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## The efficacy of hypnotherapy in the treatment of psychosomatic disorders: meta-analytical evidence

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### CRD summary

The authors concluded that hypnosis is a very effective treatment for patients with psychosomatic disorders. Poor reporting of the review methods, lack of an assessment of study quality, and lack of information about study outcomes make it difficult to comment on the likely reliability of the authors' conclusions.

### Authors' objectives

To evaluate the efficacy of hypnotherapy for patients with psychosomatic disorders.

### Searching

MEDLINE, PsycLIT and Dissertation Abstracts were searched from 1887 to 2005; the search terms were reported. Studies were only included if they were reported in English, German or French. In addition, references from identified papers and three specified reviews were screened.

### Study selection

Randomised controlled trials (RCTs) that compared hypnotherapy with an untreated waiting-list control in patients with psychosomatic disorders were eligible for inclusion. Studies could provide concomitant standard medical care to either treatment group, but could not combine hypnotherapy with another form of psychotherapy. In the review, patients had to meet the criteria for somatoform disorder according to the International Classification of Diseases (ICD-10), or have a physical disorder or physical condition in which psychological or behavioural factors played a major role. Studies of patients with cancer, viral infections or warts were excluded.

The review classified hypnotherapy as classical, modern, mixed or unknown (criteria used for this classification were reported). Most of the included studies evaluated classical hypnotherapy. The most commonly used hypnotherapy elements were symptom-oriented suggestions, self-hypnosis and relaxation. The participants had a wide range of conditions: tinnitus, insomnia, enuresis, asthma, gastrointestinal problems, stress, chronic pain, osteoarthritis, chronic headache, conversion disorder, dermatitis and hay fever. Most of the studies were in adults; others were in children, mixed age groups and patients of unknown age. The majority of studies used individual sessions and were set in out-patient departments. The number of treatment sessions, where reported, ranged from 1 to 12.

The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

### Assessment of study quality

The authors did not state that they assessed validity. However, they did comment on the lack of use of validated outcome measures across the included studies.

### Data extraction

For each study, the standardised mean treatment difference (Cohen's *d* effect size) was calculated for each outcome measure for the reported first post-treatment time period and an average effect size calculated. Thus, each study only one treatment effect was provided.

The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction.

### Methods of synthesis

One study with an outlying high difference in effect sizes between treatment groups was excluded from the meta-analysis. An average overall effect size (*d*<sup>+</sup>) with standard error was calculated as the average of the weighted trial level

effect. Statistical heterogeneity was assessed using the  $\chi^2$  statistic. Cluster analysis was used to identify homogeneous treatment groups. Weighted analysis of variance was used to examine the influence of gender, age group, setting, patient group and type of hypnosis. Regression analysis was used to examine the influence of the number of treatment sessions. Correlations between treatment outcome and suggestibility reported in individual studies were summarised. Publication bias was assessed using a funnel plot. The number of studies required to reduce the effect size to a specific value (fail-safe N) was calculated.

### Results of the review

Twenty-two RCTs (n=1,091) were included in the review and 21 in the meta-analyses.

The authors stated that most studies used outcome measures that were of unknown reliability and validity. The mean drop-out rate was 12.2%.

Hypnotherapy was associated with a statistically significant benefit compared with control (d=0.61, defined as medium; p=0.000). Significant heterogeneity was found (p=0.00024). An additional 56 studies would be required to reduce this effect size to 0.20 (fail-safe N). The funnel plot suggested the absence of larger studies with larger effect sizes.

The cluster analysis identified three clusters at the 5% significance level which were statistically homogeneous (studies in each cluster were listed).

The weighted analysis of variance found that only the type of hypnotherapy was associated with a significant effect on effect size. Effect sizes were higher for mixed and modern hypnotherapy compared with classical hypnotherapy (d=1.42 for modern, defined as large and d=0.73, defined as medium, for mixed; and d=0.33, defined as medium, for classical).

Three of the 7 studies assessing the correlation between suggestibility and effect size reported a significant positive correlation. Of the remaining 4 studies, three reported a positive correlation and one did not find any correlation.

There was no significant relationship between effect size and number of treatment sessions (p=0.093).

Data on pre- and post-treatment comparisons were also reported.

### Authors' conclusions

Hypnosis is a very effective treatment for patients with psychosomatic disorders.

### CRD commentary

The review question was stated with respect to the study design and intervention. Inclusion criteria for the participants seemed broad and open to varying interpretations, and no inclusion criteria were defined for the outcomes. Several relevant sources were searched and limited attempts were made to minimise publication bias (by searching Dissertation Abstracts) and language bias; the funnel plot was suggestive of publication bias. The methods used to select studies and extract the data were not described, so it is not known whether any efforts were made to reduce reviewer error and bias. Only RCTs were included but, apart from the validity of methods used to measure outcomes, study validity was not assessed and so the results from these studies and any synthesis may not be reliable. There was no information about the outcomes assessed in the individual studies, therefore it is not possible to assess the comparability or relevance of these outcomes. The studies were combined using meta-analysis and various potential sources of heterogeneity were examined. Potential reasons for the high effect size in the excluded study were not discussed. Broad definitions of psychosomatic illness, lack of reporting of review methods, lack of an assessment of study quality, and lack of information about study outcomes make it difficult to comment on the likely reliability of the authors' conclusions.

### Implications of the review for practice and research

Practice: The authors did not state any implications for practice. .

Research: The authors stated that future studies should take account of accurate diagnosis, measurement of outcomes and characteristics of therapists.

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