

What research evidence is there for the use of art therapy in the management of symptoms in adults with cancer? A systematic review

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Abstract

Objective: Common psychosocial difficulties experienced by cancer patients are fatigue, depression, anxiety, and existential and relational concerns. Art therapy is one intervention being developed to address these difficulties. The purpose of this research was to assess and synthesize the available research evidence for the use of art therapy in the management of symptoms in adults with cancer.

Methods: A literature search of electronic databases, 'grey' literature, hand searching of key journals, and personal contacts was undertaken. Keywords searched were 'art therapy' and 'cancer' or 'neoplasm'. The inclusion criteria were: research studies of any design; adult cancer population; and art therapy intervention. There were no language or date restrictions. Data extraction occurred and quality appraisal was undertaken. Data were analyzed using narrative synthesis.

Results: Fourteen papers reporting 12 studies met the inclusion criteria. Symptoms investigated spanned emotional, physical, social and global functioning, and existential/spiritual concerns. Measures used were questionnaires, in-depth interviews, patients' artwork, therapists' narratives of sessions, and stress markers in salivary samples. No overall effect size was determined owing to heterogeneity of studies. Narrative synthesis of the studies shows art therapy is used at all stages of the cancer trajectory, most frequently by women, the most common cancer site in participants being breast.

Conclusion: Art therapy is a psychotherapeutic approach that is being used by adults with cancer to manage a spectrum of treatment-related symptoms and facilitate the process of psychological readjustment to the loss, change, and uncertainty characteristic of cancer survivorship. Research in this area is still in its infancy.

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Introduction

The arts and arts therapies play a significant role in cancer care, providing avenues for communication and expression and enhancing quality of life (QOL) [1–13]. Art therapy is a form of psychotherapy that uses the expressive qualities of visual mark making within the context of a therapeutic relationship to effect personal change with the aim of increasing well being and psychological functioning. Art therapists undergo at least 2 years postgraduate training to qualify as state registered health professionals in the United Kingdom [14].

Within medical settings, art therapy is often recognized as a mind–body intervention and included under the umbrella of complementary

and alternative medicine [6]. However, it does not replace standard medical treatment and is usually delivered as part of a multidisciplinary approach. Empowerment seems to be a key outcome of art therapy [15]; it is also a significant attribute of self-care and self-management for those living with cancer [16].

This systematic review explores art therapy's contribution to adult cancer care by focusing on its use in the management (or relief) of symptoms. The definition of 'symptoms' is broad since cancer disrupts so much, from body and self-image, social and sexual relationships [17] to employment [18]. Thus the consequences—or symptoms—of cancer are extensive and can cause significant problems for daily life, during treatment and afterwards. In

this review art therapy is defined as an intervention delivered by someone with a qualification to practise art therapy. This relates to the state regulation of the profession in the United Kingdom, and the accreditation and licensing of art therapists in the United States where the title 'art therapist' cannot be used without undergoing a recognized training. Anthroposophical art therapy [19] is also included, although its training is not widely recognized in the United Kingdom and United States.

This review aims to identify and evaluate studies of art therapy in cancer care, and to assess and synthesize the evidence for its use in the management of symptoms in adults with cancer.

Method

The heterogeneity of study designs within the art therapy research field meant that the Cochrane Collaboration approach was inappropriate for this review. Instead, a more suitable critical appraisal tool was chosen [20,21]. This provides a method for assessing disparate data where quality is graded as good, fair, poor, or very poor based on descriptors given for nine characteristics. These cover both internal and external validity and each is given a numerical score with the maximum possible being 360.

All stages of the systematic review process, from the development of the research question, search strategy, data extraction, critical appraisal, and narrative synthesis of the results were directed by researchers experienced in systematic reviews (A. M. and S. P.) and undertaken by M. W., with differences in opinion being resolved through discussion.

Search strategy

A search strategy was developed with maximum sensitivity. No restrictions were placed on publication date or language, and a variety of search methods were used, both computerized and manual.

The keywords art therapy (exp ART THERAPY/OR exp ART THERAPISTS/) AND ((neoplasm* OR cancer* OR oncolog* OR tumour* OR tumor* OR carcinoma* OR melanoma* OR malignan* OR leukemia* OR leukaemia* OR carcin* OR metastas* OR sarcoma*)) OR palliative care were searched for in titles and abstracts of studies in the following databases: EMBASE; MHIC; PsychINFO; CINAH; MEDLINE; AMED; and BNI. In addition, search terms were adjusted to look for references in other electronic databases and web sites, such as openDOAR, INDEX TO THESES at British Library, The National Library for Health, INTUTE, ERIC, ASSIA, and Scie.org.uk. Hand searching of relevant journals and personal contacts were made with key authorities in the area to

identify eligible studies. Citations lists of retrieved studies were examined to check for any studies that may have been overlooked. Additionally, authors of relevant theses were followed up by email or by using the search engine Google Scholar to locate their publications. Endnote software was used to organize citations. The search began on September 23, 2008, and concluded on December 1, 2008.

Inclusion criteria

The inclusion criteria were: research studies of any design; adult cancer population; and art therapy intervention.

Retrieval strategy

See Figure 1.

