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Hypnotizability in the Clinic, Viewed from the Laboratory

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Abstract

A recent international survey discovered that clinicians who use hypnosis in their practice rarely assess the hypnotizability of their patients or clients. This contrasts sharply with the practice in laboratory research. One reason offered for this discrepancy is that hypnotizability does not strongly predict clinical outcome. But a comparison of this relationship with similar correlations in other domains shows that this criticism is misleading—especially when the treatment capitalizes on the alterations in perception, memory, and voluntary control that characterize the domain of hypnosis. Routine assessment of hypnotizability improves clinical practice by enabling clinicians to select patients for whom hypnosis is appropriate; and it improves clinical research by providing important information about the mechanisms underlying hypnotic effects.

Zusammenfassung:

Eine kürzlich durchgeführte internationale Umfrage ergab, dass Praktiker, welche in ihrer Arbeit Hypnose verwenden, selten die Hypnotisierbarkeit ihrer Patienten oder Klienten untersuchen. Das steht in deutlichem Gegensatz zum Vorgehen der Forschung im Labor. Ein Grund, der für diese Diskrepanz angeführt wird, besteht darin, dass Hypnotisierbarkeit das klinische Ergebnis nicht zwingend voraussagt. Allerdings zeigt ein Vergleich dieses Zusammenhangs mit ähnlichen Korrelationen auf anderen Gebieten, dass dieser Vorbehalt irreführend ist – insbesondere, wenn die Behandlung das Schwergewicht auf Veränderungen der Wahrnehmung, des Gedächtnisses und der willentlichen Steuerung legt, die den Bereich der Hypnose kennzeichnen. Regelmäßige Überprüfung der Hypnotisierbarkeit verbessert die klinische Praxis, indem sie den Praktiker befähigt, diejenigen Patienten auszuwählen, für die Hypnose passend ist, und sie verbessert die klinische Forschung, indem sie wichtige Informationen über die zugrundeliegenden Wirkungen hypnotischer Effekte bereitstellt.

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Résumé :

Une enquête internationale récente a découvert que les cliniciens qui utilisent l'hypnose dans leur pratique évaluent rarement l'hypnotisabilité de leurs patients ou clients. Cela contraste fortement avec la pratique de la recherche en laboratoire. L'une des raisons avancées pour cette divergence est que l'hypnotisabilité ne prédit pas fortement le résultat clinique. Mais une comparaison de

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cette relation avec des corrélations similaires dans d'autres domaines montre que cette critique est trompeuse, surtout lorsque le traitement s'appuie sur les altérations de la perception, de la mémoire et du contrôle volontaire qui caractérisent le domaine de l'hypnose. L'évaluation de routine de l'hypnotisabilité améliore la pratique clinique en permettant aux cliniciens de sélectionner les patients pour lesquels l'hypnose est appropriée ; et il améliore la recherche clinique en fournissant des informations importantes sur les mécanismes sous-jacents aux effets hypnotiques.

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Resumen:

Una encuesta internacional reciente descubrió que los médicos que utilizan la hipnosis en sus prácticas, rara vez evalúan la hipnotizabilidad de sus pacientes o clientes. Esto contrasta marcadamente con la práctica en la investigación de laboratorio. Una de las razones ofrecidas para esta discrepancia es que la hipnotizabilidad no predice fuertemente el resultado clínico. Pero una comparación de esta relación con correlaciones similares en otros dominios muestran que esta crítica es engañosa, especialmente cuando el tratamiento capitaliza las alteraciones en la percepción, la memoria y el control voluntario que caracterizan el dominio de la hipnosis. La evaluación rutinaria de la hipnotizabilidad mejora la práctica clínica al permitir que los médicos seleccionen pacientes para quienes la hipnosis es apropiada, y mejora la investigación clínica al proporcionar información importante sobre el mecanismo subyacente a los efectos de la hipnosis.

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The survey conducted by the Task Force for Efficacy Standards in Hypnosis Research is an important contribution to the advancement of clinical hypnosis (Palsson et al., 2023; in this issue, pp. XX-XX). Previous surveys of hypnosis practice were limited in terms of clinical specialty or geographical coverage. Now, for the first time, we have a truly international survey of clinicians, from Australia to Ukraine, who use hypnosis in their practice, including a wide variety of professions, from physicians to marriage and family counselors. We can hope that the survey will be repeated and expanded in the future and that even more clinicians will respond to it. For now, however, the survey provides a useful snapshot of the various ways that hypnosis is used in clinical practice today.

Reading the paper as an experimental researcher, albeit one with clinical training and interests, one fact stood out from all the rest: the limited role that assessments of hypnotizability play in clinical practice. Only about 25% of respondents consider individual differences in hypnotizability "very" or "extremely" important to therapeutic success (Table 9), or even to "successfully producing the phenomenon of hypnosis" (Table 10); and only about 20% routinely assess hypnotizability in their patients or clients.

