Does obesity surgery improve psychosocial functioning: a systematic review

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CRD summary

This review assessed the effects of surgery for obesity on psychosocial outcomes. The authors concluded that mental health and social functioning improve for most people after surgery for obesity. Most of the studies were of a poor quality and so provided poor quality evidence.

Authors' objectives

To assess the effects of obesity surgery on psychiatric syndromes, psychosocial functioning and quality of life.

Searching

Computerised databases including MEDLINE and PsycLIT were searched for studies published in English or German between 1980 and 2000. Reviews were also searched and peer-reviewers were asked for additional studies.

Study selection

Study designs of evaluations included in the review

Prospective and retrospective studies were eligible for inclusion. Prospective studies had to present data for pre- and post-operative baseline assessments. Studies were excluded if they included fewer than 10 patients, did not state criteria for selecting the patients, the drop-out rates were greater than 50%, or they were reports of expert panels or authorities. Case studies and case series were also excluded.

Specific interventions included in the review

Studies of surgery for obesity were eligible for inclusion, whereas studies of intestinal bypass surgery were excluded. The included studies used restrictive surgery (gastric banding and gastroplasty), gastric bypass and biliopancreatic diversion. Some studies reported only one type of surgery; other studies reported on mixed samples. In the small number of comparative studies, the comparisons were surgery versus conventional weight loss treatment, surgery versus no surgery, obesity surgery versus cholecystectomy, and people having surgery versus people of normal weight.

Participants included in the review

Patients who had undergone obesity surgery were included. The studies included both male and female patients.

Outcomes assessed in the review

Studies were eligible for inclusion if they assessed weight change and any of the following: psychological or psychiatric symptoms or disorders measures using expert judgements or standardised tool; quality of life using any standard measure; partnership and sexuality; or econometric data. In addition, the duration of follow-up had to be at least one year.

The review assessed: psychiatric disorders; anxiety and depression; suicide and suicide gesture; eating patterns and eating pathology according to type of surgery; self-esteem; social functioning; partnership and sexuality; employment sick leave and disability pension; general quality of life; satisfaction with surgery; and the relationship between weight loss and psychosocial outcome. Studies assessed outcomes using standardised, structured or semi-structured or clinical interviews, questionnaires, or combinations of these methods.

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. The included studies were graded using the hierarchy of study design classification described by the Agency for Health Care Policy and Research and the Scottish Intercollegiate Guidelines Network, although the authors did not state how the grading was performed. Classification of study design was based on the consensus of six reviewers.

Data extraction

The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction. The extracted data included characteristics of the sample, duration of follow-up, weight loss and outcomes. Results data were extracted for the longest follow-up period reported. The authors calculated the drop-out rate for each study.

Methods of synthesis

How were the studies combined?

The studies were grouped according to outcome and a narrative synthesis was undertaken.

How were differences between studies investigated?

Differences between the studies could be inspected in tables and some differences were discussed in the paper.

Results of the review

Forty studies were included: 1 controlled trial, 26 non-randomised controlled trials and 13 descriptive studies (about 975 patients). The sample size ranged from 16 to 487 patients.

No randomised controlled trials were found.

Psychiatric disorders (8 studies): 3 studies found that psychiatric disorders decreased after surgery,

while 2 studies found no marked change in personality disorder after surgery.

Anxiety and depression (4 studies): 2 studies (including one controlled trial) found that larger weight loss was associated with reduced anxiety and depression. Two studies found significant improvements in generalised or phobic anxiety.

Suicide and suicide gesture (4 studies): there were insufficient data to allow a valid estimate of the suicide rates.

Eating patterns and eating pathology (24 studies): the studies assessed patients undergoing restrictive surgery, gastric bypass and biliopancreatic diversion. The results for exclusively restrictive surgery were inconsistent: 2 studies found a decrease in binge eating, one study found an improvement in eating behaviour and 4 studies found an increase in vomiting after surgery. Following gastric bypass, 3 studies found an improvement in binge eating and 2 studies found an increase in vomiting. Three studies found an improvement in binge eating after biliopancreatic diversion. Two of these and another 4 studies found a decrease in scores on standardised questionnaires of eating behaviour after surgery.

Self-esteem (10 studies): 9 studies found that self-esteem improved considerably after surgery. The other study found that half the patients reported negative effects of surgery.

Social functioning (10 studies): one controlled study found marked improvements in functioning 2 and 4 years after surgery, but the surgery group had increased dysfunction at baseline compared with the control group. Three other studies found improved functioning after surgery in 49, 44 and 62% of the patients, respectively.

Partnership and sexuality (10 studies): 2 studies found improved partnerships, while one found a negative change in maritial relations after surgery. Most of the patients in all 6 studies assessing sexuality reported a more satisfying sex life after surgery.

Employment sick leave and disability pension (6 studies): the controlled study found that there were more days off sick in the first year with surgery, but that at 2 to 4 years there were fewer days sick in the surgically treated group. Three studies found employment increased after surgery by 16 to 22%. Two studies found that 33 and 36% of the patients, respectively, improved their educational or employment status after surgery.

General quality of life (7 studies): one controlled study found that substantial weight loss was associated with improved quality of life after 2 to 4 years. The majority of the patients in the other 6 studies reported an improved quality of life after surgery.

Satisfaction with surgery (11 studies): the satisfaction rates ranged from 72% to 86 to 90%.

Relationship between weight loss and psychosocial outcome (11 studies): the results were generally inconsistent.

Authors' conclusions
Most people have improved mental health and social functioning after surgery for obesity and this leads to improvements in quality of life. There was a lack of evidence supporting the hypothesis that obesity surgery reduces quality of life in people unless there is severe psychiatric co-morbidity pre-operatively.

CRD commentary
The review question was clear in terms of the intervention, participants and outcomes. The inclusion criteria were defined broadly in terms of study design. Full details of the literature search were not reported: the search terms were not stated, the list of databases searched was incomplete, and it was not stated whether attempts were made to locate unpublished studies. The methods used to select the studies were not described, so it is not known whether efforts were made to reduce errors and bias. Validity was not assessed.

The authors calculated the drop-out rates and reported the results in tabular format, but did not discuss the influence of drop-out rates on the results, except for studies reporting suicides. The drop-outs might have had more negative outcomes than those who were followed-up. It was not always clear how many studies assessed each outcome. A narrative synthesis was appropriate given the diversity among the studies. The results for the one controlled study were discussed separately. Differences among the studies were partly discussed. Given the weaknesses of this review, it is difficult to assess the robustness of the authors' evidence.

Implications of the review for practice and research
Practice: The authors stated that centres undertaking obesity surgery should liaise with mental health professionals who have experience in dealing with patients with obesity.

Research: The authors did not state any implications for further research.

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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.