Data extraction

The following features were extracted from each study: location; design; participants (characteristics, recruitment, and consent); intervention (model, content, duration, frequency, delivered by, and setting); symptoms investigated; outcome measures; results reported (and omitted); methodological issues; and clinical comments.

Data quality appraisal

The hierarchy of research designs outlined by Centre for Reviews and Dissemination [22] provided a schema for the clustering of retrieved studies, with qualitative studies grouped at Level Four. Quality appraisal occurred using the system outlined earlier [20].

Effect sizes [23]

These were calculated for randomized controlled trial (RCT) studies where sufficient data were given [24–26].

Results

See Table 1.

Fourteen papers [24–38] reporting 12 different research projects met the inclusion criteria, and three presented different aspects of the same RCT using the same sample [25,26,34,35].

Symptoms

Studies investigated psychological symptoms, some including physical symptoms and some the meaning of experiences of art therapy for participants. Significant improvements in symptoms of distress, depression, fatigue, QOL, general health, and

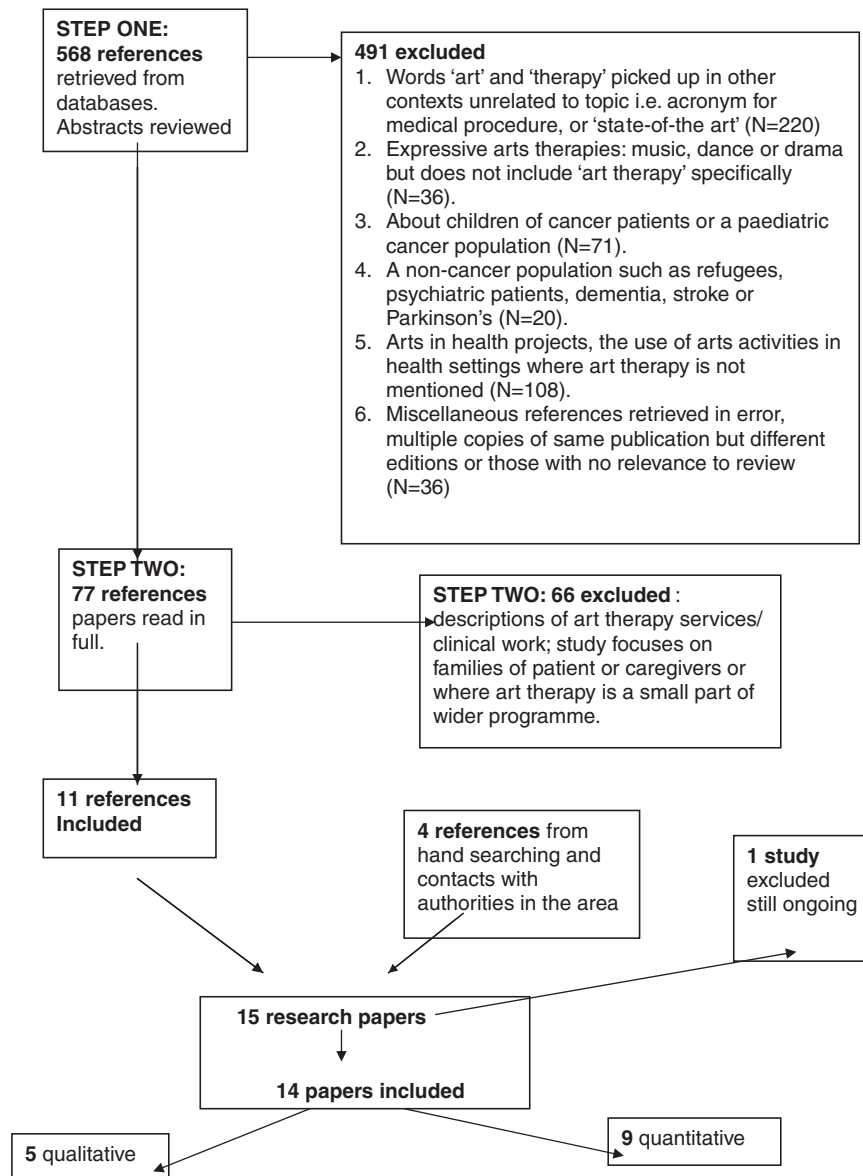


Figure 1. Retrieval strategy

coping resources were reported, though effect sizes for the variables assessed in the RCT studies [24–26] were mostly small and medium. Large effect sizes were detected in relation to anxiety, social coping, and overall QOL (measured by WHO BREF and subscales of Profile of Mood States); however, negative studies were also published. Bar-Sela *et al.* [27] saw no change in the anxiety levels of the intervention group, which they attribute to the absence of anxiety disorders at baseline. Puig *et al.* [24] found their intervention had no effect on emotional expression or spirituality. Visser *et al.* [37] found no change between pre- and post-intervention scores, but a retrospective assessment of QOL did reach statistical significance.

Participant characteristics

Most participants were female (total = 402) and the most common cancer site was breast ($N = 196$).

Four studies focused on women with breast cancer [24,25,28,32]. There were seven studies open to both sexes, with more than one-third of participants being men ($N = 101$ from 291 participants). Getting a definitive picture of the disease stage of participants was difficult owing to inadequate reporting. Recruitment occurred at all stages of disease progression, with participants in eight studies still undergoing cancer treatment.