Such assessments are critical to basic research on hypnosis, and no basic researchers would even consider conducting a study that did not assess hypnotizability and include

that information in their publications. As Jack Hilgard used to say, *there is no point in studying hypnosis in subjects who cannot experience it*. In his pioneering dissertation research, Young (1925) employed pretesting to ensure that his subjects could easily enter hypnosis and sustain a certain depth (unresponsive subjects served as controls). Hull (1933) likewise employed a variety of tests in preselection, including the then-new Davis-Husband Scale (Davis & Husband, 1931) developed by a colleague of his at Wisconsin. Even Milton Erickson, at least in his early experimental work, preselected subjects for their ability to respond to hypnosis (e.g., Erickson, 1938; Huston et al., 1934).

The Stanford Hypnotic Susceptibility Scales, Forms A, B, and C (SHSS:A, B, C; Weitzenhoffer & Hilgard, 1959, 1962), as well as the Harvard Group Scale of Hypnotic Susceptibility Scale, Form A (HGSHS:A; Shor & Orne, 1962) brought increased psychometric rigor to the assessment of hypnotizability. In addition, the data collected during the standardization studies, comparing hypnotizable and insusceptible subjects' responses to the various suggestions, provided E. R. Hilgard (1965) with the first comprehensive description of the phenomena constituting the domain of hypnosis (E. R. Hilgard, 1973; Kihlstrom, 2008). Investigators such as Theodore Barber and Nicholas Spanos, while generally taking a "skeptical" stance toward hypnosis, nevertheless developed their own parochial scales to use for subject selection (Barber, 1965; Spanos et al., 1983). Put another way, the assessment of individual differences has become thoroughly institutionalized within the basic research community.

Qualms About Hypnotizability

If there is no point in studying hypnosis in those who cannot experience it, it might also be true that there is no point in treating a patient with hypnosis who cannot experience it. So why are clinical hypnotists so reluctant to assess hypnotizability? The Task Force survey is silent on this issue, but we can consider some possible reasons. In this discussion, I exclude economic considerations. The reluctance of third parties to pay for psychological testing is a scandal (Eisman et al., 2000). Presumably, that situation will improve as insurers are convinced that such assessments really make a difference to the outcome of treatment. And that evidence cannot accrue unless clinicians who use hypnosis routinely assess hypnotizability in their patients and clients.

Another issue is the time it takes to undertake such an assessment. According to best practice, proper assessment of hypnotizability in the laboratory entails an initial group session with the HGHS:A, to familiarize subjects with hypnosis and obtain an initial estimate of their hypnotizability, followed by individual testing with the SHSS:C, which surveys more demanding hypnotic suggestions and permits deeper inquiry into the subjects' experiences. The Stanford Profile Scales of Hypnotic Susceptibility, Forms I and II (SPSHS:I, II; revised by Weitzenhoffer & Hilgard, 1967) were originally intended to assess subtle, individual differences within the range of medium-to-high hypnotizability (Kihlstrom, 2015; Terhune, 2015). The SPSHSs have fallen into disuse, supplanted by a version of SHSS:C "tailored" to include an additional item of special interest, such as analgesia or posthypnotic suggestion (E. R. Hilgard, Crawford, Bowers, & Kihlstrom, 1979). In the laboratory, administering the HGSHS:A followed by the SHSS:C can take

as much as 3 hours (adding one or the other form of SPSHS would add another hour). That is, admittedly, a lot of time—though maybe not, considering the amount of time consumed administering tests like the Minnesota Multiphasic Personality Inventory (MMPI) and Rorschach that do nothing to predict how people will respond to hypnosis.

Fortunately, we now have available alternative versions of the standardized scales specifically intended for clinical use. The Stanford Hypnotic Clinical Scale, available in different forms for adults and children, is an adaptation of the SHSS (SHCS:A&C; Morgan & Hilgard, 1978-1979a, 1978-1979b). The Elkins Hypnotizability Scale is similar to the SHCS but with a continuous rather than dichotomous scoring system that takes account of both objective behavior and subjective experience (EHS; Elkins et al., 2015; Kekecs et al., 2016, 2021, 2022). Either scale can be administered in less than half an hour. Even shorter scales are available, such as the Hypnotic Induction Profile (HIP; Spiegel, 1972, 1977; D. B. Stern et al., 1979) and the Stanford Hypnotic Arm Levitation Induction and Test (SHALIT; E. R. Hilgard, Crawford, & Wert, 1979).

Some clinicians may worry that, if subjects score low on a test of hypnotizability, that will reduce their motivation for a treatment that involves hypnosis (e.g., Sacerdote, 1982a, 1982b). Frankel and his colleagues found that this and other misgivings about hypnotizability testing was dispelled by the actual experience, over 6 years and more than 300 patients, of routinely administering one or another of the standardized scales as part of routine psychological testing (Frankel, 1982; Frankel et al., 1979). After all, patients do not know the precise criteria by which their hypnotizability is being evaluated, and may find a suggestion to be subjectively successful despite what would count as an objective failure in the eyes of the hypnotist (Register & Kihlstrom, 1986). Most patients, like most experimental subjects, apparently find the hypnotizability scales to be pleasant and interesting—regardless of how they respond in objective terms.

