Could Empathy Be a Predictor of Hypnotic Ability?

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This study examined whether trait empathy is related to hypnotic ability and absorption. Sixty-four graduate students and mental health professionals completed the Harvard Group Scale of Hypnotic Susceptibility, Form A; the Davis Interpersonal Reactivity Index; and the Tellegen Absorption Scale as measures of hypnotic ability, empathy, and absorption. Correlation analysis determined that statistically significant relationships exist between empathy and hypnotic ability ($r = .41$); empathy and absorption ($r = .43$); and absorption and hypnotic ability ($r = .31$). The results also indicate that empathy and absorption are both predictors of hypnotic ability, although absorption does not appear to contribute a statistically significant amount of the explained variance in hypnotizability that is independent of empathy. It may be that the conceptual ground shared by both empathy and absorption is what predicts hypnotic ability.
Empathy is mediated. It follows that important elements of Sarbin’s theory such as role-taking aptitude and perception could be described as empathic characteristics.

Tellegen and Atkinson (1974) discussed the tendency of persons with high absorption to behave in an empathic manner when they become absorbed in an interpersonal conversation or relationship. Absorption, as measured by the Tellegen Absorption Scale (TAS), has been identified as a modest but reliable personality correlate of hypnotic ability (Roche & McConkey, 1990; Tellegen & Atkinson, 1974), although debate continues with regard to the degree that context variables influence the observed relationships in these studies (Milling, Kirsch, & Burgess, 2000; Nadon, Hoyt, Register, & Kihlstrom, 1991). Tellegen and Atkinson described the tendency of highly absorbed persons to implicitly mirror the body language of the person with whom they are speaking. Clark Hull (1933) and Sigmund Freud (1922/1949) each theorized that this phenomenon is related to hypnotic suggestibility and referred to it as unconscious mimicry or imitation. Recently, Chartrand and Bargh (1999) renewed this hypothesis in a study that demonstrated that high-scoring individuals on measures of empathy related to perspective taking (a process akin to role-taking aptitude) are more likely to engage in unconscious mimicry than persons with a low empathic disposition. Chartrand and Bargh also theorized that these processes of nonconscious mimicry (which they also refer to as the chameleon effect) are similar to E.R. Hilgard’s (1965) description of hypnosis.

Other authors have also speculated that the empathic nature of hypnotic ability places high hypnotizables at risk for the development of psychosomatic symptoms and psychophysiological disease. Daniel Tuke wrote that “One who sympathizes strongly with another who is suffering from bodily pain, is very likely to experience pain himself” (p. 40). Tuke discusses this phenomenon as evidence of unconscious emotional influence of the mind upon the body. I.E. Wickramasekera I (1998) has speculated in his High Risk Model of Threat Perception (HRMTP) that high hypnotizables may have an increased risk of developing psychosomatic symptoms partly because of their tendency to possess surplus empathy. This hypothesis is also consistent with the clinical observations of Spiegel and Spiegel (1978) that high hypnotizables often affiliate to new events and develop symptoms that are similar to those they are observing in others. In Trance and Treatment, the authors described a highly hypnotizable patient who would “become nauseated every time her friend’s sick dog was nauseated” (Spiegel & Spiegel, p. 82) as an example of this phenomenon. The process of affiliation they describe is similar to the theories of others (Chartrand & Bargh, 1999; Freud, 1922/1949; Hull, 1933; Sarbin, 1956; Tellegen & Atkinson, 1974; Tuke, 1873) who have described how hypnosis is related to processes of unconscious imitation or role enactment.
To our knowledge, the possibility that hypnotizability might be related to empathic ability has never been empirically tested (I.E. Wickramasekera II, 2001). The present study is a preliminary examination of this relationship. The primary objective of this study is to examine whether empathy is related to hypnotic ability using the Davis (1983, 1994) Interpersonal Reactivity Index (IRI) as a measure of empathy. A secondary goal of this study is to examine the relationship between empathy as measured by the IRI and absorption as measured by the TAS (Tellegen, 1982). We also predict that absorption might be related to empathy consistent with Tellegen and Atkinson’s (1974) descriptions of absorption. We also base these predictions upon the content similarity between a few items on the IRI and TAS. Both the TAS and the IRI utilize questions that assess a person’s tendency to identify with fictional characters in literature, film, and theater. However, the popular interpretation of absorption’s relationship to hypnotic ability often neglects the affective dimensions (Nash & Spinler, 1989) and phenomenological experience (Pekala & Kumar, 2000) of interpersonal absorption that may be imbedded in the relationship between the participant and hypnotist.

