
Charles Darwin University

The beneficial attributes of visual art-making in cancer care

An integrative review

Ennis, G.; Kirshbaum, M.; Waheed, N.

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The beneficial attributes of visual art-making in cancer care: An integrative review

Abstract

We seek to understand what is known about the use of visual art-making for people who have a cancer diagnosis, and to explore how art-making may help address fatigue in the cancer care context. Art-making involves creating art or craft alone or in a group and does not require an art-therapist as the emphasis is on creativity rather than an overt therapeutic intention. An integrative review was undertaken of qualitative, quantitative and mixed-method studies on art-making for people who have cancer, at any stage of treatment or recovery. Kaplan's Attention Restoration Theory (ART) was used to interpret the themes found in the literature. Fifteen studies were reviewed. Nine concerned art-making programs and six were focused on individual, non-facilitated art-making. Review results suggested that program-based art-making may provide participants with opportunities for learning about self, support, enjoyment and distraction. Individual art-making can provides learning about self, diversion and pleasure, self-management of pain, a sense of control, and enhanced social relationships. When viewed through the lens of ART, art-making can be understood as an energy-restoring activity that has the potential to enhance the lives of people with a diagnosis of cancer.

Key words: art-making, craft, cancer, fatigue, cancer-related fatigue, attention restoration theory.

Introduction

In this review we seek to determine what is known about the use of art-making in the care of people who have had a diagnosis of cancer, and how art-making might help address fatigue in this context, using the theoretical lens of Attention Restoration Theory (ART). While the place of art-therapy in cancer care has been explored over recent decades, there is little known about the value of the less overtly therapeutic activity of 'art-making'. Art-therapy involves a trained art-therapist and is underpinned by psychological theory as a type of psychotherapy. Rather than being led by a therapist, art-making may be an individual pursuit, or facilitated by an artist or other worker who guides and often inspires an individual or a group to create art and/or craft. In this review we focus on visual art and craft making, and explore its use in the support of people who have had a diagnosis of cancer and are at any stage of treatment or recovery. Using an integrative review method, we analysed research that has focused on art-making in cancer care to better understand its value and meaning to participants. The theoretical framework developed by an environmental psychologist, Stephen Kaplan is known as Attention Restoration Theory (ART) (Kaplan 1995, 2001) and is used in this review as a lens through which to understand the potentially energy-restoring attributes of art-making.

We begin our exploration with the background to our study, then define key terms. The theoretical lens of ART is explained before we present the study aims and review method. The findings are presented in table format, with a discussion of the major themes found in the research; we then interpret these themes in relation to ART. To conclude we consider the implications for health professionals who support people working in cancer care.

Background:

Art therapy and art-making have been used in the care of people with cancer for many decades. A diagnosis of cancer can have life changing impacts that include fatigue, depression and anxiety as people grapple with physical, cognitive and existential issues that impact relationships, roles and identity (Galiono-Castillio et al. 2014; Jones et al. 2016; Menning et al. 2015;). Art therapy and art-making have been used to help people manage these issues, however teasing apart these different ways to approach 'art' in the context of cancer care warrants consideration. For example, Derman and Deitrick (2015) use the term 'art interventions'. Others use 'creative psychological interventions' (Archer, Buxton & Sheffield 2015) that include both therapy and art-making. Collie, Bottorff and Long (2006a) provide definitions of the two approaches, but conflate them when researching their value. While limited programs and research often necessitate combining these two approaches, such fusion can be seen to devalue the specific skills and training of both art therapist and art-making facilitators/artists. It is therefore useful to spend some time unpacking the differences between these two phenomena.

Art-therapy and cancer care

According to the Professional Association for Arts Therapy in Australia, New Zealand and Singapore (ANZATA), "The arts therapies are a form of psychotherapy utilising creative modalities, including visual art-making, drama, and dance/movement, within a therapeutic relationship to improve and inform physical, mental and emotional well-being" (ANZATA 2016). While other definitions from art therapy associations worldwide (e.g. The British Association of Art Therapists, American Art Therapy Association, and the Global Art Therapy Alliance) differ slightly in their detail, a brief scoping indicates commonalities in foci. That is,

the enhancement of emotional and mental health and wellbeing through the use of creative arts.

Art-therapists are masters-level qualified professionals, often engaged in health care settings, who use a range of approaches dependent upon their specific work context. Art therapy is a “well-established intervention” for people with mental health issues (Mische Lawson et al. 2012a, p. E353), yet remains under-researched and under-theorized. In a recent review of art therapy interventions, Van Lith (2016) found that art-therapists used a variety of practice theories such as “psychodynamic; humanistic (phenomenological, gestalt, person centered); psycho-educational (behavioural, cognitive behavioural, developmental); systemic (family and group therapy); as well as integrative and eclectic approaches” (Van Lith 2016, p. 9). This indicates a dynamic, diverse and evolving area of practice.

The use of art therapy in cancer care settings has become more noticeable over the past two decades. Research has suggested that art therapy can assist in the reduction of anxiety and other symptoms related to cancer treatment in cancer patients (Collie et al. 2006a; Collie, Bottorff, Long & Conati 2006b). Yet, the evidence in support of its beneficial impacts is still in the early stages as highlighted in a comprehensive review by Wood, Molassiotis and Payne (2011).

