CHAPTER 32

HYPNOSIS, HYPNOTIZABILITY, AND HYPNOTHERAPY

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Contemporary research in the area of hypnosis is organized around two competing paradigms, which have been labeled the special process and the sociocognitive perspectives (Spanos, 1986a, 1986b; Spanos & Chaves, 1989). In special process accounts hypnotic behavior is conceptualized as differing fundamentally from ordinary social behavior, and a variety of unusual psychological processes or mechanisms are posited to account for hypnotic responding (e.g., trance state, dissociation). Alternatively, sociocognitive approaches emphasize the continuity between hypnotic enactments and other forms of social behavior, eschew the positing of unusual mental processes, and attempt to account for hypnotic performance by using constructs regularly employed by social psychologists to explain other forms of social behavior (e.g., attitudes, expectations, attributions, role enactment, interpretational set).

The theoretical controversies between special process and sociocognitive formulations have usually been played out in the experimental laboratory where control over relevant antecedent variables can be attained with relative ease. However, the procedures and ideas associated with the topic of hypnosis began in clinical practice and have been employed for clinical purposes from the late 18th century to the present.

Theoretical controversies have been much less prominent in the clinical than in the experimental literature. Frequently, the literature reviews (e.g., Frankel, 1987; Holroyd, 1980) and clinical reports (e.g., Oystraugh, 1989) in the clinical area begin with the tacit assumptions that the term hypnosis refers to a denotable psychological state, condition, or process, that the presence of this “state” can be readily recognized, that it can be induced with the use of varied sets of rituals labeled as hypnotic induction procedures, and that once induced, the hypnotic state in some manner (often unspecified) facilitates a therapeutic outcome.

All of the above assumptions, however, are open to very serious question. For example, after more than 200 years of research, the term hypnosis remains exceedingly vague and continues to be used in contradictory ways by different investigators (Barber, 1969; Barber, Spanos, & Chaves, 1974). Furthermore, physiological, behavioral,
and verbal report indicators that unambiguously reflect a hypnotic state (as opposed to relaxation, expectancy-induced attributions, etc.) have yet to be identified (Edmonston, 1980; Radtke & Spanos, 1981; Spanos, 1986b). Most important, it has become increasingly clear that the available data in this research area can be better understood by rejecting rather than accepting outdated notions such as "hypnotic trance state" (Spanos, 1986b). Explanatory concepts drawn from the contemporary literature in cognitive and social psychology have proven successful in generating and parsimoniously conceptualizing a wide array of laboratory findings concerning hypnotic behavior (Sarbin & Coe, 1972; Spanos & Chaves, 1989). This chapter reviews clinical findings in this area without adopting the tacit assumptions of special process theories.

Before addressing these issues, however, several limitations should be acknowledged. The term hypnototherapy does not refer to a delimited and agreed upon set of procedures. In fact, any therapeutic intervention that is defined by the therapist as involving hypnosis can be considered hypnototherapy. In some cases (e.g., Rock, Shipley, & Campbell, 1969) therapists have claimed to be "doing hypnototherapy" even though the treatment was never defined as hypnosis to the clients. Procedures as diverse as psychoanalytically oriented age regression and "uncovering" therapy (Raginsky, 1967), direct suggestion for symptom removal (Gelder, Bancroft, Gath, Johnston, Mathews, & Shaw, 1973), variants of systematic desensitization (Gibbons, Kilbourne, Saunders, & Castles, 1970), and other behavior therapies (Kroger & Fezler, 1976) have all been considered hypnototherapy. However, the only thing tying these diverse procedures together is the name "hypnosis" with its attendant mythologies of altered states and unusual psychological mechanisms.

Most clinical reports of hypnotic treatment are little more than anecdotal case reports or a series of such reports. Oftentimes criteria for inferring improvements are unclear, and frequently there are no control or comparison groups against which to evaluate the effects of the hypnotic treatment. When studies contain serious deficiencies of this kind then it is obviously impossible to draw meaningful conclusions about the effectiveness of hypnotic interventions. Consequently, this review is, for the most part, limited to studies in which the procedures labeled hypnotic are at least minimally described, the hypnotic treatments are compared with some non-hypnotic psychological treatment and/or to a no-treatment control condition, and quantitative indexes of therapeutic effect are provided.

The effects of hypnotherapy are examined on six disorders. For three of these disorders the problem behaviors are under the client's self-control (i.e., phobic avoidance, smoking, obesity). The remaining three disorders are typically conceptualized as involuntary (asthma, warts, pain; Wadden & Anderton, 1982). These six disorders were chosen because in the case of each there are at least a few studies that compared hypnotic and nonhypnotic treatments and provided information about the relationship between treatment outcome and hypnotizability.

Evidence from laboratory studies strongly indicates that hypnotic procedures are no more effective than various nonhypnotic procedures (e.g., task-motivating instructions) at enhancing responsiveness to a wide range of suggestions (for reviews cf. Barber, 1969; Diamond, 1974; Spanos & Chaves, 1989). Despite this evidence, numerous clinicians argue that hypnotic procedures are more effective than nonhypnotic procedures for treating clinical problems (e.g., Gault, 1988; Graham, 1986), or, relatedly, that therapeutic suggestions and procedures given to hypnotic subjects are more effective than the same procedures given to nonhypnotic subjects (Astor, 1973; Dengrove, 1973). When confronted with the results of laboratory studies it is common for such investigators to argue that clinical hypnosis is somehow different from laboratory hypnosis and, therefore, that experimental findings should not be generalized to the clinic (Gault, 1988; Graham, 1986). One purpose of this review is to examine clinical studies that compared hypnotic and nonhypnotic therapeutic procedures in order to determine whether the available data in fact provide any support for the common contention that hypnotic procedures are more therapeutically beneficial than nonhypnotic ones.

Some investigators (Bowers & Kelly, 1979; Spinhoven, 1988; Wadden & Anderton, 1982) acknowledge that hypnotic procedures are unlikely to be any more effective than nonhypnotic procedures at inducing therapeutic gain. Nevertheless, these investigators contend that hypnotizability (i.e., responsiveness to hypnotic suggestions) is likely to moderate the success of many psychological treatments regardless of whether the treatments are formally labeled as hypnotic. This argument is based on the assumption that hyp-
notizability constitutes a stable trait or capacity and that subjects who possess high levels of this capacity utilize it in response to the suggestive components of whatever psychological treatment they are administered. For example, Wadden and Anderton (1982) argued that hypnosis should be regarded not in terms of the administration of an induction procedure, but instead "as a stable characteristic (trait) of the individual. . . . If the subject has high [hypnotizibility] any communication can be turned into a therapeutic suggestion. Hypnotic ability can be used without labeling the situation as hypnotism . . . " (p. 217).