METHOD

Participants

Sixty-four graduate students and mental health professionals (16 men and 48 women) engaged in training in clinical psychology volunteered for the study. Five participants had previously experienced hypnosis, although no subjects had previously completed a measure of hypnotic ability. Thirty-three participants were graduate students of the Illinois School of Professional Psychology (ISPP). Thirty-one participants were graduate students of Saybrook Graduate School or mental health professionals who were engaged in a clinical workshop at the Esalen Institute. The participants ranged in age between 23 and 69, with a mean age of approximately 35 years.

All the volunteers were informed that they would receive neither course credit nor monetary compensation for their participation. The participants were told that one benefit of their participation would be that they would be able to learn about their own level of hypnotic ability as a result of their participation in the study. The volunteers were informed that the study was an investigation of hypnotic ability that would take approximately 1.5 hours to complete.

Measures

Hypnotic ability. The Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A; Shor & Orne, 1962) was used to measure hypnotic ability. The HGSHS:A is a standardized 12-item
group-administered measurement of hypnosis that has been found to possess good properties of reliability, validity, and stability (E.R. Hilgard, 1979; Piccione, Hilgard, & Zimbardo, 1989). I.E. Wickramasekera II administered the HGSHS:A at ISPP, and I.E. Wickramasekera I administered the HGSHS:A at Esalen.

**Empathy.** The Davis (1983, 1994) IRI was employed as the principal index of empathy. The IRI is a 28-item instrument divided into four scales of seven items that measure the global concept of empathy as fantasy, empathic concern, perspective taking, and personal distress. The fantasy scale measures a person’s tendency to identify with characters in fictitious settings like books, plays, or movies. The empathic concern scale examines a person’s tendency to respond with compassionate feelings of tenderness and concern to another person’s suffering. The perspective-taking scale measures one’s tendency to shift into the worldview of others when relating with them. The personal-distress scale assesses anxiety and other negative affect resulting from experiences with other persons’ suffering. The questions utilize a self-report format that calls for participants to rate how well each statement describes them on a scale of 0 to 4. The instrument has been found to possess good internal reliability, test-retest reliability, and validity (Davis, 1980, 1983, 1994).

**Absorption.** The TAS (Tellegen & Atkinson, 1974) was used to measure absorption. The internal and test-retest reliability were reported to be $r = .88$ and $.91$, respectively (Tellegen, 1982).

**Procedure**

The ISPP volunteers for the experiment were scheduled for a single experimental session on a date convenient to the participants. The Saybrook and Esalen volunteers were all scheduled for one session at the beginning of their workshop. The induction of hypnosis and administration of the HGSHS:A were in strict accordance with the standardized procedure of the HGSHS:A. The subjects then completed the HGSHS:A response booklet, the TAS measure of absorption, and the IRI measure of empathic capacity.

**RESULTS**

All 64 participants successfully completed the HGSHS:A and the IRI. One participant neglected to answer all 34 of the TAS items, and this subject’s data were discarded from all analyses involving absorption. The mean score on the HGSHS:A was 7.02 ($SD = 2.73$) for all 64 participants.

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3The results were also completed with a case-wise deletion of this subject’s data. The pattern of findings is similar to those presented here.
Table 1
Means, Standard Deviations, and Intercorrelations for Hypnotic Ability, Absorption, and Empathy

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. HGS:HS A</td>
<td>64</td>
<td>7.02</td>
<td>2.73</td>
<td>–</td>
<td>.31*</td>
<td>.41**</td>
<td>.22</td>
<td>.31*</td>
<td>.22</td>
<td>.24</td>
</tr>
<tr>
<td>2. TAS</td>
<td>63</td>
<td>21.43</td>
<td>6.08</td>
<td>–</td>
<td>.43**</td>
<td>.45**</td>
<td>.16</td>
<td>.28*</td>
<td>.12</td>
<td></td>
</tr>
<tr>
<td>3. IRI-Total</td>
<td>64</td>
<td>71.06</td>
<td>11.19</td>
<td>–</td>
<td></td>
<td>.66**</td>
<td>.62**</td>
<td>.56**</td>
<td>.56**</td>
<td></td>
</tr>
<tr>
<td>4. IRI-Fantasy</td>
<td>64</td>
<td></td>
<td></td>
<td>–</td>
<td>.09</td>
<td>.17</td>
<td>.16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. IRI-Empathic Concern</td>
<td>64</td>
<td></td>
<td></td>
<td>–</td>
<td></td>
<td>.36**</td>
<td>.19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. IRI-Perspective Taking</td>
<td>64</td>
<td></td>
<td></td>
<td>–</td>
<td></td>
<td>–</td>
<td>–.07</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. IRI-Personal Distress</td>
<td>64</td>
<td></td>
<td></td>
<td>–</td>
<td></td>
<td>–</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Note. HGS:HS A = Harvard Group Scale of Hypnotic Susceptibility: Form A; TAS = Tellegen Absorption Scale; IRI = Davis Interpersonal Reactivity Index.

