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SALIENT FINDINGS

# CLINICAL RESEARCH ON THE UTILITY OF HYPNOSIS IN THE PREVENTION, DIAGNOSIS, AND TREATMENT OF MEDICAL AND PSYCHIATRIC DISORDERS

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**Abstract:** The authors summarize 4 articles of special interest to the hypnosis community in the general scientific and medical literatures. All are empirical studies testing the clinical utility of hypnosis, and together address the role of hypnosis in prevention, diagnosis, and treatment of medical and psychiatric disorders/conditions. The first is a randomized controlled study of smoking cessation treatments comparing a hypnosis-based protocol to an established behavioral counseling protocol. Hypnosis quit rates are superior to those of the accepted behavioral counseling protocol. A second study with pediatric patients finds hypnosis critically helpful in differentiating nonepileptic seizure-like behaviors (pseudoseizures) from epilepsy. The remaining 2 papers are randomized controlled trials testing whether hypnosis is effective in helping patients manage the emotional distress of medical procedures associated with cancer treatment. Among female survivors of breast cancer, hypnosis reduces perceived hot flashes and associated emotional and sleep disruptions. Among pediatric cancer

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patients, a brief hypnotic intervention helps control venepuncture-related pain.

The Salient Findings section of the *International Journal of Clinical and Experimental Hypnosis* features summaries of very important and very recent articles about hypnosis that have appeared in the general medical, general psychological, and broad scientific literatures. Although the article section of the *Journal* itself remains the primary specialty venue for important findings in the field, it is helpful for readers to be apprised of emerging developments published elsewhere. Entries in *Salient Findings* are highly selective. Inclusion means that the editorial staff believes the article should not be missed by anyone.

Four articles of special interest to the hypnosis community have recently appeared in the general scientific and medical literatures. These four clinical research studies test the utility of hypnosis across the entire spectrum of clinical practice, from prevention, to diagnosis, to treatment. The first article (Carmody et al., 2008) is a randomized clinical trial testing whether hypnosis has a role in helping people to quit smoking and by doing so lower health risk. It is an important paper that adds to the corpus of empirical findings supporting the utility of hypnosis (Abramowitz, Barak, Ben-Avi, & Knobler, 2008; Alladin, Sabatini, & Amundson, 2007; A. Barabasz & Perez, 2007; M. Barabasz, 2007; Bob, 2007).

The second article (Olson, Howard, & Shaw, 2008) addresses differential diagnosis of pediatric patients presenting with seizure-like behaviors: Are they pseudoseizures or are they epilepsy proper? This work takes advantage of hypnosis' association with suggestibility and alterations in behavioral/emotional expression (Bryant & Fearns, 2007; Bryant & Sindicich, 2008; Council, Bromley, Zabelina, & Waters, 2007; Diamond, Davis, & Howe, 2008; Lee et al., 2007; Lichtenberg et al., 2008; Oakley, Deeley, & Halligan, 2007; Spiegel, 2007).

The third paper (Elkins et al., 2008) evaluates whether hypnosis can be used to decrease the number and intensity of hot flashes among breast cancer survivors. Here the researchers capitalize on the alteration in somatic changes associated with hypnosis (Elkins, Jensen, & Patterson, 2007; Flammer & Alladin, 2007; Flory, Martinez Salazar, & Lang, 2007; Golden, 2007; Graci & Hardie, 2007; Hutchinson-Phillips, Gow, & Jamieson, 2007).

The fourth study (Liossi, White, & Hatira, 2009) tests whether a very brief hypnotic intervention prior to invasive medical procedures can reduce pain and distress among pediatric cancer patients (Iglesias, 2008; Jensen et al., 2008; Karlin, Hill, & Messer, 2008; Keefer & Keshavarzian, 2007; Marc, Rainville, & Dodin, 2008; Miller & Whorwell, 2008; Nash, Levy, Tasso, & Perez, 2008).