Art-making and cancer care

Art-making is the process of creating art or craft, and can occur in a wide range of formats. It might be an individual pursuit, occurring in any location, with no input from anyone other than the art-maker. Art-making can also be a structured activity that involves individuals or groups working with an artist or other facilitator to create art. Art-making can be

understood as creative expression that brings pleasure, new knowledge and skills, and is a vehicle for self-expression. There is no overt emphasis on the facilitation of in-depth thinking or the uncovering, exploring and expressing of emotion as there is in art therapy (Collie et al. 2006b). Art-making is more focused on creating art and working with tactile materials to express emotion and identity (Collie et al. 2006b), and enhance self-worth through providing challenges and achievements (Reynolds & Lim 2007a). Art-making has been used in health care contexts for some time, in both incidental and more purposeful ways (for examples of programs see websites of Arts & Health Australia, National Alliance for Arts Health & Wellbeing U.K., and the Art Health Network Canada).

Art-making may have unexpected benefits that differ from work with an art therapist. In a meta-analysis of creative arts interventions in cancer care up to 2012, Puetz, Morley and Herring (2013) suggested that anxiety reduction was strongest in programs which were delivered by a non-art therapist compared to those delivered by an art therapist. Though the number of studies is too small to make strong assertions, this points to the value of the art-making per se, and not only art creation with an overtly therapeutic angle.

Attention Restoration Theory

Attention Restoration Theory (ART) as developed by Kaplan (1995, 2001) was based on the work of an early philosopher and psychologist, William James (1892). The theory was grounded in empirical research of perception and cognition and provides an interesting perspective to understand how the environment and certain activities impact upon tiredness. ART uses the concept of *directed attention* to explain why activities that require a person to concentrate hard, sometimes against their natural will and inclination, result in

tiredness. Conversely, enjoyable activities that are linked to *fascination* are viewed as *involuntary attention*; these activities are effortless, easy and *restorative*.

ART was originally conceptualised to raise awareness of the importance of structuring daily activities. Kaplan encouraged people to take breaks within their work day – to walk outside in nature to revive and refresh themselves, to take time out to participate in fascinating pursuits whenever possible (Kaplan 1995). Kaplan's theory refers to effortless concentration capable of restoring energy to the healthy individual. Kaplan used terms such as: *being away* [being distinct from every day, routine], *extent* [scope and coherence with personal values] and *compatibility* [with an individual's interests] in his early work to distinguish the different aspects or attributes of an activity, which was developed further by others (Cimprich 1993; Korpela et al. 2008; Norling et al. 2008; Scopelli & Giuliani 2004; Berto 2008, 2007; Berto et al. 2010; Staats & Van Gemerden 2010).

ART was used as a framework in a recent qualitative study within a palliative care setting in the United Kingdom that aimed to develop a non-pharmacological intervention to help individuals manage fatigue related to advanced illness in a palliative care setting (Kirshbaum and Donbavand 2014). A prototype interview tool was developed to assist individuals to identify the types of activities that employ *involuntary attention* for them. These activities are simply the kinds of things that provide enjoyment, but are unique to that person. It can be a revelation for some, to identify what truly is fun, stimulating, worthwhile and pleasurable, and to prioritise those activities which restore attention and energy, over boring, energy draining activities that require *directed attention*. The tool was developed to be used by health care practitioners to assist those who are debilitated by fatigue to identify and then engage in energy restorative pursuits.

The *attributes of attention restoration* included in Kaplan's framework for well populations were mapped against a revised set of attributes based on four emergent themes of the palliative care study (Kirshbaum & Donbavand 2014). These were identified as: *Belonging*, *Expansive*, *Nurturing* and *Purposeful*. Briefly, the attribute of *Belonging* refers to the importance placed on being part of and engaging with a social group or community. It is closely aligned to having a sense of 'normalisation' with the outside world, whether it is the workplace, family, a football match or going out with a group of friends. The *Expansive* attribute values all learning and participation in new activities and experiences, where the individual is stimulated by tackling new challenges outside of their usual routine. In contrast, the attribute of *Nurturing* refers to activities that are often solitary, relaxing and comforting such as taking a warm bath, enjoying a massage, reading or listening to music. The *Purposeful* attribute is where the person is naturally motivated by achievement, action and a movement towards a tangible outcome.

We were intent to understand the literature on art-making and cancer care and its potential for addressing fatigue by drawing upon and advancing Kirshbaum and Donbavand's work (2014) with respect to the attributes of *Belonging*, *Expansive*, *Nurturing* and *Purposeful* activities.

The aim of this review

The aim of this integrated review was two-fold. Firstly, we wished to answer the question: What is known about art-making in the care of people with a cancer diagnosis? Secondly, we wanted to analyse the existing research through the lens of ART to explore the value of art-making in energy restoration and fatigue management.

Method

Integrative review

Integrative review is a research method used to summarize existing literature with the aim of providing 'a more comprehensive understanding of a particular phenomenon or healthcare problem' (Whittmore and Knafl 2005, p. 546). Integrative reviews allow for the inclusion and analysis of a range of research which can assist in the development of knowledge in new, emerging or under-researched areas. The method requires the adoption of a clear theoretical framework to guide the conceptual structuring of the literature (Torraco 2005). As we were keen to explore art-making through a conceptual, theory based lens, and art-making is a relatively under-researched area, integrative review was deemed to be an appropriate method for the task.

Search Strategy

The search strategy is based on the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines (Moher, Liberatii, Tetzlaff, Altman, The PRISMA Group, 2009). A search strategy was developed and undertaken using the following electronic data bases: Academic Search Premier, Art Full-Text, CINAHL, MEDLINE, PsychINFO, and SocINDEX. The following search terms/combinations were piloted in each of the data bases (art OR craft*) AND (cancer OR oncology). Specific search strategies were then developed for each database using the MeSH browser (Medline) and the thesaurus/subject terms browsers (all other data bases). These are documented in Table 1.

