Effects of creative arts therapies on psychological symptoms and quality of life in patients with cancer

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CRD summary
This review concluded that creative arts therapies could reduce the symptoms of anxiety, depression and pain, and improve quality of life, for patients with cancer, after treatment, but less so at follow-up. Due to some concerns with the review methods, these conclusions should be treated with caution.

Authors' objectives
To evaluate the effects of creative arts therapies, on psychological symptoms and quality of life, in patients with cancer, during treatment and follow-up.

Searching
The authors searched ERIC, PsycINFO, PubMed and Web of Science for studies, in English, from database inception to January 2012. The Internet was searched using Google Scholar. Search terms were reported. Reference lists of retrieved articles were scanned.

Study selection
To be eligible, studies had to be randomised controlled trials (RCTs) that compared creative arts therapies with no treatment, being on a waiting list, usual care, or placebo. Eligible patients had cancer of any type or stage, at any age, and were of either gender. Patients could be receiving any type of cancer treatment or long-term follow-up, or receiving palliative care. Interventions could occur in an in-patient or out-patient setting, for groups or individuals. Creative arts were defined as art, dance, drama, music, writing, or a combination of these. Outcomes could be measures of anxiety, depression, pain, fatigue or quality of life, assessed before treatment, and during or after treatment, or both.

In the included trials, the average age ranged from 48.6 years to 56.9 years. The percentage of patients who were female ranged from 56.6 to 100. The most frequent cancers were those of the blood and breast. Other forms of cancer were colorectal, gynaecological, head and neck, kidney, lung, and prostate. Treatments were surgery, chemotherapy, radiotherapy, hormone therapy, and combination therapy.

The authors did not state how many reviewers selected the studies for the review.

Assessment of study quality
Trial quality was assessed independently, by two authors, using a 15-item scale, for randomisation, sample selection, quality of outcome measures, and statistical analysis.

Data extraction
Effect sizes for each outcome were calculated by subtracting the mean change in the control condition, from the mean change in the treatment condition, and dividing the difference by the pooled standard deviation of the scores before the intervention. Adjustments were made for small samples.

The authors independently extracted the data and resolved discrepancies by consensus.

Methods of synthesis
Trial effects were weighted by the inverse of their variance, and synthesised using a random-effects meta-analysis. Separate analyses were conducted for the outcomes of anxiety, depression, fatigue, pain and quality of life; overall, and by assessment after treatment, or assessment at follow-up. Heterogeneity was investigated through the Q statistic and I².

Publication bias was assessed in funnel plots and statistically. Primary effect moderators were included in a weighted, least squares, multiple regression analysis. Further analyses were reported.
Results of the review
Twenty-seven trials were included in the review (1,576 patients). There was no evidence of publication bias.

Compared with control, creative arts therapies significantly reduced anxiety after the intervention (WMD 0.28, 95% CI 0.11 to 0.44; I²=59.4%), but not at follow-up. Depression was significantly reduced after the intervention (WMD 0.23, 95% CI 0.05 to 0.40; I²=21.5%), but not at follow-up. Pain was significantly reduced after the intervention (WMD 0.54, 95% CI 0.33 to 0.75; I²=69.3%) and at follow-up (WMD 0.59, 95% CI 0.41 to 0.77; I²=41.8%). Fatigue was not reduced after the intervention and at follow-up. Quality of life was improved after the intervention (WMD 0.50, 95% CI 0.25 to 0.74; I²=21.4%), but not at follow-up.

Further effect modifiers were reported.

Authors’ conclusions
Creative arts therapies could reduce the symptoms of anxiety, depression and pain, and improve quality of life, for cancer patients after treatment, but the effects were reduced at follow-up.

CRD commentary
This review was based on clearly defined inclusion criteria, but the definition of a creative arts therapy was very broad. Searching encompassed a range of sources, but only publications in English were eligible, raising the possibility of language bias. Unpublished material was not eligible, but the authors found no evidence of publication bias. Trial quality was assessed, but was not used to inform the results.

Data extraction and quality assessment were undertaken by more than one reviewer, which should minimise bias, but it was unclear if study selection was conducted in the same way. Meta-analysis may not have been appropriate, given the diversity of the interventions. There was evidence of statistical heterogeneity in several of the analyses, which was explored by analysis of potential moderating variables.

The conclusions should be treated with caution given these concerns.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: Well-designed trials should document fully the features of the creative arts therapy and adhere to reporting guidelines. They should examine the relationship between neurobiological and psychological measures of cancer symptoms, and investigate the similarities, differences and interactions between different creative arts therapies, psychosocial interventions, and drugs to improve psychological symptoms.

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