*p < .05. **p < .001.
These scores are reported in Table 1 along with the means, standard deviations, and intercorrelations for all measures and the four scales of the IRI (fantasy, perspective taking, empathic concern, and personal distress). A two-tailed alpha level of .05 was used for all statistical tests.

**Effect of the Hypnotist**

An unpaired t-test analysis was carried out to assess for any possible effect of the hypnotist that might bias the hypnotic testing results. The mean HGSHS:A scores for the ISPP participants ($M = 7.48, SD = 2.36, n = 33$) and Esalen participants ($M = 6.52, SD = 3.03, n = 31$) were not found to be significantly different ($df = 62, t = 1.43, p = .16$).

**Intercorrelational Analysis**

Table 1 presents the Pearson product-moment correlations found between all measures and subscales employed in the study. A significant correlation of .41 ($p < .001$) was found between the HGSHS:A and the IRI total score. A significant correlation of .31 ($p < .05$) was also found between the empathic concern subscale of the IRI and the HGSHS:A. A significant correlation of .43 ($p < .001$) was found between the TAS and the IRI total score. The fantasy and perspective-taking scales of the IRI also obtained significant correlations with the TAS ($r = .45, p < .001$ and $r = .28, p < .05$, respectively). A significant correlation of .31 ($p < .001$) was also found between the TAS and the HGSHS:A.

**Regression Analyses**

We wished to test whether empathy predicts variance in hypnotizability above and beyond that predicted by absorption. We first entered the TAS as a predictor. The $F$ was significant ($F = 6.35, R^2 = .09, N = 63, p < .05$) as expected. We then entered the IRI total score. The change in $R^2$ was significant ($\Delta R^2 = .10$) and $R^2$ now rose to .19 ($F = 7.14, R^2 = .19, N = 63, p < .01$). Hence, empathy predicts variance in hypnotizability beyond that explained by absorption alone. Finally, a hierarchical multiple regression analysis using the four IRI subscales and the TAS to predict the HGSHS:A was also completed. The regression equation generated an $R^2$ of .16 ($N = 63, p < .01$). Only the TAS and empathic-concern scale remained in the regression equation. The $R^2$ increased significantly by 7% ($N = 63, p < .05$), when empathic concern was added at Step 2.

**DISCUSSION**

The results of this study offer preliminary support for the hypothesis that empathy and hypnotizability share conceptual common ground (I.E. Wickramasekera II, 2001). We feel that these are important initial findings, given that there are only a few personality correlates that have...
been identified to be related to hypnotic ability despite more than 150 years of speculation and research on individual differences in hypnotic ability (E.R. Hilgard, 1965; Kirsch & Council, 1992).

Our findings also indicate that absorption and empathy are related ($r = .43, p < .001$). Empathy is a significant trait that many persons with high absorption may possess. The fact that absorption is unable to contribute a substantial amount to the total explained variance in hypnotic ability independent of empathy suggests that there is some common ground between the predictors. It may be that the conceptual ground shared by both empathy and absorption is what predicts hypnotic ability. However, the empathic concern scale contributed a small but significant amount of variance independent of absorption ($\Delta R^2 = .07$), which may represent a possible unique aspect of empathy’s predictive power. Overall, these findings thus have significance for elucidating the possible interpersonal nature of absorption as well as hypnosis.