Inclusion/Exclusion Criteria

We included only research published in peer-reviewed academic journals, that concerned the making of visual art or craft of any kind, by people who have had a diagnosis of cancer, in any setting. Studies were excluded if they were not associated with cancer, if they involved an art-therapist, or utilised an overt therapeutic foundation of any kind (e.g. cognitive behaviour therapy or other psychotherapy). Studies that combined art-making and art-therapy were also excluded, as were studies that combined art-making and other non-visual art forms (such as music or drama) or activities such as mediation or yoga. Studies that used an arts-based research method (e.g. Using participants' paintings or photographs as data) to explore questions not related to art-making were also excluded. No date limiters were set. Due to resource limitations, only English language studies were included.

Data abstraction & quality appraisal

The first author reviewed the all search returns, removed duplicates and then all content not related to the topic. The first and second authors then screened returns against the inclusion/exclusion criteria as well as level of evidence and quality using the John Hopkins Nursing Evidence-Based Practice Rating Scale (JHNEBP) (Newhouse et al. 2005). The JHNEBP has two aspects: A level of evidence score (I-V) where Level I includes RCT's and experimental research and Level V studies involve expert opinion that is not based on research evidence. A quality of evidence score (A-C) is also used, where a rating of A indicates high quality research, and C is low quality or has major flaws. The JHNEBP recommends that studies with a rating of C should not be included in the review (Newhouse et al. 2005).

Analysis & Synthesis

Quantitative and qualitative studies are separated for the analysis and we have drawn upon Harden & Thomas (2005) and Popay et al. (2006) for guidance in the synthesis of diverse studies. Firstly we bring together results from quantitative studies and quantitative data from mixed-methods studies to document any quantifiable benefits of participation in art-making. Secondly, results from the qualitative studies (and qualitative data from mixed methods studies) were analysed using a general inductive thematic analysis (Thomas 2006). Themes were later mapped against the four ART attributes.

Results

Figure 1 provides an overview of the review process. The search identified 1338 initial records (after duplicates were removed). Forty-eight articles were read in full (authors one and two), and 15 met all inclusion/exclusion criteria. Table 2 provides an overview of these 15 studies. There are no Level 1 studies. Two studies were mixed-methods program evaluations (range: n=6 to n=214), 11 were qualitative studies (range: n=2 to n=21) and two were quantitative studies (n=20 & n=39). Breast cancer was the most commonly researched cancer, then a combination of lymphoma, leukaemia, immune deficiency disorder and aplastic anaemia. All other studies involved participants with any cancer type. Studies fell into two broad categories of program-based and personal art-making types. There were nine studies concerning program-based art-making and six about personal, individual, art-making. Program-based art-making research utilized a broader range of methods, and included program evaluations. Personal art-making research was entirely qualitative. The review findings have been divided into these two categories, as it became apparent they are different phenomena.

(Table 2 here)

Table 2: Table of evidence for art- making and cancer care

Program-based art-making

Program-based art-making involved the facilitation of art-making in a group setting or individually (or both), by artists or health workers. Program-based art-making generally had aims or goals associated with the art-making. In the literature presented here, art-making included brief activities that lasted for an hour (such as the tile making program outlined in the work of Mische Lawson et al. (2012a, 2012b, 2016a, 2016b)) as well as longer programs involving weekly sessions running from six weeks to six months, using art forms such as sculpture and other 3-D works, multi-media, painting, drawing and mosaic-work (Ferszt, Massotti, Williams & Miller 2000; Heiney & Darr -Hope 1999; Heiney, Darr-Hope, Meriweather & Swan Arp 2015; Predeger, 1996; Sabo & Thibeault, 2012).

Measured (quantitative) understandings of participation in program-based art-making

Given the lack of quantitative research found in the review, there is very little that can surmised in terms of measureable impacts or benefits of art-making. In their 2012a study, Mische Lawson et al. found no decrease in participant stress or anxiety after a one hour art-making session. There was however, a decrease in treatment-related symptoms which Mische Lawson et al. suggested may be linked to the distraction of art-making. In a more recent study focused on understanding the benefits of art and music interventions for reducing symptoms associated with bone and marrow transplant, Mische Lawson et al. (2016b) compared music listening with art-making and a control group, finding no statistical differences between the three groups on all measures. The only other quantitative data

comes from two mixed-method program evaluations by Heiney & Darr-Hope (1999) and Heiney et al. (2015). The 1999 study involved only 6 participants. While the program was highly rated, the numbers are too small to make assertions of benefit. Heiney et al.'s (2015) study was larger (214 participants). Using a scale of 1 to 5, where five is 'strongly agree', Heiney et al. (2015) found most participants strongly agreed that: Working with art helped them learn about their feelings (4.8 mean), the group would be useful to other cancer patients (4.9), sharing with other cancer patients felt good (4.9), and, the art helped them to understand their inner self better (4.8).

Thematic analysis of program-based art-making impacts:

The impacts of art-making programs in the care of people with a cancer diagnosis have been organised into three themes. These are: 1) Learning about self through expression and creativity, 2) Being supported by a group, and 3) Enjoyable distraction. These themes, their elements and their relationship to the four attributes of ART, according to Kirshbaum and Donbavand (2014), are summarized in Table 3.

