



SALIENT FINDINGS: *Pivotal Reviews and Research on Hypnosis, Soma, and Cognition*

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Abstract: Recently, 9 especially important critical reviews and research studies have appeared in the general scientific and medical literatures pertaining to 4 areas of applied and scientific hypnosis: management of pain, treatment of gastrointestinal disorders, adjunctive hypnosis in outpatient surgery, and error in memory. Together, these articles examine matters of soma and cognition that are at once core to scientific hypnosis but also of keen interest to clinicians. The studies and reviews are conceptually ambitious and methodologically sophisticated. The findings enlighten medical and scientific readers about what hypnosis is and what it is not.

The Salient Findings section of the *International Journal of Clinical and Experimental Hypnosis* features summaries on 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 professional 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.

Nine interesting and important articles have appeared in the scientific and medical literatures over the past few months. They are in the finest tradition of our field, both recent (Kahn, 2003; Kihlstrom, 2002a, 2002b) and remote (Franklin et al., 2002). Each study examines a phenomenon which is at once core to scientific hypnosis but also of keen interest to clinicians: pain, soma, acute stress of surgery, and memory. These studies and reviews are conceptually ambitious and methodologically sophisticated. The comprehensive review of hypnosis and clinical pain (Patterson & Jensen, 2003) is thorough, lucid, and

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splendidly useful to clinicians, researchers, and administrators. The four reviews and studies on hypnosis with gastrointestinal disorders are similarly informative and influential (Blanchard & Scharff, 2002; Calvert, Houghton, Cooper, Morris, & Whorwell, 2002; Gonsalkorale, Houghton, & Whorwell, 2002; Palsson, Turner, Johnson, Burnett, & Whitehead, 2002). Two papers on hypnosis with outpatient surgery, one a cost-benefit analysis (Lang & Rosen, 2002) and one a meta-analysis (Montgomery, David, Winkel, Silverstein, & Bovbjerg, 2002), will be of special interest to those working in a hospital setting. The two memory studies (Cox & Barnier, 2003; Scoboria, Mazzoni, Kirsch, & Milling, 2002) deliver a cautionary tale regarding both forms of memory error: false negatives and false positives (Nash, 1994). As is the case with all articles reviewed in *Salient Findings*, these nine are wonderful examples of our applied science at its best: papers which eschew the partisan, embrace discourse, and in so doing map the domain of hypnosis with imagination and passion.

COMPREHENSIVE REVIEW OF HYPNOSIS AND CLINICAL PAIN

JOURNAL: *Psychological Bulletin*

Patterson, D.R., & Jensen, M.P. (2003). Hypnosis and clinical pain. *Psychological Bulletin*, 129, 495–521.

This 27-page review article (six pages of tables and 192 references) is a comprehensive and critical examination of controlled trials of hypnotic analgesia for clinical pain problems, both chronic and acute (e.g., spinal taps, bone marrow transplants, burns). First, the authors briefly cover laboratory studies on hypnotic analgesia, sympathetic responding, endogenous opioid, evoked potential, electroencephalogram, brain imaging, spinal cord, and sensory/affective pain studies. There is of course a great deal of research with clinical and nonclinical pain (Borckardt, 2002; Borckardt & Nash, 2002; DuHamel, Difede, Foley, & Greenleaf, 2002; Koch et al., 2003; Langenfeld & Cipani, 2002; Rainville & Price, 2003; Rucklidge & Saunders, 2002). From their comprehensive review of the clinical pain studies, the authors conclude that hypnotic analgesia is superior to attention or standard care control conditions for acute pain (mostly procedural). Sometimes benefit from hypnosis for acute conditions exceeds that of other accepted pain treatments. Until recently, the amount and quality of research on hypnosis for *chronic* pain lagged behind that for acute pain. However, the authors note that over the past 20 years a number of controlled studies suggest that hypnotic analgesia is consistently superior to no-treatment controls and equivalent to relaxation training and autogenic

training conditions. Overall, the authors conclude that hypnosis has a reliable and significant impact on acute and chronic pains, and it is a viable intervention for both.

REVIEWS AND RESEARCH STUDIES ON HYPNOSIS AND DIGESTIVE TRACT DISORDERS

JOURNAL: *American Journal of Gastroenterology*

Gonsalkorale, W.M., Houghton, L.A., & Whorwell, P.J. (2002). Hypnotherapy in irritable bowel syndrome: A large-scale audit of a clinical service with examination of factors influencing responsiveness. *American Journal of Gastroenterology*, 97, 954–961.

JOURNAL: *Journal of Consulting and Clinical Psychology*

Blanchard, E.B., & Scharff, L. (2002). Psychosocial aspects of assessment and treatment of irritable bowel syndrome in adults and recurrent abdominal pain in children. *Journal of Consulting and Clinical Psychology*, 70, 725–738.

JOURNAL: *Gastroenterology*

Calvert, E.L., Houghton, L.A., Cooper, P., Morris, J., & Whorwell, P.J. (2002). Long-term improvement in functional dyspepsia using hypnotherapy. *Gastroenterology*, 123, 1778–1785.

JOURNAL: *Digestive Diseases and Sciences*

Palsson, O.S., Turner, M.J., Johnson, D.A., Burnett, C.K., & Whitehead, W.E. (2002). Hypnosis treatment for severe irritable bowel syndrome – Investigation of mechanism and effects on symptoms. *Digestive Diseases and Sciences*, 47, 2605–2614.