Despite such assertions, opinions about the relationship between hypnotizability and treatment outcome are divided, and a number of clinicians have argued that hypnotizability is irrelevant to treatment outcome (Barber, 1980; Gill & Brennan, 1959; Swirsky-Sacchetti & Margolis, 1986; Weitzenhoffer, 1953). Moreover, the experimental evidence for a stable trait conceptualization of hypnotizability is rather tenuous. Recent studies (reviewed by Spanos, 1986a) indicate that brief training procedures aimed at enhancing subjects' attitudes toward hypnosis, and teaching them appropriate interpretations of task demands, produce substantial enhancements in hypnotizability. Also, relationships between hypnotizability and responsiveness to at least some types of test suggestions are context dependent (Spanos, 1986b). These relationships appear to depend less on any special abilities or capacities held by high hypnotizables, and more on the degree to which subjects hold similar understandings, motivations, and expectations when enacting the responses to be correlated. A second purpose of this review is to examine the evidence for a relationship between hypnotizability and treatment outcome in each of the disorders under examination, and to determine whether the available data are more consistent with a stable trait or sociocognitive conceptualization of hypnotizability.

**PHOBIAS**

**Hypnotic versus Nonhypnotic Treatments**

Eight studies have compared hypnotic procedures with some form of behavior therapy (usually systematic desensitization) in the treatment of phobias. In four of these studies (Gibbons et al., 1970; Lang, 1969; McAmmond et al., 1971; Schubot, 1966) the hypnotic and behavior therapy procedures yielded equivalent reductions in phobic behavior; in three studies (Lang, Lazovik, & Reynolds, 1965; Marks, Gelder, & Edwards, 1968; Melnick & Russell, 1976) the behavior therapy procedure produced significantly greater fear reduction than the hypnotic procedure; and in only one study (O'Brien, Cooley, Ciotti, & Henninger, 1981) did the hypnotic procedure produce greater fear reduction than the behavior therapy procedure. It is important to keep in mind that many of these studies contain methodological difficulties that make any interpretation difficult. For example, O'Brien and colleagues (1981) compared desensitization alone against desensitization plus hypnotic sessions in which subjects were given posthypnotic suggestions to have dreams that would reduce their phobias. The desensitization alone group received four treatment sessions whereas the desensitization plus hypnosis group received nine sessions. In addition, the subjects assigned to the desensitization plus hypnosis group were preselected for high hypnotizability whereas those assigned to the desensitization alone group were unselected with respect to hypnotizability. Given that no subjects were given nonhypnotic dream suggestions and that type of treatment was confounded with both the number of treatment sessions and pretested hypnotizability, it is impossible to draw any conclusions from this study concerning the role played by hypnotic procedures in phobia reduction.

Unfortunately, the confounding of antecedent variables characterizes most of the studies in this area. Only two of the eight studies dealing with phobia reduction (Lang, 1969; Schubot, 1966) avoided such confounding by comparing systematic desensitization in which the initial relaxation procedure was replaced with a hypnotic induction, with standard systematic desensitization. In neither study did the two treatments differ significantly on any fear reduction index. Taken together, the results of these eight studies provide no support for the hypothesis that hypnotic treatments are intrinsically more effective than nonhypnotic treatments in the reduction of phobic behavior, and no support for the related hypothesis that hypnotic procedures facilitate the effectiveness of treatments such as systematic desensitization.

**Hypnotizability and Outcome**

Three studies assessed the relationship between treatment outcome and hypnotizability in phobic disorders. Horowitz (1970) found that three hyp-
Hypnotic treatments (i.e., recalling fear-related events while relaxed, recalling fear-related events while aroused, posthypnotic suggestion for fear reduction) were equally effective at reducing phobic avoidance behavior. When the subjects in her three treatment groups were combined, Horowitz (1970) found that the correlation between hypnotizability and improvement scores (i.e., posttest approach score – baseline approach score) were consistently low and nonsignificant. Lang (1969) also reported low and nonsignificant correlations between hypnotizability and fear reduction following either systematic desensitization or a hypnotic treatment. On the other hand, Schubot (1966) reported significant correlations between hypnotizability and fear reduction following hypnotic desensitization but no significant correlations between these variables following standard (nonhypnotic) desensitization.

SMOKING

A large number of studies have assessed changes in smoking behavior following hypnotic interventions designed to reduce smoking (see Holroyd, 1980, for a review). The particular kinds of interventions labeled as hypnotic in these studies varied greatly (e.g., imagining aversive consequences to smoking, “ego-enhancing” instructions, explanations of reasons for quitting), as did the number and length of treatment sessions, length of follow-up, drop-out rates, and abstinence rates associated with the various treatments. Furthermore, the large majority of these studies failed to include no treatment control or nonhypnotic comparison groups. Consequently, in these studies it is impossible to evaluate the role of spontaneous remission in smoking reduction or to determine whether the hypnotic components of these various treatments actually contributed anything to the results obtained.

Hypnotic Versus Nonhypnotic Treatments

Eleven studies (Barkley, Hastings, & Jackson, 1977; Hyman, Stanley, Burrows, & Horne, 1986; Francisco, 1972; MacHovec & Man, 1978; Pederson, Scrimgeour, & Lefcoe, 1975, 1979; Perry, Gelfand, & Marcovitch, 1979; Rabkin, Boyko, Shane, & Kaufert, 1984; Shewchuk et al., 1977; Spanos, De Faye, Gabara, & Jarrett, 1989; Williams & Hall, 1988) compared hypnotic with nonhypnotic treatments for smoking cessation. In seven of these studies some variant of a hypnotic cognitive restructuring procedure developed by Spiegel (1970) as a treatment for smoking was compared with various nonhypnotic treatments. In the Spiegel procedure, subjects were relaxed and repeatedly administered a standard set of “therapeutic messages” (e.g., “Smoking is poisonous to your body. You need your body to live.”), in a context defined as hypnosis. As originally developed, the procedure involved only a single session, but clients were encouraged to practice self-hypnosis regularly, during which they self-administered the therapeutic messages. Common modifications of this procedure include the use of multiple treatment sessions (Francisco, 1972; Hyman et al., 1986) and group treatment (e.g., Spanos et al., 1989).

In four studies (Francisco, 1972; Hyman et al., 1986; Shewchuk et al., 1977; Spanos et al., 1989) the Spiegel procedure failed to produce significantly greater abstinence or smoking reduction at follow-up than did various nonhypnotic treatments (e.g., the Spiegel instructions defined nonhypnotically, nonhypnotic relaxation, individual counseling, placebo, group behavior modification), and in one of these studies (Spanos et al., 1989) the Spiegel procedure also failed to differ in these regards from no treatment. The Spiegel procedure was more effective than a nonhypnotic comparison treatment in only one study (Williams & Hall, 1988), and in that case the comparison treatment simply involved a one-session group discussion of reasons for smoking and attempts to quit. Finally, Perry et al. (1979) conducted two studies that found that the Spiegel treatment produced significantly lower abstinence rates at follow-up than did rapid smoking treatments. Barkley et al. (1977) also compared a hypnotic cognitive restructuring treatment with nonhypnotic rapid smoking and, in addition, included an attention placebo treatment. Rapid smoking led to significantly greater abstinence than did the placebo, whereas the hypnotic and placebo treatments failed to differ significantly.