On the other hand, Milling et al. (2018) found that, while hypnosis improved the effectiveness of cognitive-behavioral therapy for obesity, the effect of hypnosis was diminished when hypnotizability was assessed at the outset of treatment. Such a finding might argue against assessing hypnotizability at all, and simply employing hypnosis in the hope that it will help. However, a more recent, greatly expanded meta-analysis of studies in which hypnosis was used as an adjunct to cognitive-behavioral therapy did not confirm this finding (Ramondo et al., 2021).

Finally, there is the question of the mechanism underlying any therapeutic effect of hypnosis. Modern medicine abjures purely empirical treatments, whose efficacy is clear but whose underlying mechanisms are unknown. We know from clinical trials that hypnosis “works” in a wide variety of clinical situations. Of course, hypnosis affords substantial relief from clinical pain (E. R. Hilgard & Hilgard, 1975; Jensen & Patterson, 2014). In particular, randomized clinical trials (RCTs) show that the adjunctive use of hypnosis decreases the need for chemical analgesia, reduces negative side effects, and actually reduces the cost of care (e.g., Lang et al., 2000). Similarly, several meta-analyses have found a significant advantage when hypnosis is used adjunctively in cognitive-behavioral therapy for a number of problems (e.g., Lynn et al., 2000; Ramondo et al., 2021; Valentine et al., 2019).

Studies like these speak to the question of efficacy, but they do not demonstrate that hypnosis affords a specific advantage, over and above placebo-like effects mediated by patients' expectations and beliefs. A treatment effect may be enhanced simply by being embedded in a "hypnotic induction ceremony" (Frischholz et al., 1981, p. 55), even if the patient is not hypnotizable. Or it may be mediated by relaxation, guided imagery, self-directed reverie, or even transference (what Shor, 1979, called "archaic involvement"), rather than the suggested alterations in perception and memory that constitute the domain of hypnosis. In order to address this question, we may invoke what has come to be called "Bowers's Doctrine" (so named after Kenneth S. Bowers; see Woody, 1997; Woody & Barnier, 2008): any specific effect of hypnosis should be correlated with hypnotizability. If hypnosis, *qua* hypnosis, contributes to treatment efficacy, then clinical outcomes should be correlated with hypnotizability.

Hypnotizability as Predictor

Given the practical and theoretical importance of the relation between hypnotizability and the outcome of hypnotherapy, it is somewhat surprising that there is very little empirical research on the question. In an early meta-analysis of treatment outcomes, Flammer and Bongartz (2003) identified only seven studies, out of a total 57 RCTs surveyed, that correlated hypnotizability with treatment outcome: these studies yielded an average effect size of $r = 44$.

In a later meta-analysis, Montgomery and his colleagues (2011) identified just 10 out of 80 RCTs that correlated outcome with hypnotizability. They found a smaller overall average effect size of just $r = .24$. Such an outcome might justify not assessing hypnotizability at all prior to treatment, and simply adding hypnosis in the hope that it will help. However, this overall value was suppressed by two studies employing the HIP to evaluate hypnotizability, which yielded a mean correlation of $r = .12$ (none of the studies surveyed by Flammer and Bongartz employed HIP). Examining only those studies that employed SHCS, the mean correlation essentially doubled to r=.47, with individual rs ranging as high as r=.82—a considerable improvement, and a value that comports with that obtained earlier by Flammer and Bongartz.

Effect sizes in the mid-.20s would be considered "low" by the usual standards, and those in the mid-.40s would be considered only "moderate" (Cohen, 1988). We can put these values in context, however, if we consider the task of predicting clinical outcome from hypnotizability to be analogous to the classic problem of predicting behavior in some specific situation (in this case, treatment response) from knowledge of an individual's personality traits (in this case, hypnotizability). Such predictions are notoriously poor. In fact, Mischel (1968) suggested that the upper limit of such a prediction, which he dubbed the "personality coefficient" (p. 78), corresponded to a correlation of approximately $r = .30$.

Additional perspective is provided by a study by Meyer and his colleagues (2001), who tabulated a number of such correlations derived from everyday life. For example, for major league baseball players, the correlation between an individual's batting average and the likelihood of scoring a hit at any time at bat is $r = .06$ (Table 1, Entry 7); the correlation

between ratings from employment interviews and actual job success was $r = .20$ (Entry 31); and the validity of screening interviews for personnel selection was $r = .27$ (Entry 40). Overall, across 60 different domains, the average unweighted correlation was $r = .23$, and the median correlation was $r = .20$. More to the point, Meyer et al. (2001) examined 144 validity coefficients in which some test score was used to predict some specific outcome. For example, and famously (even notoriously), the Scholastic Aptitude Test correlates only $r = .20$ with undergraduate grade point average (Table 2, Entry 43); extraversion measured by various questionnaires correlates with sales success at only $r = .08$ (Entry 17); and scale scores on the MMPI predict actual diagnosis of a depressive or psychotic disorder at $r = .37$ (Entry 94). Across the entire corpus of studies, which included a large number of popular medical tests (e.g., Entry 96, accuracy of home pregnancy testing, $r = .37$), the unweighted average $r = .32$, median $r = .30$.

