

ART THERAPY AND ONCOLOGY

The effects of Art Therapy interventions for adult cancer patients:

A systematic literature review

Bachelor thesis

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Abstract

Keywords: Art therapy, cancer care, oncology, pain treatment, quality of life, emotion*, stress reduction.

Background: Common psychosocial difficulties of cancer patients are anxiety, depression and fatigue. This systematic review focused on art therapy interventions and the effectiveness of art therapy for cancer patients.

Objective: The purpose of this review was to research the evidence of using art therapy with adult cancer patients to improve coping of psychosocial problems and management of symptoms. The role of art therapy in cancer treatment will be discussed with the possibility of increased innovative settings for art therapists in the future.

Methods: Different online databases were searched in this review. Articles were included or excluded, based on predetermined criteria. The data analysis of all included articles was based on a total of 1006 patients and included art therapy interventions, outcome evaluation and results. Data extraction was conducted by two independent reviewers.

Results: A total of 14 studies with the inclusion criteria. Measures were questionnaires, oral narratives, and screening of psychosocial distress, depression, anger and fatigue, and quality of life (QoL). Studies included different stages and types of cancer with 3 studies focusing on breast cancer. Art therapy (AT) had the potential to decrease stress, anxiety and in most studies depression. AT improved QoL, and the emotional support to cancer patients and also to family caregivers.

Conclusion: In this review evidence was found that AT interventions improve coping skills and self-awareness. AT benefits different symptoms of cancer patients in terms of decreasing anxiety, depression, stress, pain, fatigue and increasing QoL. More studies, based on methodological homogeneity with a larger sample size are needed to show the long term effects of follow up studies.

Abstract in Dutch- Samenvatting

Trefwoorden: Creatieve therapie, zorg voor kanker, oncologie, pijnbestrijding, levenskwaliteit, emotie*, stress reductie.

Achtergrond: Gemeenschappelijke psychosociale problemen bij kankerpatiënten zijn angst, depressie en vermoeidheid. Deze systematische review was gericht op interventies van vaktherapie beeldend en de effectiviteit daarvan bij patiënten met kanker.

Doelstelling: Het doel van dit onderzoek was om bewijsmateriaal te onderzoeken met behulp van vaktherapie beeldend op gebied van psychosociale problematiek, en begeleiding van volwassen kankerpatiënten te onderzoeken. De rol van vaktherapie beeldend in de oncologische zorg zal besproken worden met de mogelijkheid op verhoogde kansen voor innovatie- trajecten voor vaktherapeuten in toekomst.

Methodes: Verschillende online databanken werden doorzocht in deze review. De artikelen werden opgenomen of uitgesloten, op basis van vooraf bepaalde criteria. De data-analyse van alle opgenomen artikels was gebaseerd op een totaal van 1006 patiënten en omvatte alle vaktherapeutische interventies, met evaluatie van de gegevens en resultaten. De data-extractie werd uitgevoerd door twee onafhankelijke beoordelaars.

Resultaten: Data verzameling en analyse: 14 studies die voldeden aan de inclusie criteria werden opgenomen. Metingen bestonden uit vragenlijst, narratieve verhalen, metingen van psychosociale stress en het omgaan met het ziekte, metingen van depressie, woede en vermoeidheid, het screenen van de levenskwaliteit. De studies omvatten diverse stadia en kankertypes. 3 studies waren gericht op borstkanker. Vaktherapie beeldend heeft de potentie om stress, angst, en in de meeste studies ook depressie te verminderen. Vaktherapie

beeldend verbeterde de levenskwaliteit van kankerpatiënten en emotionele steun aan familieleden.

Conclusie: In deze review werd de aanname bevestigd dat interventies door vaktherapie beeldend het coping gedrag en zelfbewustzijn verbeteren. Vaktherapie beeldend beïnvloedt in gunstige zin symptomen van angst, depressie, stress, pijn, vermoeidheid en kan de levenskwaliteit van kankerpatiënten verbeteren. Meer studies, gebaseerd op methodologische homogeniteit met een grotere steekproef, zijn nodig om de lange termijn effecten van follow-up studies aan te tonen.

¹ see other references

Background

Art therapy is partly integrated in the Health Care system in the Netherlands.

This systematic literature review was done in the context of the research project called “art therapies in medical setting” which was set up by Sylka Uhlig, (MATH) lecturer at the HAN University of Applied Sciences in Nijmegen, Netherlands. This project involved students, professionals and alumni and consisted of practice- based research and literature reviews. 5 students were selected with the goal to create an overview of effectiveness and application of art therapy in medical settings in the form of a systematic literature review. Every participating student investigated another medical specialty in the medical setting from each form of therapy (music-, drama- and art therapy). As an art therapy student, my special task and focus was to look at the effects of art therapy interventions with adult cancer patients. This systematic review explored the contribution of art therapy of cancer patients, focusing on quality of life (QoL), pain treatment, stress reduction, emotional distress, coping, fatigue, and depression. Archer *et al.* (2014) explained in his review about effectiveness of Creative Psychological Interventions (CPIs), that a number of studies were found with positive effects in anxiety and depression, QoL, coping and mood. CPIs of music, drama, art and dance/ movement were analyzed in his review (Archer, 2014).¹ The result was benefit of adult cancer patients through the treatment of CPIs.

The aim of this review was to assess the effects of art therapy interventions on different psychological and mood outcomes, including the impact on well-being and the ability to cope with this disease. No other form of creative therapy was assessed in this review. This research was conducted to underline the descriptions of effects in earlier systematic literature reviews.

In addition to general medical care, art therapy might provide an essential contribution in Dutch medical settings towards the patients' psychosocial care, general well- being and pain management. If art therapy is found to be effective, it could be integrated into the Dutch Health Care system, first in establishing pilot projects in art therapies, second, setting up training programs, and third, developing employment for art therapists.

The expertise coming from this study will be valuable to the newly formed practicing art therapists group, along with the FVB (Federation of Art Therapy NL)¹ in their work with cancer patients.

