

A Concurrent Validity Study between the Hypnotic Induction Profile (HIP) and the Stanford Hypnotic Clinical Scale for Adults (SHCS:A) in an Inpatient Sample: A Brief Report

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Abstract

The Hypnotic Induction Profile (HIP) is a brief, standardized assessment of hypnotizability which takes 5-10 minutes to administer. The Stanford Hypnotic Clinical Scale for Adults (SHCS:A) is a different clinical measure of hypnotizability that takes about 20-25 minutes to administer. Although both scales purport to measure the same thing, they were based on different theories of hypnosis and constructed using different psychometric techniques. The present investigation is a concurrent validation study comparing scores on the two instruments in a sample of 24 inpatients. The correlation between the SHCS:A and HIP Induction score was 0.41 ($p < .01$). However, the Eye Roll Sign (ERS) did not correlate significantly with either the SHCS:A (.04, ns) or the HIP-IND score (-.05, ns). These results indicate that while scores on the HIP and SHCS:A are significantly correlated the inter-correlations are not high enough to consider them as interchangeable measures. Implications of these findings for future research are discussed.

Keywords: Hypnotic Induction Profile (HIP), Eye Roll Sign (ERS), Induction Score (IND), Stanford Hypnotic Clinical Scale (SHCS).

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The Hypnotic Induction Profile (HIP: Spiegel & Bridger, 1970; Spiegel & Spiegel, 1978; 2004) is a brief, 5 to 10 minute measure of hypnotic responsivity originally developed for use in a clinical setting. Since its original publication in 1970, a variety of reports have been published which have substantiated its psychometric properties in both clinical and experimental settings (DeBetz & Stern, 1980; Frischholz & Tryon, 1980; Frischholz et al., 1980; Spiegel, Aronson, Fleiss, & Haber, 1976; Stern, Spiegel, & Nee, 1979). However, the majority of these psychometric studies were conducted by a group of clinicians/researchers who were closely connected to Herbert Spiegel throughout the last 35 years. To date, only one other study has attempted to present a psychometric analysis of the HIP among a more independent group of researchers (Sheehan, Latta, Regina, & Smith, 1979).

While the HIP has demonstrated clinical utility and empirically substantiated psychometric characteristics, even the test author has emphasized that it only discriminates among low, mid-range, and high hypnotizables. It does not contain a method for screening out high hypnotizables (i.e., Grade 4's & 5's) from extremely high hypnotizables (i.e., Grade 5's; Spiegel, 1974; Spiegel & Spiegel, 1978; 2004). In this regard, Spiegel has introduced one procedure for making these discriminations (Spiegel, 1974; Spiegel & Spiegel, 1978). However, while his procedure seems to have excellent face validity when compared to other measures which purport to make this kind of distinction (i.e. the Stanford Hypnotic Susceptibility Scales; c.f. Hilgard, 1965), to date no study has been undertaken to empirically validate this method.

The HIP has two main scores: 1) the Eye Roll Sign (scores can range from 0-4) and the Induction (IND) score (scores can range from 0-10). The ERS and the IND were hypothesized to be different measures of hypnotic responsiveness. The ERS is proposed to measure innate trance capacity, while the IND measures responsivity to more traditional hypnotic phenomena (e.g., post-hypnotic arm levitation, experienced involuntary motor movement, response to post-hypnotic cut off signal and a generalized or specific subjective sense of floating (Spiegel, 1974; Spiegel & Spiegel, 1978).

The Stanford Hypnotic Clinical Scale for Adults (SHCS:A) is also a brief, clinical instrument for assessing hypnotic ability and responsiveness (Morgan & Hilgard, 1978/1979). Five items make up the scale. They are: a) moving hands together (an ideomotor item), b) hypnotic dreaming, c) hypnotic age regression, d) posthypnotic suggestion, and e) posthypnotic amnesia. Total scores on the SHCS:A can range from 0 to 5. Total scores of 0 to 1 are considered evidence of "low hypnotic responsiveness," scores of 2 to 3 are considered evidence of "medium hypnotic responsiveness," and total scores of 4 and 5 are considered evidence of "high hypnotic responsiveness." The alternate form reliability of the SHCS:A has been found to be .72 (Morgan & Hilgard, 1978/1979).

The purpose of the present study is to examine the concurrent relationship between scores on the HIP (ERS and IND) with the Stanford Hypnotic Clinical Scale for Adults (SHCS:A; Morgan & Hilgard, 1975). To date, no previously published empirical study has compared HIP scores with scores on the SHCS:A.

Method

Subjects

Subjects were 24 inpatient volunteers at Tinley Park Mental Health Center who agreed to participate in a study on hypnotic responsivity. The mean age of the subjects was 32.2 (sd = 9.3). Approximately, one-quarter of the sample was female. One-half of the sample was Caucasian, ten subjects were African-American, one subject was Native-American and one

subject was Hispanic. Ten of the subjects were diagnosed with some type of thought disorder (usually schizophrenia), seven diagnosed with major depressive disorder, four diagnosed with bipolar disorder, two of the subjects were suffering from substance abuse disorders and one had a diagnosis of obsessive compulsive disorder. A more detailed description of the subjects can be found in Pappas-Gritzalis (1998). No attempt was made to estimate the inter-rater reliability of the DSM-IV diagnoses because the purpose of the present study was confined to examining the strength of the relationship between HIP scores (ERS and IND) with the SHCS:A.