(Insert Table 3 here)

Learning about self through expression and creativity

Art-making programs can offer participants an opportunity to reflect on their personal identity and their circumstances through creatively exploring their realities, and expressing themselves artistically (Heiney & Darr Hope 1999; Heiney, et.al. 2015; Mische Lawson et al. 2012b; Mische Lawson et al. 2016a; Predeger 1996; Sabo & Thibeault 2012). Art-making can open up new creative possibilities (Ferszt et al. 2000). It provides a vehicle for story-telling, expressing new and often intense emotions associated with the cancer experience, as well

as the opportunity to have this expression validated by others (Heiney et.al. 2015). The importance and meaning of creative expression, and the ability of art-making to reflect emotions or thoughts, life experiences and self-identity was also highlighted (Mische Lawson et al 2012b; Mische Lawson et al 2016a; Predeger 1996).

The opportunity to use creativity and self-expression to reframe the cancer experience and renew or refresh one's identity is an important aspect of art-making found in these studies. Sabo and Thibeault (2012, p. 206) highlighted the "reclamation of self" that can occur through art. They discussed the liberating aspect of creativity, and the processes of reflection that come through creative self-expression. The importance of articulating new or renewed identities, developed through overcoming challenges and gaining new skills, perspectives and strength, is highlighted Sabo & Thibeault (2012) and Predeger's (1996) work.

As can be seen in Table 3, the theme, *Learning about self through expression and creativity* maps to the ART attributes of *Nurturing* and *Expansive*. Art-making can be viewed as a self-nurturing and healing activity, in which art is used to understand and express an evolving identity in a non-stressful, enriching way.

The support of a group

Being part of a group who have shared meaningful experiences was a key element of the benefits of some of the program-based art-making. Sharing stories and being understood and accepted was cathartic for women in the Heiney et al. (2015) study. In an earlier study by Predeger (1996, p.55), the ideas of "connecting with sisters" and the creation of a "safe harbour" were found to be elements of the group that were important for participants'

sense of healing. The term “Woman Spirit”, which refers to the process of “knowledge co-created from experience, exploration, expression and empowerment”, was developed by participants and researchers to explain the group phenomena (Predeger 1996, p. 57).

Themes highlighting the importance of social interaction and the support of others are also expressed in the studies by Heiney et. al. (1999) and Ferszt (2000). When mapped to the ART attributes in Table 3, we see that the *Support of a Group* theme aligns with the attributes of *Belonging* and *Nurturing* through the elements of sharing, understanding and a feeling of safety.

Enjoyable Distraction

Program-based art-making can provide meaningful activity that provides much needed distraction from some aspects of cancer treatment. Nursing staff and patients in the study by Ferszt et al. (2000) discussed the distraction from pain, hospital and illness that art-making can provide. Similarly, one of the 12 themes in the 2012b study by Mische Lawson et al, was “occupying time” (p. 406), of which subthemes included “pass time” and “distraction from treatment”. In a later study, Mische Lawson et al. (2016a) found that “a few patients used the activity of painting a tile to pass the time”(p.5).

The theme of *Enjoyable Distraction* is mapped to the ART attributes of *Purposeful* and *Expansive* (Table 3). Art-making can provide distraction that is meaningful and results in a tangible product, while at the same time being an uplifting activity that can promote laughter and joy (Predeger 1996).

Personal art-making

Personal art-making studies were qualitative and generally involved participants who practiced visual art or craft on their own. Some participants identified as artists prior to their cancer diagnosis. Most studies involved participant reflection upon the meaning of their arts practice during or post cancer treatment.

Thematic analysis of reported impacts of personal art-making:

Studies in the 'personal art-making' category can be encapsulated within five themes. These themes, their elements, and how these map against the ART attributes, are summarized in

Table 4:

(Insert Table 4 here)

Learning about self through expression and creativity

Having a cancer diagnosis can make a person more reflective about their identity, their life, and its meaning, which may prompt them to take up new activities such as art-making (Reynolds and Prior 2006). Art-making can provide ways to express thoughts and feelings and can increase self-understanding (Green and Young 2015). The idea of evolving identity is key in much of the research. Reynolds and Prior (2006) found that art-making could help women to re-establish their identity. By highlighting their role as an artist, art-making could also help women resist less empowering identities that were focused on their illness (Reynolds & Lim 2007a, 2007b; Reynolds, Lim and Prior 2008). Adding to the idea of evolving identity, Singh (2011) found that art-making helped people to gain a clearer view of themselves and their lives, and that people were able to resolve emotional issues and gain insight into their thoughts and feelings through artistic expression and reflection on their art work. Singh's (2011, p.162) study highlighted the way in which art-making allowed women

to “clear the way emotionally” through working with art to understand, express and acknowledge a range of complex emotions.

As with program-based art-making, we mapped the theme of *Learning about self through expression and creativity* with the ART attributes *Nurturing* and *Expansive* in Table 4. The processes of self-expression and creativity appear to nourish participants emotionally, enhance self-understanding and enable the promotion of a more holistic identity.

Management of physical and emotional pain

The work of Reynolds and Lim (2007b) and Reynolds et al. (2008) underpins this theme. They have found that art-making can help people to manage some of the emotional turmoil associated with cancer, and that art work can “offer a record of tangible resistance against the impacts of cancer” (Reynolds et al., 2008 p. 211). There are close associations between this idea and the previously noted concept of identity. Reynolds and Lim (2007a) found that one of the reasons art-making could assist with pain was because it focussed attention on life experiences *other* than having cancer. This outward focus was helpful in relieving worry and pain and providing hope for the future. Furthermore, Green and Young (2015) found art-making was a generally healing experience for art-makers.

In Table 4 we have mapped the elements of this theme predominantly to the ART attribute *Nurturing*. It seems that art-making can provide a sense of healing and respite from emotional turmoil. The attribute of *Expansive* is also important here as the literature shows that art-making can provide a sense a hope for the future for some people.

