

Social-cognitive predictors of adherence and stress in a group-based Type 2 Diabetes prevention intervention

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Background

Type 2 Diabetes (T2D) is an increasing public health problem. Lack of physical activity and high energy foods lead to obesity, which is a major risk factor of T2D. Lifestyle changes leading to weight-loss may be effective in preventing the onset and defer the development of T2D. Adhering to lifestyle change interventions may support weight-loss.

Aim of the study

Examine social-cognitive variables and chronic stress associated with adherence to T2D prevention intervention in natural settings.

Methods

Participants with overweight and prediabetes were recruited from six European and two overseas countries (n=2,223). Intervention consisted of an initial 8-week weight-loss and 148-week weight-maintenance phase for those who lost $\geq 8\%$ body weight.

Participants were divided afterwards into three groups: ‘weight-loss not achieved’, ‘weight-loss achieved, but intervention not completed’, and ‘weight-loss achieved and intervention completed’. Using logistic regression associations between social-cognitive variables and adherence were assessed.

Results

Overall model was significant ($\chi^2_{(66)} = 315.5$; $p \leq .001$; Nagelkerke $R^2 = .187$). Compared to intervention completers, “weight-loss non-achievers” were likelier to report higher chronic stress ($p \leq .001$), living in a single adult household with children ($p = .021$), and non-Caucasian ethnicity ($p \leq .001$). “Weight-loss achievers but non-completers” were likelier to report higher chronic stress ($p = .026$), and being married ($p = .048$), but had lower beliefs of physical activity as measure to maintain weight-loss ($p = .025$).

Conclusions and implications

Socio-demographic variables and chronic stress appear to be associated with attrition to weight-loss and maintenance intervention. These results may help community nurses to identify individuals less likely to benefit from formal T2D prevention interventions.