Setting

Most studies occurred in an outpatient ($n = 7$) or inpatient setting ($n = 3$). Collie *et al.*'s study [28] involved interviewing women about earlier experiences so no data on setting was given, and Virago and Dunkley [36] do not report setting.

Table 1. Study characteristics and quality appraisal

Study Author Country	Design	Participants	Intervention	Outcome measures ^a	Results where applicable effect size (ES) ^b Cohen's 'd'	Quality appraisal Score ^c and HL ^d
Oster et al. [34,35] Sweden	Mixed methods RCT paper reports the qualitative data control group: Yes Power calculation: not reported.	N = 42. Female Intervention n = 20, control n = 22, 37–69 years. Women with non-metastatic breast cancer starting 5 weeks of post-operative radiotherapy.	Model: phenomenological Content: five individual sessions of art therapy following a semi-structured programme. Duration and frequency: once weekly to coincide with radiotherapy.	Thematic interviews guided by specific questions developed by the project team	Three different interpretative repertoires identified in women's narratives: (1) gendered boundaries, (2) breast cancer as a challenge and a learning opportunity, and (3) stoicism in the face of adversity.	Score: 355 HL: 1
Svensk et al. [26] Sweden	As above. Paper reports the quantitative data	N = 42 as above.	As above.	Assessment points: (1) before randomization, (2) 2 months later, and (3) 6 months later. WHOQOL-BREF Swedish version EORTC QLQ-BR23, version 1.0.	Significant improvements in QOL and general health in favor of art therapy at assessment point 3 where ES $d = 1.05$. Significant improvements in intervention group (G) between points 1 and 3 in QOL, general health, psychological, and physical health. EORTC (QLQ)-BR23: positive differences in domains of body image and future perspectives in IG, but no significant differences between the intervention and control groups. ES at point 3: body image $d = 0.37$, sexual function $d = 0.23$, sexual enjoyment $d = -0.12$, future perspectives $d = 0.48$, side effects $d = -0.45$, breast symptoms $d = -0.24$, arm symptoms $d = -0.16$, and hair loss $d = -0.49$. Significant increases in scores in the social domain and total scores of CRI for intervention group indicating that art therapy had significantly improved their coping resources.	Score: 350 HL: 1
Oster et al. [25] Sweden	As above. This paper reports the quantitative data	N = 41. Intervention n = 20, control n = 21, as above.	As above.	Quantitative data: CRI.	ES total: $d = 0.53$. ES 5 domains of CRI cog $d = 0.24$, soc $d = 0.71$, emo $d = 0.32$, physical $d = 0.48$, and S/P $d = 0.12$. Statistically significant reductions in 8/9 ESAS symptoms following intervention, nausea showed no change. Significant differences in most domains (scale items) measured by STAI-S. (This analysis was undertaken by the authors and presented as a bar chart of 20 feelings, despite the STAI-S providing a measure of state anxiety as a single dimension).	Score: 340 HL: 1
Naimis et al. [33] United States	Quantitative: observational before and after study. Participants completed questionnaires immediately before and after the art therapy intervention. Control group: No Power calculation: not reported.	N = 50. 29 female; 21 male 19–82 years. In-patients: leukemia n = 14; lymphoma n = 15; breast n = 4; GI/colorectal n = 4; gynecological n = 2; and other malignancies n = 11.	Model: not stated. Patients were given lists of materials available from a cart outside their room. Content: individual session. Goals identified by patients ranged from distraction to investigating deep psychological issues. Duration and frequency: one session of art therapy that lasted one hour.	(ESAS) STAI-S. Cancer symptoms investigated pain; tiredness; nausea; depression; anxiety; drowsiness; appetite; well-being; and breathlessness.		Score: 335 HL: 4