Meyer and his colleagues assembled their collection of correlations in order to address a criticism of traditional personality theory that had been instigated by Mischel's (1968) critique—namely, that assessments of general personality traits, of the sort favored by traditional personality researchers, simply did not predict actual behavior very well. Meyer et al.'s response was to show that this problem was not unique to personality testing. A surprisingly large number of real-world correlations, including some that play an important role in health policy, are no larger: e.g., aspirin and reduced risk of a heart attack, $r = .02$ (Table 1, Entry 2); low-level lead exposure and reduced childhood IQ, $r = .12$ (Table 1, Entry); smoking and lung cancer, $r = .08$ (Table 1, Entry 12); alcohol use in pregnancy and premature birth, $r = .09$ (Table 1, Entry 15).

At the same time, some of the results gathered by Meyer et al. provide an aspirational benchmark for psychological tests and interventions. For example, the differentiation of dementia from normal aging by means of neuropsychological tests such as the Wechsler Memory Scale yielded an average effect size of $r = .68$ (Table 2, Entry 137), which counts as a strong effect by the usual standard; the comparable figure for MRI testing was $r = .57$ (Table 2, Entry 130). As noted by McGrath and Meyer (2006), however, the association between neuropsychological tests and dementia may have been inflated by oversampling of patients with dementia (Dawes, 1993). Once the effect size is corrected for the relatively low base rate of dementia in the elderly population, McGrath and Meyer (2006) suggested the true effect size might fall to $r = .49$ or even $r = .30$.

By comparison, then, the effect of hypnotizability on the outcome of hypnotic treatment ($r = .47$) uncovered by Montgomery et al. (2011) looks pretty good. At the same time, there are reasons to suspect that this summary effect size might itself be an underestimate. If a particular condition is not amenable to treatment by hypnosis, we would not expect outcome to be correlated with hypnotizability. More important, applying the label "hypnosis" to a treatment does not make it so. If a "hypnotic" treatment involves little more than instructions for relaxation, which is not a necessary part of hypnosis (Bányai & Hilgard, 1976; Bányai et al., 1993; Capafons, 2004; Cardeña et al., 1998; Vingoe, 1973), hypnotizability is unlikely to be associated with outcome. This is also true when treatment involves guided imagery or spontaneous reverie: neither vividness of mental imagery nor daydreaming are substantially

correlated with hypnotizability (Glisky et al., 1995; Hoyt et al., 1989). These factors and others will likely attenuate the correlation between hypnotizability and outcome.

Most important, even though a treatment (or treatment component) is labeled “hypnosis” does not necessarily mean that it capitalizes on the alterations in perception, memory, and action that lie at the core of hypnosis. Pain provides a classic example. It is well known from early laboratory research that hypnotic suggestions for analgesia can lead to substantial pain relief, especially in subjects who are hypnotizable (e.g., E. R. Hilgard, 1969; J. A. Stern et al., 1977; for a recent review, see Thompson et al., 2019). But how well do these laboratory findings translate to the clinic? Very well indeed. A meta-analysis by Milling and colleagues (2021) of 42 studies in which hypnosis was used in the alleviation of clinical pain found that hypnotizability was a significant moderator of the effect, yielding a mean weighted effect size of $r = .53$. This finding, by itself, confirms that higher hypnotizability is associated with greater pain reduction in the clinic as well as in the laboratory. But this overall value included two studies which employed the HIP to measure hypnotizability. Excluding those two studies, the effect of hypnotizability rose to $r = .67$—approaching the “benchmark” for the discrimination of dementia by neuropsychological tests discussed above. Hypnotizability matters—at least when treatment capitalizes on the phenomena that constitute the domain of hypnosis.

Which Scale to Use?

Given the decision to assess hypnotizability in clinical patients and clients, which scales to choose? Of the small proportion of survey respondents who assessed hypnotizability in their patients and clients, most employed the SHCS (the EHS had been introduced only very recently); about half used some variant of the HIP; none reported using the SHALIT.

The HIP and SHALIT both have the virtue of speed of administration, but this comes at a cost as both consist of only a single item: suggested arm levitation. For the SHALIT, response is scored on a 10-point scale, depending on the height to which the subject’s arm rises. The scoring of the HIP is somewhat more complicated: the eye-roll sign (ER) is based on the amount of sclera (the white outer layer of the eyeball) visible when subjects are asked to roll their eyes upward; the induction score (IND) is based on various aspects of arm levitation, but the most important of these is the extent of levitation occurring following a posthypnotic suggestion. Because ER loads on a separate factor from IND (Spiegel et al., 1976; D. B. Stern et al., 1979), and all the subscores entering into the IND score are derived from arm levitation, we can consider the HIP, like the SHALIT, to be a one-item scale. The SHALIT, however, is much easier to score.

