


The impact of the arts in healthcare on patients and service users: A critical review

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Abstract

This review provides an updated evaluation of the emerging body of literature on the value of the arts in healthcare settings. Internationally, there is growing interest in the use of the arts in the healthcare context supported by the number of research studies reported in the nursing and medical literature. There is evidence that arts interventions have positive effects on psychological and physiological outcomes on patients in a hospital environment. A critical review of the literature between 2011 and 2016 was undertaken. The following databases were searched: MedLine, CINAHL, AMED, Web of Science and ASSIA. Searches included words from three categories: cultural activities, outcomes and healthcare settings. Initial searches identified 131 potentially relevant articles. Following screening and review by the research team, a total of 69 studies were included in the final review. The majority of studies examined the effect of music listening on patients/service users (76.8%). These studies were primarily quantitative focusing on the measurable effects of music listening in a surgical context. Overall, the studies in the review support the growing evidence base on the value of the arts in a variety of healthcare settings for patients/service users. The review findings suggest that now is the time for different voices and art forms to be considered and represented in the research on arts in healthcare. Further research is also required to strengthen the existing evidence base.

KEYWORDS

art interventions, arts and health, cultural activities, healthcare, well-being

1 | INTRODUCTION

The application of the arts in healthcare has steadily developed globally, within western bio-medical models (All Party Parliamentary Group on Arts, Health and Wellbeing. Inquiry Report, 2017; Wilson, Bungay, Munn-Giddings, & Boyce, 2016). Historically, Broderick (2011) argued that healthcare was founded on providing medical interventions for acute episodes and infectious diseases, as these were the predominant causes of mortality of the time. The medical model of healthcare that developed was predicated on the principles of the eradication of illness through diagnosis and effective treatment. With increased life expectancy, chronic and degenerative diseases

have replaced infectious disease, leading to a shift in the model of healthcare provided to a more social model, with an emphasis on the multiple and interrelated factors influencing health (Broderick, 2011). Since the publication of the Marmot Review (Marmot, 2010), in the UK, the social determinants of health have increasingly underpinned current government policy, and Sonke et al. (2009) suggested that the movement, towards a more integrative and social model of health, has opened the space for creative arts activities in healthcare.

Globally, over the past 30 years, there has been a widening in practice of the arts in a wide range of healthcare settings. The growing recognition of the arts having an important role to play in improving the health and well-being of individuals has been a key driver (Leckey,

2011). In the UK, the Department of Health (DH) published, in partnership with the Arts Council England (ACE), the "Report of the Review of Arts and Health Working Group" (Department of Health, 2007). The report concluded that the arts are integral to health, healthcare provision and healthcare environments (Department of Health, 2007). Following on from this the DH, again in partnership with ACE, produced "A prospectus for arts in health" illustrating how the arts make a major contribution to key health and wider community issues (Arts Council England, 2007). Overall the prospectus promoted the benefits of the arts in improving well-being, health and healthcare and its role in supporting healthcare staff and caregivers. However, the potential for these reports to make an impact was limited by the global financial crisis in 2008, and the ensuing austerity measures that were implemented with cuts to public services and the arts (Wiesand, 2011). In terms of funding for the NHS, it is not only the economic climate that has led to budget restraint but also the shift towards neoliberalism following the change in government in 2010 (Pownall, 2013). Lord Howarth (previously Minister of Arts 1998–2001) suggested that the global financial crisis dominated UK policy thinking, with austerity cuts supplanting earlier optimism and willingness to explore more creative and imaginative paths with the arts in healthcare (Howarth, 2013). Yet despite this, the recent publication of *Creative Health: The Arts for Health and Wellbeing* (All Party Parliamentary Group on Arts, Health and Wellbeing. Inquiry Report, 2017) signals new possibilities for influencing policy makers and healthcare commissioners to re-consider the potential to embed such approaches into mainstream healthcare.

The widening practice and delivery of arts and health projects has come with a recognition of the need to provide a satisfactory evidence base of arts and health interventions to maintain its growth and to convince policy makers of the need to adequately support the arts and health sector (Clift et al., 2009; Sonke, et al., 2009). In response, there have been a number of reviews examining the medical literature on the impact of the arts on health. One of the first, by Staricoff (2004), examined and identified a number of benefits to using arts in healthcare settings. In 2011, Staricoff and Clift updated this review, and provided further evidence of the positive effects of arts interventions on psychological and physiological outcome of patients in a hospital environment.