Diversion and Pleasure

The relatively simple act of turning one's attention to something meaningful and pleasurable is an important aspect of art-making that was reflected in the research. This is associated with the ideas of mindfulness and flow in the work of Green and Young (2015) who find that art-making can induce a flow-state in art-makers. Reynolds et al. (2008 p. 215) found artworks offered a "sensuous pleasure" involving the use of a range of senses in ways that brought about good-feelings. Singh's (2011) participants felt that the process and physical place of art-making provided a sense of art as "a haven" (2011 p. 162) from other life issues or problems. When lives are disrupted by a cancer diagnosis and treatment, many activities and/or roles may be given up or put on hold. Reynolds and Lim (2007b) found art-making can be an important diversion in that it can help to fill a void in participants' lives.

The theme of *Diversion and Pleasure* revealed a level of complexity when mapping its elements with the ART attributes (Table 4). The three linked attributes are *Expansive*, *Nurturing* and *Purposeful*. The sensuousness of art-making can be viewed as being self-nurturing, as are elements of the flow experience. Yet the flow can also be understood as *Expansive* in that a person continues to learn and grow in their skills as an art-maker through practice over time. The idea that the creation of art is a meaningful activity also provides a sense of purpose to the art-making.

Sense of Control

The processes of art-making involve making decisions about the evolving art. This ability to choose and direct can help people feel a sense of control that might be missing in other areas of life. Green and Young (2015) discussed the importance of renegotiating control through the creation of art. Reynolds and Prior (2006) also touched on the idea that art-

making is meaningful because it enables feelings of choice and control. We have mapped this theme to the ART attribute *Expansive* (Table 4) as it involves being able to create and exert personal choices and control at a time when choices in other areas of life can be limited.

Improving Relationships

Art-making can facilitate relationships with others that are based on art and creativity, rather than on illness. Reynolds and Prior (2006) found that being recognised for their art was very important for participants' social identities. In a later study, Reynolds and Lim (2007b) found art helped participants to strengthen and protect their family relationships, through offering a different form of care. Later still, Reynolds et al. (2008) found art-making helped people confirm their ongoing capability, personal continuity and social connectedness. All of these observations demonstrate the importance of art-making in participants' relationships with others. Green and Young (2015, p. 701) found that participants felt they could "give back" through their art, and this too was important to their sense of self and their relationships with others. This final theme has been mapped to the ART attribute of *Belonging* (Table 4) which is supported by art-making through the affirming of capabilities and being able to maintain relationships through interests, not illness.

Challenges and barriers to participation in art-making (personal or program-based)

The final aspect of our analysis addresses the issue of barriers to participation in art-making in cancer care. Life history was found to have relevance for the way in which participants understood the subjective benefits of participating in art-making (Reynolds & Prior, 2006). Similarly, Reynolds and Lim (2007b) found that people who had previously learned art-skills, valued the arts, had the support of families and were open to new experiences, were more

likely to take up art-making. Mische-Lawson et al. (2016a, and 2012b) also draw attention to some of the negative aspects participants discussed. This involved the “stress, anxiety or frustration” (2016b, p. 6) that participants can experience with themselves while painting, and also not being happy with the results of their efforts. While most participants found the art-making experience positive, the issue of how to properly support people in creative work requires careful consideration (Mische Lawson et al. 2016a, p.8).

Discussion

This review reveals relatively few studies on art-making for people with a diagnosis of cancer. The quantitative studies (Mische Laswon et al. 2012a; 2016b) demonstrated little measurable benefit from a 1-hour art experience. The quantitative aspects of the mixed method evaluations demonstrated only that the programs evaluated were well received (Heiney & Darr-Hope 1999; Heiney et al. 2015). The qualitative studies were divided into program-based and personal art-making categories, thematically analysed and mapped to the four ART attributes. We have found that the themes from the research literature about art-making in cancer care can be mapped to the ART attributes in a way which sheds light on the potential of art-making for enhancing energy and addressing cancer-related fatigue.

Learning about self through expression and creativity was a theme found in both program-based and personal art-making. The elements of this theme mapped to the *Nurturing* and *Expansive* attributes of ART. The remaining themes for both categories of art-making help us to tease out some interesting differences between program-based and personal art-making. In program based art-making the support of a group and the benefits this provided were clearly highlighted and mapped easily to the ART attributes of *Belonging* and *Nurturing*

(Table 2). There was also an emphasis on the *Enjoyable Distraction* elements of these programs, which were mapped to attributes of *Expansive and Purposeful*. Interestingly, the *Purposeful* attribute only appeared once in our analysis (Table 3).

The benefits of personal art-making were centred on meaning-making through self-reflection, as well as the experiences of pleasure and control, 'healing' and management of emotional and to a lesser extent, physical pain. This is, in part, a result of the qualitative research methods used, and foci of this literature. Themes were mapped most commonly to the *Nurturing* and *Expansive* ART attributes. It could be argued that these types of benefits are similar to those one might expect from art therapy. The notions of diversion and pleasure were highlighted. As with program-based art-making, the only time we used the ART attribute *Purposeful* in terms of personal art-making (Table 4) was in relation to art-making filling a void left by being unable to pursue employment or other activities. The attribute of *Belonging* was interpreted in this context as the improvement of relationships with family and friends through being able to 'give back', rather than belonging to a group of fellow art-makers.