One problem with one-item scales is that they are inherently unreliable, even when that single item is scored on a continuum, because only multiple-item scales allow measurement error, inevitable in any single item, to average out (Nunnally, 1967; Wiggins, 1973). Similarly, although it is possible to assess the test-retest reliability of a one-item scale, it is not possible to measure its internal consistency. In turn, reliability imposes a ceiling on validity: a test score cannot correlate more highly with an external variable than it correlates with itself. This may be one reason why the HIP is a poor predictor of clinical outcome.

Another may be that the HIP is often used in conjunction with cognitive-behavioral therapeutic approaches that, however effective they may be in their own terms, do not capitalize on the perceptual-cognitive alterations that characterize the domain of hypnosis.

The primary problem with one-item scales, however, is that they lack content validity, in that they do not provide an adequate survey of the whole domain of hypnosis. Arm levitation, the single item in both the HIP and SHALIT, is a relatively "easy" direct ideomotor suggestion, which can be passed even by many subjects of low hypnotizability, and does not adequately discriminate between subjects of medium and high hypnotizability or predict whether subjects will experience more difficult challenges or perceptual-cognitive suggestions. Multi-item scales such as the SHCS and EHS permit the assessment of both test-retest reliability and internal consistency and provide the breadth of assessment that is optimal for the assessment of hypnotizability in subjects and patients alike (E. R. Hilgard, 1982; J. R. Hilgard & Hilgard, 1979).

It is of course possible to conduct a preliminary assessment of hypnotizability with the HIP or SHALIT (either one is short enough to be included in an intake interview), followed by the more extensive and definitive assessment provided by the SHCS:A/C or EHS. In some respects, this would parallel the best laboratory practice, in which the preliminary assessment provided by the HGSHS:A is confirmed by the SHSS:C. On the other hand, both the SHCS and EHS contain an arm-levitation suggestion (or its cognate, arm lowering), so using these multi-item scales alone would add to the efficiency of assessment. Practitioners interested in exploring the clinical implications of various HIP scores, such as the ER sign and "intact" vs. "nonintact" profiles, should still follow up with one of the multi-item scales. By employing a common set of instruments, clinical research on hypnosis can be put on a common measurement basis, much as laboratory research has been by the widespread use of the Harvard and Stanford scales.

Hypnotizability Always Matters

Martin Orne used to caution that nobody should treat a patient with hypnosis who is not otherwise qualified to treat that patient *without* hypnosis. That way, the clinician's decision is not *whether* to treat the patient, but rather, *how best* to treat the patient. Assessing hypnotizability is one way to determine whether hypnosis may be appropriate in the individual patient. This view comports with that expressed in another Task Force report, which recommended that clinical investigators routinely assess hypnotizability in their patients and clients and report the correlation between hypnotizability and the outcome of treatment (Kekecs et al., 2022; see also Lynn et al., 2022; Lynn & Shindler, 2002). By making the assessment of hypnotizability a routine part of their practice and employing the best of the available methods, practitioners can put clinical hypnosis on a firmer scientific basis, and improve both the efficacy and general acceptance of what they do.

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References

Bányai EI, & Hilgard ER (1976). A comparison of active--alert hypnotic induction with traditional relaxation induction. Journal of Abnormal Psychology, 85(2), 218–224. doi: 10.1037/0021-843X.85.2.218 [PubMed: 767390]

Bányai ÉI, Zseni A, & Túry F (1993). Active-alert hypnosis in psychotherapy. In Rhue JW, Lynn SJ & Kirsch I (Eds.), Handbook of clinical hypnosis (pp. 271–290). American Psychological Association.

Barber TX (1965). Measuring "hypnotic-like" suggestibility with and without "hypnotic induction": Psychometric properties, norms, and variables influencing response to the Barber Suggestibility Scale (BSS). Psychological Reports, 16(Monograph Supplement 3), 809–844. doi: 10.2466/pr0.1965.16.3.809 [PubMed: 14303013]

Capafons A (2004). Clinical applications of `waking' hypnosis from a cognitive-behavioural perspective: from efficacy to efficiency. Contemporary Hypnosis, 21(4), 187–201. doi: 10.1002/ch.306

Cardeña E, Alarcón A, Capafons A, & Bayot A (1998). Effects on suggestibility of a new method of active-alert hypnosis. International Journal of Clinical and Experimental Hypnosis, 4(3), 280–294. doi: 10.1080/00207149808410008

Cohen J (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Erlbaum.

