Old wine, new label: The role of hypnotherapy in the management of chronic health conditions

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Disclosures

Research Support

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Other Roles

- Scientific Advisory Board and common equity, MetaMe Health*
- Board of Directors, Rome Foundation
- Chair, Rome GastroPsych Group
- Consultant, Pfizer UC Narrative
- Consultant, Lucid Technologies
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Agenda

- Old Wine: History of medical hypnosis and its applications to chronic health conditions
- Gut-Directed Hypnotherapy as an example of an evidence based brain-gut intervention
- Emerging trends in hypnotherapy
Myths and Misconceptions

- The patient can lose control
- Therapist can make the patient do whatever therapist wants
- Patient must be highly hypnotizable/deep trance state to benefit
- Hypnosis can elicit forgotten memories
- Patient will not be able to “come out” of the hypnotic state
Hypnosis has long been the subject of scientific inquiry. From the late 18th century to the mid-20th century, it has been studied and practiced by various individuals and groups.

- **Franz Mesmer** (1770-1784): Animal Magnetism as a healing medium. Magnetic wands, tubs, and magnetic passes with hands.

- **James Esdaile** (1840): Decreased death rate from surgeries attributed to absence of pain under hypnosis.

- **Commission of Inquiry into Animal Magnetism** (1784): Ben Franklin and others conclude that hardware is not needed; post-hypnotic responses.

- **Ether and Chloroform** (1847): Become easily accessible, eliminate need for surgical hypnosis.

- **Ether and Chloroform** (1870s): Scientific methods to study hypnosis, corrected myths and conceptions.

- **Clark Hull** (1900s): Hypnosis as a normal mental phenomenon, self-hypnosis, less emphasis on subconscious.

- **Milton Erickson** (1950s): Hypnosis as a natural phenomenon, self-hypnosis, less emphasis on subconscious.

"Not many of this generation will live to benefit by Mesmerism, if they wait till it is admitted into the Pharmacopoeia" – "Ether and Chloroform", Benjamin Rush.

Cognitive-behavior therapy is compatible with medical hypnosis!

- Sleep-like state in which people are more suggestible than they are in the normal waking state
- Self-regulatory
- Provide a context for therapeutic behaviors that may be inappropriate in other settings (i.e. style of communication)
- Can reinforce therapy themes without sounding hokey
- Easier to sell for the medical patient/physician
Three Factors influencing outcomes (e.g. controlled for) in hypnosis clinical trials

- Inter-individual variability in hypnotic susceptibility
- Ritual of hypnotic induction
- Specific hypnotic suggestions

Mazzoni et al., 2013; Oakley and Halligan, 2010.
Medical Hypnosis for Surgical Procedures

- Meta-analysis of 20 studies
- Hypnosis treatment groups had better outcomes than 89% of patients in control groups
- Benefits across several clinical outcome categories
  - Pain
  - Pain medication
  - Physiological indicators (e.g., blood pressure, heart rate)
  - Recovery (e.g., postop vomiting, fatigue)
  - Treatment time (e.g., length of procedure, inpatient stay)
  - Negative affect

Medical Hypnosis for Surgical Procedures

- Breast CA surgery
  - 200 patients undergoing breast CA surgery
  - 15 mins pre-surgical hypnosis or supportive listening
  - Hypnosis group required less medication (propofol, lidocaine)
  - Less pain intensity, pain unpleasantness, nausea, fatigue, discomfort, and emotional distress
  - Cost $772.71 less per patient

Hypnosis for Pain

- Growing interest in hypnosis for acute and chronic pain
- Non-pharmacological treatments are attractive to patients and providers
- Brain imaging studies provide further support

- Headache pain
- Arthritis
- Fibromyalgia
- Spinal cord injury-related pain
- Sickle cell disease

Review article

The effectiveness of hypnosis for pain relief: A systematic review and meta-analysis of 85 controlled experimental trials

Trevor Thompson\textsuperscript{a}, Devin B. Terhune\textsuperscript{a}, Charlotte Oram\textsuperscript{b}, Joseph Sharangparni\textsuperscript{a}, Rommana Rouf\textsuperscript{c}, Marco Solmi\textsuperscript{d}, Nicola Veronese\textsuperscript{d}, Brendon Stubbs\textsuperscript{e,f}