Pederson et al. (1975) gave clients either (a) six sessions of group counseling that involved discussion of self-regulation techniques, the relative advantages of quitting versus cutting down, and so forth; (b) group counseling plus a single 1½-hour hypnotic session that emphasized relaxation procedures plus descriptions of the benefits of not smoking; or (c) hypnosis alone. Counseling plus hypnosis led to greater abstinence at follow-up than did either counseling alone or hypnosis alone. Subjects in the latter two treatments failed to differ in abstinence from waiting list controls.
In a second and related study, Pederson et al. (1979) again compared counseling and counseling plus hypnosis. Two other treatments also were compared: counseling plus videotaped hypnosis, in which subjects watched a videotape of others being administered the hypnotic treatment, and counseling plus relaxation hypnosis. In the latter treatment, subjects were administered hypnotic suggestions for relaxation but did not receive any suggestions or instructions concerning smoking cessation. The counseling plus hypnosis treatment produced significantly higher abstinence than did the remaining three treatments. Unfortunately, neither of the Pederson et al. (1975, 1979) studies included subjects who received nonhypnotic suggestions and instructions concerning smoking cessation in combination with counseling. Consequently, the role of hypnotic procedures in producing the superior effects found in the counseling plus hypnosis treatments remains unclear.

MacHovec and Man (1978) compared subjects who received individual hypnotherapy, group hypnotherapy, correct site acupuncture, pseudoacupuncture, and no treatment. The authors did not compute statistical analyses on their findings, but provided enough information about rates of smoking cessation in the various conditions to allow such analyses to be performed. Contrary to the implication given in some review articles (e.g., Holroyd, 1980), subjects in the two hypnosis conditions did not show significantly greater improvement than those given correct site acupuncture ($\chi^2[1] = .01, p = \text{not significant}$).

In summary, the available data provide no support for the notion that hypnotic treatments are more effective than nonhypnotic treatments for reducing smoking. On the other hand, two studies indicate that rapid smoking treatments are more effective than hypnotic cognitive restructuring in this regard. Cognitive restructuring procedures defined as hypnosis were no more effective than nonhypnotic cognitive restructuring in reducing smoking.

Hypnotizability and Outcome

Four studies have assessed relationships between hypnotizability and treatment-induced reductions in smoking. Perry and Mullen (1975) found a significant correlation ($r = .32$) between hypnotizability assessed before treatment and percentage reduction in smoking following the administration of Spiegel's (1970) one-session hypnotic cognitive restructuring treatment. Subjects also were divided into those who reduced smoking by more than 50% and those who reduced smoking by less than 50%. Significantly more high than low hypnotizables reported on follow-up that they had reduced smoking by more than 50%.

Perry et al. (1979) conducted two studies. As described earlier, the first compared hypnotic cognitive restructuring and rapid smoking. In neither treatment did hypnotizability, tested at follow-up, correlate significantly with smoking reduction. In Perry et al.'s (1979) second study, subjects received hypnotic cognitive restructuring plus rapid smoking. Hypnotizability tested both before treatment and again at follow-up failed to correlate significantly with smoking reduction. Finally, Spanos et al. (1989) found no significant correlation between hypnotizability assessed at follow-up and smoking reduction in either hypnotic or nonhypnotic cognitive restructuring treatments.

Despite their failure to find a relationship between hypnotizability and treatment outcome, Perry et al. (1979) found that the degree to which subjects rated themselves as motivated to stop smoking did predict treatment outcome. In other words, irrespective of hypnotizability, subjects who were strongly motivated to give up smoking benefited from their hypnotic treatment to a greater extent than those with relatively little motivation.

OBESITY

As pointed out by Mott and Roberts (1979), most of the literature dealing with hypnosis and weight loss consists of anecdotal case reports or uncontrolled clinical studies.

Hypnotic Versus Nonhypnotic Treatment

Only five experiments (Devine & Bornstein, 1980; Deyoub & Wilkie, 1980; Goldstein, 1981; Miller, 1975; Wadden & Flaxman, 1981) have compared hypnotic and nonhypnotic treatments for weight loss, and three of these studies compared covert modeling with or without a prior hypnotic induction procedure. Deyoub and Wilkie (1980) found that task-motivating instructions followed by covert modeling produced significantly more weight loss than hypnotic induction followed by covert modeling. On the other hand, neither Devine and Bornstein (1980) nor Wadden and Flaxman (1981) found significant differences between their hypnotic and nonhypnotic covert modeling treatments.
Goldstein (1981) compared a behavior modification treatment with two hypnosis plus behavior modification treatments. One of these hypnosis treatments included an arm levitation suggestion designed to prove to subjects who passed it that they were "really hypnotized." The other hypnotic treatment did not include the arm levitation suggestion. Subjects in the two hypnotic treatments were also administered various cognitive restructuring exercises that were not given to those in the behavior modification alone treatment. Subjects given behavior modification alone or hypnosis without arm levitation plus behavior modification did not differ significantly in weight loss. However, subjects in both of these treatments lost less weight than those in the hypnosis with arm levitation plus behavior modification treatment. Unfortunately, the confounding of the arm levitation suggestion with the hypnotic conditions, coupled with the extra cognitive restructuring exercises given only to the hypnotic groups, makes it impossible to determine the role played by hypnotic procedures in producing the obtained results.

Miller (1975) provided subjects with a treatment aimed at building a positive self-image and teaching good eating habits. For those in one condition the treatment was preceded by a hypnotic induction whereas those in another received the same treatment without an induction. Subjects in a third treatment practiced good eating habits in vivo. At follow-up, subjects in the three treatments failed to differ in weight loss. In summary, the available evidence does not support the hypothesis that hypnotic procedures are more effective than nonhypnotic procedures at inducing weight loss; and there is some evidence to suggest that task-motivating instructions coupled with covert modeling are more effective in this regard than hypnotic induction coupled with covert modeling.

Hypnotizability and Outcome

Table 32.1 outlines the results of studies that have assessed relationships between treatment-induced weight loss and hypnotizability. Andersen (1985) found a significant correlation between these variables for hypnotically treated subjects (nonhypnotic subjects were not tested). Relatedly, Goldstein (1981) reported that subjects who passed the arm levitation suggestion in his hypnosis plus arm levitation treatment lost significantly more weight than those who failed this suggestion.

Deyoub and Wilkie (1980) provided some evidence that the relationship between hypnotizability and treatment-induced weight loss might be dependent on the type of treatment administered. Those investigators found a substantial correlation between hypnotizability and weight loss in their hypnosis plus covert modeling treatment but no significant correlation between these variables in their task motivation plus covert modeling treatment. On the other hand, in six other studies (Cohen & Alpert, 1978; Devine & Bornstein, 1980; Deyoub, 1979a, 1979b; Miller, 1975; Wadden & Flaxman, 1981) no significant relationship was found between hypnotizability and weight loss in either hypnotic or nonhypnotic treatments. Despite a failure to find relationships between hypnotizability and treatment-induced weight loss, it is interesting to note that Wadden and Flaxman (1981) did find a significant correlation between expectancy for treatment success and weight loss in both hypnotic and nonhypnotic treatments.