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¹ see other references

Definitions

This systematic review explores the contribution of art therapy to the treatment of adult cancer patients by focusing on quality of life, pain treatment, stress reduction and other emotional issues.

Oncology

Data from the Dutch cancer registry in 2005 - the latest year for which incidence data were available - showed approximately 81.000 malignant tumors that were determined in 73.000 people (www.iknl.nl).¹ For many decades cancer has been the leading cause of death in the Netherlands after heart disease. In 2007, cancer was responsible for 30% of all deaths (de Haes, 2009).¹

Art therapy

The definition of Art Therapy by the American Association of Art Therapy is:

“Art Therapy is a mental health profession in which clients, facilitated by the Art Therapist, use art media, the creative process, and the resulting artwork to explore their feelings, reconcile emotional conflicts, foster self-awareness, manage behavior and addictions, develop social skills, improve reality orientation, reduce anxiety, and increase self-esteem” (American Association of Art Therapy, 2013).¹

Within medical settings, art therapy is often recognized as a mind-body intervention and is included under the umbrella of complementary and alternative medicine. However, it doesn't replace standard medical treatment and is usually delivered as part of a multidisciplinary approach. Art therapy is also a significant attribute of self-care and self- management for those living with cancer (Wood, Payne, 2009). The review of Puetz *et al.* (2013) indicates that creative art therapy (CAT) can decrease the symptoms of anxiety, pain and depression. The authors of this review asserted an increase of QoL among cancer patients after CAT interventions. The review of Archer *et al.* (2014) used Creative Psychological Interventions (CPIs) of all forms of creative arts (music, art, drama, dance/ movement) for assessing the emotional, social, cognitive and physical benefits of cancer patients.

Art therapy and Oncology in the Netherlands

Art therapy is integrated into the psychosocial support of cancer patients at the Antoni van Leeuwen Hospital (AVL) at Amsterdam. There art therapists are working together with activity coaches and social workers. One art therapist works in the department of oncology and hematology at Erasmus MC Rotterdam, using an Anthroposophic model.

In 2013 the FVB set up a survey¹ among therapists working with cancer patients in the Netherlands. The outcome showed that only 37 art therapists are working with cancer patients. Most of these art therapists are settled at centers outside the medical setting (e.g. hospitals and rehabilitation centers) or are working in the private practices.

¹ see other references

Research questions

- 1) "What are the effects of art therapy interventions treatment with adult cancer patients between 2004 and 2014?"
- 2) "Which outcomes were most effective ?"

Methods

To find an answer to the research question, online databases were systematically searched for relevant articles. These articles were included or excluded from the analyses based on the search criteria listed below. Inclusion and exclusion criteria, and outcome criteria of the systematic review were defined.

Search strategy

Searches were conducted in the following databases for the period of January 2004 till June 2014: - HAN Quest (CINAHL Plus, Medline, Science direct), Cochrane, PUB MED and ERIC.

By using *Boolean search commands* relevant articles could be found, restricting the search items. Search terms included: "art therapy" AND "keyword" (AND "outcome criteria"). The following search terms were used: "art therapy" AND "cancer care", "art therapy" AND oncology, "art therapy" AND "cancer care" AND "quality of life", (("art therapy AND "cancer care" AND ("quality of life" OR stress reduction OR coping strategy OR emotion* OR sadness OR anxiety OR anger OR aggression OR fatigue OR depression OR mood OR "decrease blood pressure" OR cortisol)), ("art therapy" AND oncology AND ("quality of life" OR stress reduction OR coping strategy OR emotion* OR sadness OR anxiety OR anger OR aggression OR fatigue OR depression OR mood OR "decrease blood pressure" OR cortisol)).

Inclusion criteria

In order to be included the studies had to meet the following requirements:

- Interventions must be in the 'therapeutic triangle' ¹ of art therapy: therapist (researcher)-client/ patient- medium/ artwork. The 'creative therapeutic triangle' ¹ is a prerequisite for interventions (Schweizer, 2009).¹
- The main diagnosis is cancer (medical definition, see DSM- 5).¹
- Published in full text.
- Published in English.
- Evidence must be ranked 3b or higher (see: National Health Scheme Centre for evidence based medicine).²
- The medical setting is hospital, rehabilitation centre, hospice, other location outside the hospital.
- Inpatients or outpatients did participate in the research.
- All forms of cancer would be included.
- Published between January 2004 and June 2014.
- Adult cancer population.
- 'Art therapy', 'creative art therapy', 'Mindfulness based art therapy', 'creative art therapy

² see other references

interventions' or 'art therapy interventions', 'complementary therapies' were mentioned in the abstract of the article.

Exclusion criteria

Studies were excluded from further analyses on the basis of the following criteria:

- A focus on -'non- art therapy interventions' (e.g. "*looking* at paintings or art objects in a medical setting").
- Systematic literature reviews.
- All studies performed in psychiatric settings.
- All studies with the focus on mental health diseases (psychiatric settings) in relation to art therapy.
- All studies with patients younger than 18.
- All studies with patients with a primary diagnosis of a mental health disorder.
- All studies with patients with other chronic illness.