Davis LW, & Husband RW (1931). A study of hypnotic susceptibility in relation to personality traits. Journal of Abnormal and Social Psychology, 26(2), 175–182. doi: 10.1037/h0074985

Dawes RM (1993). Prediction of the future versus an understanding of the past: a basic asymmetry. American Journal of Psychology, 106(1), 1–24. doi: 10.2307/1422863

Eisman EJ, Dies RR, Finn SE, Eyde LD, Kay GG, Kubiszyn TW, … Moreland KL (2000). Problems and limitations in using psychological assessment in the contemporary health care delivery system. Professional Psychology: Research and Practice, 31(2), 131–140. doi: 10.1037/0735-7028.31.2.131

Elkins GR, Johnson AK, Johnson AJ, & Sliwinski J (2015). Factor analysis of the Elkins Hypnotizability Scale. International Journal of Clinical and Experimental Hypnosis, 63(2), 335–345. doi: 10.1080/00207144.2015.1031550 [PubMed: 25978085]

Erickson MH (1938). A study of clinical and experimental findings on hypnotic deafness: II. Experimental findings with a conditioned response technique. Journal of General Psychology, 19, 151–167. doi: 10.1080/00221309.1938.9711192

Flammer E, & Bongartz W (2003). On the efficacy of hypnosis: A meta-analytic study. Contemporary Hypnosis, 20(4), 179–197. doi: 10.1002/ch.277

Frankel FH (1982). Hypnosis and hypnotizability scales: A reply. International Journal of Clinical and Experimental Hypnosis, 30(4), 377–392. doi: 10.1080/00207148208407273 [PubMed: 7129695]

Frankel FH, Apfel RJ, Kelly SF, Benson H, Quinn T, Newmark J, & Malmaud R (1979). The use of hypnotizability scales in the clinic: A review after six years. International Journal of Clinical and Experimental Hypnosis, 27, 63–73. doi: 10.1080/00207147908407547 [PubMed: 541132]

Frischholz EJ, Spiegel H, & Spiegel D (1981). Hypnosis and the Unhypnotizable: A Reply to Barber. American Journal of Clinical Hypnosis, 24(1), 55–58. doi: 10.1080/00029157.1981.10403284 [PubMed: 7315760]

Glisky ML, Tataryn DJ, & Kihlstrom JF (1995). Hypnotizability and mental imagery. International Journal of Clinical and Experimental Hypnosis, 43(1), 34–54. doi: 10.1080/00207149508409374 [PubMed: 7875919]

Hilgard ER (1965). Hypnotic susceptibility. Harcourt, Brace, & World.

Hilgard ER (1969). Pain as a puzzle for psychology and physiology. American Psychologist, 24(2), 103–113. doi: 10.1037/h0027146 [PubMed: 5777299]

Hilgard ER (1973). The domain of hypnosis, with some comments on alternative paradigms. American Psychologist, 28, 972–982. doi: 10.1016/j.beproc.2011.04.006 [PubMed: 4584217]

Hilgard ER (1982). Illusion that the eye-roll sign is related to hypnotizability. Archives of General Psychiatry, 39(8), 963–966. doi: 10.1001/archpsyc.1982.04290080069010 [PubMed: 7103685]

Hilgard ER, Crawford HJ, Bowers P, & Kihlstrom JF (1979). A tailored SHSS:C, permitting user modification for special purposes. International Journal of Clinical and Experimental Hypnosis, 27(2), 125–133. doi: 10.1080/00207147908407552 [PubMed: 541130]

Hilgard ER, Crawford HJ, & Wert A (1979). The Stanford Hypnotic Arm Levitation Induction and Test (SHALIT): A six-minute hypnotic induction and measurement scale. International Journal of Clinical and Experimental Hypnosis, 27(2), 111–124. doi: 10.1080/00207147908407551 [PubMed: 541129]

Hilgard ER, & Hilgard JR (1975). Hypnosis in the relief of pain. Los Altos, Ca.: Kaufman.

Hilgard JR, & Hilgard ER (1979). Assessing hypnotic responsiveness in a clinical setting: A multi-item clinical scale and its advantages over single-item scales. International Journal of Clinical and Experimental Hypnosis, 27(2), 134–150. doi: 10.1080/00207147908407553 [PubMed: 541131]

Hoyt IP, Nadon R, Register PA, Chorny J, Fleeson W, Grigorian EM, … Kihlstrom JF (1989). Daydreaming, absorption, and hypnotizability. International Journal of Clinical and Experimental Hypnosis, 37(4), 332–342. doi: 10.1080/00207148908414487 [PubMed: 2793273]

Hull CL (1933). Hypnosis and suggestibility: An experimental approach. New York: Appleton.

Huston PE, Shakow D, & Erickson MH (1934). A study of hypnotically induced complexes by means of the Luria technique. Journal of General Psychology, 11, 65–97. doi: 10.1080/00221309.1934.9917817

Jensen MP, & Patterson DR (2014). Hypnotic approaches for chronic pain management: clinical implications of recent research findings. American Psychologist, 69(2), 167–177. doi: 10.1037/a0035644 [PubMed: 24547802]

Kekecs Z, Bowers J, Johnson AJ, Kendrick C, & Elkins G (2016). The Elkins Hypnotizablity Scale: Assessment of reliability and validity. International Journal of Clinical and Experimental Hypnosis, 64(3), 285–304. doi: 10.1080/00207144.2016.1171089 [PubMed: 27267674]

