Mind and cancer: does psychosocial intervention improve survival and psychological well-being?

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Authors' objectives
To assess the effectiveness of psychosocial intervention for improving survival and psychological well-being in people with cancer.

Searching
MEDLINE (from 1966 to June 2001) and PsycINFO (from 1974 to June 2001) were searched; the search terms were reported. The authors also checked the reference lists of identified papers for additional studies.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials (RCTs) comparing psychosocial treatment(s) with no psychosocial treatment were eligible for inclusion. The duration of the interventions and follow-up periods varied widely between the studies; details of these were tabulated in the review.

Specific interventions included in the review
Studies of any psychosocial intervention were eligible for inclusion if they sought to improve survival or psychological well-being in people with cancer and included an untreated control group. The exact interventions varied widely and no overarching definition was provided. Examples of interventions included in the review were: individual counselling as needed over a 1-year period; weekly group therapy for one year, plus instruction in self hypnosis to control pain; supportive group sessions led by a facilitator for 3 months and undertaken without leadership for a further 3 months; cognitive-behavioural group therapy weekly for 8 weeks and a family night followed by 3 monthly sessions; three home visits and 5 telephone calls by specialist nurses over a 4-week period following surgery; individual psychotherapy every second day or more frequently if needed during hospital stay; a clinic tour, general information, and question and answer session with an oncology counsellor; and tape recordings and written material giving concrete information or instructions for self care and coping during radiation therapy. The full list of interventions was reported in the review.

Studies of interventions aimed exclusively at reducing adverse effects from treatment were excluded.

Participants included in the review
Studies were eligible for inclusion if they included people with cancer, aged 18 years or older. The participants included in the review were heterogeneous with respect to gender, cancer type, stage of disease and other treatments received. Data on the types and stages of cancer in each primary study were tabulated in the review.

Outcomes assessed in the review
Studies that assessed survival or psychological well-being were eligible for inclusion. Psychological well-being was defined in several ways, including anxiety, depression, mood, pain intensity and quality of life. A number of different scales were used to measure the outcomes; details of these were tabulated in the review.

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. The authors reported that two papers were excluded from the review because they provided inadequate descriptive information and because other writers had questioned the integrity of the data.
Data extraction
The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction. Data on the cancer site, number of participants, intervention, duration of follow-up and outcomes were extracted.

Methods of synthesis
How were the studies combined?
The authors provided a narrative synthesis of the findings and tabulated details of the individual studies. They did not report a formal method for assessing publication bias, but described potential publication bias in their conclusions.

How were differences between studies investigated?
The authors did not report a formal method for assessing differences between the studies. They described sources of heterogeneity and tabulated details of the individual studies.

Results of the review
Forty-three RCTs were included in the review. There were 4,300 participants in 38 studies (range: 24 to 375); the number of participants in the remaining 5 studies were not reported. Eleven studies included a second psychosocial intervention control as well as a no-treatment control.

There were 8 studies (1,246 participants) of survival. Four of these studies found that psychosocial interventions improved survival in people with cancer. The other four found no survival benefit.

All 43 studies assessed the effect of psychosocial interventions on well-being. Thirty of these studies assessed well-being within one month of completing the intervention. The results were inconsistent, with more recent studies tending to find no benefits. All 5 studies limited to people with psychological distress found that psychosocial interventions significantly improved anxiety, depression, or both.

The most effective intervention strategies and the optimal timing of the intervention remained uncertain. There was some evidence that psychological education had a benefit (8 out of 12 studies found a positive effect).

The authors suggested that publication bias might have influenced the findings, especially as 15 of the 25 studies that assessed anxiety and depression immediately after the intervention found a significant positive effect. Some studies with negative effects may not have been published.

Authors' conclusions
The trials did not provide conclusive evidence of the effectiveness of psychosocial interventions in cancer. There may be several reasons for this: only some of the interventions affect prognosis or well-being, and only in certain groups; the effect was weak, therefore inconsistent results were found in the generally small samples; or the effect was diluted by including unselected patients rather than being restricted to those in need of psychological support.

CRD commentary
The review question was clearly specified but was very broad, thus requiring general inclusion and exclusion criteria for the patients and interventions. The search strategy was conducted in two major databases, but the authors do not appear to have included unpublished studies or those published in languages other than English. It was difficult to assess the methodological rigour of the review because the authors did not report the methods used to assess the relevance and validity of the studies, or how the data were extracted for the review, or what quality checks were implemented. The narrative synthesis of the findings was appropriate given the varying interventions, cancer types and outcome measures in the primary studies.

The authors' conclusions are supported by the data presented. However, because the interventions and types of participants and cancers included in the review were so broad, it was difficult to generalise or draw implications for
clinical practice.

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

Practice: The effect of psychosocial interventions on survival and well-being in people with cancer may be weak. However, the authors suggested that these interventions may have more subtle benefits that are difficult to measure, but which may justify psychosocial programmes in the clinical treatment of people with cancer.

Research: The authors suggested that large-scale studies with sound methods, in which eligible patients are screened for distress, are needed. Large samples are needed to enable the evaluation of a possibly small effect. Future studies on survival could address possible mechanisms underlying an improved prognosis.

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