

Expert testimony

Expert:

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Testimony:

This expert testimony, to be presented to the 'prevention of pre-diabetes' Programme Development Group, is based on the sources cited at the end of this paper.

Low-income groups and interventions to promote physical activity and healthy diet – a review of interventions

Interventions to change health-related behaviours have potential to increase health inequalities.

A review (published in 2009) investigated the effectiveness of interventions specifically targeting low-income groups to reduce smoking or increase physical activity and/or healthy eating. Intervention content was coded by component technique and theoretical basis.

13 papers met the inclusion criteria of the review. Interventions were heterogeneous, comprising 4–19 techniques. Nine interventions had positive effects, seven resulted in no change and one had an adverse effect. Effective interventions had a tendency to have fewer techniques than ineffective interventions, with no evidence for any technique being generally effective or ineffective. Only six studies cited theory relative to intervention development, with little information about how theory was used and no obvious association with intervention content or effect.

Suggestive findings from this review included that more focused interventions involving a small set of techniques may be more effective than interventions combining a large number of different techniques, possibly due to increasing the likelihood of inconsistent effects across larger numbers of interventions. This highlights the need to monitor the fidelity of intervention delivery. The second suggestive finding is that the most common techniques — providing information, facilitating goal setting and prompting barrier identification — may be helpful for low income groups and that such techniques may be working additively.

The review concluded that behaviour change interventions, particularly those with fewer techniques, can be effective in low-income groups, but highlights the lack of evidence to draw on in informing the design of interventions for disadvantaged groups.

Culturally appropriate health education for Type 2 diabetes in ethnic minority groups – a review of interventions

A review (Hawthorne et al 2010) using Cochrane Collaboration methods investigated whether culturally appropriate health education is more effective than 'usual' health education for people with diabetes from ethnic minority groups.

A systemic review included RCTs of a specified diabetes health education intervention, and a named ethnic minority group with Type 2 diabetes. A narrative review was also conducted.

Hawthorne et al (2010) reported, "HbA(1c) showed an improvement at 3 months [weighted mean difference (WMD) -0.32%, 95% confidence interval (CI) -0.63, -0.01] and 6 months post intervention (WMD -0.60%, 95% CI -0.85, -0.35). Knowledge scores also improved in the intervention groups at 6 months (standardized mean difference 0.46, 95% CI 0.27, 0.65)." Few studies had long term follow-up and were heterogeneous in design and outcomes reported.

The authors reported that culturally appropriate health education was more effective than 'usual' health education in improving HbA(1c) and knowledge in the short to medium term. They were unable to draw conclusions on the effects of key elements of interventions or of potential cost effectiveness

Maximising the cross-cultural validity of health promotion interventions for use in UK ethnic minority – a “realistic evaluation”

The evaluation used four methods. The preliminary findings (reported in a poster by Liu et al 2010) include:

- A systematic overview of high level evidence found that few made ethnic-specific recommendations, no subgroup analyses.
- A systematic literature review noted that a majority of interventions were developed for African-Americans and that some interventions involved adaptation to faith-based settings. The authors noted the importance of working with community at early stages of intervention development.
Qualitative interviews with experts, who have delivered adapted interventions in ethnic minority populations, found that delivery of intervention and advice may be tailored to families rather than individuals and that outreach workers with mix of skills and backgrounds should be involved.
- Synthesis of study components using 'realistic evaluation' identified adaptations to target multiple components (individual, family, community) and consider differing contexts (location, age, gender).

Key references:

S Michie, K Jochelson, W A Markham, C Bridle. Low-income groups and behaviour change interventions: a review of intervention content, effectiveness and theoretical frameworks. *J Epidemiol Community Health*. 2009;63:610-622.

This is currently available without charge via:

<http://jech.bmj.com/content/63/8/610.full>

Hawthorne K, Robles Y, Cannings-John R, Edwards AG. Culturally appropriate health education for Type 2 diabetes in ethnic minority groups: a systematic and narrative review of randomized controlled trials. *Diabet Med*. 2010;27(6):613-23.

Related Cochrane review (2008) available without charge to UK-based users via:

<http://mrw.interscience.wiley.com/cochrane/clsystrev/articles/CD006424/frame.html>

Liu, J.J., Davidson, E., Bhopal, R., Netto, G., Johnson, M., White, M. and A Sheikh. (2010) Modifying smoking cessation, physical activity and dietary interventions for south Asian, African-Caribbean and Chinese-origin populations: preliminary findings. Edinburgh: University of Edinburgh. Poster presented at Centre for Population Health Sciences Research Day, 2nd April 2010.