JOURNAL: *Nicotine & Tobacco Research*

Carmody, T. P., Duncan, C., Simon, J. A., Solkowitz, S., Huggins, J., Lee, S., et al. (2008). Hypnosis for smoking cessation: A randomized trial. *Nicotine & Tobacco Research, 10*, 811–818.

This study is a randomized clinical trial comparing smoking quit rates for a hypnosis-based treatment protocol (two 1-hour face-to-face hypnosis sessions plus nicotine replacement) to quit rates of an already accepted behavioral-based treatment protocol (two 1-hour sessions of face-to-face behavioral "counseling" plus nicotine replacement). Patients assigned to both groups also received three 20-minute follow-up phone calls at Weeks 3, 4, and 6. Patients assigned to the hypnosis group were given an audiotape of the hypnotic procedure and encouraged to use it regularly. The patients were 176 men and 110 women seen at the San Francisco V.A. Medical Center. Patients in both groups smoked an average of a pack a day. Criteria for quitting were stringent, with biochemical validation. Patients were assessed at Weeks 1, 2, and 8; then at 6 and 12 months. Quit rates for the hypnosis-based treatment were superior to those of behavioral-based intervention (27% and 18% 12-month quit rate, respectively). Note that the extent to which patients used nicotine replacement was unrelated to outcome. In contrast, there was some evidence of a dosage effect for the hypnosis. That is, patients who reported using the self-hypnosis more often were more successful at quitting. Dropout rates were higher for the behavioral intervention. Interestingly, depressed patients appeared to do better with hypnosis. The authors rightly note that "expectations" are an unlikely explanation for group differences because there were no group differences in expectation of success measured pretreatment (Benham, Woody, Wilson, & Nash, 2006). Besides, patient expectations correlate (very modestly) across almost all forms of psychotherapy. There is no reason to believe that hypnosis would be any different. To date, there is no compelling evidence that increasing expectations causes better outcome in psychotherapy (Greenberg, Constantino, & Bruce, 2006).

JOURNAL: *Epilepsy & Behavior*

Olson, D. M., Howard, N., & Shaw, R. J. (2008). Hypnosis-provoked nonepileptic events in children. *Epilepsy & Behavior, 12*, 456–459.

This brief report is an interesting clinical feasibility study of using hypnosis in the differential diagnosis of seizure episodes in children. Nonepileptic events (NEEs, pseudoseizures, nonepileptic seizures) are episodes that superficially resemble epileptic seizures but are not in fact seizures. When NEE is misdiagnosed as an epileptic disorder,

patients can be needlessly medicated for a very long time. For many years, the standard for epilepsy diagnosis has been video-monitored EEG (VEEG), where the patient is monitored visually and neurologically under seizure-provoking conditions (e.g., sleep deprivation, strobe lights). When NEE is suspected, these diagnostic protocols sometimes include an attempt to mislead the patient into thinking that he or she is undergoing a seizure-inducing procedure when in fact the procedure is inactive (e.g., saline injection, tuning fork). Essentially, the patient is told (wrongly) that the placebo will induce seizure. If the nonactive procedure in fact provokes the patient's typical seizure episode and the EEG is negative for seizure, an NEE must be seriously considered. The authors of this study note that hypnosis has sometimes been used as a nonactive provoking condition with adults (Zalsman, Dror, & Gadoth, 2002), but there is no literature on its use with children. The authors used hypnosis to provoke NEE in 9 consecutive pediatric cases referred to the Stanford Medical School Neurology Department. The patients were 8 to 16 years of age; 6 boys, 3 girls. The duration of the episodes was from 3 weeks to 2 years. All patients underwent an initial psychiatric consultation. Five returned with a psychiatric diagnosis. Seven of the 9 patients were being treated with antiepileptic medications. During the diagnostic procedure, a very brief hypnotic procedure was used based on the Hypnotic Induction Profile (Spiegel & Spiegel, 2004). Imagining pleasant scenes was followed by direct suggestions of the typical seizure. Within 2 minutes, 8 of the 9 patients had a seizure episode. In all 9 cases, the EEG tracked no seizure semiology. Four of the 5 patients had spontaneous NEE during the hospital stay. Three of these 4 patients had these spontaneous NEEs after the initial even during hypnosis. The authors sensibly note that this is a pilot study only, and that seizures and NEEs commonly coexist. Here again, hypnosis has applied and theory-based relevance to neurology (O'Connor, Barnier, & Cox, 2008; Oneal, Patterson, Soltani, Teeley, & Jensen, 2008; Santarcangelo, Scattina, et al., 2008; Spiegel, 2007; Tschugguel & Hunter, 2008; Wickramasekera, 2008).