Kekecs Z, Moss D, Elkins G, De Benedittis G, Palsson OS, Shenefet PD, … Whorwell PJ (2022). Guidelines for the assessment of efficacy of clinical hypnosis applications. International Journal of Clinical and Experimental Hypnosis, 70(2), 104–122. doi: 10.1080/00207144.2022.2049446 [PubMed: 35316157]

Kekecs Z, Roberts L, Na H, Yek MH, Slonena EE, Racelis E, … Elkins G (2021). Test–retest reliability of the Stanford Hypnotic Susceptibility Scale, Form C and the Elkins Hypnotizability Scale. International Journal of Clinical and Experimental Hypnosis, 69(1), 142–161. doi: 10.1080/00207144.2021.1834858 [PubMed: 33513065]

Kihlstrom JF (2008). The domain of hypnosis, revisited. In Nash M & Barnier A (Eds.), Oxford handbook of hypnosis (pp. 21–52). Oxford University Press.

Kihlstrom JF (2015). Patterns of hypnotic response, revisited. Consciousness & Cognition, 38, 99–106. doi: 10.1016/j.concog.2015.11.001 [PubMed: 26551995]

Lang EV, Benotsch EG, Fick LJ, Lutgendorf S, Berbaum ML, Berbaum KS, … Spiegel D (2000). Adjunctive non-pharmacological analgesia for invasive medical procedures: A randomised trial. Lancet, 355(9214), 1486–1500. doi: 10.1016/S0140-6736(00)02162-0 [PubMed: 10801169]

Lynn SJ, Cardeña E, Green JP, & Laurence J-R (2022). The Case for Clinical Hypnosis: Theory and Research-Based Do's and Don'ts for Clinical Practice. Psychology of Consciousness, 9(2), 187–200. doi: 10.1037/cns0000257

Lynn SJ, Kirsch I, Barabasz A, Cardena E, & Patterson D (2000). Hypnosis as an empirically supported clinical intervention: The state of the evidence and a look to the future. International Journal of Clinical and Experimental Hypnosis, 48(2), 239–259. doi: 10.1080/0020714000841005 [PubMed: 10769986]

Lynn SJ, & Shindler K (2002). The role of hypnotizability assessment in treatment. American Journal of Clinical Hypnosis, 44(3-4), 185–197. doi: 10.1080/00029157.2002.10403479 [PubMed: 11799533]

McGrath RE, & Meyer GJ (2006). When effect sizes disagree: The case of *r* and *d*. Psychological Methods, 11(4), 386–401. doi: 10.1037/1082-989X.11.4.386 [PubMed: 17154753]

Meyer GJ, Finn SE, Eyde LD, Kay GG, Moreland KL, Dies RR, … Reed GM (2001). Psychological testing and psychological assessment: A review of evidence and issues. American Psychologist, 56(2), 128–165. doi: 10.1037/0003-066X.56.2.128 [PubMed: 11279806]

Milling LS, Gover MC, & Moriarty CL (2018). The effectiveness of hypnosis as an intervention for obesity: A meta-analytic review. Psychology of Consciousness, 5(1), 29–45. doi: 10.1037/cns0000139

Milling LS, Valentine KE, LoStimolo LM, Nett AM, & McCarley HS (2021). Hypnosis and the alleviation of clinical pain: A comprehensive meta-analysis. International Journal of Clinical and Experimental Hypnosis, 69(3), 297–322. doi: 10.1080/00207144.2021.1920330 [PubMed: 34038322]

Mischel W (1968). Personality and assessment. Wiley.

Montgomery GH, Schnur JB, & David D (2011). The impact of hypnotic suggestibility in clinical care settings. International Journal of Clinical and Experimental Hypnosis, 59(3), 294–309. doi: 10.1080/00207144.2011.570656 [PubMed: 21644122]

Morgan AH, & Hilgard JR (1978-1979a). The Stanford Hypnotic Clinical Scale for Adults. Americal Journal of Clinical Hypnosis, 21(2-3), 134–147. doi: 10.1080/00029157.1978.10403968

Morgan AH, & Hilgard JR (1978-1979b). The Stanford Hypnotic Clinical Scale for Children. American Journal of Clinical Hypnosis, 21(2-3), 148–169. doi: 10.1080/00029157.1978.10403969

Nunnally JC (1967). Psychometric theory. McGraw-Hill.

Palsson OS, Kekecs Z, De Benedittis G, Moss D, Elkins G, Terhune DB, Varga K, Shenefelt PD, & Whorwell PJ (2023). Current practices, experiences, and views in clinical hypnosis: Findings of an international survey. International Journal of Clinical and Experimental Hypnosis, 71(2) XX–XX.