2 | THE REVIEW

This critical review updates Staricoff and Clift's (2011) earlier review on the value of the arts in healthcare settings, and in the light of the publication of the All Party Parliamentary Group on Arts, Health and Wellbeing. Inquiry Report (2017) report is timely as it updates and summarises the evidence on the impact of the arts in healthcare on patients and service users. It forms one strand of a wider review funded by the Arts and Humanities Research Council, as part of their Cultural Values project. The second strand of the review focused on the perceptions of caregivers on the value and impact of the arts in therapeutic and clinical interventions (Wilson et al., 2016).

What is known about this topic

- There is a growing recognition of the value of the arts in improving well-being, health and healthcare.
- Evidence of the positive effects of music interventions on both psychological and physiological outcomes for patients in healthcare environments.
- Literature concerning participation in the arts in healthcare settings is complex and wide ranging, with terms often used interchangeably and inconsistently.

What this paper adds

- Further evidence that strongly attests to the positive impact of arts activities in healthcare.
- The evidence base remains narrow in relation to methodological approach and healthcare setting.
- Proposes that different voices, art forms and methodologies are considered in the research on the arts in healthcare.

2.1 | Aim

The aim of this review was to examine the impact of the arts in healthcare on patients and service users since 2011–2016.

2.2 | Design

The review reported here fits the definition of a critical review. Critical reviews comprise narrative accounts of available research along with an effective, analytical, original assessment of this information. Such reviews critically compare and contrast the ideas and evidence and identify knowledge gaps (e.g. Jesson & Lacey, 2006). Petticrew and Roberts (2006) defined critical reviews as literature reviews that assess a theory or hypothesis by critically examining the methods and results of the studies, but not using the formalised approach of a systematic review. Systematic reviews alternatively comprise comprehensive reviews of published articles selected to address a specific clearly defined question that uses a systematic method of identifying studies, with strict adherence to protocol. The search process is more rule-driven and rigorous and has specific criteria for abstracting data from studies and assessing quality of evidence (e.g. Jesson & Lacey, 2006). The present review comprised a critical review involving mixed-method synthesis, whereby quantitative, mixed-method and qualitative evidence was integrated and interpreted (Pettigrew & Roberts, 2006). An expert e-advisory group (see Acknowledgements) provided strategic inputs to the early planning stages of the review in relation to definitional issues and relevant search terms.

2.3 | Search methods

Key search terms were identified from those used by Staricoff (2004) and Staricoff and Clift (2011) in addition a scoping exercise

determined frequently used terms in the literature. Through this process three core keyword categories were agreed as *cultural activities*, *health-related outcomes* and *healthcare settings*. Within each of these three categories, there were a number of sub-key words that are presented in Table 1 below.

Electronic databases were searched to identify published empirical research. Database searches were carried out using MedLine, CINAHL, AMED, Web of Science and ASSIA. UK and international empirical studies published from 2011 to 2016 written in the English language and which explored the effect of arts activities on health-related outcomes in healthcare settings were included. The literature concerning participation in the arts is complex and wide ranging, with terms and definitions often used interchangeably and inconsistently (Skingley, Bungay, & Clift, 2011). A broad and diverse range of arts activities informed our interpretation of the arts, and ranged from visual and performing arts, to music, dance, theatre and literature. For the purpose of this review, clinical and therapeutic settings refer to inpatient settings (e.g. hospitals), outpatient settings (e.g. outpatient clinics, GP surgeries) and residential care home settings (e.g. hospices, older persons' care homes). This excludes schools, prisons, community settings and private residences. Studies reporting on art therapies (art, drama and music) were also excluded, on the basis that in the therapies, the therapeutic relationship is generally of primary importance rather than the creation of the art/music itself. This review is interested in the intrinsic value of the arts activities rather than seeing them as a means to an end.

2.4 | Search outcome

Initial searches identified 131 potentially relevant studies. Abstracts and full-texts were divided and shared between the review authors and screened for relevance and quality using recognised critical appraisal tools (CASP, 2013; EPHP, 2010). The remaining articles were

then reviewed independently by all members of the research team, and following discussion 69 studies were deemed of sufficient quality, relevance and rigour to be included in the review.

3 | RESULTS

The majority of the papers (53/69, 76.8%) were concerned with the positive effect of music listening on patients/service users, although some, e.g. Vaajoki, Pietilä, Kankkunen, and Vehviläinen-Julkunen (2011), Vaajoki, Kankkunen, Pietilä, and Vehviläinen-Julkunen (2011), Vaajoki, Kankkunen, Pietilä, Kokki, and Vehviläinen-Julkunen (2012), reported different aspects and findings from the same studies (see Table 2 for details of the music listening studies). The remaining 16 papers incorporated a range of different art forms (see Table 3). The findings of the review are discussed in relation to context, methods and findings.