WARTS

Warts are virally induced benign tumors of the skin (White & Fenner, 1986). Although a large number of anecdotal case reports and clinical studies have employed hypnotic interventions in an attempt to induce wart loss, most of these studies lacked no treatment control groups and, therefore, treatment effects could not be distinguished from spontaneous remission (for reviews see Johnson, 1989; Ullman & Dudek, 1960).

Hypnotic Versus Nonhypnotic Treatments

Only five experiments have compared hypnotic treatments with untreated control conditions and/or to nonhypnotic treatments for wart regression (Johnson & Barber, 1978; Spanos, Stenstrom, & Johnston, 1988; Spanos, Williams, & Gwynn, 1990; Surman, Gottlieb, Hackett, & Silverberg, 1973). Surman et al. (1973) found that subjects given hypnotic suggestions to imagine that their warts were disappearing lost significantly more warts during a 3-month follow-up period than untreated controls. These findings certainly indicate that some aspect of Surman et al.'s (1973) hypnotic suggestion treatment was effective at inducing wart remission. However, the lack of a group administered suggestions without hypnosis makes it impossible to assess the contribution of the hypnotic procedure to the success of the treatment.

Johnson and Barber (1978) compared hypnotic
### Table 32.1. Relationships Between Hypnotizability and Treatment Outcome in Studies Dealing with the Treatment of Phobias, Smoking, Obesity, Asthma, Warts, and Pain

<table>
<thead>
<tr>
<th>STUDY</th>
<th>SIGNIFICANCE OF RELATIONSHIP</th>
<th>HYPNOTIZABILITY ASSESSMENT</th>
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<tr>
<td>Phobias</td>
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<tr>
<td>Horowitz (1970)</td>
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<td>Lang (1969)</td>
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<tr>
<td>Schubot (1966)</td>
<td>+ (hypnosis)</td>
<td>S</td>
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<td></td>
<td>− (nonhypnosis)</td>
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<tr>
<td>Smoking</td>
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<tr>
<td>Perry &amp; Mullen (1975)</td>
<td>+</td>
<td>NS</td>
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<td>Perry et al. exp. 1 (1979)</td>
<td>−</td>
<td>S</td>
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<td>Perry et al. exp. 2 (1979)</td>
<td>−</td>
<td>S</td>
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<td>Spanos et al. (1989)</td>
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<tr>
<td>Obesity</td>
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<td>Andersen (1985)</td>
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<td>Devine &amp; Bornstein (1980)</td>
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<td>Deyoub (1979a)</td>
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<td>Deyoub &amp; Wilkie (1980)</td>
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<td>− (task-motivation)</td>
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<td>Miller (1975)</td>
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<td>Wadden &amp; Flaxman (1981)</td>
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<td>Asthma</td>
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<td>Collision (1975)</td>
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<td>White (1961)</td>
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<td>Warts</td>
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<td>+</td>
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<td>Spanos et al. exp. 1 (1988)</td>
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<td>Spanos et al. exp. 2 (1988)</td>
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<td>Surman et al. (1973)</td>
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<tr>
<td>Ullman &amp; Dudek (1960)</td>
<td>+</td>
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<td>Pain</td>
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<td>Crowley (1980)</td>
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<td>Friedman &amp; Taub (1984)</td>
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<td>Gottfredson (1973)</td>
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<td>Hilgard &amp; Le Baron (1984)</td>
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<td>Nolan et al. (1989)</td>
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<td>Perchard (1960)</td>
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<td>Reeves et al. (1983)</td>
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<td>Rock et al. (1969)</td>
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<td>NS</td>
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<td>Sank &amp; Schoenfeld (1975)</td>
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<td>S</td>
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<tr>
<td>Schafer (1975)</td>
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<td>NS</td>
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<td>Snow (1979)</td>
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<td>S</td>
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<tr>
<td>Spinhowen et al. (1985)</td>
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<td>S</td>
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<tr>
<td>Spinhowen et al. (1988)</td>
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<td>S</td>
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<tr>
<td>Stam et al. (1984)</td>
<td>+</td>
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<td>Venn (1987)</td>
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<td>S</td>
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<tr>
<td>Wall &amp; Womack (1989)</td>
<td>−</td>
<td>S</td>
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<tr>
<td>Smith, Womack &amp; Chen (1989)</td>
<td>−</td>
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Note. + = significant relationship between hypnotizability and treatment outcome; − = no significant relationship between these variables; S = hypnotizability was assessed with a standardized, multi-item hypnotizability scale; NS = the procedure for assessing hypnotizability is unknown, involved only a single item, or involved an unknown or nonstandardized number of items.
and nonhypnotic suggestions for wart regression. However, so few subjects in either treatment lost warts that statistical comparisons could not be meaningfully conducted. Because this study failed to include a no-treatment control group, spontaneous remission could not be excluded as the cause of the small amount of wart loss that was obtained.

Two studies (Spanos et al., 1988, experiment 1; Spanos et al., 1989) found that subjects given hypnotic suggestions lost significantly more warts than those given either placebos or no treatment. In addition, Spanos et al. (1990) found that their hypnotic suggestion subjects lost significantly more warts than those who self-administered a commercially available nonprescription topical salicylic acid compound.

Spanos et al. (1988, experiment 2) compared hypnotic and nonhypnotic suggestions that asked subjects to imagine their warts tingling and disappearing. Hypnotic induction plus suggestion, nonhypnotic relaxation instructions plus suggestion, and suggestion alone were equally effective at inducing wart remission within a 6-week follow-up period, and more effective in this regard than no treatment. In short, hypnotic suggestions to imagine warts disappearing appear to be more effective than placebo treatments or no treatment at inducing wart loss. However, suggestions to imagine without any accompanying hypnotic procedures appear to be as effective in this regard as hypnosis plus suggestion.

Hypnotizability and Outcome

Three studies reported that highly hypnotizable subjects treated with hypnotic suggestions lost more warts than corresponding low hypnotizables (Asher, 1956; Sinclair-Gieben & Chalmers, 1959; Ullman & Dudek, 1960). On the other hand, Tenzel and Taylor (1969) reported that none of 20 highly hypnotizable subjects treated with hypnotic suggestions exhibited wart regression and three other studies (Spanos et al., 1988, experiments 1 & 2; Surman et al., 1973) found no significant correlation between wart loss and hypnotizability in subjects treated with hypnotic suggestions or suggestions alone.

ASTHMA

Although the etiology of asthma remains a controversial topic, there is general agreement that psychological factors are linked to this disorder (Creer, 1982). A large number of psychological interventions have been employed to treat this disorder, and claims of success have been registered in numerous studies, including some that employed hypnotic interventions (for reviews see Creer, 1982; DePiano & Salzberg, 1979; Purcell & Weiss, 1970). Nevertheless, most such studies suffer serious methodological problems that suggest caution against overoptimistic interpretation.

