Hypnosis as an adjunct to cognitive-behavioural psychotherapy: a meta-analysis

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Authors' objectives
To assess the effects of cognitive behavioural therapy (CBT), compared with CBT supplemented by hypnosis.

Searching
PsycLIT was searched from 1974 to 1993 (search strategy provided). References from previous reviews were included.

Study selection
Study designs of evaluations included in the review
Studies in which CBT administered in a hypnotic context was compared to the same treatment administered without hypnosis. Inclusion criteria were as follows:

(1) a cognitive-behavioural psychotherapy was administered to at least one group of participants in a hypnotic context;

(2) the same therapy was administered to at least one group of clients in a non-hypnotic context; and

(3) sufficient data were reported to allow calculation of effect size.

Specific interventions included in the review
CBT plus hypnosis and CBT alone. CBT included: relaxation, covert modelling, imagery and coping suggestions, self-monitoring and stimulus control and self-reinforcement, self-monitoring and stimulus control and goal setting, systematic desensitization, cognitive restructuring, self-monitoring and goal setting, cognitive strategy, relaxation and imagery and cognitive restructuring and in vivo practice, and varied treatments.

Participants included in the review
Persons presenting with pain, insomnia, hypertension, anxiety, obesity, snake phobia, self-concept of athletic performance, duodenal ulcer, public speaking anxiety and a mixture of problems. Participants were either clinical patients or college students. No other participant characteristics are provided.

Outcomes assessed in the review
Outcome variables are not stated, only the standardised effect size.

How were decisions on the relevance of primary studies made?
The authors do not state how the papers were selected for the review, or how many of the authors performed the selection.

Assessment of study quality
The authors do not report the criteria used to assess validity, or how the validity assessment was performed.

Data extraction
The authors do not state how the data were extracted for the review, or how many of the authors performed the data extraction.

Methods of synthesis
How were the studies combined?
Standardised mean difference of effect size between hypnosis and non-hypnosis group for each treatment, with 95%
How were differences between studies investigated?
Differences between the studies were investigated through a subgroup analysis, in order to assess presenting condition, treatment, length of follow-up and aspects of methodological quality.

Results of the review
Eighteen studies with 20 treatment comparisons (577 patients) were included.

The weighted mean effect size showed a significant effect of 1.36 standard deviations (SD) resulting from the addition of hypnosis to CBT; this indicated that the average patient receiving cognitive-behavioural hypnotherapy showed more improvement than 90% of clients receiving non-hypnotic treatment. When the effects of outliers were removed, the estimates were reduced: the average patient receiving therapy with hypnosis showed more improvement at the end of treatment than 75% of those receiving the same therapy without hypnosis. The standardised mean effect sizes remained significant whether considering physiological (SD=1.42), behavioural (SD=0.73) or self-reported (SD=0.58) measures. Whilst significant variance in the effect sizes suggested the influence of a moderator effect, analysis indicated that this was not due to the addition of relaxation instructions, therapeutic suggestions, the nature of the participant population, the condition at presentation or methodological criteria of the meta-analysis. Further analysis revealed that the moderator appeared to affect obesity studies only, and was thought to be associated with the length of follow-up. Correlation revealed that the effect of hypnosis on obesity increased over time (correlation coefficient, r=0.59, P<0.02) and inflated the standardised mean effect sizes.

Following criticism of this meta-analysis, a refined analysis of the obesity studies was performed with additional data, different calculation methods and exclusion of a questionable study. This resulted in different size effects but the same conclusions. The mean weight loss averaged across post-treatment and follow-up assessment periods was 6.00 lbs (2.72 kg) without hypnosis and 11.83 lbs (5.37 kg) with hypnosis. The resulting additional weight loss of 5.83 lbs (2.64 kg) equates to a 97% increase in treatment efficacy. Weight loss treatments aim to produce a change in eating and exercise habits, which may only be revealed over longer periods of time. As such, weight loss at the final assessment period appears a more accurate estimate of treatment effect. At final assessment, mean weight loss was 6.03 lbs (2.74 kg) and 14.88 lbs (2.75 kg) without and with hypnosis, respectively. By including hypnosis in the treatment protocol, an additional weight loss of 8.85 lbs (4.01 kg) was achieved, corresponding to a 147% increase in treatment efficacy.

Authors’ conclusions
The results indicate a fairly substantial effect arising from the addition of hypnosis to CBTs across a broad range of problems. For obesity, the large effect sizes and variances caused difficulties in interpreting the exact magnitude of effects. A refined meta-analysis of obesity studies in a later publication revealed that the addition of hypnosis appears to have a significant and substantial effect on the outcome of CBT for weight reduction, and this effect increases over time. Hypnosis appears to be effective only in conjunction with a sound CBT treatment. It is unlikely hypnosis will be helpful to all clients.

CRD commentary
The review, consisting of two studies (see Other Publications of Related Interest nos 1 and 2), lacks many of the elements of a good quality systematic review. Outcome measures, participant characteristics, validity criteria, and the methods by which decisions of relevance, judgements of validity and processes of data extraction are made are not included within the review. The details of the included primary studies are not provided clearly or in sufficient detail. Another meta-analysis of the obesity data (Allison and Faith, see Other Publications of Related Interest no 1; DARE record no. 11997008373) has provided a different interpretation of the pooled effect size.

Bibliographic details
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Other publications of related interest

Indexing Status
Subject indexing assigned by NLM

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Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.