As noted at the outset of this article, we planned to focus on art-making and its potential benefits in addressing fatigue which is why the ART Framework adapted by Kirshbaum and Donvaband (2014) was chosen. We have found that research on the art-making experience provided evidence of a range of themes which can be mapped to the ART Framework. However, mapping the themes with the ART attributes was challenging in some regards. None of the studies were about the impact of art-making on fatigue specifically, and not all research participants had a problem with fatigue. As such, utilizing a framework that was designed to provide insight into activity that is associated with *involuntary attention* for the

purpose of fatigue self-management, was at times difficult. This was particularly so in relation to the concepts of control and choice found in some of the studies. ART does not provide tools for analysis of the socio-political contexts in which people with cancer are located. Yet, the issue of empowerment of the individual following a cancer diagnosis can be viewed as falling broadly within the *Expansive* realm, where the individual's sense of self is enlivened and strengthened.

Limitations:

There is no standard definition of art-making and it is often used in combination with other art forms in organic ways that makes separating out visual art-making research difficult. Similarly, art-making and art therapy (and other therapies) are often conflated or used together in practice and literature. These issues with defining/isolating art-making mean we may have missed some studies in our review. Other limitations are associated with synthesizing results from very different types of programs (e.g. one-hour experiences and six-month projects) and studies using very different research methods. The context and richness of the studies can be lost in synthesis. Only English language studies were considered, which also limits the scope of the review.

Implications

Whether undertaken alone or as part of a group program, art-making appears to be a meaningful activity that may have a positive impact on people's sense of identity and their relationships with others. Art-making skills can be learned and developed alone, or with others in program-based settings, and subsequently these skills can continue to develop both with and/or without the facilitation skills of artists and others.

For health and human service practitioners involved in the care of people with cancer, art-making programs appear to be an activity worthy of further investigation for integrating into patient and client care options. Art-making potentially provides a non-medicalised intervention that is relatively affordable to facilitate in acute or community settings. Furthermore, the intervention could be continued by the person on their own, with continued benefit and enjoyment. Yet barriers or challenges to participation in art-making require further understanding. Reynolds & Prior (2006) found that biographical factors were relevant to a full understanding of the subjective benefits of art-making. Other literature has also found that issues such as lack of transport, time and language and cultural differences are also likely to be barriers to participation that require attending to if such activities are to be open and relevant to a range of different populations (Collie & Kante, 2011).

Conclusion

This review demonstrates that research in the area of art-making and cancer care is small, varied and emergent. As such, further studies of art-making of all types for people with a cancer diagnosis are needed to better understand the beneficial impacts. Through analysing the existing research through the lens of ART we have found that the framework provides a useful way to understand some of the benefits of art-making. This analysis takes one important step towards acknowledging the potential of art-making to enrich the lives of people with cancer through offering a different way to enhance energy.

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Table 1: Search Terms

Database	Search/MeSH/Subject Terms	Returns	Notes
Academic Search Premier	(art making OR craft*) AND (cancer OR oncology)	373	The use of 'art' alone resulted in many thousands of returns so was refined using 'art making'
Art Full Text	(art OR craft*) AND (cancer OR oncology)	55	Small number of returns did not require refining
CINAHL	(art making OR drawings OR handicrafts) AND (neoplasms OR oncology)	283	CINHAL headings search used to locate terms.
Medline	(medicine in art OR paintings OR sculpture OR portraits as topic OR art making) AND (cancer OR oncology)	381	MeSH terms search used to locate terms
PsychInfo	(art OR craft*) AND (cancer OR oncology)	222	Subject headings selected to narrow returns: <i>neoplasm, human females, human males, quality of life, oncology, survivors, treatment interventions, major depression, patients, death and dying, art, wellbeing, creativity, social support, symptoms, anxiety, artists, case report, emotions, models, narratives.</i>
SocIndex	(art OR craft*) AND (cancer OR oncology)	127	Small number of returns did not require refining

Table 2. Table of evidence for art making and cancer care.

Author (year of publication)	Design/Methods	Participants/Setting	Intervention	Research aims/questions	Main findings	Strength and quality of Evidence
<i>Quantitative Studies</i>						
Mische Lawson, Williams, Glennon, Carithersm Schnabel, Andrejack and Wright (2012a)	Quasi-experimental cross-over design Therapy-Related Symptom Checklist (TRSC), Spielberger State-Trait Anxiety Index (STAI)	Convenience sample N = 20 (10 male/10 female) Aged 20-68 years Blood and marrow transplantation (BMT) recipients USA	Tiles of Hope art-making program during BMT treatment	To examine whether a one-hour art-making session during BMT treatment significantly affects therapy-related symptoms	No significant difference between control and intervention groups in stress (cortisol measure) No significant difference in anxiety between groups. Significant decrease in treatment related symptoms in intervention group (possibly because of distraction of art making).	Level II B (pilot)
Mische Lawson, Glennon, Fiscus, Harrell, Krause, Moore & Smith (2016b)	Randomized, three-group pre/post-pilot design.	39 adults (22-74 years) receiving blood and marrow transplants (BMT) 3 groups: 14 – control group 14 – art group 11 – diversional music group USA	The art group participated in the Tiles of Hope art-making program (1 hour).	To understand the benefits of making art and listening to music and whether those activities may be beneficial for reducing symptoms associated with BMT	No significant differences in age, gender, ethnicity, or diagnosis existed between groups. No statistical differences were found between groups on all measures following the intervention.	Level II B (pilot)
<i>Mixed Method Studies</i>						
Heiney & Darr-	Mixed method survey	N= 25 participants in	Healing 3D and	Evaluation of program	The benefits of the program derive	Level III B