With respect to hypnotic treatments, for example, DePiano and Salzberg (1979) pointed out that, "When self-report is used, most investigators report an improvement in the patient's symptoms. However, physiological measures show more equivocal results" (p. 1233). The importance of using physiological as opposed to self-report criteria when evaluating therapeutic reduction in asthmatic symptomatology was illustrated by Rubinfield and Pain (1976). Those investigators found that patients who indicated by self-report that they were asthma free were actually exhaling less than 50% of what should have been their normal expiration rates.

Hypnotic Versus Nonhypnotic Treatments

Only two studies (Maher-Loughman, 1970; Moore, 1965) have compared hypnotic with nonhypnotic psychological interventions for asthma. Maher-Loughman (1970) gave subjects in one group extensive training in hypnotic and self-hypnotic procedures that included relaxation and ego-enhancing suggestions and information aimed at enhancing expectations of treatment success. Nonhypnotic subjects received progressive relaxation and breathing exercises. Males reported equivalent improvements under both treatments, but females reported significantly more improvement with the hypnotic intervention. Objective indicators of respiratory functioning were not assessed. The reasons for the marked sex difference in response to the two treatments are unclear. Furthermore, the confounding of the hypnotic treatment with ego-enhancing and expectancy suggestions precludes any conclusion about the role of hypnotic procedures per se in determining treatment outcomes. The failure to assess physiological indicators of respiratory functioning also suggests caution when evaluating these findings.

Moore (1965) treated asthmatic patients with either relaxation, relaxation (hypnosis) plus suggestions for improvement, or systematic desensitization. Patients in all three treatments reported equivalent levels of improvement, but only those
treated by systematic desensitization exhibited improvement on objective indices of respiratory functioning.

Hypnotizability and Outcome

No studies have assessed relationships between degree of improvement following hypnotic interventions for asthma and hypnotizability as assessed by standardized scales. However, two studies assessed relationships between such improvement and ratings of patients' "hypnotic depth." Collison (1975) retrospectively analyzed the medical records of 121 asthmatic patients who had been treated with hypnotic treatments designed to enhance coping and relaxation. Patients rated as relatively good hypnotic subjects were classified as exhibiting substantially more improvement than those who were rated as poor hypnotic subjects. Unfortunately, the same investigator who performed the hypnotic treatments also rated hypnotic depth and retrospectively rated degree of improvement. Therefore, the possibility that the pattern of obtained results was influenced by subtle experimenter biases cannot be ruled out.

White (1961) reported that ratings of "hypnotic depth" were unrelated to improvement on either self-report or physiological indices in asthma patients treated with hypnotic suggestions. Unfortunately, White's (1961) study suffered from a small sample size and in both the Collison (1975) and White (1961) studies the reliability and validity of the procedures used to rate "hypnotic depth" are unknown.

PAIN

A large number of studies (reviewed by Tan, 1982; Turk, Melichenbaum, & Genest, 1983) now indicate that various cognitive-behavioral interventions (e.g., coping imagery suggestions, electromyogram biofeedback, relaxation training) can engender reports of reduced pain and distress for at least some kinds of acute and chronic clinical pain syndromes. A number of these studies compared hypnotic and nonhypnotic treatments and these will be discussed in terms of the pain syndromes toward which the treatments were directed.

Headache

Seven controlled outcome studies have compared hypnotic interventions with various nonhypnotic behavioral and/or cognitive treatments for the control of migraine, chronic tension, or mixed migraine/tension headaches (Andreychuk & Skriver, 1975; Friedman & Taub, 1984, 1985; Nolan, Hayward, Scott, & Spanos, 1989, experiments 1 & 2; Schlutter, Golden, & Blume, 1980; Spinhowen, Van Dyck, Zitman, & Linssen, 1985; Spinhowen, Linssen, Van Dyck, & Zitman, 1988). Four of these studies failed to include no treatment control conditions (Andreychuk & Skriver, 1975; Schlutter et al., 1980; Spinhowen et al., 1985; Spinhowen et al., 1988). All four found no differences between the hypnotic and nonhypnotic treatments that were compared, but the lack of no treatment control groups makes it unclear whether the treatments were equally effective or whether they all simply failed to influence headache activity.

Friedman and Taub (1984, 1985) reported that thermal biofeedback, relaxation alone, hypnotic relaxation plus thermal imagery, and hypnotic relaxation alone were all equally effective, and more effective than no treatment, at reducing the self-reported frequency and intensity of migraine headaches. Nolan et al. (1989, experiment 1) found that two sessions of hypnotic induction plus training in the use of coping imagery and two sessions of nonhypnotic imagery training were equally effective, and more effective than no treatment, at reducing self-reports of mixed migraine/tension headache both at posttreatment and at 3-months' follow-up. In a second experiment Nolan et al. (1989, experiment 2) employed the same treatments for chronic tension headache but, in addition, included a psychological placebo treatment and gave all subjects four rather than two treatment sessions. Both the hypnotic and nonhypnotic imagery group subjects reported equivalent reductions in headache activity from the baseline to the posttreatment intervals. However, at the 4-month follow-up interval, neither treatment any longer differed from baseline in reported headache activity. Placebo subjects reported no changes in headache activity across assessment intervals, while no treatment control subjects reported significant increments in headache across assessment intervals.

Anderson, Basker, and Dalton (1975) compared at least six sessions of hypnotic suggestions for enhanced coping, ego-strengthening, relaxation, and instructions for self-hypnosis with the administration of vasoconstrictive ergotamine medication for the treatment of migraine headache. Subjects were randomly assigned to the two treatments and followed at monthly intervals for a
year. The assessment of headache activity was based on therapists’ reports of patients’ retrospective monthly reports of their headache activity. The hypnotic treatment was associated with significantly greater reported headache reduction than the medication treatment. Unfortunately, the retrospective nature of patients’ monthly pain reports leaves open the possibility that memory distortions may have influenced the accuracy of subjects’ pain estimates. Furthermore, the failure of Anderson et al. (1975) to include a group of nonhypnotic patients administered the same treatment suggestions as given to the hypnotic group means that the role of hypnotic procedures in producing the obtained results cannot be evaluated.

Taken together, the available data in this area indicate that cognitive restructuring procedures administered in a hypnotic context may sometimes be more effective than vasoconstrictive medication at controlling migraine headache. However, these data provide no support whatsoever for the hypothesis that hypnotic cognitive restructuring procedures are more effective than corresponding nonhypnotic procedures in reducing migraine or tension headache.

**Obstetrical Pain**

Hypnotic (and earlier mesmeric) procedures have been employed to aid in the alleviation of childbirth pain for well over a century (D’Eon, 1989). Nevertheless, there appear to be only five published studies that compared hypnotic and nonhypnotic interventions in this regard, and that provided at least rudimentary quantitative information concerning pain.

In the oldest of these studies, Perchard (1960) compared three parturient-mother groups. One group was administered information about childbirth plus three hypnotic sessions that emphasized relaxation and that included suggestions for pain reduction and comfort during delivery; a second group received educational talks about childbirth and in some cases nonhypnotic relaxation exercises; and a third group received no treatment. Unfortunately, the mothers’ reports of pain during labor were not assessed until a week following delivery, and therefore, the validity of these reports is compromised. Perchard (1960) did not report statistical analyses on his data. The data provided suggest that the patients who received hypnosis or education/information reported less pain than controls, but in the absence of statistical analyses the findings remain unclear.

