CRD summary
This meta-analysis evaluated the efficacy of hypnosis for psychotherapeutic and medical applications. The authors concluded that there was medium efficacy for International Classification of Diseases (ICD-10)-codable disorders, and low efficacy for medical procedures. Given the lack of methodological and study details, and potential for error and bias, these results should be treated with caution.

Authors' objectives
To evaluate the efficacy of hypnosis for psychotherapeutic and medical applications.

Searching
MEDLINE and PsycINFO were searched up to 2002; the keywords were reported. The reference lists of retrieved studies were screened.

Study selection

Study designs of evaluations included in the review
For the assessment of clinical efficacy of hypnosis, randomised controlled trials (RCTs) were eligible for inclusion. Comparators had to be either a waiting control, or standard medical treatment with no psychotherapeutic intervention.

Specific interventions included in the review
Studies of hypnosis were eligible for inclusion. Studies were classified as either classic hypnosis (direct suggestions) or modern hypnosis (symbolism, resource use, metaphors and indirect suggestion). Studies of classic hypnosis evaluated direct suggestions for relaxation, imagination or alleviation of symptoms, and direct post-hypnotic suggestions. Studies of modern hypnosis evaluated utilisation of resources, indirect suggestions for relaxation, imagination or alleviation of symptoms, application of metaphors, and symbolisations.

Participants included in the review
Studies of patients with psychological or medical conditions were eligible for inclusion. Studies that were intended to increase performance (such as academic or athletic) were excluded. The included studies were of children or adolescents, adults, or children and adults. Most included both male and females. The patients were out-patients, in-patients, or both.

Outcomes assessed in the review
There were no specific inclusion criteria relating to the outcomes. The outcomes measured in the included studies were treatment of anxiety, somatic complaints, reduction in symptoms or adverse effects of treatments, and smoking cessation.

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

Assessment of study quality
The main clinical meta-analysis was restricted to RCTs. However, no further formal quality assessment was undertaken.

Data extraction
The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction. A mean effect size (the pointbiserial correlation coefficient, r) was calculated for each study by taking the average of the effect sizes from all outcomes in a study. Outcomes reported in different formats (e.g. F- or t-statistics) were converted to r using statistical software. Only outcomes measured immediately before and after treatment were used to compute the effect sizes. For each study, r was used to calculate Cohen’s effect size d.
Methods of synthesis

How were the studies combined?
The effect sizes \( r \) for each study were transformed using a Fisher’s Z-transformation to ensure approximately normally distributed data. These were then pooled in a meta-analysis which was weighted according to the number of patients in each study. Binomial effect size displays (BESD) were calculated from the pooled results (this estimates the difference between the treatment and control groups in the proportions of patients experiencing a benefit). Publication bias was assessed using Rosenthal’s file drawer method.

How were differences between studies investigated?
Heterogeneity was assessed statistically, but the method used was not reported. Subgroup analyses were conducted, with studies grouped in five groups according to the field of application, and the groups compared statistically by analysis of variance.

Results of the review

Fifty-seven RCTs (\( n=2,373 \)) were included in the review. Forty-two studies reported the duration of treatment (mean 3.7 weeks) and 54 studies reported the drop-out rate (mean 6.4%).

Overall (57 studies), the pooled effect size \( d \) was 0.56 (corresponding to a medium effect) and the pooled effect size \( r \) was 0.27 (corresponding to an increase from 37% of patients without treatment to 64% of patients after treatment experiencing alleviation of their symptoms). There was significant evidence of statistical heterogeneity (\( p<0.001 \)).

When grouped by type of application, pooled effect sizes were: for somatic complaints, \( d=0.64 \) and \( r=0.31 \) (17 studies); for smoking cessation, \( d=0.59 \) and \( r=0.28 \) (7 studies); for anxiety, \( d=0.69 \) and \( r=0.32 \) (8 studies); for support of medical procedures, \( d=0.44 \) and \( r=0.21 \) (19 studies); and for hypnosis related to the treatment of cancer, \( d=0.59 \) and \( r=0.28 \) (6 studies). There was no significant difference between these groups, although only 2 groups (anxiety and support of medical procedures) showed homogeneity between the studies within that group.

The test for publication bias showed that an additional 254 studies would be needed to reduce the average effect size from \( r=0.27 \) to \( r=0.05 \).

Authors’ conclusions

There was medium efficacy of hypnosis for International Classification of Diseases (ICD-10)-codable disorders, and a low efficacy for the use of hypnosis in support of medical procedures.

CRD commentary

The research question was clear in terms of the interventions and study design, although vague with respect to the participants. Two relevant databases were searched, but it is unclear whether any language restrictions were applied. The search seems limited and unpublished studies do not appear to have been sought, therefore publication bias may be an issue. The authors assessed publication bias using a statistical method but the implication of the results is unclear. There were no details as to how the studies were selected or the data extracted, thus it is not clear whether attempts were made to minimise error and bias. The authors calculated a mean effect size for each study which was an average of all the outcomes in that study; since not all the results for each individual study were given, it is not clear whether this was appropriate or clinically useful. There appears to be significant heterogeneity between the results of the individual studies, thus the reliability of the pooled results may be questionable. Given the lack of methodological details, lack of study details, and potential for error and bias during the review process, the results of this meta-analysis should be treated with caution.

Implications of the review for practice and research

The authors did not state any implications for practice or research.

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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.