Outcome criteria

The 'art therapy research group medical setting' of the HAN defined the following outcome variables for the systematic literature research:

- Quality of life
- Pain management
- Stress reduction
- Emotional distress (e.g. reduction of anxiety, sadness, anger, aggression)
- Coping
- Fatigue
- Depression
- Physiological effects (e.g. heart rate variability, blood pressure, cortisol)

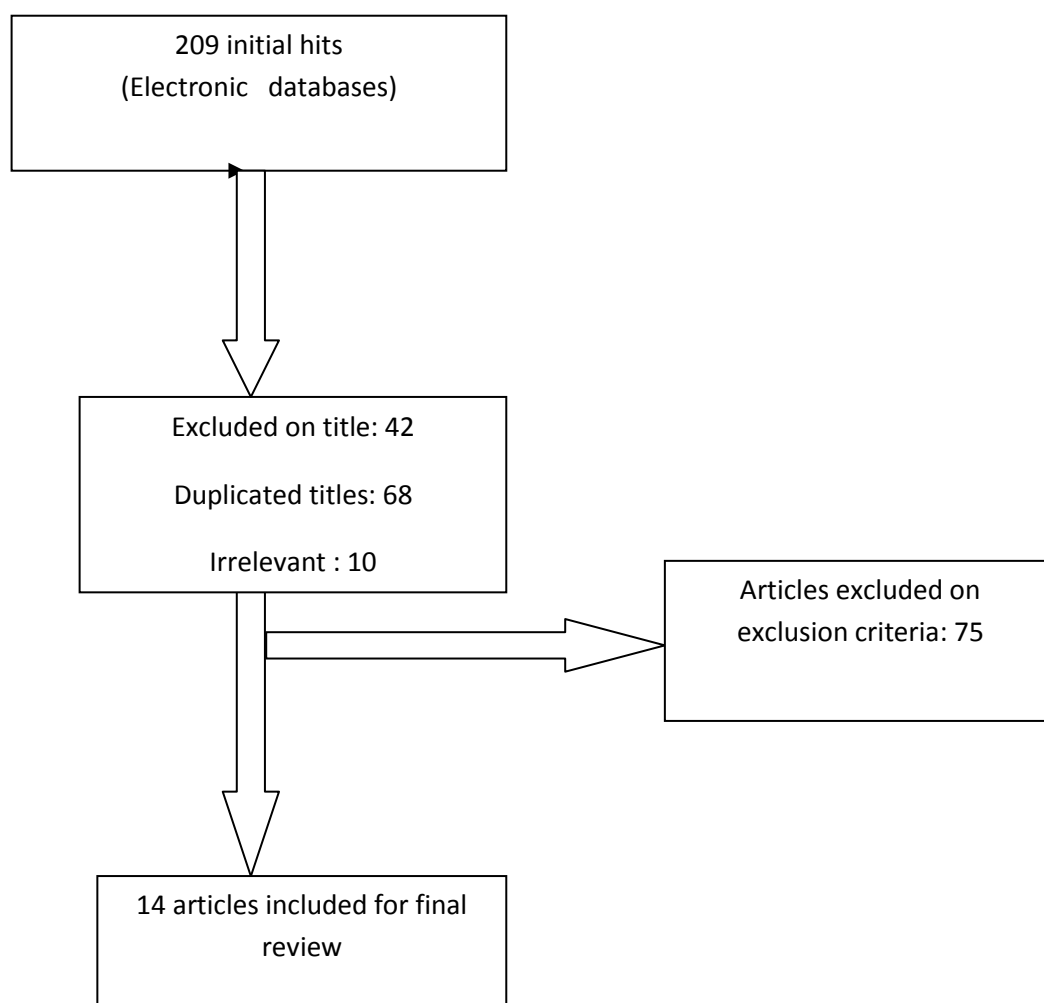
Selection of studies and data extraction

Full articles were only assessed if the abstract or article suggested the study conformed to the search criteria. Two other students of the research group independently scanned the title, abstract and keywords for all records. The data extraction did not show any disagreements among the researchers. There was consensus about the found articles.

The following features were extracted from each study: author, year, country/ age of participants/ number of participants/ design/ follow up/ control/ art therapy interventions/ measures/ treatment intensity/ outcome evaluated/ improvement, results. After assessing the full papers for inclusion, 14 studies were included for final review.

Figure 1 shows an overview of the data extraction process and the number of included articles in each stage.

Figure 1: study selection process



RESULTS

The 14 articles included in this review varied in research design and approach. After searching the before-mentioned databases, the articles were analyzed in terms of art therapy interventions, outcome evaluation and improvement/ results and were put into table 1 for an overview. The total number of patients in the included studies was 1006. The studies focused on psychological distress, anxiety, depression, coping strategies and QoL. Four studies had a control group (Bar- Sela, 2007; Geue, 2012; Monti, 2005; Nainis, 2006). Within the intervention group significant positive differences were found in domains of body image, anxiety and reduction of stress. Only three studies had more than 100 participants (Lindemalm, 2012; Monti, 2005; Vianna, 2012).

Some articles described individual measures of narratives and artistic expression approach (Vianna, 2012; Loi, 2011; Lawson, 2012; Walsh, 2004). Statistical measurements were used in 10 studies for development of the results of art therapy interventions (Geue, 2012; BAR-Sela, 2007; Svensk, 2008; Monti, 2005; Lindemalm, 2012; Rhondali, 2013; Jones, 2009;

Visser, 2008; Nainis, 2006). Geue *et al.* (2010) assessed the gender differences in receiving art therapy interventions and found different results in anxiety, depression, psychological distress, QoL and coping with cancer. Only two RCTs were available for this review using SF-36¹, WHOQOL-BREF¹ and EORTC¹ for measuring the outcome of studies (Lindemalm, 2012; Monti, 2005). One study had the focus on art therapy intervention at a hematologic department (Lawson, 2012). Three studies with the focus on breast cancer patients mentioned significant improvement of psychological and psychosocial problems of cancer patients (Lindemalm, 2012; Monti, 2005; Svensk, 2008). Wood *et al.* (2006)¹ maintained in an earlier review that “art therapy interventions are necessary to manage a spectrum of treatment related symptoms and seem to benefit mainly psychological and spiritual distress. Participants of art therapy may become more active in symptom management and self-care”.

Outcome and effects

Interventions

Art therapy interventions done by art therapists were found in ten studies. In some studies art therapists were working together with other professionals in an interdisciplinary team of clinical psychologists, social workers, psychotherapists, artists trained in expressive, creative therapy and/or nurses (Geue, 2012; Rhondali, 2013; Vianna, 2012). The study of Svensk *et al.* (2008) provided a strong support for the use of art therapy to improve QoL for women undergoing radiotherapy treatment for breast cancer.