Davidson (1962) reported that six sessions of group self-hypnosis were more effective at reducing reported pain than either six sessions of Reid’s prepared childbirth training or no special training other than “mothercraft.” Unfortunately, instead of random assignment, subjects were allowed to choose their own treatment group. Moreover, only the hypnotic treatment included suggestions for pain reduction. The confounding of hypnotic and suggestion procedures coupled with subjects’ self-selecting their own treatment makes it impossible to assess whether hypnotic procedures played a role in the results obtained.

Two studies (Davidson, Garbett, & Tozer, 1985; Rock, Shipley, & Campbell, 1969) assigned subjects to either hypnotic or standard antenatal preparation treatments. In both studies the hypnotic treatment included suggestions for relaxation and comfort during delivery. Rock et al. (1969) found that hypnotic subjects rated their delivery as less painful than did those given antenatal preparation. Davidson et al. (1985) found that hypnotic subjects rated the first stage of labor as less painful than did subjects given antenatal preparation. However, the subjects in these groups failed to differ significantly in their pain ratings of the second stage of labor. Once again, the confounding of hypnotic procedures with suggestions for analgesia makes it impossible to determine the role of hypnotic procedures in producing the findings of either study.

Finally, Venn (1987) compared parturient-mothers who self-selected Lamaze childbirth training, hypnotic treatment plus Lamaze training, or hypnotic treatment alone. The hypnotic treatment included an induction procedure and guided imagery suggestions for analgesia. Subjects in the three conditions failed to differ significantly in either self-reports or nurses’ reports of labor pain, or in medication usage.

**Cancer Pain**

Six studies compared hypnotic and nonhypnotic interventions for the alleviation of pain associated with cancer or its treatment. Three of these studies (viz., Katz, Kellerman, & Ellenberg, 1987; Wall & Womack, 1989; Zelter & LeBaron, 1982) assessed pain in children undergoing bone marrow aspiration procedures, and three (Reeves, Redd, Storm, & Minagawa, 1983; Spiegel & Bloom, 1983; Syrjala, Cummings, Donaldson & Chapman, 1987) assessed pain relief in adults.
In a well-known study, Zelter and LeBaron (1982) compared pain reduction during bone marrow aspiration in a control group of children that received supportive counseling, distraction, and deep breathing procedures with a hypnotic group that received the same kinds of supports along with suggestions to carry out pleasant and interesting guided imagery. Children in both conditions exhibited reductions in pain, but hypnotic subjects showed greater reductions than controls. Although Zelter and LeBaron (1982) concluded that “hypnosis is more effective than nonhypnotic techniques” (p. 1035), the failure of these investigators to administer guided imagery procedures to their nonhypnotic as well as their hypnotic subjects precludes acceptance of this interpretation.

Katz et al. (1987) compared a group of children trained in hypnotic and self-hypnotic procedures with a group that received nondirected play sessions that controlled for the amount of attention and time the children were given by a professional. Girls did somewhat better in the hypnotic condition, whereas boys did somewhat better in the play condition. Overall, however, this study clearly indicates no superiority for hypnotic analgesia as compared with a control play condition in children undergoing a noxious medical treatment.

Wall and Womack (1989) taught children in a nonhypnotic treatment the use of active distraction strategies, while children in a hypnotic group received training in relaxation and guided imagery. The two treatments were associated with equivalent reductions in pain during the bone marrow aspirations.

The three studies that compared hypnotic and nonhypnotic interventions for the relief of cancer-related pain in adults have been reviewed in detail by Stam (1989). Spiegel and Bloom (1983) compared three groups of women with breast cancer. Those in one group constituted a no-treatment control sample, those in another condition received group therapy, and those in a third received group therapy plus a self-hypnosis exercise. Two of four self-reported pain measures were significantly reduced in the combined group therapy conditions as opposed to control condition. However, only one of the four pain report measures was reduced in the group therapy plus hypnosis condition as compared with the group therapy alone condition. Stam (1989) has detailed problems with Spiegel and Bloom’s (1983) analyses of data that make interpretation of these findings difficult. In addition, Spiegel and Bloom (1983) confounded number of treatments (group therapy plus hypnotic treatment) with the use of a hypnotic procedure. Thus, it is impossible to determine whether the hypnotic procedures played any role in the results obtained.

Syrjala et al. (1987) compared hypnotic, cognitive-behavioral, therapist contact, and no-treatment control conditions in cancer patients who experienced oral pain as a side effect of chemotherapy and radiation treatments. The authors concluded that the hypnotic treatment was more effective in alleviating pain than the cognitive-behavioral treatment. However, statistical analyses were carried out only after dropping the data from control subjects. As pointed out by Stam (1989), “It seems likely that, if the no treatment control group were included, it would have washed out any treatment effects” (p. 322).

Reeves et al. (1983) compared a group given two sessions of hypnotic training and a no-treatment control group in the reduction of pain induced by hyperthermia treatments. For all subjects pain was assessed on both pretreatment (baseline) and posttreatment trials. Hypnotic subjects exhibited significantly greater pain reduction than controls. Unfortunately, subjects administered nonhypnotic procedures for pain reduction were not included in the study.

Other Pain Syndromes

In a methodologically sound study, Stam, McGrath, and Brooke (1984) compared hypnotic and nonhypnotic cognitive-behavioral pain management treatments for the reduction of temporomandibular joint pain. Subjects were randomly assigned to treatments, and no treatment control subjects also were included. Subjects in the hypnotic and nonhypnotic treatments reported significant pain decrements of equivalent magnitude, and greater pain decrements than control subjects.

Snow (1979) compared one session of hypnotic suggestions for analgesia with an oral placebo for the reduction of chronic pain in male paraplegics. Subjects in the two treatments failed to differ significantly in degree of pain reduction. Crowley (1980) compared a single session of hypnotic suggestions for analgesia with local chemical analgesia on reductions in acute pain associated with podiatric surgery. Hypnotic analgesia was significantly less effective than the local analgesic at reducing reported pain. Werbel (1963) gave hypnotic suggestions for comfort, relaxation, and painless
defecation to one group of patients who underwent surgery for the removal of hemorrhoids and no treatment to control patients who underwent the same type of surgery. Patients who received the hypnotic treatment required less postoperative medication and reported less pain during defecation than controls. Unfortunately, patients were not randomly assigned to groups. More important, the failure of Werbel (1963) to include patients who received nonhypnotic suggestions for analgesia makes it impossible to evaluate the role of hypnotic procedures in the results obtained.

Several investigators (Gault, 1988; Perry, Laurence, & Nadon, 1988) have employed anecdotal reports to argue that hypnotic procedures can greatly reduce or eliminate the pain of major surgery. However, these anecdotes contain so many methodological limitations that no firm conclusions concerning this topic are possible (Spanos & Chaves, 1989). Moreover, there are also anecdotal reports that indicate that nonhypnotic suggestions can be employed to reduce surgical pain (cf. Chaves, 1989, for a review). Controlled studies that compare hypnotic and nonhypnotic procedures for reducing the pain of major surgery are nonexistent.

