Effectiveness of structured group education for individuals with type 1 diabetes

Jane Murphy[1], Sarah Woodman[1], Jan Mitchell[2], Maria Jack[2], Joanne Sweet[2], Kate Strickland[1] and Patrick Sharp[2]

[1]*Department of Nutrition & Dietetics, Royal South Hants Hospital, Southampton, UK and* [2]*Diabetes Resource Centre, Royal South Hants Hospital, Southampton, UK*

It is recognised that the provision of high-quality structured education for individuals with diabetes facilitates self-management to attain better glycaemic control[1,2]. Structured education aims to empower individuals and provide the skills, knowledge and confidence to self-manage the condition. There are few studies that have demonstrated the benefits of intensive education programmes by promoting dietary freedom together with intensive insulin training specifically for those with type 1 diabetes. At Southampton a new structured education programme has been introduced for individuals with type 1 diabetes who are taking basal bolus insulin. The programme is provided by the multidisciplinary diabetes team with the aim of meeting National Institute for Health and Clinical Excellence guidance[3] as part of the 'Diabetes for life' programme of education. It is a 10 h education programme that is delivered over three weekly sessions. Preliminary findings on the effectiveness of the programme on biomedical and psychosocial outcomes piloted during 2007 are reported for a group of subjects with type 1 diabetes.

Ten subjects (aged 18–46 years; five men, BMI 21–32 kg/m^2) were invited to attend the programme. Duration of diabetes ranged from 3 to 180 (median 19) months. Blood glycated Hb (HbA$_{1c}$) and plasma cholesterol concentrations were measured as part of routine management before and at 3 and 6 months after completing the programme. The 'problem areas in diabetes' (PAID) scale was used to assess emotional distress specific to diabetes (minimum score 0, not a problem; maximum score 80, serious problem)[4]. Data are given as medians and ranges (minimum to maximum).

The participants completed all three sessions of the education programme. The emotional impact of having diabetes based on the PAID scale was significantly reduced from 32 (range 10–59) to 14 (range 4–48) after completing the programme (Wilcoxon; $P < 0.01$). HbA$_{1c}$ was 9.6 (range 6.5–12.4) % before starting the programme. After 3 months there was a trend towards a reduction in HbA$_{1c}$ (8.6 (range 6.4–13.1) %) but it was not significantly different from that observed before the programme (Friedman repeated measures; $P > 0.07$). HbA$_{1c}$ decreased in all but one participant at 3 months and was reduced by >1% in half the group. After 6 months a further decrease was observed in only two participants but values were similar to or lower than that observed for the group at baseline (9.4 (range 6.7–11.8) %). There was no association between the changes observed from PAID scores and HbA$_{1c}$. Before the programme plasma cholesterol concentrations were 5.0 (range 3.2–5.6) mmol/l and remained unchanged at 3 months (3.7 (range 2.7–6.1) mmol/l; Wilcoxon; $P > 0.5$).

These data show that all participants felt better able to cope with managing their diabetes after attending this programme. This finding would suggest that structured education is more likely to encourage and support individuals with type 1 diabetes to take responsibility for the day-to-day control of their condition. Almost all participants achieved some improvement in glycaemic control during the initial period after attending the programme. The findings indicate that ongoing support and reinforcement of the principles of self-management is recommended within ≥ 6 months of completing the programme. This programme with planned follow-up sessions continues to be offered to individuals both within the local population and around the Southampton area. Further work needs to extend these observations and compare the findings with traditional approaches for managing type 1 diabetes as a control group.

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