Psychosocial/emotional outcomes

One study reported significantly reduced stress, lowered anxiety, and increased positive emotions in 40 family caregivers after following creative art therapy interventions (CAI) participation (Walsh, 2004). Another study focusing on Welsh speaking cancer patients (also palliative) and family caregivers mentioned improvement for understanding and coping with cancer as well as self-esteem, enjoyment, relaxation and pain relief (Jones, 2009).

Significant improvement in anxiety, distress, coping skills, emotions, emotional stability, personal growth and QoL were reported in most of the studies in this review. One study reported no significant changes in depression scores for the intervention group but did find a decrease of anxiety scores (Geue, 2012). Svensk *et al.* (2008) found a significant positive difference in the domains of body image and future perspectives within the intervention group. Decreasing levels of anxiety, depression or stress were reported in most of the studies. Lindemalm *et al.* (2012) described that existential issues were important for cancer patients. Issues like meaning, awareness of values in life but also the need of nature is mentioned in the outcomes of this study (Lindemalm, 2012).

Art therapy shows a reduction in the symptoms common in oncology patients.

Walsh *et al.* (2004) reported that family care givers had a decrease in stress and anxiety and increase in positive emotions (Walsh, 2004). Monti *et al.* (2005) reported that Mindfulness based art therapy (MBAT)¹ is intended to benefit cancer patients dealing with problems of stress- reduction and emotional support and expression. A social worker was working together with a clinical psychologist. No art therapist was mentioned, however (Monti, 2005). Geue *et al.* (2010) found that there were no significant gender differences regarding stress and quality of life before and after the intervention. Women showed a decrease in distress

and increase in self- esteem and physical activity in this prospective study with two measurements (Geue, 2010).

Physiological outcomes

The study of Geue *et al.* (2010) focused on gender specific characteristics and reported that man had a lower rate of decrease in positive moods (36%) than women (48 %). Men had observable cardiologic- specific benefits, while women had a decrease in distress, increase in self- esteem and physical activity (Geue, 2010). Pain reduction, by doing art therapy, was reported in one study (Rhondali, 2013).

Settings

Differences can be found between studies of inpatients and outpatients. Five studies focused on the problems of cancer patients and family caregivers in a clinical setting, nine were outpatients or in rehabilitation. Nainis provides the beginning of efficacy of art therapy in reducing a broad spectrum of symptoms of cancer patients and mentioned that art therapy is easy to implement in the hospital setting (Nainis, 2006).

Table 1: results from included studies

*page 21/22: Explanation of abbreviations of table1

Author, year, country	-Age, gender -N	Design / follow up	Control	Art therapy interventions	Measures	Treatment intensity	Outcome evaluated	Improvements / results
<p>1) GIL BAR- SELA, L. ATID, S. DANOS, N.GABAY, R. EPELBAUM.</p> <p>Division of Oncology, Rambam -Health Care Campus, Faculty of Medicine, Technion</p> <p>Israel Institute of Technology.</p> <p>2007</p> <p>Haifa, Israel</p>	<p>N= 60</p> <p>Intervention group%: male/female:4/15</p> <p>Participation group %: male/female:9/32</p> <p>Median age: 55 (25-77)</p>	Study	Intervention group	Anthroposophical art therapy, painting with brush and water based paints.	<p>Pre-meeting and after four meetings: depression (HADS), anxiety (HADS) fatigue (BFI)</p> <p>Drawing and questionnaire</p>	<p>Once weekly art therapy sessions, lasting from a few minutes to more than one hour.</p> <p>Art therapists were present at all session!</p>	<p>Goal of art therapy treatment: reduce of emotional distress and fatigue and depression. Most patients found the art therapy sessions to be very relaxing and giving them a 'breathing space' during the chemotherapy treatment period. Many gave the impression that they could set their emotions free and that they felt 'lighter' after the session.</p> <p>Participants with high stress levels at baseline had significantly improved overall outcomes only in the MBAT group, both immediately post-intervention and at 6 month. In addition, at 6 month follow-up, participants attending five or more sessions trended toward retaining treatment effects better in the MBAT than in the control group.</p> <p>Anxiety decreased from 54% to 33 %. No significant changes for IG en CG at points of "problem-solving behavior" and "distraction and self-assembly".</p>	<p>The significant reduction in the depression score in this study agreed with the results of other studies showing that conscious interventions reduce depression and support other quality of life issues for cancer patients. No answer found for anxiety in this study because participants had low anxiety levels from the outset. The reduction in BFI scores may represent a trend to improvement, bringing the median fatigue score near to the mild fatigue level. In conclusion, Anthroposophical art therapy is worthy of further study in the treatment of cancer patients with depression or fatigue during chemotherapy treatment.</p> <p>Intention to contact a randomized controlled trial with more restrictive eligibility criteria.</p> <p>No changes found in depression scores for the IG. Anxiety scores decreased in a pre-post comparison. A long term effects, were solely found for anxiety with t-test for dependant mean (pre-post comparison). Initially, the research team expected to find medium effect size for changes in the outcomes. To detect this smaller effects, especially for psychological distress, a bigger sample in the IG is</p>
<p>2) GEUE K., RICHTER R., BUTTSTÄDT M., BRÄHLER E.& SINGER S.</p> <p>University of Leipzig</p> <p>NOV 2012</p>	<p>N=74</p> <p>Men/ women, mean age: 51,5</p>	<p>Non-randomized controlled study (Non- RCT)</p> <p>Three points of measurement: questionnaire before starting</p>	Control group without art therapy, randomized waiting group	<p>Art therapist and psychotherapist worked out this after care program. three stages: in the beginning: experimental drawing with guidance of an artist. Second stage: introduction of water</p>	<p>HADS , FKV, PACIS. Measures of psychosocial distress, coping with illness</p>	Outpatients after care program: 22 weekly sessions (90 min each)		