Monti et al. [32] United States.	Quantitative: RCT Control group wait-list Power calculation: 80%. Sample size determined as 96 but increased to 110, since attrition higher than expected.	N = 111. Female Intervention n = 56, control n = 55, 26–82 years and 4 months. Two years of original cancer diagnosis (or recurrence), breast n = 51, gynaecol n = 19, hematol n = 13, neurol n = 5, rectal n = 6, and other n = 17.	Model: MBAT mindfulness-based art therapy. Content: 8-week MBAT group structured program that followed standardized MBAT manual (unpublished) and includes homework. Duration and frequency: 8 consecutive weekly meetings of 2 1/2 hr each.	SCL-90-R; psychological distress Medical Outcomes Study Short-Form Health Survey (SF-36); health-related QOL GSI	Statistically significant decrease in symptoms of distress and significant improvements in aspects of health-related QOL (SF-36) in MBAT group when compared to wait-list control group. Significant change in GSI. Data suggest intervention group felt more rested and less fatigued.	Score: 330 HL: 1
Collie et al. [28] Canada and United States	Qualitative: interviews.	N = 17. female with breast cancer, 37–82 years.	Art making (AM) and art therapy (AT) are ways for meaning making and aim of study was to illuminate this. Definitions: AM is without a therapist, AT is with a therapist.	Narrative descriptions of each interview and story/lines identified.	AT and AM: (1) promote emotional expression, gaining access to unexpressed feelings; (2) permit trust in what has been expressed; (3) facilitate personalized expression and resistance to disempowering discourses; (4) bring sense of personal worth; (5) provide intrinsic motivation; and (6) enable a feeling of connection with larger whole, maintaining a sense of purpose and meaning beyond the self.	Score: 330 HL: 4
Gabriel, et al. [29] United States	Qualitative: thematic analysis of patients' artwork. Comparisons between the images made by patients with an art therapist and those made when alone.	N = 9. 4 female; 5 male; 30–61 years. Bone marrow transplant in-patients.	Model: supportive psychotherapy. Content: individual sessions using 'The Creative Journey', ten projects focusing on living with cancer. Duration and frequency: twice weekly for duration of admission. Each session lasted about one hour.	Number of images produced (42 by 9 patients, average 4.6 pictures/patient). Thematic analysis (feelings evident in the images) and process analysis (changes in patients' moods) undertaken by team (art therapists plus supervisor).	Art therapy used for: (1) strengthening positive thoughts; (2) resolution of distressing emotional conflicts; (3) deepening awareness of spiritual and existential issues; and (4) facilitation of communication with relatives and friends. Study suggests art therapy may benefit those who need to resolve relationship difficulties especially with family members, and those wishing to explore their vulnerability and their spirituality.	Score: 325 HL: 4
Bar-Sela et al. [27] Israel	Quantitative: quasi-experimental. Patients attending less than four sessions assigned to the comparison group. Power calculation: not reported.	N = 60. 47 female; 13 male; 25–72 years. Intervention n = 19, control n = 41. In- and outpatients: breast (n = 22), gastrointestinal (n = 14), and 'other cancers' (n = 24).	Model: anthroposophical art therapy. Content: intervention in a group setting. Patients worked at individual workstations. Duration and frequency: ongoing service occurring once weekly. Patients decided on time spent in sessions ranging from a few minutes to more than an hour.	HADS BFI: completed at baseline and before every session.	Depression HADS: statistically significant improvement from baseline in the intervention group. Anxiety HADS: no change between baseline and end point of study. Fatigue BFI: some improvements seen but did not reach statistical significance.	Score: 265 HL: 3b

Table 1. Continued

Study Author Country	Design	Participants	Intervention	Outcome measures ^a	Results where applicable effect size (ES) ^b Cohen's 'd'	Quality appraisal Score ^c and HL ^d
Pug, et al. [24] United States	Quantitative: RCT Control group wait-list. No report of matching at baseline. Power calculation: not reported.	N = 39. Female with Stage I or II breast cancer within 12 months before entering study, only mean age reported 51.4 years.	Model: positive psychology. Content: individual guided, semi-structured creative arts therapy exercises within a counseling framework. Duration and frequency: 4 sessions in 4 weeks, each session 60 min, except last one of 90 min to complete post-test measures.	EACS POMS: expressions of spirituality inventory revised.	No statistical difference between intervention (IG) and control groups (CG) for emotional expression and spirituality. Significant differences between the IG and CG on POMS scores. Significantly lower scores on tension-anxiety, depression-dejection, anger-hostility, confusion-bewilderment for IG. But for vigor-activity and fatigue-inertia, subscales of POMS no statistically significant differences between the two groups. ES for POMS subscales: A-H $d = -0.52$, C-B $d = -0.54$, D-D $d = -0.83$, F-I $d = -0.31$, T-A $d = -0.51$, and V-Ac $d = -0.11$.	Score: 240 HL: 1
Visser A and Op 't Hoog [37] The Netherlands	Quantitative: observational before-and-after study. Power calculation: not reported.	N = 35. 34 female; 1 male; 21-63 years. Breast $n = 21$, variety $n = 14$. Cancer symptoms investigated QOL well being.	Model: psycho-educational content: group intervention combining art therapy with relaxation, visualization, concentration, and imagery exercises. Focus was 'on coping with their own images and themes concerning living with cancer' p81. Duration and frequency: 8 weekly sessions of 2 1/2 hr each.	EORTC QLQ POMS: experienced meaning of life (described as a standardized questionnaire but no other details). Adapted version of client satisfaction questionnaire for retrospective assessment of course.	Little change found between pre- and post-intervention. Retrospective assessment almost reached statistical significance suggesting participants' QOL had improved after the course.	Score: 230 HL: 4
Gotze, et al. [30] Germany	Qualitative: mixed methods data collected at baseline before the intervention, then again immediately afterwards. Control patients with treatment as usual.	N = 20. F: 19 female; 1 male; 26-62 years. All participants in aftercare with diagnoses of breast, gynecological, and other cancers.	Model: supportive psychotherapy. Content: group program starts highly structured becoming less so. Participants create a book containing topics connected to coping with cancer. Duration and frequency: 22 sessions of 2 1/2 hr each.	Face-to-face interviews after intervention. Cancer symptoms investigated coping with disease QOL social integration.	From qualitative content analysis, five domains were significant: emotional stabilization; deepening and enhancing possibilities of personal expression; personal growth; coping with the disease; and communicative competence.	No quality appraisal possible: English abstract HL: 4