- Analgesic effects of hypnosis for all pain outcomes (gö=ö 0.54-0.76, p’s < .001).
  - strongly influenced by hypnotic suggestibility
  - direct analgesic suggestion
Fig. 5. A general framework for integrating the neural correlates of hypnosis. Within this overarching model, central hubs of the CEN play a central role in maintaining attentional focus on relevant information, deploying mental strategies to produce a reliable hypnotic response, anticipate and prepare the hypnotic response, and appraise the subjective feelings of agency. Moreover, the CEN likely exerts a causal influence over the DN (Chen et al., 2013). The SN regulates CEN and DN dynamics as a function of prominent events. Modulations of this network alter awareness of external and internal signals. Finally, hypnosis relates to reduced DN activity (see pattern likely reflect decreased self-referential thoughts during hypnosis. ACC = Anterior Cingulate Cortex. DLPFC = Dorsolateral Prefrontal Cortex. MPFC = Medial Prefrontal Cortex. PCC = Posterior Cingulate Cortex. PPC = Posterior Parietal Cortex.
A single session of hypnosis in **active UC** reduced heart rate, serum interleukin-6 concentration, rectal mucosal release of substance P, histamine, interleukin-13, and blood flow (all statistically significant reductions, compared to healthy controls).
The scientific evolution of gut-directed hypnotherapy
Whorwell et al. 1984 randomized trial

Physiological and Psychological Mechanisms of Change

- Reduction in ANS activity, modification of physiological arousal over long-term
- Increases transit time\(^1\) and quiets colonic motility\(^2\)
- Specific suggestions can affect gastric secretion\(^3\)
- Reduction in somatization/cognitive change
  - Altering perceptions of somatic sensations
  - Altering belief that sensations are indicative of serious disease
- Alterations in Pain Tolerance
  - Decreased perception of pain associated with rectal distention\(^4\)


Palsson et al., 2002; DDS
Effectiveness Profile on Comorbidity

Gonsalkorale et al., 2002, AJG
Long-term Benefits of Hypnotherapy for IBS

81% of patients who improved maintained their improvements for up to 5 yrs after treatment

Mean IBS-SS Scores

Pre Post | 1 year | 2 years | 3 years | 4 years | 5 years

N=204

The North Carolina Protocol: Structure and Content Development

Slides courtesy of Olafur Palsson, PsyD

The North Carolina Protocol: A fully standardized hypnosis treatment for IBS

- Completely standardized with verbatim scripts, so the exact treatment could be replicated by others
- Designed to be usable with all patients regardless of their specific symptoms, or their responsiveness to hypnosis, or their capacity for mental imagery
- 7 sessions – one session every other week + shorter audio home exercise
Key therapeutic elements cut across each script

- Changing attention focus to decrease symptom experience
- Altering perceptual experience of symptoms
- Increasing overall sense of health and comfort
- Suggestions and imagery for the intestines to become immune to irritation or upset
- Suggestions and imagery to encourage normal and healthy bowel functioning
Basic session structure

- Induction
- Extensive physiological relaxation
- Deepening through counting and imagined descending
- Dissociation from here and now (x1, x2, or x3)
- Vivid therapeutic scene
- Therapeutic hypnotic/post-hypnotic suggestions & imagery
- Tying of suggestions to the therapeutic scene
- Re-alerting
Indications for gut-directed hypnotherapy

- IBS
- Non-cardiac chest pain
- Functional Dyspepsia
- Globus Sensation
- Pediatric Abdominal Pain
- Ulcerative Colitis

Philosophy in creating the protocol: Making hypnosis treatment that could work w/(nearly) all clients

- Make the effects of suggestions clearly felt (to address the skepticism that hypnosis is really happening)
- Plenty of imagery vividly described – colors, details, contrasts, sensations in all senses
- Protracted use of physical relaxation
- Neutralize and bypass natural resistance
- Emphasizing comfort and safety (include inviting adjustments)
- Minimizing performance demands
- Repeated emphasis on automaticity/letting things happen
- Address the symptom picture broadly enough to impact all the main symptoms of IBS without having to address its idiopathic presentation in individual patients
IBS- Specific Imagery

*Picture a wave of medication spreading down from your stomach all the way down through your intestines creating a strong protective coating… a strong protective coating that makes your intestines immune to irritation, and protects you from feeling upset inside…*

Ulcerative Colitis Relapse Prevention Trial (UCRPT)

Assessed for Eligibility (N = 234)

Randomized (N = 54)

HYP+ (N = 26)

CON* (N = 28)