<p>Germany</p> <p>3) K. GEUE, R. RICHTER, M. BUTTSTAEDT, E. BRAECHLER, U. BOEHLER, S. SINGER</p> <p>Department of Medical Psychology and Medical Sociology. University of Leipzig</p> <p>2010</p> <p>Germany</p>	<p>N= 74</p> <p>Men:14, women: 60</p> <p>age: 18-55+</p>	<p>intervention, upon completing it and state 6 month later. Adult cancer patient finished acute medical treatment.</p> <p>Prospective study with two measurement points</p>	-	<p>colors, patients expressed their 'inner pictures'. Third stage: creation of an individual book.</p> <p>First unit: learning various experimental drawing techniques(blind drawing, spiral drawing) using a given topic.</p> <p>Second unit: shaping personal thoughts and feelings with the aim of encouraging self-perception and reflection (drawing moods and self-portraits).</p> <p>Third unit: entails participants creating their own book, in which they can process their disease and coping experiences. Different methods used and materials available during the course.</p>	<p>HADS , EORTC, QLQ-C30, FKV used as measurement: anxiety, depression screening, psychological distress, quality of life and coping with illness measures.</p>	<p>Weekly sessions (22 double session): outpatient aftercare program for cancer patients.</p> <p>6 month</p> <p>ART THERAPISTS</p>	<p>Men rate their demand for psycho- oncologic support lower than women do (36% vs. 48%).Male cancer patients tend to concentrate with their requests for help on their partner, try to cope with suffering in an internal way. No significant gender differences in the participants' psychological distress and quality of life values. Men: decrease in positive moods and observable cardiologic-specific benefits. Women: decrease in distress, increase in self-esteem and physical activity.</p>	<p>necessary. The subjective experiences of patients of the IG was positive (personal growth, means of expression, increasing emotional stability).</p> <p>Approaching patients in a personal proactive way is particularly effective, especially potential male participants.</p> <p>Future studies should describe the methods more transparently in order to make this knowledge available for others. We investigated gender- specific characteristics regarding recruitment, usage, psychological distress, and quality of life, which had not previously been explored in this context. It would be most suitable to perform a gender- specific comparison between participants and a control group who did not receive art therapy.</p>
<p>4) JONES G. <i>et al.</i></p> <p>BRONGLAIS HOSPITAL, ABERYSTWYTH</p> <p>2009</p> <p>UK</p>	<p>N=10 male/female</p> <p>MIDDLE AGED: 45-64</p>	<p>Case studies</p>	-	<p>Use of different art materials</p>	<p>Using NICE and Y Ffilltir Sgwar/ Home Ground service</p> <p>Also using HADS en MYCaW</p>	<p>Not reported!</p> <p>Project lasting for three years!</p>	<p>Art therapy sessions which offer a psychodynamic approach, help with rebuilding confidence and self- esteem, enjoyment, relaxation and pain relief, as well as a place to think about underlying complex issues that have re- emerged after a cancer diagnosis. The use of art material offers ways to communicate ideas and feelings through images, and make visible thoughts that</p>	<p>This project was set up voor cancer patients (also palliative status), family and staff working with this group of Welsh speaking patients.</p> <p>Supportive care is reported as an umbrella term for all services, both generalist and specialist, that may be required to support people with cancer and their carers. Pathway and maps offer useful analogies for the process of understanding and coping with a cancer diagnosis. Y Ffilltir Sgwar/ home Grounds' aim is to enhance existing palliative care services and</p>

<p>5) M. LAWSON L., GLENNON C., AMOS M., NEWBERRY T., PEARCE J., SALZMAN S.& YONG J.</p> <p>2012</p> <p>University of Kansas</p> <p>USA</p>	<p>N= 20</p> <p>Patients with malignant and hematologic diseases, receiving blood or marrow transplantation (BMT) treatment</p> <p>Age: 20- 68(average age:38.5)</p>	<p>Study</p>	-	<p>Art making program with Ceramic tile, brushes, painting material</p> <p>Making art while undergoing BMT treatment.</p>	<p>All 20 interview recording transcripts were coded independently by one of the six researchers</p>	<p>1 hour tile painting during treatment</p> <p>Recreational therapist and occupational therapist, NO ART THERAPIST!</p>	<p>may be hard to put into words alone! Art therapists with experience working in oncology and palliative care.</p> <p>Most prominent themes: occupying time, creative expression, reactions to tile painting.</p> <p>Support, side effects, life outlook, BMT treatment process, spirituality, barriers, shared painting experience.</p>	<p>provide support to cancer patients and family so that they can take measures, and make sense of, their way through the world of cancer.</p> <p>Painting was a meaningful activity and/or distraction from treatment. Negative symptoms(such as pain, fatigue, weakness and anxiety) tend to perceive time as passing very slowly. Art making gave patients with limited options for activity engagement a creative outlet to render their thoughts and feelings. Nearly all patients mentioned that tiles of hope painting took their mind off treatment, relieved stress or made time go faster. Art making can be safe, easy to implement, and decrease therapy- related symptoms associated with cancer treatment. Art making has the potential to decrease stress, anxiety, depression associated with cancer and increase patients' quality of life during BMT treatment.</p> <p>The fact that existential issues were the most frequently stated ones is an important finding as psycho-social interventions have so far only been evaluated with psychological or QoL instruments. Studies show existential issues are generally rated as important by cancer patients. Dimension comprises issues such as meaning, awareness of values in life, need of positive outlook, need for nature and relationships with fellow persons. Focus on measuring a sense of meaning and peace and focus on the role of faith and illness.</p>
<p>6) CHRISTINA LINDEMALM, H. GRANSTAM- BJÖRNE KLETT, L. BERGKVIST, M.L.OJUTKANGAS & P.STRANG</p> <p>Department of Oncology- Pathology, Karolinska Institutet, Stockholm. March 2012 Sweden</p>	<p>N= 191</p> <p>Women with breast cancer</p>	<p>Randomized one- week long psycho- educational study</p>	-	<p>Art therapy is not reported</p> <p>Other therapies: massage, qi-gong as relaxation supplement</p>	<p>The emotional impact has been evaluated with instruments as HADS, Beck scale or STAI. The psychosocial effects on QoL evaluated on: EORTC QLQ-30, POMS or FACT/FACIT with variable outcomes.</p>	<p>Not reported</p>	<p>4 categories were worked out: 1)existential aspects 2) the actual content of the program 3) staff attitude 4) others(including milieu and catering). Thirteen of the respondents underlined the existential meaning of being acknowledged as also 'cared for' in their struggle with both practical but also life - and - death issues as exemplified.</p>	