It is possible that the present findings may be due at least in part to context effects, given that the IRI was administered in the same session that hypnotic ability was assessed (Council, Kirsch, & Hafner, 1986; Kirsch & Council, 1992; Milling, et al., 2000). Another critique of the current study is that it employed a self-selection design that has sometimes proved problematic in hypnosis research (Barabasz & Barabasz, 1992). Future studies of empathy and hypnotic ability could be improved by drawing a larger sample size and administering hypnotic ability, absorption, and empathy measures in separate contexts. It would also be desirable to utilize additional measures of hypnotic ability, such as the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & Hilgard, 1962) to confirm the results of HGSHS:A findings (Hilgard, 1979). We also recommend the utilization of phenomenological hypnotic assessment methods (Pekala & Kumar, 2000) to examine the types of hypnotic experience that are most related to empathy.

Our data indicate that it may be the shared ground between empathy and absorption that predicts hypnotic ability. The study of empathy may help further elucidate the interpersonal nature of hypnosis and absorption. Future studies of empathy and hypnosis could examine questions regarding how processes of empathy may facilitate the adoption of expectations, roles, perspectives, imagery, emotions, somatic symptoms, and body language during hypnotic induction procedures and hypnotic suggestions.

REFERENCES


Könnte Empathie ein Prädiktor der Hypnosefähigkeit sein?

Ian E. Wickramasekera II und Janet P. Szlyk

Zusammenfassung: Diese Studie ging der Frage nach, ob das Merkmal Empathie mit Hypnosefähigkeit und Absorption in Verbindung steht. 64 Studenten und auf dem Gebiet psychischer Krankheiten beruflich Tätige absolvierten die Harvard Group Scale of Hypnotic Susceptibility: Form A, den Davis Interpersonal Reactivity Index, und die Tellegen Absorption Scale als Maße für Hypnosefähigkeit, Empathie und Absorption. Die Korrelationsanalyse ergab, dass statistisch signifikante Korrelationen zwischen Empathie und Hypnosefähigkeit (r = .41); Empathie und Absorption (r = .43) und zwischen Absorption und Hypnosefähigkeit (r = .31) bestehen. Die Ergebnisse legen außerdem nahe, dass Empathie und Absorption Prädiktoren der Hypnosefähigkeit sind, obwohl es den Anschein hat als ob Absorption nicht in einem statistisch signifikanten Ausmaß zur erklärten Varianz der Hypnosefähigkeit beiträgt, welches unabhängig von Empathie wäre. Es könnte sein, dass das konzeptionelle Fundament, welches Empathie und Absorption miteinander teilen, das ist, was die Hypnosefähigkeit vorhersagt.

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L’empathie peut-elle être un prédicteur des capacités hypnotiques?

Ian E. Wickramasekera II et Janet P. Szlyk

Résumé: Cette étude a examiné si le trait d’empathie est lié aux capacités et à l’absorption hypnotiques. 64 étudiants diplômés et les professionnels de santé mentale ont effectué le test Harvard Group Scale of Hypnotic Susceptibility: Form A, l’index interpersonnel de réactivité de Davis, et la balance d’absorption de Tellegen comme mesures de capacités hypnotiques, d’empathie, et d’absorption. L’analyse de corrélation a déterminé que statistiquement des rapports significatifs existent entre les capacités d’empathie et hypnotique (r = .41); d’empathie et d’absorption (r = .43); et d’absorption de et capacités hypnotiques (r = .31). Les résultats indiquent également qu’empathie et absorption sont les deux prédicteurs de capacités hypnotiques, bien que l’absorption ne semble pas contribuer à une quantité statistiquement significative de la différence expliquée de l’hypnotisabilité.
¿Es la empatía un predictor de la capacidad hipnótica?

Ian E. Wickramasekera II y Janet P. Szlyk

Resumen: Este estudio examinó si el rasgo de la empatía se relaciona con la capacidad hipnótica y la absorción. Sesenta y cuatro estudiantes de posgrado y profesionales de salud mental completaron la Escala Grupal de Susceptibilidad Hipnótica de Harvard: Forma A, el Índice de Respuesta Interpersonal de Davis, y la Escala de Absorción de Tellegen, para medir la capacidad hipnótica, empatía, y absorción. El análisis de correlación determinó relaciones significativas entre empatía y capacidad hipnótica ($r = .41$), empatía y absorción ($r = .43$), y absorción y capacidad hipnótica ($r = .31$). Los resultados también indican que tanto la empatía como la absorción predicen la capacidad hipnótica, aunque la absorción no parece contribuir estadísticamente a la varianza explicada de la hipnotizabilidad independientemente de la empatía. Puede ser que el terreno conceptual compartido por la empatía y absorción sea lo que prediga la capacidad hipnótica.

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