3.1 | The effect, impact and experiences of music listening

3.1.1 | Contextual background

The 53 studies exploring the effects of music listening were undertaken across a number of different countries and clinical settings and utilised a range of qualitative and quantitative methodologies (Table 2). The majority (49/53) adopted quantitative methods, including pre- and post-study test designs, a range of tools and measures were used including the State-Trait Anxiety Inventory (STAI), Visual Anxiety Scale (VAS) and Hospital Anxiety and Depression Scale (HADS).

3.1.2 | Emphasis on measurable effects and clinical outcomes

There were just four studies that were informed by a qualitative approach. Two of these studies were by the same lead author who applied semi-structured interviews to examine paediatric and adult cancer patients' views about music (O'Callaghan, Baron, Barry, & Dun, 2011; O'Callaghan et al., 2014). The exploratory study by Dennis (2011) examined the effects of music listening and caregiver singing during personal care for residents with dementia in a care home, while a mixed-methods approach was undertaken by Trangeberg and Stomberg (2013) who used semi-structured interviews and a quantitative anxiety scale to examine the effects of music listening on patients during anaesthesia.

The quantitative studies using a pre- and post-test study design compared and measured the degree of physiological change that occurred following a music listening intervention and/or the effects of music listening on patients/service users in relation to anxiety, stress and pain levels. Nineteen studies primarily assessed the effect of music listening on anxiety and stress in a variety of different clinical and therapeutic settings. For instance, Bae, Man Lim, Hur, and Lee

TABLE 1 Core and sub-keywords

Cultural activities	Health-related outcomes	Healthcare settings
Music	"Clinical outcome"	Surgery
Painting*	Dementia	"Care unit"/"Care units"
Art/Arts	Health	"Care home"
Singing	Pain	Hospital*
Drama	Symptom*	"Primary care"
Dance/Dancing	Illness*	"Acute care"
Sculpture	Anxiety	Hospice*
Poetry	Depression	"Clinical setting"
	Patient/patients	"Therapeutic setting"
	Inpatient*	"Residential care"
	Outpatient*	
	Well-being/well-being	
	"Service user"	

*Indicates truncation.

TABLE 2 The effect, impact and experiences of music listening

	Country	Setting	Sample	Study design and methods	Findings
Angioli et al. (2014)	Italy	Operating Theatre	356 patients	RCT	Systolic blood pressure and heart rate were statistically significantly lower in the music group compared to the control group. The music group had lower anxiety and less pain during and after surgery compared to the control group
Bae et al. (2014)	South Korea	Operating Theatre	80 patients (40 in control group, 40 in experimental group)	Quasi-experimental, pre-/post-tests	Anxiety levels significantly lower in experimental group, and sedation increased in patients undergoing surgery
Beaulieu-Boire et al. (2013)	Canada	Adult intensive care unit	49 mechanically ventilated patients	Crossover design	No change in vital signs over placebo control, but biological response observed—reduced stress hormone
Chen, Wang, Shih, and Wu (2013)	Taiwan	Oncology Department	200 patients (100 in intervention, 100 in control group)	Quasi-experimental, pre-/post-tests	Music listening decreased anxiety levels and blood pressure in oncology patients
Chiasson, Baldwin, McLaughlin, Cook, and Sethi (2013)	USA	Adult intensive care unit	100 patients (50 in control group, 50 in experimental group)	Case-control design pre-/post-tests	Harp music significantly decreased patient perception of pain but heart rate not affected
Chlan et al. (2013)	USA	Adult intensive care unit	373 patients	RCT	Music listening resulted in reduced anxiety levels, and greater reduction in sedation intensity compared to usual care.
Comeaux and Steele-Moses (2013)	USA	Post-operative	N = 27 (Control = 11, intervention = 16)	Quasi-experimental pre-/post-test	Decrease in pain and environmental noise but not anxiety.
Cutshall et al. (2011)	USA	Post-operative surgical patients	100 patients	RCT	Significant decrease in pain scores in the music group, anxiety levels but not statistically significant difference compared to control group
Dennis (2011)	UK	Dementia care home	7 Dementia patients	Exploratory	Reduction in angry vocabulary, enjoyment, improvement in diction and increased eye contacts.
Eggert et al. (2015)	USA	Dementia assisted living community	13 Dementia patients	Pre-/post-test	The use of both music and nature images has the potential to reduce disordered behaviours and improve engagement of patients.
Ganzini et al. (2013)	USA	Adult intensive care unit?	55 family members	Survey	Family members reported modest changes in terminally ill relatives breathing, relaxation and comfort.
Graversen and Sommer (2013)	Denmark	Day surgery	93 patients	RCT	Music group experienced less pain 7 days post-surgery, less fatigue and cortisol levels reduced during surgery
Guétin et al. (2012)	France	Hospital	87 Patients with chronic pain (control group = 43, intervention n = 44)	Quasi-experimental, pre-/post-tests	Music group significantly reduced anxiety and depression and medication use compared to non-music group.