<p>7) LOI CAROL</p> <p>DECEMBER 2011</p> <p>SINGAPORE</p>	<p>N= 4</p> <p>Colorectal cancer survivors</p> <p>Age: 29-57</p> <p>2 male, 2 female</p>	Case study	-	Drawing, coloring and taping. Also sharing experiences about cancer	Using the artistic expression approach (Collie, Bottorff & Long, Malchiodi, 1999) for analysis of art work.	Once a week, with a trained art therapists .	<p>Fear and frustration have been worked out in art therapy. Patients had more joy of life, could smile again.</p> <p>Increase QoL!</p> <p>Art therapy can be a potential psychosocial intervention, even the research group was small (limitation!)</p>	Communication through art works in this case provided an opportunity for the expression of experiences and thoughts not otherwise available. These examples provide encouraging preliminary data to support a possible future role for nurses in a therapeutic use of art as a psychosocial intervention within a Singapore context for colorectal cancer patients or other patients with cancer.
<p>8) DANIEL A. MONTI, C. PETERSON, E. J. SHAKIN KUNKEL</p> <p>Thomas Jefferson University, Philadelphia USA 2005</p>	<p>N= 191</p> <p>Women with breast cancer age: 21+ mean age: 53.</p>	RCT	BSCG-control group	<p>MBAT: creative expression: drawing a picture of their self, awareness of sensory stimuli, imaging self-care, art production to foster mindfulness, creating stressful and pleasant event pictures. MBAT intervention: Mindfulness practices including body scan methods, sitting meditation, gentle Hatha yoga postures, walking meditation, with awareness breathing.</p> <p>BSCG: 5 educational sessions: topics- nutrition, exercise, stress reduction, familial cancer risk, managing fatigue.</p>	<p>Psychological distress and stress-related symptomatic complaints were assessed pre-intervention and post-intervention (at week 1, 9 and 36), using a symptoms checklist Revised (SCL-90-R). Health related quality of life was assessed pre-intervention and post-intervention, using the Medical Outcome Study Short-form Health Survey(SF-36).</p>	<p>36 sessions in three periods, after 6 month follow-up of five sessions or more.</p> <p>Social worker and clinical psychologist.</p> <p>NO ART THERAPIST</p>	<p>Participants with high stress levels at baseline had significantly improved overall outcomes only in the MBAT group, both immediately post-intervention and at 6 month. In addition, at 6 month follow-up, participants attending five or more sessions trended toward retaining treatment effects better in the MBAT than in the control group.</p>	<p>MBAT is intended to address needs of cancer patients for stress reduction, emotional support, and meaningful modes of expression. MBSR is an important component in the MBAT program.</p> <p>1)MBAT is designed for cancer patients</p> <p>2)MBAT provides an additional nonverbal expressive component</p> <p>3)MBAT incorporates mindfulness practices within a group milieu of 7-10 participants. The typical MBSR program can have as many as 30 or more participants, allowing for fewer opportunities for group interaction and a less intimate environment.</p> <p>The results of this study confirm earlier findings that MBAT is a feasible intervention that can benefit a diverse range of cancer patients. Important: these results extend the sustained effects of the MBAT program on stress reduction, even 6 month after completing program.</p> <p>This study provides beginning evidence for the efficiency of art therapy in reducing a broad spectrum of symptoms in a diverse sample of cancer patients. Art therapy is easy to implement in a hospital setting and was widely accepted by the participants in this study who found the process distracting</p>
<p>9) NANCY NAINIS, MA, ATR <i>et al.</i></p> <p>Northwestern Memorial Hospital, Chicago, Illinois, Division of Hematology-</p>	<p>N= 50</p> <p>Mean age: 51,3</p> <p>Female: 29</p>	Study	-	Different Art therapy supplies (cards, drawing material, journals, painting materials, stamps, wooden boxes, jewelry...)	The instruments used to measure physical and emotional symptoms associated with cancer were : ESAS	<p>A 4 month study. Session: 1 hour frequency not reported</p>	<p>After finishing the subject, the art therapist asked the patient: "were you thinking about anything in particular while you were making this? Do any of your choices have</p>	