Ramondo N, Gignac GE, Pestell CF, & Byrne SM (2021). Clinical hypnosis as an adjunct to cognitive behavior therapy: An updated meta-analysis. International Journal of Clinical and Experimental Hypnosis, 69(2). doi: 10.1080/00207144.2021.1877549

Register PA, & Kihlstrom JF (1986). Finding the hypnotic virtuoso. International Journal of Clinical and Experimental Hypnosis, 34(2), 84–97. doi: 10.1080/00207148608406974 [PubMed: 3699937]

Sacerdote P (1982a). Further reflections on the hypnotizability scales: A comment. International Journal of Clinical and Experimental Hypnosis, 30(4), 393. doi: 10.1080/00207148208407274

Sacerdote P (1982b). A nonstatistical dissertation about hypnotizability scales and clinical goals: Comparison with individualized induction and deepening procedures. International Journal of Clinical and Experimental Hypnosis, 30(4), 354–376. doi: 10.1080/00207148208407272 [PubMed: 7129694]

Shor RE (1979). A phenomenological method for the measurement of variables important to an understanding of the nature of hypnosis. In Fromm E & Shor RE (Eds.), Hypnosis: Developments in research and new perspectives (pp. 105–135). Aldine.

Shor RE, & Orne EC (1962). Harvard Group Scale of Hypnotic Susceptibility, Form A. Consulting Psychologists Press.

Spanos NP, Radtke HL, Hodgins DC, Bertrand LD, Stam HJ, & Dubreuil DL (1983). The Carleton University Responsiveness to Suggestion Scale: Stability, reliability, and relationships with expectancy and "hypnotic experiences". Psychological Reports, 53(2), 555–563. doi: 10.2466/pr0.1983.53.3.723 [PubMed: 6647703]

Spiegel H (1972). An eye-roll test for hypnotizability. American Journal of Clinical Hypnosis, 15(1), 25–28. doi: 10.1080/00029157.1972.10402206 [PubMed: 4679812]

Spiegel H (1977). The Hypnotic Induction Profile (HIP): A review of its development. Annals of the New York Academy of Sciences, 296, 129–142. [PubMed: 279239]

Spiegel H, Aronson M, Fleiss JL, & Haber J (1976). Psychometric analysis of the Hypnotic Induction Profile. International Journal of Clinical and Experimental Hypnosis, 24(3-4), 300–315. doi: 10.1080/00207147608405616 [PubMed: 1262087]

Stern DB, Spiegel H, & Nee JC (1979). The Hypnotic Induction Profile: Normative observations, reliability, and validity. American Journal of Clinical Hypnosis, 21(2-3), 109–133. doi: 10.1080/00029157.1978.10403967

Stern JA, Brown M, Ulett GA, & Sletten I (1977). A comparison of hypnosis, acupuncture, morphine, valium, aspirin, and placebo in the management of experimentally induced pain. Annals of the New York Academy of Science, 296, 175–193.

Terhune DB (2015). Discrete response patterns in the upper range of hypnotic suggestibility: A latent profile analysis. Consciousness & Cognition, 33, 334–341. doi: 10.1016/j.concog.2015.01.018 [PubMed: 25720856]

Thompson T, Terhune DB, Oram C, Sharangparni J, Rouf R, Solmi M, … Stubbs B (2019). The effectiveness of hypnosis for pain relief: A systematic review and meta-analysis of 85 controlled experimental trials. Neuroscience and Biobehavioral Reviews, 99, 298–310. doi: 10.1016/j.neubiorev.2019.02.013 [PubMed: 30790634]

Valentine KE, Milling LS, Clark LJ, & Moriarty CL (2019). The efficacy of hypnosis as a treatment for anxiety: A meta-analysis. International Journal of Clinical and Experimental Hypnosis, 67(3), 336–363. doi: 10.1080/00207144.2019.1613863 [PubMed: 31251710]

Vingoe FJ (1973). Comparison of the Harvard Group Scale of Hypnotic Susceptibility, Form A and the Group Alert Trance Scale in a university population. International Journal of Clinical and Experimental Hypnosis, 21(3), 169–179. doi: 10.1080/00207147308409121 [PubMed: 4701788]

Weitzenhoffer AM, & Hilgard ER (1959). Stanford Hypnotic Susceptibility Scale, Forms A and B. Consulting Psychologists Press.

Weitzenhoffer AM, & Hilgard ER (1962). Stanford Hypnotic Susceptibility Scale, Form C. Consulting Psychologists Press.

Weitzenhoffer AM, & Hilgard ER (1967). Revised Stanford Profile Scales of Hypnotic Susceptibility, Forms I and II. Consulting Psychologists Press.

Wiggins JS (1973). Personality and prediction: Principles of personality assessment. Addison-Wesley.

Woody EZ (1997). Have the hypnotic susceptibility scales outlived their usefulness? International Journal of Clinical and Experimental Hypnosis, 45(3), 226–238. doi: 10.1080/00207149708416125 [PubMed: 9204636]

Woody EZ, & Barnier AJ (2008). Hypnosis scales for the 21st century: What do we need and how should we use them? In Nash MR & Barnier AJ (Eds.), Oxford handbook of hypnosis: theory, research and practice (pp. 255–282). Oxford: Oxford University Press.

Young PC (1925). An experimental study of mental and physical functions in the normal and hypnotic states. American Journal of Psychology, 36, 214–232. doi: 10.2307/1413859