Hope (1999)		<p>program, 3 male/22 females, n=6 sampled</p> <p>mostly breast cancer</p> <p>24-68 years of age</p> <p>USA</p>	<p>mixed media art support program (Healing Icons)</p> <p>6 sessions x 1.5 hour sessions</p> <p>6 programs run over three years</p>		<p>from a combination of the healing elements of group-work and the creative process of art making.</p> <p>Survey very high scoring in almost all areas (lowest was 'I received support from other patients – 3.83/5. Highest was 'I think this would be useful to other and 'I would attend a similar group'. 5/5)</p> <p>Open-ended responses produced the following themes:</p> <ol style="list-style-type: none"> 1. Decrease in isolation/Increasing support 2. Alternative means of expression and a validation of intense emotion 3. Gaining different perspectives on their experiences. 	
Heiney, Darr-Hope, Meriweather, & Swan Arp (2015)	<p>Mixed method</p> <p>Survey;</p> <p>Conceptual therapeutic framework of creating arts, story sharing and therapeutic group process</p>	<p>N=214</p> <p>5 male/209 female</p> <p>Mixed cancers</p> <p>USA</p>	<p>Art making Program, story, group discussion, presentations during</p> <p>6 sessions x 90 minutes group sessions (average, 7 in a group).</p> <p>Program ran 32 times.</p> <p>Painting collage, mosaic</p>	<p>Evaluation of program: To determine patient satisfaction and identify areas for programme improvement</p>	<p>Most participants strongly agreed (score of 5) that:</p> <p>Working with art helped me learn about my feelings (4.8 mean)</p> <p>I think the group would be useful to other cancer patients (4.9)</p> <p>Sharing with other cancer patients felt good to me (4.9)</p> <p>The art helped me understand my inner self better (4.8) Themes:</p> <p>Creative aspect: Art provided a new way to express emotions, Re-frame their cancer experience, Provided</p>	Level III B

					<p>catharsis.</p> <p>Group aspect: Acceptance by group members, Sharing and understanding others, Catharsis.</p> <p>Story aspect: There is value in sharing stories.</p> <p>Emotional Healing: Participants felt they achieved self-defined emotional healing</p>	
Qualitative Studies						
Ferszt, Massotti, Williams & Miller (2000)	<p>Qualitative Exploratory, pilot study:</p> <p>Semi-structured interviews</p>	<p>N = 14</p> <p>7 oncology patients (2 female/5 male) 21-83 years old, diverse ethnic backgrounds.</p> <p>7 nurses (1 male/5 female) all Caucasian.</p> <p>USA.</p>	<p>Oncology unit based art program.</p> <p>Individual or group participation in 2 hour, weekly session with art teacher.</p>	<p>To examine the potential benefits of an arts program on an inpatient oncology unit located in a major medical centre.</p>	<p><i>Benefits from patient interviews:</i></p> <p>Distraction from pain, distraction from Hospital and illness, pleasurable, social Interaction, pride/accomplishment, rekindled past interest in art, and discovered new possibilities.</p> <p><i>Benefits from nurse interviews:</i></p> <p>Distraction from pain, distraction from Hospital and illness, pleasurable, increased motivation, pride/accomplishment improved mood, and improved communication</p>	Level III B

Green & Young (2015)	Qualitative, Hermeneutic phenomenology; Unstructured interviews (in persona and video conferencing using Skype) and email	N=7 1 male/6 females; 23-35 years of age; 7 different cancers Canada and USA, diverse cultural backgrounds	Personal/individual visual art making.	What is the lived experience and meaning of visual creative expression for young adult cancer survivors?	The lived experience and meaning of creative expression involved 2 major themes: Increased self-understanding and a healing experiencing. 7 sub-themes: Being in the flow Allowing body to express itself Renegotiating control Changing ones environment Being seen Respect for art as a separate entity Giving back	Level III B
Mische Lawson, Glennon, Amos, Newberry, Pearce, Salzman, Young (2012b)	Qualitative Semi-structured, in-depth interviews	Convenience sample N = 20 (10 male/10 female) Aged 20-68 years Blood and marrow transplantation (BMT) recipients USA	Tiles of Hope art-making program during BMT treatment	To explore BMT patients' perceptions of an art-making experience during treatment.	12 themes (including the percentage of total 'chunks' of information the themes reflect) Occupying time (20.5%) Creative expression (13.5%) Reactions to Tile Painting (13.5%) Support (12.2%) Impacts of Side Effects (7.3%) Other activities suggested by patients (7%) BMT treatment processes (6.2%) Shared painting experience (5.9%) Life outlook (5.2%) BMT life changes (3.8%) Spirituality (3%)	Level III B

					Barriers (1.9%)	
Mische Lawson, Cline, French & Ismael (2016a)	Qualitative Inductive approach. Semi-structured interviews	Convenience sample of BMT outpatients. N = 21 adults (19 years and over) USA	Tiles of Hope art- making program.	To investigated BMT patients' perceptions of painting a ceramic tile during outpatient treatment.	10 themes (presented from the largest to smallest amount of overall data they represent) Meaningful activity (32.2%) Expression (including themes of hope & spirituality) (18.7%) Passing time (13.2%) BMT process (12.1%) Social outlet (8.1%) Therapy-related symptoms (7.3%) Negative aspects of painting (5.9%) Encouragement to paint (2.6%)	Level III B
Predeger (1996)	Qualitative Participative, feminist enquiry	Purposive convenience sample N=18 women Ages 39-70 years Breast cancer	Women's art group 6 months, twice a week	1) What is the meaning of healing through expressive arts for women living with breast cancer? 2) What are the processes and outcomes of women co-creating personal collective knowing?	Healing through art involves: Actualizing the need to express. Losing control, gaining control. Illuminating a changing perspective. Transcending and becoming braver. Connecting with sisters. Creating a safe harbour. Fuelling the creative spark Celebrating the feminine. Woman spirit' (the process of knowledge co-created from experience, exploration, expression and empowerment).	Level III B
Reynolds & Prior (2006)	Qualitative, Interpretive Phenomenological Analysis (IPA), interviews	N=3 (1Male, 2Female) Aged 47 to 51 years Breast and stomach cancer UK	Exploring personal visual art and craft making	1)Why do people with cancer take up art as a leisure activity 2)How does visual art-making in daily life might support identity maintenance/reconstruction	People take up art because: cancer makes people reflective & facing mortality can motive people to take up new opportunities. How it supports identity: Helped block out negative thought.	Level III B