<p>12) VIANNA D. et al.</p> <p>November 2012</p> <p>Rio de Janeiro, Brazil</p>	<p>N=253</p> <p>48 groups ET sessions outpatients with cancer and receiving chemotherapy. women, men. Age: 19- 87. 196: cancer 57: autoimmune disease.</p>	Qualitative study	-	<p>Expressive therapy interventions. Interdisciplinary team.</p> <p>Mandala, the magic box, nosegay at flowers, interior garden, reliquary, from night to light, the house, opening the hart, the sand city, the secret garden, the butterfly, the internal towers, the diary.</p> <p>Imagination in sessions.</p>	<p>The qualitative study analysis considered the patients' responses to the open question of the questionnaire and the oral narratives of their experiences, which they could provide during an open interview after the activity.</p>	<p>Each: 90 min. and was carried out during the chemotherapy infusion >individual. finally each patient was introduced sharing his or her experiences or opinions freely in an open interview.</p>	<p>Expressive therapy offers emotional and psychological support by promoting self-expression, which increases self- awareness and teaches effective coping- skills. Therapy sessions often result in relief from physical and psychological symptoms as well.</p>	<p>This findings are consistent with previous research! Expressive therapy is very flexible and can be applied in small spaces with simple art or recycled materials. It is important that a qualified team is essential to achieve these benefits.</p>
<p>13) ADRIAAN VISSER, MD, MAYKE OP' T HOOG.</p> <p>2008</p> <p>NETHERLANDS</p>	<p>N= 35</p> <p>5 groups. Most women with breast CA. more female than male!</p>	Paper, case study	-	Not reported	<p>Measures taken before and after activities. Questionnaire: EORTC, POMS. meaning of life: measured.</p>	<p>8 weekly session with max. 10 participants. One session: 2.5 hours</p>	<p>Expressing feelings, coping, personal growth, developing creativity, contact with fellow-sufferers, discovering material/techniques, working on the future, finding peace/balance.</p>	<p>Creative Art therapy benefits QoL of cancer patients. Follow –up studies should provide more insight into the change of process during CAT and its long –term effect on the QoL for people with cancer.</p>
<p>14) WALSH SANDRA M., SUSAN CULPEPPER MARTIN, LEE A. SMITH.</p> <p>2004</p> <p>University of Miami nursing school.</p> <p>United States</p>	<p>N= 40</p> <p>Women= 30 Men= 10</p> <p>Family care givers.</p>	Paper, case study	-	<p>Healthy image poster, Monoprint art activity, Mandala, a silk wall hanging, a silk rubbing</p>	<p>A paired sample t test was conducted to elevate the CAI (creative art interventions) different materials.</p> <p>Art Kart nurse- artist intervention team</p>	<p>A six month study</p>	<p>Results: a short term effect on anxiety, stress and emotions.</p>	<p>Results supported the efficacy of the CAI. Decrease of: stress. Anxiety and increasing positive emotions by family caregivers. As a result, an extension of the cancer centre's "Art at the bedside" will be extended with new research at the residence hotel for patients and families. Current plans are to implement the CAI with a satellite program of the cancer treatment center as well as with children and parents at the children's hospital.</p>

*** EXPLANATION OF ABBREVIATIONS**

N: number

EORTC QLQ-C30: European Organization for Research and Treatment of Cancer Quality of Life Questionnaire

WHOQOL-BREF: instrument comprises 26 items, which measure the following broad domains: physical health, psychological health, social relationships, and environment.

QOL= quality of life

AT: Art Therapy

RCS: Randomized Controlled Study

RCT: Randomized Controlled Trial

POMS: Profile of Mood State

FACT/FACIT: The Functional Assessment of Cancer Therapy

STAI: State and Trait Anxiety inventory

HADS: Hospital Anxiety and Depression Scale

BFI: Brief Fatigue Inventory

FKV: "Freiburger Fragebogen zur Krankheitsverarbeitung" (= questionnaire for coping disease)

PACIS: Perceived Adjustment to chronic Illness Scale

CG: comparison group- oncologic patients who did not receive art therapy interventions

IG: intervention group- patients received art therapy intervention

BSCG: Breast Cancer Control Group

SCL-90-R: Symptoms checklist Revised

MBAT: Mindful Based Art Therapy

MBSR: Mindful Based Stress Reduction

Wilcoxon test: to compare pre- and post intervention from ESAS. Semi directed interviews used.

CAM: Complementary alternative medicine

ET: Expressive therapies

BMT treatment: blood or marrow transplantation treatment

CAI: Creative Art Interventions

CAT: Creative Art Therapy

SF-36: Smart-form Health Survey

NICE: National Institute for Clinical Excellence (guide aiming at improving supportive and palliative care for adults with cancer)

Filltir Sgwar/ Home Ground service: is Welsh for your square mile. This is the story of a holistic service helping people to survive the cancer experience on psychological, practical and emotional level

MYCaW: Measure Yourselfs Concerns and Wellbeing

ESAS: Edmonton Symptom Assessment Scale

STAI-S: State - Trait Anxiety Index

DISCUSSION

In this review most of the studies offered measures of different forms of psychological and psychosocial distress according to given data analysis. Some researchers found that art therapy interventions resulted in greater psychosocial or psychological benefits than any of the other forms of therapy. Trained art therapists working in the psychosocial programs were engaging cancer patients in emotional and social changes. The typical non- verbal interventions could help cancer patients to overcome their fears and depression caused by cancer.

The question of this review was focused on the effects of art therapy intervention on adult cancer patients. Some studies showed not only art therapy interventions but also other forms of creative therapy and counseling psychologists or social workers. Interventions were not clearly defined. This current research for the use of art therapy interventions in adult cancer patients, outlined in table 1 showed similar results in comparison with earlier systematic reviews (Wood, 2009; Archer, 2014). The outcome of studies, using HADS for measuring anxiety and depression, were similar to the findings in this review.

The importance of having art therapists delivering interventions for cancer patients is raised in this review. Ultimately, art therapists ran the program of psychosocial support of cancer patients in 10 studies.

The necessity of this research was to give an answer to the question of art therapy interventions with cancer patients and to create an overview for the Dutch public health sector. This review indicates that art therapy interventions are effective in the treatment of cancer patients which could lead to pilot projects and even to new jobs for art therapists in the medical setting. Because of the small size of RCTs, research on 'art therapy and oncology' is at the beginning.

Limitation

As a research group of students we didn't have great experience in conducting this type of research, what could be recognized as a limitation of this study.

The articles had different values and some case studies had a lower degree - 3b- (definition of the National Health Scheme Centre for evidence based medicine)². Only two RCTs were found within the high level of screening.

Another limitation was restricting the search to articles in full text and in English.

In this review studies without interventions of art therapists were involved. Potential biases were excluded after reading the full text of these articles. The art therapy interventions were mentioned in the full text. These articles could be included in this review.

The analysis was based on qualitative items, without using any form of quantitative measuring like meta- analyses of the outcomes.

Future directions and implications

Art therapy deserves a chance to integrate its services into the Dutch medical settings. The results of this review indicate the following to be observed points:

- More and better qualified research needs to be conducted, especially RCTs with a larger sample size.