JOURNAL: *Journal of Clinical Oncology*

Elkins, G., Marcus, J., Stearns, V., Perfect, M., Rajab, M. H., Ruud, C., et al. (2008). Randomized trial of a hypnosis intervention for treatment of hot flashes among breast cancer survivors. *Journal of Clinical Oncology, 26*, 5022–5026.

About three-fourths of breast cancer survivors experience hot flashes, which can significantly impact mood, sleep, and anxiety. Hypnosis is noted for its impact on soma (Gay, 2007; Neron & Stephenson, 2007; Santarcangelo, Carli, et al., 2008; Shakibaei, Harandi,

Gholamrezaei, Samoei, & Salehi, 2008). Clinical case reports (e.g., Elkins, Marcus, Stearns, & Rajab, 2007) have suggested that by using hypnosis women have been able to reduce the frequency and intensity of hot flashes by 41% to 91%. Sixty female breast cancer survivors with hot flashes were randomly assigned to hypnosis intervention or no treatment. All patients kept daily logs of their symptoms over the 5-week course of the study. Critically, there was no follow-up. Patients assigned to receive hypnosis were scheduled for five weekly 50-minute hypnosis sessions, which included induction, imagery, suggestions for relaxation, coolness suggestions, deepening, suggestions for dissociation from hot-flash events, positive imagery for the future, and instruction on self-hypnosis. At the end of treatment, the patients treated with hypnosis reduced hot flashes dramatically, by 68% on the hot-flash measure used in this study. This compares favorably to placebo reductions of 20% to 30% reported elsewhere in the literature. The authors acknowledge that a far more sophisticated study is needed, with random assignment to hypnosis and a more substantial control than just no treatment. Six-month and 12-month follow-up would document the sustainability of the therapeutic effect.

JOURNAL: *Pain*

Liossi, C., White, P., & Hatira, P. (2009). A randomized clinical trial of a brief hypnosis intervention to control venepuncture-related pain of paediatric cancer patients. *Pain, 142*, 255–263.

This is a very sophisticated randomized controlled clinical trial of a brief hypnotic procedure to be used with child cancer patients undergoing venepuncture. It is already established that among psychological interventions for needle procedures, hypnosis has the largest effect size for pain relief among young patients during procedures such as lumbar punctures, bone-marrow aspirations, and voiding cystourethrography (Uman, Chambers, McGrath, & Kisely, 2008). In this study, the researchers go further. They test whether hypnosis might, in combination with local anesthesia, impart relief not only to the child but to the parents. Forty-five pediatric cancer patients (ages 6 to 14) were randomly assigned to one of three groups: local anesthesia alone, local anesthesia plus hypnosis, and local anesthesia plus clinical attention. Researchers measured anxiety and pain immediately prior to, during, and after three venepunctures that (on average) occurred over a 9-month period. During the procedure, clinical observers, blind to group membership, assessed patient distress. Patients assigned to the hypnosis group received a 15-minute hypnosis protocol and instructions on self-hypnosis, patterned after Gardner's model (Gardner, 1981; Olness & Gardner, 1988). The attention group spent an identical

amount of time with the therapist, as did patients in the hypnosis group. The therapist developed rapport and limited discussion on topics such as extracurricular activities. The findings indicated that hypnosis imparted superior relief from anxiety and pain when compared to both control conditions. Hypnosis also reduced anticipatory anxiety, not only for patients but for parents as well.

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