<p>Grukke et al. [31] Germany</p>	<p>Quantitative: preliminary observational case control study. Questionnaires at baseline and 3 months post-recruitment. Control group: patients on ward who did not attend intervention sessions, but no matching. Power calculation: not reported.</p>	<p>N = 45. Intervention n = 21, control n = 24. In-patients of hematology-oncology wards.</p>	<p>Model: not stated but description seems similar to anthroposophical approach.</p>	<p>EORTC QLQ POMS HADS MAC.</p> <p>Authors state improvement in 36 out of 37 'psychometric scales' for intervention group, but deterioration in 32 out of 37 scales for control group, concluding that results show a clear benefit for painting group.</p>	<p>No quality assessment: English abstract HL: 4</p>
<p>Virago and Dunkley [36] Australia</p>	<p>Mixed methods: hermeneutic phenomenological approach taken in analyzing qualitative data. Power calculation: not reported.</p>	<p>Only information given is diagnosis: malignant melanoma less than 4mm treated by surgical incision only. Cancer symptoms investigated: general QOL, stress.</p>	<p>Group art psychotherapy weekly over 6 months. No further details reported.</p>	<p>Pre- and post-session saliva samples ELISA assays. Salivary IgA and IFN-γ, DTH test response MAC HAD COPE EORTC-QLQ-C30 (psychosocial questionnaires). Images and narrative of group art psychotherapy process.</p>	<p>No quality assessment: abstract. Attempts to obtain further details were made but were unsuccessful. HL: 4</p>
<p>Wilson and Morris [38] United Kingdom</p>	<p>Qualitative: analysis of pre- and post-intervention questionnaires.</p>	<p>N = 75. 38 female; 37 male with advanced cancer. Age range: not reported.</p>	<p>Model: psychodynamic. Content: individual sessions. Duration and frequency: not reported.</p>	<p>Content analysis of questionnaires (no further details given).</p>	<p>No quality assessment: abstract contact with authors was made, but no further details available. HL: 4</p>

^aOutcome measures: BFI, Brief Fatigue Inventory; CRI, Coping Resources Inventory; EACS, Emotional Approach Coping Scale; ESAS, Edmonton Symptom Assessment Scale; EORTC QLQ (QOL); European Organisation for Research and Treatment of Cancer quality of life scale; GSI, Global Severity Index; HAD, Hospital Anxiety Depression Scale; MAC, Mental Adjustment to Cancer scale; POMS, Profile of Mood States; SCL-90-R, Symptom Checklist Revised; STAI-S, Spielberger State-Trait Anxiety Index; WHOQOL, World Health Organisation Quality of Life Assessment Instrument.
^bEffect Size Thresholds [23]: Small (0.2); Medium (0.5); and Large (0.8).
^cMethodological Rigour Scoring System [20]: Good (maximum score 360) to Very Poor (minimum score 90).
^dStudy Design Hierarchy Level (HL) [22]: (1) Experimental studies, (2) Quasi-experimental studies, (3) Controlled observational studies, (3a) Cohort studies, and (3b) Case control studies, (4) Observational studies without control groups. NB in review qualitative interviews were assigned a score of 4, and (5) Expert opinion.

Art therapy interventions

This review specified that delivery by a trained art therapist was critical. However, discerning this information was difficult. Two papers reported studies built upon art therapy principles but delivered by non-art therapists. In Gotze *et al.*'s study [30] an artist delivered the intervention, supported by a psychologist and supervised by an art therapist/psychoanalyst; in Puig *et al.*'s study [24] counsellors did it. Two papers did not report who delivered the intervention: Visser *et al.*'s study [37] describes a creative course that includes art therapy, but with no references to the relevant literature on art therapy; the Virago and Dunkley abstract simply states 'art psychotherapy' [36]. The decision to include these four papers followed discussion by the review team. With so few research papers in this topic area, by including studies that explored something of the principles of art therapy, the findings of other retrieved studies might be supported. Seven studies presented interventions delivered by art therapists, at least two being anthroposophical in approach. One study [28] explored participants' experiences post-intervention, so the professional training of therapists was not reported.

In addition to variation in therapists' trainings, there was considerable heterogeneity in model, content, and format for the art therapy interventions. Half the studies reported group sessions; the rest individual sessions and one study reported individuals working alone in a group setting. Length of interventions varied from a few minutes to two-and-a-half hours, as did frequency (from a single session to 22 weeks). Homework was required in one study [32].

Impact on participants' lives

The qualitative studies explored art therapy's impact on the lives of cancer survivors. Investigating how art therapy and art making helped 17 women with breast cancer, Collie *et al.* [28] identified four groups of narratives with the same themes, which they describe as storylines. These constellated around

'...maintaining a sense of a unique, valuable and stable self... there was a strong undercurrent of concern about annihilation of the self -for example, by being reduced to only a cancer patient.' (p. 765)

They propose that the physical act of art making was also significant to participants, because it contributed to the task of meaning making. One storyline, 'Getting a Clearer View' seemed more in narratives about art therapy. This conveyed how art therapy enabled the women to see their experiences more clearly and prompted behavior change.