(Continues)

TABLE 2 (Continued)

	Country	Setting	Sample	Study design and methods	Findings
Guétin et al. (2016)	France	Hospital	35 patients undergoing a coronarography	Uncontrolled observational study	Significant reduction in participants' anxiety after they had listened to music. No significant differences between male and female responses.
Hsu et al. (2016)	Taiwan	Hospital	91 patients (49 in the experimental group, 42 in the control group)	Experimental design	The experimental group exhibited significantly lower anxiety levels in listening to music 10 min before the procedure.
Jafari et al. (2012)	Iran	Adult intensive care unit	60 patients	RCT	Music significantly reduced pain intensity for music group compared to control group
Jimenez-Jimenez et al. (2013)	Spain	Operating theatre	40 patients (20 in control group, 20 in intervention group)	RCT	Music listening reduced anxiety levels in patients
Johnson, Raymond, and Goss (2012)	USA	Operating theatre	120 women choose either: control group, noise blocking headphones group, music listening group	Quasi-experimental pre-/post-tests	Music group and noise blocking groups experienced reduction in anxiety compared to control group. Music group lowest post-operative anxiety scores.
Jose et al. (2012)	India	Operating theatre	64 patients	RCT	Music had a significant effect on post-operative pain, blood pressure, and pulse
Kilic et al. (2014)	Turkey	Accident and Emergency	200 patients (100 intervention group, 100 control group)	Quasi-experimental design	Significant decreases in State Anxiety Scale and VAS scores in intervention group.
Kim, Kim, and Myoung (2011)	Korea	Operating Theatre	219 patients	RCT	No significant differences between groups in blood pressure, but music group reported significantly less anxiety than control group
Kipnis et al. (2016)	Israel	Operating theatre	159 patients (82 intervention group, 77 control group)	Interventional study using systematic probability sampling	Exposure to background music was associated with decreased levels of state anxiety irrespective of age, sex and previous exposure to surgery or anaesthesia. Background music was related to environmental noise reduction in the surgery waiting room.
Koca-Kutlu and Eren (2014)	Turkey	Haemodialysis Unit	60 patients (30 in control group, 30 in intervention group)	RCT	Pain and nausea scores for intervention group were significantly lower than those in control group
Koelsch et al. (2011)	Germany	Operating Theatre	40 patients	RCT	During surgery, patients in the music group had a lower propofol consumption and lower cortisol levels compared to the control group
Korhan, Khorshid, and Uyar (2011)	Finland	Adult intensive care unit	60 mechanically ventilated patients	RCT	The music group had significantly lower respiratory rates, and blood pressure compared to the control group.
Korhan et al. (2014)	Finland	Outpatient clinic	30 patients with neuropathic pain	Quasi-experimental pre-/post-tests	Music listening reduced pain scores.

(Continues)

TABLE 2 (Continued)

	Country	Setting	Sample	Study design and methods	Findings
Kushnir et al. (2012)	Israel	Operating Theatre	60 women undergoing elective caesareans	RCT	Women who listened to music reported significant increase in positive emotions and decline in negative emotions and perceived threat of situation
Lee et al. (2011)	Taiwan	Operating Theatre	167 Patients pre-surgery, randomised to one of three groups	RCT	Visual analogue ratings of anxiety significantly decreased in both the broadcast and headphone groups.
Lee et al. (2012)	Taiwan	Operating Theatre	140 Patients undergoing surgery	RCT	Music group demonstrated significant reductions in visual analogue scores, heart rate, low frequency heart rate variability.
Li and Dong (2012)	China	Operating Theatre	60 Women undergoing elective caesareans	RCT	Mean anxiety scores on self-rating anxiety score and mean pain scores on VAS reduced significantly after music intervention.
Li et al. (2011)	China	Hospital wards	120 women undergoing radical mastectomy	RCT	Those in music listening group had significantly lower pain scores than those in control group
Lin et al. (2011)	Taiwan	Operating Theatre	60 patients	Quasi-experimental design.	Anxiety and pain visual analogue scores were significantly lower in music group than in control group
Lin et al. (2012)	Taiwan	Haemodialysis Unit	88 patients	RCT	Significant reductions in frequency and severity of adverse reactions during dialysis and scores on stressor scale, decreased respiratory rate.
Liu and Petrini (2015)	China	Hospital ward	112 patients (56 experimental and 56 control group)	RCT	Experimental group showed statistically significant decrease in pain, anxiety, blood pressure and heart rate over time compared to the control group.
McLeod (2012)	Scotland	Operating Theatre	80 patients	RCT	No significant differences in anxiety levels between music and control group
Mogos et al. (2013)	USA	Hospital wards	100 patients	Quasi-experimental design. Questionnaire	Patients responded positively to the live music and assigned higher ratings to care
Ni, Tsai, Lee, Kao, and Chen (2011)	Taiwan	Day Surgery Unit	183 patients	RCT	The music group had significantly lower anxiety than the control group
O'Callaghan et al. (2011)	Australia	Hospital-based cancer service	26 patients and 28 parents	Semi-structured interviews	Children revealed that adverse cancer experiences are often alleviated by listening to music
O'Callaghan et al. (2014)	Australia	Hospice	52 patients	Semi-structured interviews	Music used to ameliorate cancer's adverse effects, and to remain connected with pre-illness identity.
Olischar et al. (2011)	Australia	Neonatal intensive care unit	20 neonatal babies	RCT	More mature sleep—wake cycles in newborns who were exposed to music compared to controls