Procedure

The two hypnotizability measures, HIP and SHCS:A were administered in a counterbalanced order. Afterwards, subjects were then administered a number of personality inventories. However, the personality inventory data will not be considered in the present report.

Dependent Variables

HIP. The HIP first consists of assessing the: 1) Eye Roll Sign (ERS: range of scores 0-4) followed by a number of behavioral and subjective measurements including; 2) Signaled Arm Levitation (SAL; range of scores 0-4); 3) Control Differential (CD: range of scores 0-2); 4) Cut-off Score (CO: range of scores 0-2); and, 5) Float (FL: range of scores 0-2). A four-item summary score, known as the Induction Score (IND), can be computed by summing the individual item scores for SAL, CD, CO, and FL. IND scores can range from 0-10. The internal consistency of HIP scores has been found to be between .70 to .90 in various studies (Frischholz et al., 1980; Spiegel, Aronson, Fleiss, & Haber, 1976).

In the present study, the DIS item was not administered. Therefore, the full SAL score was utilized (range = 0-4) along with the other three IND items (CD, CO, FL) whose scores range from 0-2. Thus, a 10-point IND score could be computed which other research has shown to be highly inter-correlated with the traditional IND score (Spiegel, Aronson, Fleiss, & Haber, 1976). In fact, this data indicated that the two methods for computing IND scores are almost interchangeable.

Statistical Power for a Concurrent Validation Study

While a sample size of 24 subjects may speciously appear to be small for conducting a concurrent validation study, the magnitude of the expected effect size (i.e., .40 or higher) indicates that the study had over 80% statistical power to detect such an effect size.

Results

The parametric data indicated that the mean ERS score was 1.96 (sd = .86; range = 0-4). The mean HIP-IND score was 6.25 (sd = 2.67; range = 0-10). The mean SHCS:A score was 2.67 (sd = 1.58; range = 0-5). The correlation between the phenomenologically based hypnotizability scores (i.e., HIP-IND and SHCS:A) was $r(22) = .41$, $p < .01$, two tailed). However, neither the correlations between the ERS and IND ($r(22) = -.05$) and the ERS and SHCS:A ($r(22) = .04$) were statistically significant.

The data also indicate that there was no significant differences between the mean SHCS scores for patients in the present sample (mean = 2.67; sd = 1.58) and the standardization sample (mean = 2.75; sd = 1.56). However, subjects in the present sample tended to earn significantly lower ERS scores (mean = 1.96; sd = .86) than student subjects (mean ERS = 2.52; sd = .68, $p < .05$ one-tailed: Frischholz, Tryon Vellios, Fisher, Maruffi, & Spiegel, 1980). Likewise, subjects in the present sample also earned lower mean IND scores (mean = 6.25; sd = 2.67) than student subjects (mean = 6.59; sd = 2.98, $p < .23$). While the differences between

the mean IND scores in the present sample and the mean IND scores in the student sample (Frischholz et al., 1980) were not significantly lower, they were in the predicted direction (Spiegel & Spiegel, 1978).

In general, many studies have found no significant mean differences between various forms of the Stanford scales in comparison to college subjects (Frischholz, Lipman, Braun, & Sachs, 1982). In contrast, mean scores on both the ERS and IND in clinical samples (especially if the clinical sample has a large number of patients suffering from a thought disorder such as schizophrenia) tend to be significantly lower than mean ERS/IND scores in college student samples (Frischholz, Lipman, Braun, & Sachs, 1992).

Discussion

The two main findings of the present study were that the ERS did not correlate significantly with either the IND or SHCS:A total scores. Although the correlation between the HIP-IND score and SHCS:A total score was statistically significant (.41), the magnitude of the correlation was not high enough to consider these two measures to be interchangeable. In other words, while the data indicate that some common variance is shared between scores on these two measures, they are also measuring different things as well. Since both measures were developed using a phenomena typically used to define the domain of hypnosis (Hilgard, 1973) it is interesting to note their differences instead of just focusing on their similarities. The HIP-IND consists of both objectively scored behavioral observations and subjective responses. In contrast, the SHCS:A contains only behaviorally scored items. Whether or not the inclusion of items measuring subjective experience on SHCS:A would increase the correlation between the total SHCS:A score and IND score is a topic for future research.

While mean scores on the HIP (ERS and IND) have consistently tended to be significantly lower in patient samples when compared to normal samples no such differences are consistently observed between mean scores on Stanford type scales observed in college subjects when compared to patient samples. This is one difference that appears to be consistent across the various studies (e.g., Frischholz, Lipman, Braun, & Sachs, 1992). The Spiegel's (1978) have argued that the HIP is more sensitive to differences between normal and clinical groups because psychopathology impairs a patient's ability to engage in focal concentration. The data in the present study are a further confirmation of this fact. But how psychopathology affects focal concentration (as indexed by scores on the HIP) is a subject for future research.

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