Two studies (Patterson, Questad, & de Lateur, 1989; Wakeman & Kaplan, 1978) compared patients who received hypnotic analgesia plus analgesic medication during the treatment of burns with patients who received medication alone. Wakeman and Kaplan (1978) reported that hypnotic subjects required less analgesic medication than controls. Patterson et al. (1989) found that hypnotic subjects reported significant pain reductions (relative to pretreatment baseline levels), whereas medication alone controls reported no significant changes in pain. Unfortunately, neither study included patients who received nonhypnotic suggestions for pain relief. Furthermore, patients in the Patterson et al. (1989) study were not randomly assigned to treatments and those in the hypnotic group differed from those in the control group on a number of potentially important variables (e.g., controls suffered burns on significantly larger portions of their bodies than did hypnotic subjects).

The available data indicate that interventions labeled as hypnotic are often helpful in reducing the pain associated with a wide range of medical conditions and medical procedures. On the other hand, none of this evidence suggests that the hypnotic aspects of these interventions (i.e., administration of a hypnotic induction procedure) are important in facilitating pain reduction. On the contrary, the evidence from the best controlled studies (e.g., Stam et al., 1984) indicates that nonhypnotic suggestive treatments are as effective as hypnotic ones at producing reductions in clinical pain.

Hypnotizability and Outcome

Table 32.1 summarizes the results of 22 studies that assessed the relationship between hypnotizability and treatment-induced reductions in pain. Although 11 of these studies reported significant relationships between these variables, in 11 other studies the relationship between pain reduction and hypnotizability failed to attain significance. Furthermore, in several of the studies that reported significant relationships between these variables, methodological considerations complicate the interpretation of the findings.

Friedman and Taub (1985) reported that high hypnotizables given various hypnotic treatments reported significant decrements in headache pain at some posttreatment intervals, whereas low hypnotizables reported no significant decrements at any interval. However, while the high hypnotizables in this study were given hypnotic procedures without any unusual preliminary instructions, the low hypnotizables were instructed to simulate hypnosis. The experimental literature on hypnosis has made it abundantly clear that the effects of hypnotic procedures are often altered dramatically when subjects are instructed to simulate hypnosis (cf. Spanos, 1986b). Consequently, the confounding of hypnotizability level with instructions to simulate makes the high/low hypnotizability differences obtained by Friedman and Taub (1985) uninterpretable.

Schafer (1975) reported a strong relationship between hypnotically induced relief of pain in 20 burn patients and hypnotizability as assessed by response to a nonstandardized series of suggestions. Six of Schafer's (1975) patients (33.3%) reported no pain relief following the hypnotic intervention, and five of these six nonresponders also attained low hypnotizability scores. (Neither Schafer [1975] nor Rock et al. [1969] presented the correlation between hypnotizability and pain scores. I computed these correlations from the raw data presented in each article. This correlation was substantial and highly significant in the case of Schafer's data [r = .77], but failed to attain significance in the case of Rock et al.'s data.)
However, most of these nonresponders also were described as being too heavily drugged or in too high a state of panic to attend to the hypnotic analgesia procedures. If drugs and panic prevented these patients from attending to hypnotic suggestions for relaxation and pain relief, then it is likely that these same factors also prevented them from attending to the test suggestions used to assess hypnotizability. In short, the strong correlation between hypnotizability and pain relief obtained by Schafer (1975) may have been produced artfactually by high levels of drugs and panic that eliminated responsiveness to both hypnotic analgesia procedures and hypnotizability test suggestions in a subsample of his patients.

Andreychuk and Skriva (1975) combined into a single group headache patients who had been treated with a hypnotic procedure, alpha biofeedback, or temperature biofeedback. For the group as a whole they found a significant relationship between degree of headache reduction and hypnotizability. However, interpretation of this finding is complicated by several factors. To begin with, in all treatments baseline levels of pain were substantially higher in high than in low hypnotizables. Furthermore, the data presented in the article make it apparent that, despite an overall significant effect, the strength of the relationship between headache reduction and hypnotizability differed markedly among these three treatments. Curiously, this relationship was weakest and clearly nonsignificant in the hypnotic treatment. Hypnotic high hypnotizables reduced headache activity by 38.8% while the reduction for low hypnotizables was almost as large at 33.4%.

Cedercreutz, Lahteenmaki, and Tulikoura (1976) reported that “depth of hypnosis” as rated by the hypnotist on a 4-point scale correlated moderately ($r = .44$) with headache relief following hypnotic treatment. However, this correlation reflected the fact that patients classified as showing zero depth (12% of the sample) reported no relief whatsoever from the hypnotic treatment. There were no differences in treatment efficacy among subjects classified as exhibiting “light,” “medium,” or “deep” levels of hypnotic responsiveness.

The findings of both the Andreychuk and Skriva (1975) and Cedercreutz et al. (1976) studies, along with those from the 11 studies that found no significant relationship between hypnotizability and treatment-induced pain reduction, appear to contradict Hilgard’s (1977) contention that large suggestion-induced reductions in pain are attainable only by highly hypnotizable subjects.

**OVERVIEW AND CONCLUSIONS**

**Hypnotic Versus Nonhypnotic Treatments**

The clinical studies reviewed in this chapter vary substantially in quality. Many are difficult to interpret because they lack no treatment control groups and/or because they confound the administration of hypnotic procedures with particular suggestions, instructions, or procedures that were not administered to those who received nonhypnotic treatments. Despite such difficulties, and despite the fact that these studies dealt with the treatment of six different disorders, the results of studies that compared hypnotic and nonhypnotic psychological treatments show a surprising degree of consistency. Regardless of the disorder treated, the most common outcome of the studies was a failure to find significant differences between the particular hypnotic treatment under investigation and the nonhypnotic psychological treatment or treatments against which it was compared. A number of studies found that hypnotic treatments were less efficacious than nonhypnotic comparison treatments, and a few found that hypnotic treatments were more efficacious. However, studies that found a difference between hypnotic and nonhypnotic treatments invariably involved a confounding of antecedent variables. Those relatively few studies that administered the same therapeutic instructions and suggestions to both hypnotic and nonhypnotic subjects reported equivalent levels of therapeutic gain for both treatments.

Obviously, the findings reviewed in this chapter do not preclude the possibility that some clients may benefit more from hypnotic than nonhypnotic treatments. These findings do suggest, however, that any such benefit is likely to be due to variables such as the attitudes and expectations that subjects hold about hypnotic treatments rather than to any intrinsic effect (i.e., a hypnotic trance state) produced by hypnotic procedures. For example, Lazarus (1973) randomly assigned patients who requested hypnosis either to a behavior therapy procedure defined as hypnosis or a behavior therapy procedure defined as relaxation. Patients who reported no preference for either treatment also were assigned to the hypnotic and relaxation conditions.
The clients who requested and received the hypnotic treatment showed more improvement than those who requested hypnosis but received relaxation. However, the hypnotic and relaxation treatments did not produce differential improvement for clients who showed no initial preference for either treatment. Also relevant to this issue are the results of studies that found that therapeutic outcome in both hypnotic and nonhypnotic treatments was predicted by subjects' expectations of success and by their motivations to change problem behaviors rather than by hypnotizability (Perry et al., 1979; Wadden & Flaxman, 1981).