Gabriel *et al.*'s study [29] likewise compares the experience of art making with and without an art therapist, and found that images made with the

therapist communicated a wider range of emotions and issues. Their thematic analyses of patients' images yielded three themes: positive feelings, distressed moods, and existential/spiritual issues. Process analysis of changes in their participants' moods during art therapy sessions showed substantive shifts. Oster *et al.* [34] differentiated three distinct interpretative repertoires in the narratives of women in their study. They conclude that art therapy became a tool for personal empowerment, used by participants' to 'strengthen' an understanding of their own boundaries in relation to the needs of others. As a consequence, women who had art therapy felt more connected to other people and found social interactions more enjoyable than those in the control group. Content analysis of interviews by Gotze *et al.* [30] identified five significant domains: emotional stabilization; deepening and enhancing personal expression; personal growth; coping with the disease; and communicative competence. Using content analysis of questionnaires, Wilson and Morris [38] found improvements in general well being, motivation levels, abilities to discuss physical and emotional health, and increased global QOL, despite deterioration of participants' overall health. Only one paper reported negative experiences of art therapy and these were minor—relating to premature endings and inadequate follow up—since participants also felt very positive about art therapy [28].

Methodological quality

The 14 papers included in this review varied in design, necessitating the use of two quality appraisal methods (see Table 1). Only ten complete papers were available for full appraisal. Areas of methodological weakness in some studies related to bias and ethics. Many researchers failed to discuss their impact on the research process and participants. Some papers were not clear whether the therapist was also the researcher, although Oster *et al.* [25] ensured that different people took these roles. Only one study reported a power calculation [32] and none reported effect sizes directly. It is possible that with small sample sizes studies showing little change were in fact underpowered to detect any significant differences. Random assignment to intervention and control groups took place in three studies, with two studies operating a wait-list control group. Methodological limitations of the less robust studies related to recruitment, attrition, and follow-up. Follow-up of participants after 6 months was only undertaken by Oster *et al.* [25,26,34].

Discussion

The current research evidence for the use of art therapy in symptom management in adults with

cancer is outlined in Table 1. Symptoms most frequently improved by art therapy were psychological, with accompanying improvements to global QOL and coping. There was some indication of a possible positive effect upon fatigue and tiredness. However, the methodological shortcomings of the studies, including the modest effect sizes seen in the RCT studies, limit the usefulness of these findings beyond indicating where further research is needed.

The heterogeneity of the studies means it is difficult to generalize their findings to other settings or populations. The variations in the model and content of art therapy interventions also cause difficulty in determining efficacy and replicability. When art therapy techniques are embedded in a program along with other techniques, it is difficult to know which variable is causing the effect. There were large variations in length and contracts of sessions, meaning that transferability between patient populations is unlikely; in-patients undergoing bone marrow transplantation, for example, would not be able to sustain two-and-a-half hour sessions for 22 consecutive weeks.

The importance of having a trained art therapist delivering the intervention is raised in this review. Puig *et al.* [24] acknowledge that their adapted art therapy interventions were not the same as those delivered by certified art therapists. This may be a reasonable assertion when compared with Oster *et al.* [25]. Both studies provided a brief art therapy intervention of individual sessions to women with early stage breast cancer. Oster *et al.* found that art therapy (using trained art therapists) improved participants' coping resources and QOL, whereas Puig's results were inconclusive. However, given the limitations of the evidence, no conclusions can be drawn.

Since the participants in most of the studies were also undergoing chemotherapy or radiotherapy, it is worth considering the positive impact of art therapy upon compliance and tolerance of treatment and its side effects.

Although the focus of this review was on symptom management, the narrative synthesis of retrieved studies suggests art therapy offers more than relief. By exploring the resonances between the qualitative studies, a line of argument emerged in the review around the defense and development of selfhood; where cancer threatens to disrupt the survivor's identity, art therapy can be used to counter the challenge.

Oster *et al.* [34] explain the value of art therapy as its 'preferential right of interpretation... which gives the client the power to define the situation' (p. 286). Their qualitative data indicate that art therapy strengthens a sense of personal boundaries in participants. Collie *et al.*'s study concludes that art making and art therapy reinforce a satisfactory sense of self that is permanent, valuable, and unique [28]. Participants' artwork can be understood as

reinforcing or amplifying their perspective and experiences; this is important for those undergoing cancer treatments. Bellizzi *et al.* [39] point out that for some people efforts to restore stability can be very difficult when cancer threatens a continuity of identity. Through strengthening the person (by the fortification of the self) and providing a means of adjusting aspects of self-image art therapy may be used to achieve stability and improve psychological and social functioning (described here as 'recalibrating identity'); thus, demonstrating that personal growth rather than loss can be the consequence of a cancer diagnosis [40].

One feature of this review is the number of studies focused on women, which is consistent with other research showing a higher use by women of psychosocial support. The disparity between men and women accessing cancer services is well recognized and this gender difference is beginning to receive attention [41,42]. Recent studies, exploring the public portrayal of cancer experiences, confirm that women are seen to have skills in emotional self-transformation and abilities to draw on the support of others, a finding supported by this review. On the other hand, men are portrayed as stoical, isolated, and psychologically unchanged by their cancer experiences [43]. The uptake of art therapy by men in the studies identified here suggests it may be more acceptable than other forms of psychosocial support.

Papers [44–46] published, since the original appraisal, report further data from two included studies [25,30] and reinforce the findings of this review.