					<p>Enhanced feelings of choice and control.</p> <p>Re-established a familiar identity during cancer by providing meaningful activity.</p> <p>Enable personal growth & the expression of the familiar.</p> <p>Resist the powerful cancer label through artist social roles.</p> <p>Promoted relationships based on interest rather than illness.</p> <p>However, Life history had relevance for understanding the subjective benefits of art-making.</p>	
Reynolds & Lim (2007a)	Qualitative, Interpretive Phenomenological Analysis (IPA), interviews	<p>N=12</p> <p>Female</p> <p>Aged 23-74 years</p> <p>6 breast cancer, 6 other</p>	Visual art and craft making	To explore participant views about the contribution of art-making to their subjective wellbeing in the context of living with cancer	<p>1. Art symbolised the cancer experience (<i>fear & grief; hope and strength</i>).</p> <p>2. Art-making focused attention of life experiences other than cancer (<i>outward focus, relieved worry and pain, hope for future</i>).</p> <p>3. Art-making maintained personal identity and self-worth (<i>challenge & achievement, learning & self-development, express interests, subjective control</i>).</p> <p>4. Art-making preserved an 'able' social identity. (<i>mutual social interest other than cancer, a social identity, relieved family, gifts, legacy</i>)</p>	Level III B
Reynolds & Lim (2007b)	Qualitative, Interpretive Phenomenological	<p>N=11</p> <p>Female</p>	Visual art and craft making	What are the personal motives and contextual issues for turning to art when living with cancer	<p>Motivation:</p> <p>To manage emotional turmoil.</p> <p>To fill occupational void.</p>	Level III B

	Analysis (IPA), interviews	Aged 23-74 years Mixed cancers			To preserve positive identity. To offer care and protect family relationships. Facilitating Factors: The role of previously learned arts skills. Longstanding values and coping skills. Family influence. Unexpected encounters.	
Reynolds, Lim, & Prior (2008)	Qualitative, photo-elucidation, interviews	Convenience sample N=12 Female Aged 23-74 years Mixed cancers UK	Visual art and craft making	To examine the meaning of personal artwork for women living with cancer	Artworks offered sensuous pleasure. Confirmed their ongoing capability, personal continuity and social connectedness. Each piece of art offered a record of tangible resistance against impacts of cancer. Helped maintain a familiar, 'non-cancer' identity.	Level III B
Sabo and Thibeault (2012)	Qualitative Interpretive Phenomenology	N=2 Female Breast cancer Canada	Sculpture Program: Torso's of two breast cancer survivors	1) To develop lifelike torsos using innovative sculpture materials. 2) To shed light on the meaning women give to the experience of breast cancer after viewing their sculpted torsos.	The production and the viewing were both important. 4 themes: The landscape of the breast in cancer. Red Shoes: The reclaiming of self. Liberation: towards and embodied self. Scars: re-authoring a life.	Level III B

Singh (2011)	Qualitative Narrative In-depth interviews	N=3 Female Breast cancer Canada	Mixed personal art-making	1) How do artists use art making when faced with cancer to fulfil their psychosocial needs? 2) How does art change the cancer experience of the artist and provide therapeutic benefit simultaneously?	Three story lines: Getting a Clearer View Clearing the way emotionally Art as a haven. Existence is affirmed, confirmed and proclaimed through artistic expression and the experience of cancer changing both the artist and the art. Overall this study supports the fact that art making is helpful as a means of psychosocial support for women with breast cancer.	Level III B
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Table 3. Themes from program-based art-making mapped to ART attributes.

Main Theme	Elements	Relationship to ART
Learning about self through expression & creativity	Using art to process feelings	Nurturing
	Expressing feelings through art	Expansive/Nurturing
	Emotional healing	Nurturing
	Validation of intense emotions	Nurturing
	Gaining different perspectives	Expansive
	Re-claiming of self	Nurturing/Expansive
The support of a group	The acceptance of others	Belonging
	Sharing and understanding	Belonging/Nurturing
	Creating a safe space	Belonging/Nurturing
	Giving and receiving	Belonging/Nurturing
Enjoyable Distraction	Occupying time meaningfully	Purposeful
	The joy and fun of creating	Expansive

Table 4: Themes from personal art-making research mapped against ART attributes

Main theme	Elements	Relationship to ART
Learning about self through expression and creativity	Reflecting on your life/facing mortality	Nurturing/expansive
	Self-understanding	Nurturing/expansive
	Re-establishing a positive identity	Nurturing/expansive
	Expressing emotions	Nurturing/expansive
Management of physical and emotional pain	Managing anxiety and turmoil	Nurturing
	A healing experience	Nurturing
	Providing hope for the future	Expansive/nurturing
Diversion and Pleasure	Flow	Expansive/nurturing
	Filling a void	Purposeful
	sensuous pleasure	Nurturing
A sense of control	Having choice	Expansive
	Renegotiating control	Expansive
Improved relationships	Relationships based on art not illness	Belonging
	Affirming capabilities	Belonging
	Giving back	Belonging