The effects of motivations, attitudes, and expectations on treatment success can, of course, cut both ways. For some clients the definition of the situation as hypnosis may engender fear and negative attitudes that can interfere with treatment. For example, Hendler and Redd (1986) found that cancer patients undergoing chemotherapy were significantly more likely to refuse participation in a relaxation treatment for nausea control when the treatment was defined as hypnosis as opposed to relaxation.

Taken together, the available data provide no support for the hypothesis that hypnotic procedures are intrinsically more effective than nonhypnotic procedures at inducing therapeutic gain, or for the related hypothesis that the addition of hypnotic procedures augments the potency of therapeutic instructions or suggestions. In short, the results obtained in these clinical studies are consistent with the large body of findings in the experimental literature that indicates that equivalent levels of responsiveness are attained when hypnotic subjects and motivated nonhypnotic subjects are administered the same suggestions.

**Hypnotizability and Therapeutic Gain**

The available data concerning relationships between hypnotizability and therapeutic gain are much less consistent than those that deal with the therapeutic efficacy of hypnotic versus nonhypnotic procedures. For each disorder examined, at least one study reported a significant relationship between some index of hypnotizability and therapeutic gain. Overall, however, the number of studies that found no relationship between these variables outnumbered those that found a relationship.

Both Wadden and Anderton (1982) and Spinhoven (1988) hypothesized that hypnotizability would be related to therapeutic outcome when the disorders treated were involuntary, but would be unrelated to hypnotizability when the problem behaviors were self-initiated or under voluntary control. Table 32.2 divides the studies reviewed in this chapter into those that treated the three "involuntary" disorders (i.e., asthma, warts, pain) and those that treated the more "voluntary" problem behaviors (i.e., phobic avoidance, smoking, overeating). Although significant relationships between treatment outcome and hypnotizability were more often found for the involuntary than the voluntary disorders, this difference did not attain statistical significance ($\chi^2 [1] = 1.88, p = \text{not significant}$). Even in the case of the involuntary disorders, hypnotizability and treatment outcome failed to correlate significantly in half of the studies.

These findings are difficult to reconcile with a stable trait conceptualization of hypnotizability. If, for example, high hypnotizability scores reflect high levels of a stable capacity that augments the effects of therapeutic suggestions for, say, wart regression, then it is difficult to explain why in half of the available studies wart regression failed to correlate significantly with hypnotizability.

A sociocognitive alternative to the stable trait hypothesis suggests that the degree of relationship between hypnotizability and therapeutic outcome may be related to the expectations, understandings, and motivations that patients develop about these phenomena. For example, patients who are led to believe that their hypnotizability test performance is relevant to how well they will respond to treatment may well develop different motivations and expectations about both hypnotizability testing and treatment outcome than do patients who see their response to treatment as unrelated to their hypnotizability test performance. For instance, in patients who are led to construe hypnotizability and response to treatment as related, the attainment of a low hypnotizability score may engender expectations of low treatment success and a loss of motivation to follow treatment instructions and suggestions. Alternatively, the attainment of a high hypnotizability score by such patients may bolster their confidence in the success of the treatment and enhance the likelihood that they will abide by the treatment regimen provided. In short, contextual factors that lead subjects to construe their performance on hypnotizability tests as predictive of their response to treatment may play an important role in creating a correlation between these variables.

Standardized hypnotizability test situations differ from hypnotherapeutic treatment situations in a number of important respects. Frequently, hyp-
Table 32.2. Frequencies With Which Relationships Between Hypnotizability and Treatment Outcome Were Significant or Nonsignificant in Voluntary and Involuntary Disorders

<table>
<thead>
<tr>
<th>TYPES OF DISORDERS</th>
<th>VOLUNTARY</th>
<th>INVOLUNTARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>Nonsignificant</td>
<td>12</td>
<td>15</td>
</tr>
</tbody>
</table>

Note. $\chi^2 (1) = 1.88$, $p = $ not significant.

Hypnotizability is tested by someone other than the therapist in a context that is clearly defined to patients as not part of their therapy. Consequently, the patterns of rapport that develop between hypnotherapists and patients and that play a major role in motivating how patients respond to treatment are likely to be very different from the patterns of rapport that develop between patients and whoever tests them for hypnotizability using standardized scales. Moreover, the specific test suggestions employed on standardized scales may sometimes bear little resemblance to the suggestion/instruction procedures that constitute the hypnotherapeutic relationship. For reasons such as these, patients who are administered formal tests of hypnotizability may see little relationship between their performance on these tests and their response to treatment.

Investigators who assessed hypnotizability or “hypnotic depth” by using only a single item or by employing idiosyncratic, nonstandardized procedures appear to have integrated their assessment of hypnotizability into their ongoing hypnotherapeutic treatment to a much greater extent than have investigators who tested hypnotizability on standard scales. For example, when informal hypnotizability assessments were conducted, they appear almost always to have been conducted by the therapist who treated the patients. Moreover, these assessments were often performed in the hypnotherapeutic situation and, thereby, were likely to be construed by patients as part of, or at least as strongly related to, their therapy.

Table 32.3 collapses across type of disorder and divides studies into those in which hypnotizability was assessed with one or more of the standardized, multi-item scales, and those in which it was assessed with a single item or with some nonstandardized or unknown procedure. Informally assessed hypnotizability correlated significantly with therapeutic outcome much more frequently than did formally assessed hypnotizability ($\chi^2 (1) = 10.58$, $p < .01$).

Obviously, this finding should be viewed as tentative and interpreted with caution. None of the studies reviewed here was designed to manipulate the extent to which patients construed their performance on hypnotizability tests as related to therapeutic outcome. On the other hand, this finding is consistent with the results of experimental findings that indicate that correlations between hypnotizability and suggestion-induced pain reductions are context dependent and related to subjects’ perceptions of the similarities between the

Table 32.3. Frequencies With Which Relationships Between Hypnotizability and Treatment Outcome Were Significant or Nonsignificant When Hypnotizability Was Assessed With Standardized Multi-Item Scales or With Nonstandardized Procedures

<table>
<thead>
<tr>
<th>TYPES OF HYPNOTIZABILITY ASSESSMENT</th>
<th>STANDARDIZED</th>
<th>NONSTANDARDIZED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Nonsignificant</td>
<td>24</td>
<td>3</td>
</tr>
</tbody>
</table>

Note. $\chi^2 (1) = 10.58$, $p < .01$. 


hypnotizability and pain-testing situations (cf. Spanos, 1989, for a review). At the very least, the present finding suggests that experiments aimed at varying the degree of connectedness between hypnotizability testing and therapy situations may provide fruitful information about the manner in which contextual variables influence the relationship between hypnotizability and treatment outcome.

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