An abiding area of interest in medicine and psychology is the interface of soma and psyche, with an eye to whether psychosocial interventions might be wedded with medical interventions. Certainly, the hypnosis literature is relevant here (Finkelstein, 2003; Lioffi & Hatira, 2003; Spiegel, 2002; Vandenberg, 2002). The four studies noted above directly address whether and how hypnotic interventions might be effective for patients suffering from some gastrointestinal disorders, specifically dyspepsia and irritable bowel syndrome (IBS). IBS has been a topic of hypnosis research for many years. Indeed,

hypnosis is now formally categorized by Division 12 of the American Psychological Association as a “possibly efficacious” treatment for IBS (Chambless & Ollendick, 2001). The study by Gonsalkorale and his colleagues (2002) is particularly noteworthy, because it is in the centerpiece journal of the American College of Gastroenterology. Two hundred and fifty patients (ages 19–79, 50 males and 200 females) with a history of being refractory to previous medical treatment for IBS (of at least 2-year duration) were treated with hypnosis over a 3-month period, with practice (self-hypnosis) between weekly sessions. This was not an efficacy study. It was designed to examine factors that determine when, how, and for whom this previously established efficacious treatment works. Indeed hypnosis worked, with patients benefiting substantially across all four dependent measures (bowel and extracolonic symptoms, quality of life, anxiety, and mood). All patient subgroups benefited significantly. The one subgroup that appeared to benefit the least was males with diarrhea. Palsson and his colleagues (2002) tested the impact of a hypnosis treatment for IBS across two studies, one with 18 patients (no control group) and a second with 24 patients (controlled, randomized assignment). There was a long-lasting and significant improvement in IBS symptoms during and following treatment in both studies. In the second study, improvement with the hypnosis intervention exceeded that with the control intervention. Interestingly, most (though not all) physiological indicators of bowel distress were unaffected by hypnosis. Blanchard and Scharff (2002) review the literature for psychosocial interventions for bowel distress in adults and children, finding that hypnotherapy has the strongest empirical support for adult IBS, followed by cognitive therapy and brief psychodynamic psychotherapy. Finally, Calvert and her colleagues (2002) studied whether similar hypnotic interventions might be effective for patients suffering from functional dyspepsia. In a randomized, controlled study ($N=126$) with hypnotherapy, supportive therapy (with placebo medication), and medical treatment-alone groups, patients in the hypnosis group improved significantly more than patients in the other groups across measures of GI distress, quality of life, anxiety, and mood, as well as the number of medical consultations.

ADJUNCTIVE HYPNOSIS WITH SURGERY PATIENTS

JOURNAL: *Anesthesia and Analgesia*

Montgomery, G.H., David, D., Winkel, G., Silverstein, J.H., & Bovbjerg, D.H. (2002). The effectiveness of adjunctive hypnosis with surgical patients: A meta-analysis. *Anesthesia and Analgesia*, 94, 1639–1645.

JOURNAL: *Radiology*

Lang, E.V., & Rosen, M.P. (2002). Cost analysis of adjunct hypnosis with sedation during outpatient interventional radiologic procedures. *Radiology*, 222, 375–382.

These two studies make a nice pair. Following up on their own studies (e.g., Montgomery, Weltz, Seltz, & Bovbjerg, 2002), the authors report on the findings of a meta-analysis of 20 controlled studies that tested whether adjunctive hypnosis used with surgery patients is helpful. The analysis revealed a significant effect size ($d = 1.20$) over control groups. Another way of expressing this is that surgical patients in hypnosis treatment groups had better outcomes than 89% of patients in control groups. The authors conclude by noting that the analysis strongly supports the use of adjunctive hypnosis with these patients but that “additional studies are required to formally assess cost-effectiveness of hypnosis interventions to reduce barriers to its practical application . . .” (p. 644). Happily, this is precisely what Lang and Rosen (2002) did in their study. They compared the hospital’s cost for outpatient sedation (for vascular/renal interventional procedures) of 161 patients divided into two groups. One group received standard intravenous conscious sedation, and one received standard conscious sedation with adjunctive self-hypnosis. The mean hospital cost for the standard sedation patients was \$638 compared to \$300 for the adjunctive hypnosis patients. When taken together, the take-home message from these papers would seem to be quite clear: using hypnosis benefits these surgery patients and saves money for the hospital.

MEMORY AND HYPNOSIS

JOURNAL: *Memory*

Cox, R.E., & Barnier, A.J. (2003). Posthypnotic amnesia for a first romantic relationship: Forgetting the entire relationship versus forgetting selected events. *Memory*, 11, 307–318.

JOURNAL: *Journal of Experimental Psychology-Applied*

Scoboria, A., Mazzoni, G., Kirsch, I., & Milling, L.S. (2002). Immediate and persisting effects of misleading questions and hypnosis on memory reports. *Journal of Experimental Psychology-Applied*, 8, 26–32.

These two studies both examine the impact of hypnosis on memory error. However, each study focuses on a different type of error. Cox and Barnier follow up their previous work (Barnier, Bryant, & Briscoe, 2001;

Barnier & McConkey, 2001) on how and why a hypnotic subject might *not* remember something that actually did happen (i.e., a false negative error). Using a posthypnotic amnesia protocol cued to “first romantic relationship,” they found that subjects remembered less when they were highly hypnotizable and given nonspecific cues about the time period involved. Scoboria and his colleagues focused on how and to what extent hypnosis and misleading questions lead to subjects “remembering” something that in fact *did not* happen (i.e., a false positive). Using a nonautobiographical story (unlike the Cox and Barnier study), Scoboria and his colleagues found that both hypnosis and prior exposure to misleading questions significantly increased the frequency of memory error about the story. Misleading questions produced more errors than hypnosis, but asking misleading questions during hypnosis produced more errors than either intervention alone.

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