Physical activity promotion through the mass media: inception, production, transmission and consumption

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CRD summary
This review investigated the effectiveness and processes of mass media interventions in the promotion of physical activity. Mass media interventions appear effective in increasing message recall, moderately increasing physical activity knowledge and changing short-term physical activity in some groups of people. Although there were a number of methodological problems with this review, the overall conclusions appear appropriate.

Authors' objectives
To update a previous review investigating the effectiveness of physical activity interventions using mass media (see Other Publications of Related Interest), and to assess identified studies for evidence of an understanding of the inception, transmission and reception of mass media interventions. Only the first part of the objective will be discussed in this abstract.

Searching
The literature published since a previous review of the same topic (see Other Publications of Related Interest) was searched. PsycINFO, MEDLINE, ISI Web of Science, and SPORTDiscus were searched from 1997 to December 2002; the search terms were stated. Identified literature was handsearched in a form of ‘citation chasing’. The included studies were restricted to those written in English.

Study selection
Study designs of evaluations included in the review
Studies with a pre-test post-test design were eligible for inclusion. Descriptive studies that did not analyse the media campaign were excluded.

Specific interventions included in the review
Any studies that evaluated a physical activity intervention that used some aspect of community-wide mass media were eligible for inclusion. Interventions that relied on interpersonal communication, that were work- or school-based campaigns, or that were small groups, were excluded. All included studies used differing combinations of the following mass media interventions: television programmes and advertising, radio programmes and advertising, direct mail, newspapers, posters, leaflets, campaign events and merchandise, incidental news coverage, magazines, public service announcements, publicity tours, resource manuals, videos, postcards, websites, books, information lines, and workplace flyers. The targets of the included interventions were: leisure and lifestyle as part of cardiovascular disease reduction; five sessions of physical activity with a total of 150 minutes a week; five 30-minute sessions of moderate physical activity per week; tackling weight problems with small, permanent changes in diet and exercise; stage change; and a move from preparation to action stage and/or remaining in action stage with 30 minutes of walking each day.

Participants included in the review
The authors did not state any inclusion or exclusion criteria for the participants, other than that they should be a whole community. The populations included were: five cities in central California; 25- to 60-year-olds in New South Wales; 16- to 74- year-olds in England; groups with a high prevalence of obesity in England; four cities in southern Ontario; 50- to 65-year-olds in a West Virginia city; and 18- to 65+ year-olds in an Arizona town.

Outcomes assessed in the review
The authors did not state any inclusion criteria for the outcomes. The main outcomes were message recall, changes in knowledge, and changes in levels of physical activity.

How were decisions on the relevance of primary studies made?
The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

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

**Data extraction**
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 combined in a narrative.

How were differences between studies investigated?
Differences between the studies in terms of their sample, design and activity target were detailed in the report.

**Results of the review**
Eight pre-test post-test studies were included in the first part of the review. The number of participants included was not provided.

Overall, the eight studies showed that mass media interventions influenced short-term recall of physical activity messages. Changes in knowledge were noted in certain demographic groups. Six studies investigated changes in physical activity, and all but one found an increase in physical activity post intervention. The increases in physical activity tended to be in small subgroups, or for specific behaviours such as walking.

**Authors' conclusions**
Mass media interventions were effective in increasing short-term physical activity message recall and in producing more moderate changes in physical activity knowledge. The interventions may produce short-term increases in physical activity in some subgroups of people.

**CRD commentary**
The aim of the review was set out reasonably clearly, but the stated inclusion criteria only referred to the intervention and study design, thus increasing the risk of bias in the selection of papers. Several electronic databases were searched and handsearches were performed; this may have helped reduce the chance of missing relevant articles. However, the exclusion of all non-English studies might have introduced language bias and some studies might have been missed. The authors did not state how the studies were selected for inclusion, or how the data were extracted. If these tasks were carried out by one reviewer only, this may have introduced bias. No validity assessment was carried out, and only studies with a pre-test post-test design were included.

There was little information on the participants in the primary studies: it was unclear how large the population samples were, and no participant characteristics were provided. This makes it difficult to generalise the results to a wider population. The narrative synthesis seemed appropriate given the heterogeneity among the studies, particularly in terms of the theoretical framework and media methods used. Although there were a number of methodological problems with this review, the authors' overall conclusions appear appropriate.

**Implications of the review for practice and research**
Practice: The authors did not state any implications for practice.
Research: The authors stated that a more complex form of media analysis (including investigations of the inception, production, transmission and consumption of campaigns) is needed if the effectiveness of media campaigns, and associated message recall or behaviour change, are to be fully understood.

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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.