In patients with type 2 diabetes mellitus, do psychological interventions improve glycaemic control?

**METHODS**

<table>
<thead>
<tr>
<th>Outcomes at 1–6 months</th>
<th>Number of trials (n)</th>
<th>Standardised effect size (95% CI)</th>
<th>Absolute difference (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycated haemoglobin</td>
<td>12 (522)</td>
<td>-0.32 (-0.57 to -0.07)</td>
<td>-0.76% (-1.34 to -0.18)</td>
</tr>
<tr>
<td>Blood glucose</td>
<td>8 (314)</td>
<td>-0.11 (-0.65 to 0.42)†</td>
<td>-0.20 mmol/l (-1.34 to 0.91)†</td>
</tr>
<tr>
<td>Body weight</td>
<td>9 (455)</td>
<td>0.37 (-0.18 to 0.93)†</td>
<td></td>
</tr>
<tr>
<td>Psychological distress</td>
<td>5 (197)</td>
<td>-0.38 (-0.95 to -0.20)</td>
<td></td>
</tr>
</tbody>
</table>

*Abbreviations defined in glossary. Results based on a random effects model.†Not significant.

**MAIN RESULTS**

25 studies met the selection criteria. Pooling of 12 RCTs showed lower HbA1c concentrations in patients who received a psychological intervention than in control group patients (table). Groups did not differ for changes in blood glucose concentration or body weight (table). 3 of 5 RCTs showed reductions in psychological distress with a psychological intervention (table).

**CONCLUSION**

In patients with type 2 diabetes mellitus, psychological interventions improve glycaemic control and reduce psychological distress.

**Commentary**

Improving self care behaviours, glycaemic control, body weight, and psychological distress are important diabetes treatment goals. The review by Ismail et al supports the findings of other meta-analyses showing that behavioural or psychological interventions in conjunction with diabetes education are valuable in achieving improved glycaemic control. However, separating the effect of psychological counselling from the usual behavioural component of education is difficult. The authors differentiate between psychological and educational interventions with a broad interpretation of psychological interventions but a narrow definition of health education that excludes behaviour modification. Thus, in addition to established psychotherapy, studies were included if interventions used goal setting, contracts, problem solving, activity scheduling, or stress management. Several of these are common techniques in diabetes education and have been included in the US National Standards for Diabetes Self-Management Education. Furthermore, only 7 of 25 studies had interventions done by a psychologist or psychiatrist. In the other 18 studies, interventions were mainly done by nurses, dietitians, or multidisciplinary teams and involved intensive education rather than psychotherapy.

People with diabetes often have psychological problems such as depression, disordered eating, and stress. Surprisingly only 4 studies addressed these issues, and only 2 could be included in the analyses that found a reduction in distress.

The meta-analysis found no difference in weight loss between groups, although some participants did lose weight. These studies did not examine weight loss or gain in relation to glycaemic control but results emphasise the need for more innovative behavioural weight loss interventions for people with type 2 diabetes.

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