(Continues)

TABLE 2 (Continued)

	Country	Setting	Sample	Study design and methods	Findings
Ozer et al. (2013)	Turkey	Adult intensive care unit	87 patients (44 music group, 43 control group)	Quasi-experimental pre-/post-tests	The music group had statistically significantly increase in O ₂ saturation and a lower pain score than in the control group.
Perez-Cruz et al. (2012)	USA	Hospice	99 patients, 101 caregivers, 65 healthcare providers	Survey	Patients preferred music to no music, most patients agreed that music can improve mood and relieve pain
Puggina et al. (2011)	Brazil	Adult intensive care unit	30 patients	RCT	Music listening had some effect on vital signs and facial expression, however relatives recorded voice messages had a greater effect
Sadideen, Parikh, Dobbs, Pay, and Critchley (2012)	UK	Operating Theatre	96 patients	RCT	VAS ratings of anxiety and respiratory rate post-operatively were lower in those who had music played in surgery
Schneider et al. (2015)	USA	Hospital	92 patients	RCT	Fatigue, anxiety, sadness, relaxation and pain were significantly improved following live harp sounds.
Szilagyi et al. (2014)	Hungary	Adult intensive care unit	39 patients	RCT	Length of ICU stay and time spent on ventilator was significantly shorter in the study group compared to the control group.
Trangeberg and Stomberg (2013)	Sweden	Day Surgery Unit	15 patients	Semi-structured interviews and pre-/post-tests	Listening to music reduced anxiety
Travers and Bartlett (2011)	Australia	Residential care	113 residents	Quasi-experimental pre-/post-tests	Improvements in quality of life and levels of depression, but no change in loneliness measures
Vaajoki, Pietilä, et al. (2011)	Finland	Operating Theatre	168 patients	Quasi-experimental pre-/post-tests	There were no significant differences between music and control groups in terms of analgesic use, length of hospital stay, and experience of adverse effects.
Vaajoki, Kankkunen, et al. (2011)	Finland	Operating Theatre	168 patients	Quasi-experimental pre-/post-tests	In the music group respiratory rate and systolic blood pressure was significantly lower than the control group, on the 1st and 2nd post-operative days
Vaajoki et al. (2012)	Finland	Operating Theatre	168 patients	Quasi-experimental pre-/post-tests	In the music group patients' pain intensity and pain distress in bed rest and in deep breathing were significantly lower on the 2nd day post-operative day compared to control group.
Zhang et al. (2014)	China	Day surgery units	124 patients	RCT	Patients who listened to their preferred music experienced less lower discomfort at cystoscopy compared to the control group
Zhou et al. (2011)	China	Hospital wards	170 post-operative patients	RCT	Those in music group had significantly lower depression cores than the control group. Duration of hospital stay was significantly shorter in music group compared to control group.

