>-.275</td>
<td>.414</td>
<td>.085</td>
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<tr>
<td>HSR-2</td>
<td>-.121</td>
<td>.719***</td>
<td>.213</td>
<td>.446*</td>
</tr>
<tr>
<td>HSR-3</td>
<td>.499*</td>
<td>.339</td>
<td>.485*</td>
<td>.481*</td>
</tr>
<tr>
<td>HSR-4</td>
<td>.169</td>
<td>.112</td>
<td>.329</td>
<td>.600**</td>
</tr>
</tbody>
</table>

Note. HSR = Homework Self-Rating; THR = Therapist Homework Rating.

df = 20.

*p < .05.

**p < .01.

***p < .001.
### Table 8

T-Tests Between CPB Group and CHME Group on HSR's

<table>
<thead>
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<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>df</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPB</td>
<td>71.87</td>
<td>21.89</td>
<td>18</td>
<td>.5332</td>
</tr>
<tr>
<td>CHME</td>
<td>66.87</td>
<td>19.99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** CPB = Cognitive pseudo-biofeedback; CHME = Cognitive hypnotic mood elevation; HSR = Homework Self Rating Scale.
Table 9

T-Tests Between CPB Group and CHME Group on THR’s

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>df</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPB</td>
<td>2.4</td>
<td>0.488</td>
<td>18</td>
<td>1.17</td>
</tr>
<tr>
<td>CHME</td>
<td>2.2</td>
<td>0.229</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. CPB = Cognitive pseudo-biofeedback; CHME = Cognitive hypnotic mood elevation; THR = Therapist Homework Rating Scale.
Table 10

2 x 4 Analysis of Covariance with Homework Self-Ratings as Dependent Variable, Groups as Independent Variable, and HGSHS: A as Covariate

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>2583.77</td>
<td>1</td>
<td>2583.77</td>
<td>1.54</td>
</tr>
<tr>
<td>HGSHS: A</td>
<td>3098.54</td>
<td>1</td>
<td>3098.54</td>
<td>1.84</td>
</tr>
<tr>
<td>Error</td>
<td>28557.70</td>
<td>17</td>
<td>1679.86</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>12156.25</td>
<td>3</td>
<td>4052.08</td>
<td>7.62*</td>
</tr>
<tr>
<td>Groups x Time</td>
<td>1937.49</td>
<td>3</td>
<td>645.83</td>
<td>1.21</td>
</tr>
<tr>
<td>Error</td>
<td>28718.75</td>
<td>54</td>
<td>531.82</td>
<td></td>
</tr>
</tbody>
</table>

Note. HGSHS: A = Harvard Group Scale of Hypnotic Susceptibility, Form A.

*p < .0002.

Duncan's Multiple Range Test

<table>
<thead>
<tr>
<th>Trial</th>
<th>N</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSR-1</td>
<td>20</td>
<td>90.00_a</td>
</tr>
<tr>
<td>HSR-3</td>
<td>20</td>
<td>66.25_b</td>
</tr>
<tr>
<td>HSR-4</td>
<td>20</td>
<td>63.75_b</td>
</tr>
<tr>
<td>HSR-2</td>
<td>20</td>
<td>57.50_b</td>
</tr>
</tbody>
</table>

Note. HSR = Homework Self-Ratings. Means with the same subscript (a, b) do not differ significantly (p < .05).
### Table 11

2 x 4 Analysis of Covariance with Therapist Homework Ratings as Dependent Variable, Groups as Independent Variable, and HGSHS: A as Covariate

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>2.20</td>
<td>1</td>
<td>2.20</td>
<td>4.24</td>
</tr>
<tr>
<td>HGSHS: A</td>
<td>1.67</td>
<td>1</td>
<td>1.67</td>
<td>3.21</td>
</tr>
<tr>
<td>Error</td>
<td>8.83</td>
<td>17</td>
<td>0.52</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>8.30</td>
<td>3</td>
<td>2.77</td>
<td>14.50*</td>
</tr>
<tr>
<td>Groups x Time</td>
<td>0.90</td>
<td>3</td>
<td>0.30</td>
<td>1.57</td>
</tr>
<tr>
<td>Error</td>
<td>10.30</td>
<td>54</td>
<td>0.19</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* HGSHS: A = Harvard Group Scale of Hypnotic Susceptibility, Form A.

*p < .0001.

Duncan's Multiple Range Test

<table>
<thead>
<tr>
<th>Trial</th>
<th>N</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>THR-1</td>
<td>20</td>
<td>2.85&lt;sub&gt;a&lt;/sub&gt;</td>
</tr>
<tr>
<td>THR-4</td>
<td>20</td>
<td>2.20&lt;sub&gt;b&lt;/sub&gt;</td>
</tr>
<tr>
<td>THR-2</td>
<td>20</td>
<td>2.10&lt;sub&gt;b&lt;/sub&gt;</td>
</tr>
<tr>
<td>THR-3</td>
<td>20</td>
<td>2.05&lt;sub&gt;b&lt;/sub&gt;</td>
</tr>
</tbody>
</table>

*Note.* THR = Therapist Homework Rating. Means with the same subscript (a, b) do not differ significantly (*p < .05*).
Table 12
Subject Drop-Out

<table>
<thead>
<tr>
<th></th>
<th>Waiting List Controls</th>
<th>Cognitive Biofeedback</th>
<th>Cognitive Hypnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dropped out before treatment</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Dropped out during treatment</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>
References


Wright, W., & Bower, G. H. Mood effects on subjective probability assessment. Unpublished manuscript, Stanford University, Stanford.


