Effective lifestyle interventions to improve type II diabetes self-management for those with schizophrenia or schizoaffective disorder: a systematic review

Cimo A, Stergiopoulos E, Cheng C, Bonato S, Dewa CS

CRD summary
The authors concluded that lifestyle interventions could be effective in managing type II diabetes in patients with schizophrenia or schizoaffective disorders. The authors’ conclusions reflect the evidence presented, but may be overstated given the limitations of the included studies.

Authors’ objectives
To identify effective lifestyle interventions for people with type II diabetes and schizophrenia and other schizoaffective disorders.

Searching
MEDLINE, PsycINFO, CINAHL and Web of Science were searched up to June 2011. Search strategies were reported. Studies had to be in English, French, Italian or Greek.

Study selection
Eligible studies were of interventions which targeted lifestyle factors associated with diabetes self-care (such as problem-solving skills, education classes, diet, or exercise) for people with a medical diagnosis of type II diabetes combined with schizophrenia or schizoaffective disorder. Eligible studies had to report outcomes of glycated haemoglobin (HbA1c) levels, fasting blood glucose levels, body mass index, or weight loss. Studies that did not exclusively recruit people with schizophrenia or schizoaffective disorder were considered for inclusion.

Half of the included studies recruited participants from psychiatric hospital inpatient settings, and half were in outpatient mental health settings. Inpatient interventions consisted of information about the importance of exercise, enhancing motivation through classes and providing exercise facilities. The outpatient intervention involved weekly sessions providing diet, exercise and other diabetes self-care advice. Interventions took into account the challenges of decreased cognitive ability and reduced motivation in this population by gradually introducing new topics, using memory aids and providing minimal text to simplify messages. The mean age of participants ranged from 44 to 53 years. All studies were conducted in the USA.

Two reviewers independently selected studies for inclusion; disagreements were resolved by discussion with a third reviewer.

Assessment of study quality
The quality of studies was assessed using a 13-item quality checklist covering items of study design, intervention and outcome measurement, and presentation of data and analysis. The quality of the studies was rated as excellent, good or fair (details reported in the paper). Studies were excluded if they were judged to be of fair quality.

Two reviewers independently assessed study quality; disagreements were resolved by discussion.

Data extraction
Data on outcomes including diabetes knowledge, weight loss, body mass index, fasting blood glucose and glycated haemoglobin levels were extracted.

The authors did not state how many reviewers extracted data.

Methods of synthesis
A narrative synthesis was presented.

Results of the review
Four studies were included in the review (two randomised controlled trials, one retrospective case-series and one pre-test post-test study). Three studies were judged to be of excellent quality and one study was judged as good.

Psychiatric inpatient programmes had a positive impact on weight, body mass index and blood glucose measurements (two studies); the decrease in blood glucose was a statistically significant outcome (one study).

The outpatient programme reduced body mass index (P<0.001) and resulted in a larger average weight loss (P<0.001) at six months compared with usual care (one study). Programme participants also increased their diabetes knowledge compared with the control group. Fasting blood glucose and glycated haemoglobin levels were reduced in both groups, but the findings were not statistically significant.

**Authors’ conclusions**
Lifestyle interventions could be effective in managing type II diabetes in patients with schizophrenia or schizoaffective disorders. However, these interventions should be sensitive to the unique challenges associated with type II diabetes and schizophrenia.

**CRD commentary**
The review question and inclusion criteria were clear. Several databases were searched. The restriction of the search to studies in certain languages may have excluded some relevant data. Efforts were made to reduce the potential for error and bias at the study selection and quality assessment stages, but it was unclear if these were applied at the data extraction stage.

While most included studies were judged to be of excellent quality, it was likely that they had some potential for bias. A narrative synthesis was appropriate given the differences between interventions and study designs. However, the synthesis was limited because few results and their statistical significance were provided.

The authors’ conclusions reflect the evidence presented, but may be overstated given the limitations of the included studies.

**Implications of the review for practice and research**
**Practice:** The authors stated the interdisciplinary interventions using the collective expertise of psychiatrists, psychiatric nurses, family physicians and diabetes educators were needed.

**Research:** The authors stated that exploration of the long-term sustainability of diabetes self-management education lifestyle interventions and interventions addressing the young adult population suffering from schizophrenia or schizoaffective disorders and type II diabetes were needed.

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