- Future studies of men with different types of cancer accessing art therapy will be necessary for evaluation of effects.
- Studies with evaluation of Hematologic patients should be done to generate more data about this group of inpatients with a long stay at the hospital.

CONCLUSION

This systematic literature review offers an overview of the outcomes of a variety of qualitative studies, case studies and RCTs. Art therapy among in- and outpatients with cancer (predominately female) can decrease anxiety, pain and depression and increase the wellbeing and QoL of patients and family caregivers. The common effects of art therapy were found in benefits of anxiety, depression, QoL, coping skills and mood.

Well designed studies are needed in the Netherlands, e.g. RCTs for integration of art therapy in the medical setting. More studies, based on methodological homogeneity are needed for showing the long term effects of follow up studies.

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Definition of words

Outcome: translation Dutch: 'uitkomst'

FVB: Federatie vaktherapeutische beroepen

www.iknl.nl: Integraal Kankercentrum Nederland

Creative therapeutic 'triangle': the art therapy interventions are in a triangle between: art therapist/researcher- client/ patient-medium/ art/ creatieve art.

AATA: American Art Therapy Association www.arttherapy.org

CAT: creative art therapies

MBAT: Mindfulness Based Art Therapy, a combination of art therapy and Mindfulness

DSM-5: Diagnostic and Statistical Manual of Mental Disorders (DSM) is the standard classification of mental disorders used by mental health professionals in the United States and contains a listing of diagnostic criteria for every psychiatric disorder recognized by the U.S. healthcare system.

SF-36: Smart-form Health Survey

WHOQOL- BREF: instrument comprises 26 items, which measure the following broad domains: physical health, psychological health, social relationships, and environment.

EORTC: European Organization for Research and Treatment of Cancer Quality of Life Questionnaire

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² National Health Scheme Centre for evidence based medicine

Level 1A	Therapy/Prevention, Aetiology/Harm Prognosis Diagnosis Differential diag/symptom prevalence Economic and decision analyses	1a SR (with homogeneity*) of RCTs SR (with homogeneity*) of inception cohort studies; CDR1 validated in different populations SR (with homogeneity*) of Level 1 diagnostic studies; CDR1 with 1b studies from different clinical centres SR (with homogeneity*) of prospective cohort studies SR (with homogeneity*) of Level 1 economic studies
Level 1b	Therapy/Prevention, Aetiology/Harm Prognosis Diagnosis Differential diag/symptom prevalence Economic and decision analyses	Individual RCT (with narrow Confidence Interval) Individual inception cohort study with > 80% follow-up; CDR1 validated in a single population Validating** cohort study with good††† reference standards; or CDR1 tested within one clinical centre Prospective cohort study with good follow-up**** Analysis based on clinically sensible costs or alternatives; systematic review(s) of the evidence; and including multi-way sensitivity analyses
Level 1c	Therapy/Prevention, Aetiology/Harm Prognosis Diagnosis Differential diag/symptom prevalence Economic and decision analyses	All or none§ All or none case series Absolute SpPins and SnNouts†† All or none case-series Absolute better-value or worse-value analyses ††††
Level 2a	Therapy/Prevention, Aetiology/Harm Prognosis Diagnosis Differential diag/symptom prevalence Economic and decision analyses	SR (with homogeneity*) of cohort studies SR (with homogeneity*) of either retrospective cohort studies or untreated control groups in RCTs SR (with homogeneity*) of Level >2 diagnostic studies SR (with homogeneity*) of 2b and better studies SR (with homogeneity*) of Level >2 economic studies
Level 2b	Therapy/Prevention, Aetiology/Harm Prognosis Diagnosis Differential diag/symptom prevalence Economic and decision analyses	Individual cohort study (including low quality RCT; e.g., <80% followup) Retrospective cohort study or follow-up of untreated control patients in an RCT; Derivation of CDR1 or validated on split sample §§§ only Exploratory** cohort study with good††† reference standards; CDR1 after derivation, or validated only on split-sample§§§ or databases Retrospective cohort study, or poor follow-up Analysis based on clinically sensible costs or alternatives; limited review(s) of the evidence, or single studies; and including multi-way sensitivity analyses
Level 2c	Therapy/Prevention, Aetiology/Harm Prognosis Diagnosis Differential diag/symptom prevalence Economic and decision analyses	"Outcomes" Research; Ecological studies "Outcomes" Research Ecological studies Audit or outcomes research
Level 3a	Therapy/Prevention, Aetiology/Harm Prognosis Diagnosis Differential diag/symptom prevalence Economic and decision analyses	SR (with homogeneity*) of case-control studies SR (with homogeneity*) of 3b and better studies SR (with homogeneity*) of 3b and better studies SR (with homogeneity*) of 3b And better studies
Level 3b	Therapy/Prevention, Aetiology/Harm Prognosis Diagnosis Differential diag/symptom prevalence Economic and decision analyses	Individual Case-Control Study Non-consecutive study; or without consistently applied reference standards Non-consecutive cohort study, or very limited population Analysis based on limited alternatives or costs, poor quality estimates of data, but including sensitivity analyses Incorporating clinically sensible variations.
Level 4	Therapy/Prevention, Aetiology/Harm Prognosis Diagnosis Differential diag/symptom prevalence Economic and decision analyses	Case-series (and poor quality cohort and casecontrol studies§§) Case-series (and poor quality prognostic cohort studies***) Case-control study, poor or nonindependent reference standard Case-series or superseded reference standards Analysis with no sensitivity analysis
Level 5	Therapy/Prevention, Aetiology/Harm Prognosis Diagnosis Differential diag/symptom prevalence Economic and decision analyses	Expert opinion without explicit critical appraisal, or based on physiology, bench research or "first principles" Expert opinion without explicit critical appraisal, or based on physiology, bench research or "first principles" Expert opinion without explicit critical appraisal, or based on physiology, bench research or "first principles" Expert opinion without explicit critical appraisal, or based on physiology, bench research or "first principles" Expert opinion without explicit critical appraisal, or based on economic theory or "first principles"