Limitations

The identification of studies of art therapy focused on its professional provider. This proved difficult since such data is not always included in research papers. Although the sensitivity of the search elicited many citations and was comprehensive, it is possible that studies may have been missed. Conversely, the decision to include studies where art therapists were known NOT to be involved could also limit the review by skewing its findings. By identifying these studies, it is hoped that any biasing will be evident.

Implications

The heterogeneity of the studies investigated here indicates that art therapy is a psychotherapeutic approach adaptive to different clinical situations. Yet, research on art therapy in cancer settings is still in its infancy, especially considering that only three small-scale RCTs were available for this review. Outcomes of this review may be to suggest recommendations for improving upon the methodological and reporting shortcomings identified in

studies (e.g. not reporting training of therapists and disease stage of participants, a dearth of randomized designs, and long-term follow-ups), suggestions for standardization, or for tailoring interventions appropriately for particular patient groups.

Research recommendations

This review suggests that investment in art therapy in cancer care is warranted. The following research would build upon the review's findings:

1. Multicentered mixed methods randomized control trials with long-term follow-up of: (a) short-term individual art therapy for those undergoing oncology treatment; (b) community art therapy groups for those needing psychological readjustment and rehabilitation post-treatment.
2. Studies of men with cancer accessing art therapy.
3. Evaluation of art therapy's contribution to alleviating cancer-related fatigue.
4. Explorative studies of how patients' images articulate their health experiences.

Conclusion

The synthesis of current research by this review identifies a breadth of art therapy interventions that seem to benefit some cancer symptoms (namely, psychological and spiritual distress). There is no evidence that it causes harm. The review also identifies a possible mechanism by which art therapy gains its effect, suggesting that participants may be empowered to recalibrate their sense of self (and functioning and relationships) following cancer, leading to a more active involvement in symptom management and self-care. This is described as 'recalibrating identity'. The review suggests better quality research studies are needed to underpin art therapy's contribution to cancer survivorship.

References

1. Waser G. Visual artistic expression by patients with malignant diseases of the breast. *Tw Gynakologie* 1995;**8**:434–439.
2. Kunzmann B, Aldridge D, Gruber H, Wichelhaus B. Arts therapies: a compilation of studies about the arts therapies in cancer and geriatric care. Background, implications, perspectives, and challenges. *Musik-, Tanz- und Kunsttherapie* 2005;**16**(2):77–86.
3. Barraclough J. *Enhancing Cancer Care: Complementary Therapy and Support* (1st edn). Oxford University Press: Oxford and New York, 2007.
4. Connell C. *Something Understood: Art Therapy in Cancer Care*. Wrexham Publications: London, 1998.
5. Pratt M, Wood M. *Art Therapy in Palliative Care: The Creative Response*. Routledge: London, 1998.
6. Malchiodi C. *Medical Art Therapy with Adults*. Jessica Kingsley Publishers: London, 1999.
7. Waller D, Sibbett C. *Art Therapy and Cancer Care*. Open University Press: Maidenhead, England, and New York, 2005.
8. Hartley N, Payne M. *The Creative Arts in Palliative Care*. Jessica Kingsley Publishers: London, 2008.
9. Bolton G. *Dying, Bereavement, and Healing Arts*. Jessica Kingsley Publishers: London, 2007.
10. Borgmann E. Art therapy with three women diagnosed with cancer. *Art Psychother* 2002;**29**(5):245–252.
11. Stein H. In praise of wordless comfort. *Smith Coll Stud Soc* 2006;**76**(4):105–111.
12. Reynolds F, Lim KH, Prior S. Images of resistance: a qualitative enquiry into the meanings of personal artwork for women living with cancer. *Creativity Res J* 2008;**20**(2):211–220.
13. Herborn E. Art therapy with a woman cancer patient. *Tw Gynakologie* 1995;**8**(6):448–454.
14. Edwards D. *Art Therapy*. Sage: London, 2004.
15. Hogan S. *Feminist Approaches to Art Therapy*. Routledge: London, 1997.
16. Wilson P. The UK expert patients program: lessons learned and implications for cancer survivors self-care support programs. *J Cancer Surviv* 2008;**2**(1):45–52.
17. Little M, Paul K, Jordens CFC, Sayers E-J. Survivorship and discourses of identity. *Psycho-Oncology* 2002;**11**(2):170–178.
18. Amir Z, Moran T, Walsh L, Iddenden R, Luker K. Return to paid work after cancer: a British experience. *J Cancer Surviv* 2007;**1**(2):129–136.
19. Husemann F, Wolff O. *The Anthroposophical Approach to Medicine: Psychiatry*. Anthroposophical Press: Hudson, NY, 1989.
20. Hawker S, Payne S, Kerr C, Hardey M, Powell J. Appraising the evidence: reviewing disparate data systematically. *Qual Health Res* 2002;**12**(9):1284.
21. Innes S, Payne S. Advanced cancer patients' prognostic information preferences: a review. *Palliat Med* 2009;**23**(1):29.
22. CRD CfRaDR. *Undertaking Systematic Reviews of Research on Effectiveness: CRD's Guidance for Those Carrying Out or Commissioning Reviews*. Blackwell: York, 2001.
23. Cohen J. A power primer. *Psychol Bull* 1992;**112**:155–159.
24. Puig A, Lee SM, Goodwin L, Sherrard PAD. The efficacy of creative arts therapies to enhance emotional expression, spirituality, and psychological well-being of newly diagnosed Stage I and Stage II breast cancer patients: a preliminary study. *Art Psychother* 2006;**33**(3):218–228.
25. Oster I, Svensk AC, Magnusson E et al. Art therapy improves coping resources: a randomized, controlled study among women with breast cancer. *Palliat Support Care* 2006;**4**(1):57–64.
26. Svensk A-C, Öster I, Thyme KE et al. Art therapy improves experienced quality of life among women undergoing treatment for breast cancer: a randomized controlled study. *Eur J Cancer Care* 2009;**18**(1):69–77.
27. Bar-Sela G, Atid L, Danos S, Gabay N, Epelbaum R. Art therapy improved depression and influenced fatigue levels in cancer patients on chemotherapy. *Psycho-Oncology* 2007;**16**(11):980–984.
28. Collie K, Bottorff JL, Long BC. A narrative view of art therapy and art making by women with breast cancer. *J Health Psychol* 2006;**11**(5):761–775.
29. Gabriel B, Bromberg E, Vandenbovenkamp J, Walka P, Kornblith AB, Luzzatto P. Art therapy with

