Psychosocial interventions for adolescent cancer patients: a systematic review of the literature
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CRD summary
This review concluded that there was insufficient evidence to determine effectiveness of psychosocial interventions aimed at improved coping with cancer-associated problems in adolescent patients. Despite a number of limitations in the review methods, the authors cautious conclusions are likely to be valid and their recommendations for further research appropriate.

Authors' objectives
To determine the efficacy and effectiveness of psychosocial interventions for adolescent cancer patients.

Searching
Scopus, PubMed, PSYNDEXplus and PsycINFO were searched from 1980 to January 2008 for studies published in English. Search terms were reported. Journals, including Journal of Pediatric Psychology, Pediatric Blood and Cancer and Psycho-oncology, were searched by hand. Reference lists of all relevant studies and reviews were examined for additional studies.

Study selection
Controlled studies or studies that used a pre/post test design and that reported a quantitative evaluation of a psychological intervention aimed at improving psychological and social functioning or reducing psychological distress in adolescents (>10 years) with cancer were eligible for inclusion. Studies were excluded if they assessed medication, music or art therapy or programs for survivors that focused on psycho-educational components. Interventions including general health-oriented lifestyle changes and behavioural modifications (including smoking cessation) were excluded, as were studies aimed at improving pain or dealing with medical procedures (studies that were designed to focus on dealing with very specific situations).

Three quarters of the included studies were carried out in USA. Study participants varied in terms of the type, site and stage of tumour. Most studies focused on patients who were receiving or had finished treatment; only one study focused on newly diagnosed patients.

Where reported, participant age ranged from 12 to 29 years and the proportion of males ranged from 35% to 57%. Half of the studies used interventions that were based on a theoretical model (such as Adolescents’ Self-Sustaining Model). Most studies used group sessions that varied from a single 40-minute session to several weekly one hour to 1.5 hour sessions; one study used two 90 minute individual counselling sessions. Intervention aims varied between studies (further details were presented in the review). Interventions were compared with different control groups, including a wait list control group, an attention control group and a usual support group. Types of outcomes assessed varied. All studies collected data via self-report questionnaires completed by the adolescents. Baseline outcome assessments were carried out between one day and 78 months after diagnosis.

Only one reviewer assessed studies for inclusion.

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

Data extraction
The authors stated neither how data were extracted for the review nor how many reviewers performed the data extraction.

Methods of synthesis
The findings from the studies were discussed in a narrative.

**Results of the review**

Only four studies (n=129) fulfilled the inclusion criteria. Sample sizes ranged from 14 to 78 participants.

Overall, the findings from studies were mixed. One controlled study of individual counselling sessions in 21 participants aged 15 to 25 years reported a significant improvement in the intervention group compared with a wait list control group. Improvements were reported in the overall level of distress and other outcomes, including knowledge of sexual issues, body image and anxiety about psychosexual issues. The remaining two controlled studies and one pre/post test study reported no significant changes related to psychological distress or psychosocial functioning.

**Authors’ conclusions**

There was insufficient evidence to determine the effectiveness of psychosocial interventions aimed at improved coping with cancer-associated problems in adolescent patients.

**CRD commentary**

This review assessed a clear research question with broad inclusion criteria for types of participants and outcomes. A number of resources were searched for relevant studies. Only studies published in English were eligible for inclusion in the review, which suggested that there was some risk of publication and language biases. Only one reviewer selected studies for inclusion, so there was a risk of reviewer error and bias. It was unclear how many reviewers extracted the study data. Study quality was not assessed, but given the types of studies included in the review it was possible that data were not reliable. Given particularly the variation between participants, interventions and outcomes in the studies, the authors choice of a narrative synthesis appeared appropriate; further details on outcome effects and significance would have been helpful. Overall, despite a number of limitations in the review methods, the authors cautious conclusions are likely to be valid and their recommendations for further research appropriate.

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

**Practice:** The authors did not state any implications for practice.

**Research:** The authors stated that further research that used large homogeneous sample sizes and interventions specifically designed for adolescents were required to investigate effectiveness of psychosocial interventions for adolescent cancer patients. Such studies should use standardised and validated outcome measures and follow patients over the length of their care from diagnosis to survival.

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