TABLE 3 The effect, impact and experiences of different types of art forms

Details of art form	Authors	Country	Setting	Sample	Study design and methods	Findings
Various art forms: music, dance, creative writing	Baumann et al. (2012)	UK	Stroke Unit	18 patients	Semi-structured interviews	Patients reported improvements in mental well-being, feeling connected, enjoyment, mental stimulation
Art, craft or expressive art activity	Caddy et al. (2012)	Australia	Inpatient psychiatric setting	403 patients	Pre-/post-intervention tests	Reductions in patient and clinician rated symptoms were reported following participation
Creative arts: poetry, ceramics, drawing etc.	Crone et al. (2013)	UK	GP Surgery	202 patients	Pre-/post-intervention tests	Well-being improved for people who completed the intervention
Reading	Dowrick et al. (2012)	UK	GP Surgery and mental health drop-in centre	18 patients	Mixed-methods approach	Reduction in depressive symptoms following attendance at two weekly reading groups for 12 months.
Dance	Froggett and Little (2012)	UK	Inpatient psychiatric setting	15 service users and 5 members of staff	Mixed-methods	Service users reported intervention was relaxing, and distracted from anxiety, it elevated mood. Inclusion in the group and enjoyment
Dance	Guzman-Garcia et al. (2012)	UK	Care Home	13 residents, 9 care staff	Grounded Theory Interviews	All identified benefits of participating in dance classes. Enhanced interaction between patients and staff. Positive impact on residents and staff well-being.
Photographic art	Hanson, Schroeter, Hanson, Asmus, and Grossman, (2013)	USA	Hospital	80 patients	Quantitative Post-test questionnaire with qualitative element	Patients' preferences were found to be affected by the psychophysical and psychological qualities of the photographs, and were influenced by mood.
Poetry and Creative Writing	Haraldsotir (2011)	UK	Hospice	25 patients	Feedback collected at end of each session and themed	Creative writing and poetry provided an alternative approach to communication facilitating social interaction and the "sharing of stories"
Various arts forms	Hurdle and Quinlan (2014)	USA	Hospital	12 artists	Interviews	Artists believe that the arts provide respite for patients, families, and nurses and also facilitate healing
Dance	Low et al. (2016)	Australia	Nursing home	18 patients	Single site randomised controlled pilot trial	Feasible to conduct a study of group dance for people with dementia but the Impairment Battery and Clinical Global Impression of Change might not be the optimal tools to apply.
Dance	Maskarinec et al. (2014)	USA	Cardiac Rehabilitation	35 patients	Interviews	Improved functional capacity- breathing, endurance and muscle strength
Scrap-booking	Mouradian (2013)	USA	Neonatal intensive care unit	40 parents	Mixed-methods Pre-/post-test and interviews	Mean anxiety was reduced post-activity. Parents found it provided distraction, participation, opportunity to share and hope.
Visual arts	Nanda et al. (2012)	USA	Accident and Emergency Department	2 hospital's emergency department	Observational study	Significant reduction in restlessness, noise level, and people staring at other people in the room. Decrease in number of queries at reception, increased social interaction

(Continues)

TABLE 3 (Continued)

Details of art form	Authors	Country	Setting	Sample	Study design and methods	Findings
Music, dance, drama, painting etc.	Shorters (2011)	UK	Mental Health wards	2 wards in a mental health trust	Questionnaire & discussion groups	Creative expression has a role in recovery from mental distress, the author suggests that for some can be as significant as medication
Heritage focused intervention	Thomson et al. (2012)	UK	Hospital	Oncology wards	Quasi-experimental pre-/post-test design	Scores on quantitative measures of positive emotion, well-being and happiness were significantly enhanced in the experimental group compared to the control group.
Singing	Yoon-Irons et al. (2013)	Australia	Hospital	Inpatient setting	Self-report satisfaction check list	High levels of enjoyment and satisfaction with singing activity

(2014) investigated the effects of music listening on anxiety levels for patients undergoing regional anaesthesia for a range of surgical procedures. In contrast, Kipnis, Tabak, and Koton (2016) evaluated the effect of background music on preoperative anxiety in elective surgery patients, whereas Hsu, Chen, Chen, Tseng, and Lin (2016) examined the effects of music listening on anxiety levels for patients undergoing knee replacement.

Measuring the effect of music listening on pain management was the next most common focus with 11 studies studying this phenomena. However, while the focus across the studies was similar, the settings differed. For example, Guétin et al. (2012) examined the effects of music listening in the management of patients with chronic pain, whereas Jose, Verma, and Arora (2012) assessed the effectiveness of music listening for managing pain in cardiac surgery patients. A number of studies also examined the effect of music listening in relation to both anxiety and pain levels, Chlan et al. (2013) tested whether music listening reduced anxiety and sedative levels during ventilator support in critically ill patients, and Angioli et al. (2014) investigated the effects of music listening on anxiety and perception of pain during gynaecological procedures.

