

## Young people and healthy eating: a systematic review of research on barriers and facilitators

Shepherd J, Harden A, Rees R, Brunton G, Garcia J, Oliver S, Oakley A

### Authors' objectives

To evaluate the effectiveness of healthy eating interventions aimed at young people. The following abstract focuses on this evaluation. In the same report, the authors explored intervention processes, and the views and experiences of young people in the UK on this topic. The evaluations were subsequently combined in a cross-study synthesis.

### Searching

MEDLINE, EMBASE, PsycINFO, ERIC, the Social Sciences Citation Index and CINAHL were searched for eligible published and unpublished English language studies. Specialist registers were also searched, including Bibliomap, HealthPromis, the Health Scotland Library Service catalogue, the Cochrane Database of Systematic Reviews and HTA. Searches were conducted for the full range of publication years available at the time of searching and the search terms were reported.

### Study selection

#### Study designs of evaluations included in the review

Studies that employed a comparison or control group reporting pre- and post-test data, or which (in a non-randomised controlled trial) were equivalent on baseline measures, were eligible for inclusion in the review.

#### Specific interventions included in the review

Studies of interventions where the main focus was the promotion of healthy eating, and which aimed to promote changes at the community or societal level, were eligible for inclusion. All the included studies focused on healthy eating, but some incorporated physical activity promotion and other lifestyle issues. Many interventions contained information-giving or education; some were based on Social Learning Theory while others involved environmental modification, practical skill development, media input, and parental contribution. In general, teachers, peers, and community members delivered the interventions.

#### Participants included in the review

Studies in which the main focus was on young people aged between 11 and 16 years were eligible for inclusion. Of particular interest were those from socially excluded groups. Those diagnosed with an illness or disability (for example, anorexia, diabetes, obesity or a learning disability), or who were residents of young offenders' institutions, were excluded. The majority of the included studies were conducted in school settings in the USA; one was UK-based. There was some coverage of ethnic diversity but limited consideration of socially excluded groups.

#### Outcomes assessed in the review

Studies measuring behavioural and/or physical health status outcomes were eligible for inclusion. Knowledge, behaviour, clinical risk factors and practical skills (for example, the ability to read food labels) were amongst the outcomes assessed, frequently using self-reported measures. Follow-up ranged from immediately after the intervention, to a yearly assessment over a 5-year period.

#### How were decisions on the relevance of primary studies made?

Two independent reviewers screened the studies for potential inclusion in the review.

#### Assessment of study quality

The validity assessment was carried out using criteria relating to intervention definition, study design, participation rate, pre- and post-intervention data, and attrition. Studies were classified as 'not sound' or 'sound'; the latter required a minimum of baseline equivalence of a comparison or control group, the provision of pre- and post-intervention data for all individuals or groups, and reporting on all outcomes. The authors did not state how the validity assessment was performed.

#### Data extraction

Other than that a standardised framework was used, the authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction.

#### Methods of synthesis

##### How were the studies combined?

The studies were presented in a narrative synthesis.

##### How were differences between studies investigated?

Differences between the studies were explored in the text.

#### Results of the review

Twenty-two studies were considered potentially eligible for inclusion. Seven studies (describing 6 interventions) were used in the synthesis. These comprised 5 randomised controlled trials (RCTs) and 2 non-randomised controlled trials. Where reported, sample sizes ranged from 5 to 16 schools, 4 to 6 classes, or 95 to 1,755 pupils.

The 7 studies were substantially heterogeneous and showed mixed results in terms of effectiveness. A range of interventions focusing on environmental adaptation, disease risk reduction, peer-delivered education, and a mixture of strategies involving media input and parental involvement had varying success in improving knowledge, clinical risk factors, target behaviours and other outcomes. The stronger evidence appeared to be in relation to young women rather than young men, and with interventions involving a 'whole school' approach.

#### Authors' conclusions

There is a lack of good-quality, UK-based evaluations of healthy eating interventions. Some benefits

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were evident for increased healthy eating behaviour, particularly amongst young women. There is currently no clear message about what specific intervention factors are successful for different groups of young people.

### **CRD commentary**

The review question was clear and supported by well-defined inclusion criteria. The search strategy displayed comprehensive coverage of electronic databases and specialist registers. There were attempts to obtain unpublished material. There is a potential risk of language bias given that the retrieval of studies was limited to those written in English. A validity assessment was carried out and the higher-quality studies were included in the synthesis. The included studies were described extensively, and the narrative synthesis of substantially heterogeneous studies was appropriate. There was no information on the data extraction or quality assessment processes; it is therefore difficult to judge reliability. The authors acknowledged that some important issues arose in this area, such as problems with the reliability of the outcome measures and with measuring the sustainability of the intervention effects. Their conclusions reflect the evidence presented but, given the limitations described, their overall reliability is unclear.

### **Implications of the review for practice and research**

**Practice:** The authors stated that a 'whole school' approach (involving the entire school community), tailored to the recipients' needs and comprising environmental and educational initiatives, should be considered a potentially effective method of implementing healthy eating interventions.

**Research:** The authors stated that rigorously conducted UK-based RCTs (including cluster designs), incorporating long-term follow-up and integral process evaluations, are required.

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### **Bibliographic details**

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### **Original Paper URL**

<http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=258>

### **Other publications of related interest**

Shepherd J, Harden A, Rees R, Brunton G, Garcia J, Oliver S, et al. Young people and healthy eating: a systematic review of research on barriers and facilitators. *Health Educ Res* 2006;21:239-57.

### **Indexing Status**

Subject indexing assigned by CRD

### **MeSH**

Adolescent; Adolescent Nutritional Physiological Phenomena /education; Body Image; Child; Child Nutritional Physiology Phenomena /education; Child, Preschool; Culture; Europe; Food Habits; Food Preferences; Health Education; Health Planning; Health Policy; Health Promotion /methods; Life Style; Nonverbal Communication; Peer Group; Persuasive Communication; Social Identification

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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.