Managing weight in persons living with severe mental illness in community settings: a review of strategies used in community interventions

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CRD summary
The review found that interventions aimed at managing weight in persons with severe mental illness in community settings varied in content and delivery and were associated with modest, but sustained weight loss. Shortcomings in the review process, uncertain quality of the evidence base and wide variations in participants and programmes mean the authors’ conclusions should be treated with caution.

Authors’ objectives
To describe the features and assess the effectiveness of behavioural weight management interventions for people with severe mental illness in community settings.

Searching
MEDLINE, PsycINFO, CINAHL, ERIC and The Cochrane Library were searched to mid 2007 for relevant studies published in English; search terms were reported. Reference lists of retrieved studies and published reviews were searched.

Study selection
Studies of participants with severe mental illness who were living independently in community settings were eligible if they were of basic intervention strategies aimed at weight management or loss as a primary outcome and the findings were reported in a peer-reviewed English-language journal. Studies were excluded if medications aimed at minimising weight gain or to induce weight loss were used.

Participants in some studies were required to be overweight. Interventions ranged from a short conversation between client and health care provider before medication to a 48-session, multifocal enrichment programme that addressed multiple topics. Interventions were conducted individually or in small groups or were a combination of both. Several interventions were derived from pre-packaged programmes. Further details on the interventions were reported in the review.

In some studies, the primary outcome was weight loss (11 studies); in other studies the primary outcome was prevention of weight gain (five studies). Measurement of outcomes included changes in the body mass index (BMI), waist circumference, hip-to-waist ratio and body fat composition. Information on eating or exercise behaviour was collected by various scales and questionnaires and pedometers.

The authors did not state how studies were selected for inclusion in the review.

Assessment of study quality
Participant attrition rates were assessed. It appeared that no other quality assessment was undertaken.

Data extraction
Data were extracted on a coding sheet on weight loss intervention content, delivery and format and change in BMI and weight.

The authors did not state how many reviewers extracted data.

Methods of synthesis
The studies were synthesized qualitatively in narrative format.
Results of the review

Sixteen studies (n=539) were included in the review. Sample sizes ranged from 10 to 70 participants. Participant attrition rates ranged from 0% to 65% (mean 31%). Most studies used convenience samples and appeared to be case series that assessed changes from baseline; some appeared to have separate comparison groups. At least two studies were randomised controlled trials (RCTs). Intervention duration ranged from six to 52 weeks.

Weight loss interventions: (11 studies)

Decreases in BMI ranged from 0.2 points to 4.5 points. Weight reductions ranged from 4.8lbs to 13.2lbs (nine studies). Four out of nine studies reported significant changes in BMI between intervention and control. Five out of nine studies reported significant changes in weight between intervention and control.

Prevention of weight gain: (five studies)

Average weight gain among participants who underwent prevention programmes was 3.9lbs compared with 8.9lbs among participants in control groups (four studies); only one study reported a significant difference between intervention and control.

BMI increases were 0.7 and 0.1 points in participants in prevention programmes compared with 2.0 and 1.0 points for participants in the control groups (two studies); neither study found a significant difference between intervention and control.

Authors' conclusions

Interventions aimed at managing weight in persons living with severe mental illness in community settings varied in content and delivery features. Interventions were associated with modest but sustained weight loss.

CRD commentary

The review addressed a clear research question. The broad inclusion criteria appeared appropriate. A number of electronic databases and reference lists of retrieved studies were searched using appropriate search terms. Eligible studies were restricted to those in English, so language bias could not be ruled out. No attempts were made to find unpublished studies, so publication bias could not be excluded. Included studies had small sample sizes, study design was not reported and it appears that they were not assessed for quality; this suggested that the studies were underpowered and likely to be of poor quality. Methods used to select studies and extract data were not described, so reviewer error and bias could not be ruled out. Participants in the studies varied in age, diagnosis, severity of symptoms and baseline BMI. The authors' descriptions of the features of weight management programmes in the included studies suggested that these interventions varied widely in duration, intensity, scope and delivery. Inadequate information was provided on the nature of the comparisons and the findings in the control groups, which made it difficult to assess the magnitude of the findings.

Major shortcomings in the review process, uncertain quality of the evidence base and wide variations in participants and programmes mean that the authors' conclusions should be treated with caution.

Implications of the review for practice and research

Practice: The authors suggested that more simple weight management programmes may be more effective.

Research: The authors stated that further research was required to identify the most effective and the simplest weight management programmes in people with severe mental illness living in the community.

Funding

Not stated.

Bibliographic details

Galletly CL, Murray LE. Managing weight in persons living with severe mental illness in community settings: a review

Database of Abstracts of Reviews of Effects (DARE)
Produced by the Centre for Reviews and Dissemination
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of strategies used in community interventions. Issues in Mental Health Nursing 2009; 30(11): 660-668

PubMedID
19874094

DOI
10.3109/01612840903131784

Indexing Status
Subject indexing assigned by NLM

MeSH
Anti-Obesity Agents /therapeutic use; Behavior Therapy /methods; Body Mass Index; Community Mental Health Services /methods; Diet, Reducing; Exercise; Humans; Mental Disorders /complications; Menu Planning; Obesity /complications /prevention & control; Patient Education as Topic; Research Design; Self Care; Treatment Outcome; Weight Loss

AccessionNumber
12010001409

Date bibliographic record published
09/06/2010

Date abstract record published
06/04/2011

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.