The remaining quantitative studies examined the effects of music listening in relation to healthcare. A number of studies looked at perceptions of care and/or patient satisfaction in a range of different context settings, from a perioperative setting to Accident and Emergency (Kilic et al., 2014; Mogos, Angard, Goldstein, & Beckstead, 2013). Length of hospital stay and the relationship between music listening was the focus of two studies, one in relation to patients on a ventilation machine (Szilagyi, Dioszeghy, Frituz, Gal, & Varga, 2014), and the other in relation to abdominal surgery patients (Vaajoki et al., 2012). Zhou, Li, Yan, Dang, and Wang (2011) also examined duration of hospital stay, along with depression rates for breast cancer patients after a mastectomy. Similarly, Travers and Bartlett (2011) evaluated a radio programme that broadcasted music relevant to residents in a residential care setting who grew up in the 1920s–1950s and looked at depression, quality of life and loneliness. However, Eggert et al. (2015) measured the effects of music and nature images on engagement for those diagnosed with dementia.

The findings from the music listening papers are discussed under the following headings: impact on anxiety, stress and pain; wider healthcare benefits; personally valued features of music listening; musical style and preferences; and tensions and limitations.

3.1.3 | Impact of music listening on anxiety, stress and pain

The papers that explored anxiety, stress and pain in relation to music listening overwhelmingly reported positive outcomes, which in most cases were also statistically significant. For example, in examining the effect of music listening on anxiety and pain levels for women undergoing a hysteroscopy, Angioli et al. (2014) found women allocated to a music listening group during surgery experienced significantly lower anxiety after hysteroscopy and less pain during and after the procedure. Similar effects were also recorded over a longer

timeframe, as Koca-Kutlu and Eren (2014) found when they examined the effects of music listening on patients during 12 sessions of haemodialysis. The authors report that the 30 patients in the music group displayed significantly lower pain and nausea scores than the 30 patients in the control group who did not listen to music.

A reduction in depression scores was also reported in a number of the reviewed papers. For example, Zhou et al. (2011) found, after a mastectomy, women in the music listening group had significantly lower depression scores than the control group. Likewise, Guétin et al. (2012), investigated the effects of music listening in the management of chronic pain, found the music group had significantly reduced anxiety and depression scores in comparison to the control group. Additionally, Schneider et al. (2015) reported evidence of strong positive effects on the quality of life of hospitalised patients who received live therapeutic harp music during the first 24 hr of their hospital stay.

There were also a number of positive significant effects reported in relation to physiological changes that are commonly associated with stress and anxiety. For example, Vaajoki et al. (2011) measured the effects of music listening on blood pressure, heart rate and respiratory rate in abdominal surgery patients. Music was played on the evening of the operation and on the first and second post-operative days. For those in the music group, respiratory rate and blood pressure was measured as significantly lower than the control group. Additionally, Lin, Lin, Huang, Hsu, and Lin (2011) found that VAS ratings for anxiety and pain were significantly lower for patients assigned to the music group for spine surgery than those who were not, and 1 hr after surgery, blood pressure was also significantly lower in the music group than the control group.

3.1.4 | Wider healthcare benefits

There were a number of areas where music listening was described as potentially benefiting the wider healthcare system. One such area was in relation to patient satisfaction. In the study by Mogos et al. (2013), higher ratings for care were given by patients who had live music at the bedside in comparison to those who did not. Harp music vigils were also offered to terminally ill patients in the study by Ganzini, Rakoski, Cohn, and Mularski (2013), which involved family members completing a short survey in relation to observed effects and perceived benefits. From this, the authors report that music vigils have the potential to improve the patient and family member's experience of the dying process.

The cost-effective benefits of music listening were frequently identified in the reviewed papers, as the interventions were considered to be safe, inexpensive and largely easy to incorporate into the routine care of patients (Comeaux & Steele-Moses, 2013; Ganzini et al., 2013; Jimenez-Jimenez, Garcia-Escalona, Martin-Lopez, De Vera-Vera, & De Haro, 2013; Korhan et al., 2014; Kushnir, Friedman, Ehrenfeld, & Kushnir, 2012; Ozer, Ozlu, & Gunes, 2013; Trangeberg & Stomberg, 2013; Vaajoki, Pietilä, et al., 2011).

Further cost-effective benefits of music listening were in reducing hospital stays for patients. In the study by Zhou et al. (2011), duration of hospital stay was significantly shortened in the music group

for breast cancer patients compared to the control group. Similarly, Szilagyi et al. (2014) reported that length of stay and time spent on a ventilator was significantly reduced in the study music group.

