



Reviewing the results of systematic reviews:

The effects of psychosocial interventions in cancer and heart disease

Mark Rodgers¹, Debra Fayter¹, Gerry Richardson², Gill Richie¹, Amanda Sowden¹, Robert Lewin³

¹Centre for Reviews and Dissemination, ²Centre for Health Economics, ³Department of Health Sciences

THE UNIVERSITY of York, UK

Objectives

To conduct a review of existing systematic reviews, in order to:

- Examine the types of psychosocial interventions that have been used with heart disease or cancer patients.
- Evaluate the effects of such interventions on physical outcomes, psychological outcomes or health care usage.
- Evaluate the methodological quality of the systematic reviews conducted in this area.

Methods

A systematic search of 12 electronic databases (from inception to November 2002) and additional sources was undertaken.

Reviews had to meet the following inclusion criteria:

- Design: A review of the literature employing specific systematic methods, as defined by CRD's Database of Abstracts of Reviews of Effects (DARE).¹
- Interventions: One or more psychosocial interventions, such as cognitive behaviour therapy (CBT), anxiety/depression management, stress management, counselling, family therapy, education or psycho-education, health education, relaxation techniques, social support (outside of family), or any behavioural interventions designed to modify risk factors such as diet, exercise or smoking. Psychotropic medications, exercise training alone and 'black-box' interventions such as cardiac rehabilitation or interventions that include medical care such as secondary prevention through medication change were excluded.
- Participants: Patients with any form of heart disease or cancer were included. Reviews that examined multiple conditions were excluded unless they presented their findings separately for patients with heart disease and/or cancer.
- Outcomes: Psychological outcomes such as depression or anxiety, health status such as morbidity or mortality, or health care usage such as admission to care, consultant episodes and acute events such as surgery.

Two reviewers independently carried out inclusion screening. Data extraction and quality assessment were carried out by one reviewer and checked by a second.

Quality was assessed using a checklist adapted from seven criteria used for DARE and were used to evaluate the review process, including reporting of search strategies, inclusion/exclusion criteria, details of included studies, quality assessment, synthesis of included studies and the use of multiple reviewers to minimise error.

The included reviews were combined in a narrative synthesis. Results were grouped by condition (heart disease or cancer) and, where possible, by type of intervention within each condition.

Results

Of the 32 completed systematic reviews of the effects of psychosocial interventions identified, 21 related to cancer, eight to heart disease, and three included primary studies that contained both groups of patients.

The reviews covered a broad range of psychosocial interventions, such as group therapy, individual therapy, family therapy, counselling, psychoanalysis, education, stress management, cognitive behavioural therapy, relaxation, imagery, meditation training, emotional expression, biofeedback, coping skills training, problem solving training, social skills training, cognitive/attentional distraction, hypnosis, desensitisation, rehearsal modelling, and contingency management. Most of the reviews had methodological shortcomings with only nine reviews (28%) meeting more than four of the seven quality criteria (see table).

Cancer

In general, the reviews of psychosocial interventions with cancer patients indicated that psychosocial interventions are likely to produce some beneficial effect on psychological distress or emotional adjustment of patients. The effects on specific outcomes such as depression are unclear. Findings relating to the relative effects of different treatment settings and paradigms (e.g. CBT vs. counselling) were inconsistent. The findings of reviews investigating physical outcomes (such as immune outcomes, survival) were generally inconclusive.

Heart disease

Six of the eight heart disease reviews favoured the adoption of psychosocial interventions into cardiac care. Those reviews that investigated psychological outcomes generally reported some benefit of psychosocial interventions for the reduction of psychological distress and modification of type A behaviour. There is some limited evidence about the positive effects of psychosocial interventions on morbidity and mortality. There is equivocal evidence on the effects of psychosocial interventions on heart disease risk factors. Educational interventions may influence some behavioural (e.g. exercise and diet) and clinical (blood pressure and mortality) outcomes in heart disease.

Table to show the quality of systematic reviews of psychosocial interventions in heart disease and cancer (to be considered systematic, reviews had to meet a minimum of two specific criteria)

Number of quality criteria met (maximum = 7)	Number of systematic reviews identified			Total
	Cancer	Heart disease	Both cancer and heart disease	
2	2	1	0	3
3	6	1	1	8
4	9	2	1	12
5	3	1	1	5
6	1	2	0	3
7	0	1	0	1
Total	21	8	3	32

Conclusions and implications

Despite identifying 32 completed systematic reviews that drew on a pool of more than 500 primary studies, across the two conditions, it proved difficult to draw conclusions regarding the effects of specific psychosocial interventions on any specific population or even specific outcomes. Despite ostensibly answering the same question, these reviews substantially differed from one another. Definitions of what constitutes a 'psychosocial' intervention varied widely, and there was little apparent consensus as to what represents an appropriate 'control' group (e.g. no intervention, 'usual care' or attention-matched controls) and participants' baseline measures for outcomes of interest were not dealt with consistently (e.g. only some considered participants' level of depression or anxiety at baseline).

Implications for practice:

One advantage of systematic reviews is their potential to resolve conflicting results that often arise across primary studies. However, conflicting results across reviews gives rise to difficulties for anyone involved in decision-making, including patients, health professionals and policy makers. At present, a reader hoping to discover the effects of a specific psychosocial approach based on a systematic review of the research literature is likely to encounter quite different results depending upon which review they read.

Implications for research:

A wealth of primary studies evaluating the effects of psychosocial interventions currently exists. Though this literature has been extensively reviewed, this project indicates that the reviews produced are of limited utility. There is an opportunity (particularly in cancer) to undertake a systematic review of the literature on psychosocial interventions that both uses transparent methods and is based upon a clearly defined research question that is appropriate to the needs of decision makers.

References

1. <http://www.york.ac.uk/inst/crd/darehp.htm>