

Interventions that involve parents to improve children's weight-related nutrition intake and activity patterns: what nutrition and activity targets and behaviour change techniques are associated with intervention effectiveness?

Golley RK, Hendrie GA, Slater A, Corsini N

Options

Print

PDF

Set alert

Fast track

PubMed record

Original research

Share

|

**You need to be logged in
to see your keywords**

CRD summary

This review concluded that energy intake and food choices were more likely to be targeted in effective interventions. Intervention effectiveness was favoured when behaviour change techniques spanned the spectrum of behaviour change process. These conclusions should be interpreted with caution given the limited quality of most included studies.

Authors' objectives

To determine whether food and activity behaviours targeted and behaviour change techniques employed in family-targeted interventions were associated with intervention effectiveness.

Searching

The following databases were searched for studies in English from 1998 and 2008: PubMed, Web of Science, The Cochrane Library, PsycINFO and Dissertation Abstracts. Search terms were reported. Reference lists of relevant publications were screened.

Study selection

Prospective studies of any duration that compared a researcher-introduced intervention versus a control group and involved at least one parent or caregiver (with or without their children) were eligible for inclusion. The eligible studies had to assess at least one outcome in children aged one to 18 years and measure outcomes at baseline and post intervention. The interventions had to include a nutrition or activity component plus a behaviour change component aimed at increasing physical activity, decreasing sedentary activity, changing nutrition intake or weight status in children.

The primary outcomes were changes in weight status, lifestyle behaviours (nutrition and activity level), and metabolic health markers in children. Secondary outcomes were determinants of children's lifestyle behaviours; parent and child interactions such as feeding activity; and food availability and predictors of behaviour change.

All included studies evaluated family-targeted interventions. Most studies recruited pre-school or primary school children, with two studies including girls only. The duration of interventions ranged from six to twelve months. Most interventions were delivered through individual counselling, group sessions and written materials. Most of the studies targeted nutrition behaviours. Behavioural change techniques were used by most studies, providing instruction and general information, as well as prompting intention formation and barrier identification.

One reviewer assessed studies for inclusion.

Assessment of study quality

The quality of studies was assessed using the Effective Public Health Practice Project quality assessment tool. The criteria assessed were selection bias; study design and allocation bias; confounders; blinding; data collection methods; withdrawals; intervention integrity; and analysis. The quality of studies was judged as 'strong' if four criteria were rated strong, 'moderate' if less than four criteria were rated strong and one criterion was rated weak, and 'weak' if at least two criteria were rated weak.

Two reviewers performed quality assessment, with any disagreements resolved by discussion.

Data extraction

Data were extracted on mean and standard deviation for continuous outcomes, and event rates for dichotomous outcomes.

Two reviewers independently performed data extraction.

Methods of synthesis

The studies were combined in a narrative synthesis, supported by accompanying data tables.

Results of the review

Seventeen studies were included in the review. The total number of participants was not reported. Two studies were judged as strong quality, five studies as weak quality, and ten studies as moderate quality.

Eleven out of the seventeen studies reported results in favour of family-targeted intervention effectiveness. Of six studies that evaluated an obesity prevention intervention, three studies reported that the intervention was associated with a significant benefit on weight status. One study targeting coronary risk factors reported a significant decrease in the cholesterol levels of children in the intervention group.

Only two out of the ten studies reported that interventions were associated with a significant dietary change for reduced fat intake. Four studies reported that interventions aimed at reducing energy intake to prevent excess weight gain were associated with a significant benefit. Only one out of the six studies (including a measure of physical activity) showed that interventions were associated with a significant change in the activity level in children.

Of eleven studies with results favoured intervention effectiveness, six studies included behaviour change techniques covering the spectrum of behaviour change process. A number of behavioural change techniques appeared more frequently in effective interventions, including prompt barrier identification,

restructure home environment, prompt self-monitoring and prompt specific goal setting.

Authors' conclusions

Energy intake and food choice were more likely to be targeted in effective interventions. Intervention effectiveness was favoured when behaviour change techniques spanned the spectrum of behaviour change process.

CRD commentary

The review inclusion criteria were clear. A number of relevant sources were searched. Efforts were made to find both published and unpublished studies, which minimised the potential for publication bias. Only studies in English were included in the review, which may have increased the risk of language bias. Steps were made to minimise biases and errors in the processes of data extraction and quality assessment. However, only one reviewer assessed studies for inclusion, so reviewer error and bias could not be ruled out.

Appropriate criteria were used to assess study quality; most studies were found to be of limited quality. Given the clinical heterogeneity of included studies for study population and outcomes, a narrative synthesis was appropriately employed.

The authors' conclusions should be interpreted with caution given the limited quality of most included studies.

Implications of the review for practice and research

Practice: The authors stated that this review provided a guidance to make informed decisions on how best to use resources in family-targeted interventions to support and engage parents. The authors made a number of recommendations for practitioners to design and implement behavioural change interventions involving parents.

Research: The authors stated that future researchers in this research area should improve reporting of study quality and design, as well as intervention content.

Funding

National Health and Medical Research Council (NHMRC), Australia, Postdoctoral Fellowship and Public Health Training Award.

Bibliographic details

Golley RK, Hendrie GA, Slater A, Corsini N. Interventions that involve parents to improve children's weight-related nutrition intake and activity patterns: what nutrition and activity targets and behaviour change techniques are associated with intervention effectiveness? *Obesity Reviews* 2011; 12(2): 114-130

PubMedID

[20406416](#)

Original Paper URL

<http://onlinelibrary.wiley.com/doi/10.1111/j.1467-789X.2010.00745.x/abstract>

Indexing Status

Subject indexing assigned by NLM

MeSH

Adolescent; Adult; Behavior Therapy /methods; Child; Child Behavior /psychology; Child Nutrition Sciences /education; Child, Preschool; Exercise /physiology; Female; Humans; Infant; Male; Obesity /prevention & control /psychology; Parents /education /psychology

AccessionNumber

12011001458

Database entry date

25/05/2012

Record Status

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.