Authors' objectives
To review randomised controlled trials (RCTs) of psychological, pharmacological and combined treatments for bulimia and anorexia nervosa.

Searching
MEDLINE, Psychindex, PsycINFO, Psychological Abstracts and relevant journals were searched up to the beginning of 1994. Only studies published in English or German were eligible for inclusion in the review.

Study selection
Study designs of evaluations included in the review
RCTs were eligible for inclusion in the review.

Specific interventions included in the review
Psychological, pharmacological and combined treatments were eligible for inclusion. For pharmacological studies on bulimia, only studies analysing the effects of antidepressants were eligible for inclusion. The controls in the included studies were medication or psychotherapeutic placebo, waiting list control group, and alternative psychological or pharmacological treatments. The duration of treatment varied from 3 months to over 3 years. The pharmacological dose varied.

Participants included in the review
The patients in the primary studies had to have been diagnosed for bulimia or anorexia nervosa in accordance with the American Psychiatric Association's DSM-III or DSM-III-R criteria. Patients meeting the Feighner criteria for anorexia were also eligible for inclusion in the review.

Outcomes assessed in the review
For bulimia nervosa, the review looked at the response rates (abstinence or reduction rates) of addephagia (bouts of ravenous appetite), regurgitation (vomiting), attitudes towards body and weight, depression, anxiety and body weight. The included studies provided data on addephagia, regurgitation, anxiety, depression and weight.

For anorexia nervosa, the review looked for data on body weight, menstruation, eating behaviour, attitudes towards body and weight, symptoms (addephagia, regurgitation, use of laxatives), psychiatric status (e.g. depression), psychosocial adaptation (psychosocial and sexual development) and life situation.

The included studies only provided sufficient data on the average weight gain and regularity of menstruation.

How were decisions on the relevance of primary studies made?
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.

Data extraction
Two reviewers extracted the data independently using a standardised data extraction form.
The reviewers calculated the post-effect size (treatment versus control group), within-subject pre- and post-effect sizes, and the pre- and follow-up effect sizes for the bulimia studies.

**Methods of synthesis**

**How were the studies combined?**

The bulimia studies were compared by calculating the reduction rates for the outcomes in the individual studies, and by using effect sizes for the individual outcomes. The effect sizes were averaged across intervention types.

For the anorexia studies the average weight gain was calculated for psychotherapy, pharmacotherapy and placebo interventions.

**How were differences between studies investigated?**

The reduction rates for individual studies on bulimia were reported, as were chi-squared tests to detect significant differences between the psychotherapy, pharmacotherapy and combined therapy interventions. The effect sizes were reported separately for psychotherapy, pharmacotherapy and combination therapy. The effect sizes were also reported separately for cognitive-behavioural therapy, behaviour therapy and other psychotherapy interventions; for tricyclic, serotonergic, monoamine oxidase inhibitor and other pharmacological interventions; and for combined psycho- and pharmacotherapy studies, combined psychotherapy studies and combined medication studies. Statistical heterogeneity was assessed in the pooled analyses.

Within the anorexia studies, a chi-squared test was used to check for significant differences between psychotherapy, pharmacotherapy and placebo with regard to the treatment effect and therapy duration.

**Results of the review**

Fifty-three studies met the inclusion criteria: 35 on bulimia and 18 on anorexia nervosa. The bulimia studies provided data from at least 1,182 patients (not all studies reported the number of participants). Altogether, 626 patients took part in the anorexia studies.

**Bulimia nervosa.**

The post between-group effect size for addephagia was 0.80 for psychotherapy (8 studies), 0.67 for pharmacotherapy (13 studies) and 1.00 for combined therapies. For regurgitation, the effect size was 1.04 for psychotherapy (14 studies), 0.40 for pharmacotherapy (8 studies) and 0.62 for combined therapies. For changes in depression, the effect size was 1.03 for psychotherapy (8 studies), 0.29 for pharmacotherapy (10 studies) and 1.29 for combined therapy. The numbers of studies that would be necessary to show that psychotherapy has no effect on these three symptoms (addephagia, regurgitation and depression) were 647, 1,442 and 816 studies, respectively. The equivalent numbers for pharmacotherapy were 883, 312 and 280 studies.

**Anorexia nervosa.**

The average weight gain was 0.62 kg (standard deviation, SD=0.33) after the psychotherapy intervention, 0.93 kg (SD=0.38) after pharmacotherapy and 0.88 kg (SD=0.38) within the placebo control groups. The difference between the conditions was not statistically significant.

The review provided further analyses.

**Authors’ conclusions**

The results confirmed the superiority of psychological interventions for patients with bulimia nervosa in comparison with pharmacological treatment with antidepressants. The few combined treatment studies suggested similar results for the combined psycho- and pharmacotherapy treatment and the psychological treatment alone. There was a lack of RCTs on anorexia nervosa, and the differentiation between psychotherapeutic and pharmacotherapeutic studies was difficult.
CRD commentary
This was a review that compared psycho- and pharmacotherapeutic studies using only high evidence level studies (RCTs). The searches concentrated on published studies and studies not published in German or English were excluded. This leaves room for publication and language bias. However, the review calculated how many studies would be necessary to disprove the evidence. It was unclear exactly how many studies provided data for some of the effect sizes or average values, and whether the studies were equally weighted regardless of their study samples. It was also unclear as to what the psychotherapeutic interventions had actually been compared with in the bulimia studies; the possible interventions for the control groups varied greatly and was for many studies an alternative psychotherapeutic intervention, whereas pharmacotherapy studies used mainly placebos. The distinction between psychotherapy and pharmacotherapy in the anorexia studies was very vague as the patients apparently received multiple psycho- and pharmacointerventions.

The outcome assessment varied greatly between the individual studies and between intervention types, e.g. the pharmacological and the psychotherapeutic studies showed systematic differences in how they measured depression (Hamilton scale versus Beck depression inventory). Only point estimates without confidence intervals were presented for the pooled outcomes. The authors’ conclusions appear reliable with the exception of the generalisation about the similarity between the effects of psychotherapy alone and combined treatment (not demonstrated for all outcomes shown).

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: The authors stated that it would be valuable to analyse high-quality studies without strict control group comparison and random treatment allocation as they mirror clinical reality. Furthermore, a comparison of therapy-manual (published guidelines)-guided treatments for bulimia and treatments using no therapy-manual should be undertaken. Studies of patients with anorexia nervosa are generally missing.

Bibliographic details

PubMedID
9411464

Other publications of related interest

Indexing Status
Subject indexing assigned by NLM

MeSH
Adolescent; Adult; Anorexia Nervosa /psychology /therapy; Antidepressive Agents /therapeutic use; Bulimia /psychology /therapy; Female; Follow-Up Studies; Humans; Psychotherapy; Randomized Controlled Trials as Topic; Treatment Outcome

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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.