- adult bone marrow transplant patients in isolation: a pilot study. *Psycho-Oncology* 2001;**10**(2):114–123.
30. Gotze H, Geue K, Buttstaadt M, Singer S. Gestaltungskurs für onkologische Patienten in der ambulanten Nachsorge: Erwartungen und Wirkungen aus der Sicht der Teilnehmer. *Musik Tanz Kunsttherapie* 2007;**18**:33–40.
 31. Grulke N, Bailer H, Stahle S, Kachele H. Evaluation of an art therapy offer for oncological patients in an acute hospital: a pilot study. *Musik-, Tanz- und Kunsttherapie* 2006;**17**(1):21–29.
 32. Monti DA, Peterson C, Kunkel EJ *et al.* A randomized, controlled trial of mindfulness-based art therapy (MBAT) for women with cancer. *Psycho-Oncology* 2006;**15**(5):363–373.
 33. Nainis N, Paice JA, Ratner J, Wirth JH, Lai J, Shott S. Relieving symptoms in cancer: innovative use of art therapy. *J Pain Symptom Manag* 2006;**31**(2):162–169.
 34. Oster I, Magnusson E, Thyme KE, Lindh J, Astrom S. Art therapy for women with breast cancer: the therapeutic consequences of boundary strengthening. *Art Psychother* 2007;**34**(3):277–288.
 35. Oster I, Magnusson E, Thyme KE, Lindh J, Astrom S. Art therapy for women with breast cancer: the therapeutic consequences of boundary strengthening (vol 34, pg 277, 2007). *Art Psychother* 2008;**35**(3):242.
 36. Virago M, Dunkley M. A journey past the sun and back: using art psychotherapy to investigate the connection between immunological and psychological function following a diagnosis of melanoma. Paper abstracts of the APOS 5th annual conference. *Psycho-Oncology* 2008;**17**:S27.
 37. Visser A, Op 't Hoog M. Education of creative art therapy to cancer patients: evaluation and effects. *J Cancer Educ* 2008;**23**(2):80–84.
 38. Wilson A, Morris F. Evaluation of art therapy intervention as an aid in the elevation of patients' psychological and emotional distress following a diagnosis of advanced cancer. *10th World Lung Cancer Conference*, August 2, 2003. Lung Cancer ISLAC, Vancouver, vol 41 supplement pages 48–9, 2003.
 39. Bellizzi K, Blank T. Cancer-related identity and positive affect in survivors of prostate cancer. *J Cancer Surviv* 2007;**1**(1):44–48.
 40. Bellizzi K. Expressions of generativity and posttraumatic growth in adult cancer survivors. *Int J Aging Hum Dev* 2004;**58**(4):267–287.
 41. CCG CCG. Green paper: preparing for a second plan: maintaining momentum in cancer policy: www.cancercampaigninggroup.org.uk 2006.
 42. Gooden R, Winefield H. Breast and prostate cancer online discussion boards: a thematic analysis of gender differences and similarities. *J Health Psychol* 2007;**12**(1):103–114.
 43. Seale C, Ziebland S, Charteris-Black J. Gender, cancer experience and internet use: a comparative keyword analysis of interviews and online cancer support groups. *Soc Sci Med* 2006;**62**:2577–2590.
 44. Gotze H, Geue K, Buttstadt M, Singer S, Schwarz R. Art therapy for cancer patients in outpatient care. Psychological distress and coping of the participants. *Forschende Komplementarmedizin (2006)* 2009;**16**(1):28.
 45. Thyme KE, Sundin EC, Wiberg B, Oster I, Astrom S, Lindh J. Individual brief art therapy can be helpful for women with breast cancer: a randomized controlled clinical study. *Palliat Support Care* 2009;**7**(01):87–95.
 46. Oster I, Astrom S, Lindh J, Magnusson E. Women with breast cancer and gendered limits and boundaries: Art therapy as a 'safe space' for enacting alternative subject positions. *The Arts in Psychotherapy* 2009;**36**(1):29–38.