Low-income groups and behaviour change interventions: a review of intervention content and effectiveness

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CRD summary
This review of interventions aimed at promoting smoking cessation, healthy eating and/or physical activity in low-income adults found evidence that behavioural change interventions can be effective, although the results of included studies were mixed. The authors’ conclusions follow from the evidence presented, but the lack of validity assessment in the review suggests that the conclusions should be treated with caution.

Authors' objectives
To describe the evidence base for the effectiveness of health behaviour interventions targeting low-income groups with the aim of reducing smoking or unhealthy eating, or increasing physical activity.

Searching
The authors searched 21 electronic databases (including MEDLINE, EMBASE, PsycINFO and others) from January 1995 to September 2006 using search terms related to low-income populations and selected health behaviours (smoking cessation, healthy eating and physical activity). Additional studies were sought by contacting experts and screening reference lists of included studies. Only English-language studies were sought.

Study selection
Studies of interventions aimed at promoting smoking cessation, healthy eating and/or physical activity in adults from low-income groups were eligible for the review. Studies were required to have a concurrent control group, with or without randomisation, and to report relevant behavioural outcomes. Included studies were performed in North America and Europe (including the UK). The interventions used varied widely and incorporated between four and 19 different techniques. Participants had a low income, lived in a low-income area or were in receipt of benefits. Studies were screened for inclusion by one reviewer with a random 10 per cent of the sample being checked by a second reviewer.

Assessment of study quality
The authors did not state that they assessed validity.

Data extraction
Data were extracted by one reviewer with a random 10 per cent sample being checked by a second reviewer; any discrepancies were resolved by discussion. Interventions were classified using a published list of techniques and two additional techniques were identified.

Methods of synthesis
Studies were described and synthesised narratively with an emphasis on factors associated with the effectiveness or ineffectiveness of interventions.

Results of the review
Thirteen studies were included in the review: eight (n = 3,796) were randomised and five (n = 4,930) were non-randomised, but with a concurrent control group. Follow-up ranged from 24 weeks to five years. Four out of seven interventions had a positive effect on smoking, four of six had a positive effect on healthy eating and one of four had a positive effect on physical activity. Effective interventions tended to involve fewer techniques than ineffective interventions. Techniques that appeared to be associated with effective interventions were providing information about consequences of the behaviour and others' views of it, and prompting people to form intentions to change and set goals for change.

Authors' conclusions
There was evidence that behaviour change interventions can be effective in low-income groups, but the small number
of studies found meant that the results should be treated with caution.

**CRD commentary**
This review had broad but clear inclusion criteria for interventions, participants and study designs. The search was broad, but limited to studies published in English and relevant studies could have been missed. The authors did not attempt to locate unpublished studies or assess the risk of publication bias. Some effort was made to reduce the risk of errors and bias in study selection and data extraction, although checking a sample of decisions is less effective than involving two independent reviewers. Validity of the included studies was not assessed, which meant that the reliability of the included studies and the synthesis derived from them was uncertain. Adequate details of included studies were presented in the report. A narrative synthesis was appropriate in view of the heterogeneity of the included interventions and outcomes. The authors' conclusions follow from the evidence presented, but the lack of validity assessment in the review suggested that the results should be treated with caution.

**Implications of the review for practice and research**
Practice: the authors did not state any implications for practice.

Research: the authors stated that further research was needed to assess the effectiveness of behaviour change interventions in different social groups, including comparing the same intervention across different groups and different interventions in the same group.

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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.