Completed followup (N = 25)

Completed followup (N = 25)

Total Completers (N = 50)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hypnotherapy (n = 25)</th>
<th>Attention control (n = 25)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>56% female (n = 14)</td>
<td>52% female (n = 13)</td>
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<tr>
<td>Race</td>
<td>84% white (n = 21)</td>
<td>88% white (n = 22)</td>
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<tr>
<td>Ethnicity</td>
<td>4% non-white Hispanic (n = 1)</td>
<td>4% non-white Hispanic (n = 1)</td>
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<tr>
<td>Marital status</td>
<td>48% married/life partner (n = 12)</td>
<td>64% married/life partner (n = 16)</td>
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<tr>
<td>Education</td>
<td>86% college degree or higher (n = 19)</td>
<td>68% college degree or higher (n = 17)</td>
</tr>
<tr>
<td></td>
<td>Mean (s.d.)</td>
<td>Mean (s.d.)</td>
</tr>
<tr>
<td>Age</td>
<td>38.7 (11.8)</td>
<td>38.8 (12.1)</td>
</tr>
<tr>
<td>Disease duration (years)</td>
<td>9.38 (7.95)</td>
<td>9.96 (6.73)</td>
</tr>
<tr>
<td>Disease extent</td>
<td>84% (n = 21) left-sided colitis, 16% (n = 4) pancolitis</td>
<td>88% (n = 22) left-sided colitis, 12% (n = 3) pancolitis</td>
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<tr>
<td>No. of BM/day</td>
<td>3.1 (0.88)</td>
<td>3.3 (1.4)</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>1.3 (0.43)</td>
<td>1.3 (0.46)</td>
</tr>
<tr>
<td>Well-being</td>
<td>1.21 (0.37)</td>
<td>1.2 (0.54)</td>
</tr>
<tr>
<td>No. of flares per year</td>
<td>1.29 (0.46)</td>
<td>1.29 (0.46)</td>
</tr>
<tr>
<td>Days since last flare</td>
<td>102.6 (20.8, 60–144)</td>
<td>99.2 (18.9, 55–136)</td>
</tr>
<tr>
<td>+ 5ASA use (current)</td>
<td>18 (72%)</td>
<td>17 (68%)</td>
</tr>
<tr>
<td>+ Azathioprine/mercaptopurine</td>
<td>4 (16%)</td>
<td>5 (20%)</td>
</tr>
<tr>
<td>use (current)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration of last flare (weeks)</td>
<td>6.1 (4.9, 1–16)</td>
<td>6.6 (6.0, 0.1–24)</td>
</tr>
<tr>
<td>+ History of smoking</td>
<td>8 (32%)</td>
<td>7 (28%)</td>
</tr>
<tr>
<td>+ Family history of IBD</td>
<td>5 (20%)</td>
<td>3 (12%)</td>
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Gut-directed Hypnotherapy Prolongs Clinical Remission in Quiescent UC

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hypnotherapy (n = 25) Mean (s.d.)</th>
<th>Attention control (n = 25) Mean (s.d.)</th>
<th>Test statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days to relapse</td>
<td>359.4 (145.9)</td>
<td>281.8 (100.5)</td>
<td>t = 2.1 (1, 48), P = 0.03</td>
</tr>
<tr>
<td>Proportion still in remission at 1 year (%)</td>
<td>68</td>
<td>40</td>
<td>x²(1) = 3.9, P = 0.04</td>
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Risk of Flare at 1 Year Was Twice as High in Controls vs. Hypnotherapy Group
Emerging trends in hypnosis
Virtual Reality Hypnosis for Pain

- Patients received hypnotic induction and analgesic suggestions via virtual reality
- “Snow world” for pediatric pain patients can reduce pain levels by 50%
- Reduced pain intensity and less pain unpleasantness for hospitalized trauma patients
- Helpful for less hypnotizable?

Hypnotherapy vs FODMAPS

Randomised clinical trial: the efficacy of gut-directed hypnotherapy is similar to that of the low FODMAP diet for the treatment of irritable bowel syndrome


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READ THE EVIDENCE
Summary

- Hypnotherapy has been used in medical and surgical settings for hundreds of years
- The science of hypnosis has lagged behind its use, and has invoked skepticism by evidence-based therapists
- Gut-directed hypnotherapy is an example of how hypnosis can be approached with scientific rigor and reproducibility, and is potentially scalable
Thank you for your attention!