3.1.5 | Personally valued features of music listening

There were only a small number of papers that considered music listening from a more exploratory and personalised study design. O'Callaghan et al. (2011) explored the relevance of music from the perspective of paediatric cancer patients. From the semi-structured interviews undertaken with children and their parents, the authors suggest that the adverse experiences of cancer are often alleviated by listening to music and that music has the potential to alleviate distress. Similar findings were echoed when O'Callaghan et al. (2014) examined adult cancer patients' views about music's role before and after diagnosis. The authors found that music was often used and adapted by many patients to ameliorate cancer's aversive effects. Patients spoke about how music provided emotional support that reduced their symptoms and strengthened their capacity to endure treatment, ongoing survival and impeding mortality.

In the paper by Dennis (2011), the effects of music listening and caregiver singing during personal care for residents with dementia were examined, music and singing were found to aid a reduction in the residents angry vocabulary, improved their diction and number of words used, and more eye contact was made with caregivers. Likewise, in the mixed-methods study, Trangeberg and Stomberg (2013) explored patients' experiences of music listening during anaesthesia, and music listening was found to offer patients a sense of calm and detachment from what was going on around them and was overall a positive, empowering experience.

3.1.6 | Musical style and preferences

There were a few studies that examined attitudes towards music in the wider hospital setting. Overall patients responded positively and welcomed background music, recognising that it could improve mood and relieve pain (Kilic et al., 2014; Perez-Cruz et al., 2012). For those studies that examined the individual effects of music listening, the selection of music style was often made by the study investigators. Usually the music was slow in tempo; typically 60–80 beats per minute, such as traditional and classical music (Lee et al., 2012). There were a number of studies, however, that allowed patients to choose their own preferred music style (Jafari, Zeydi, Khani, Esmaeili, & Soleimani, 2012; Zhang et al., 2014), which was found to be of importance from the patient's perspective. Trangeberg and Stomberg (2013) found that to facilitate the positive effects music listening can have on the individual, it is important that the patient has the opportunity to select the music that is meaningful to them.

3.1.7 | Tensions and limitations

The choice of music in many of the studies was chosen by the study investigators, who similarly all favoured a slow-tempo style.

Consequently, there was very little consideration for individual preferences and likings. Indeed, very few studies provided any evidence to support their choice of slow-tempo music, which raises questions around the assumptive and accepted nature of this style of music.

Additionally, a number of studies investigated the effects of music listening on patients who were mechanically ventilated, most of whom were reported as being in a critical condition within an intensive care ward. It was not always clear in the papers the level of patients' consciousness and the extent to which they could consent to the intervention (Beaulieu-Boire et al., 2013; Chlan et al., 2013; Puggina, da Silva, & Santos, 2011; Szilagy et al., 2014). In the study by Ganzini et al. (2013), assent was provided by family members to examine the benefits of harp vigils for terminally ill patients. However, Olischar, Shoemark, Holton, Weninger, and Hunt (2011), who examined the effect of music on the brain activity of newborns in relation to sleep cycles, made no references to ethical consent or assent. Overall, there was little or no discussion on the ethical issues in gaining consent or assent from patients in a critical condition. Often the only references made to ethics were the confirmation that ethics approval had been granted from the necessary approving boards.

At a broader descriptive level, there was an inconsistent use of terms, as a large number of the papers included incorrectly applied the term "music therapy" to the intervention of music listening (e.g. Jose et al., 2012; Korhan et al., 2014; Li, Zhou, Yan, Wang, & Zhang, 2011; Lin, Lu, Chen, & Chang, 2012; Lin et al., 2011; Liu & Petrini, 2015). In relation to patient outcomes, this may be inconsequential, but differentiation between "music listening" and "music therapy" is crucial to avoid blurring the processes between the therapeutic relationship and participation in the arts activity in and of itself. In a number of quantitative studies (e.g. Guétin et al., 2016; Jimenez-Jimenez et al., 2013; Korhan et al., 2014; Szilagy et al., 2014), the small sample sizes of less than 40 participants also limits the generalisability of the findings.

3.2 | The effect, impact and experiences of different types of art forms

The remaining 16 papers included in this review incorporated a range of different art forms and were conducted in a variety of clinical and therapeutic settings. As there were only a few papers for the various art forms and a lack of grouping in relation to setting, the remaining papers have been combined.

3.2.1 | Contextual background

As previously stated, the remaining 16 studies used a range of art forms. Five papers used singing and dance, and five used other arts activities, which ranged from music, dance and creative writing to poetry, ceramics and drawing. Four papers focused on the visual arts, and poetry and reading were the art forms used in the remaining two papers (see Table 3 for details).

Geographically, these 16 papers were drawn from fewer regions. The clinical and therapeutic setting where the different art form

papers were undertaken also varied but the setting did not determine the art form used. For example, the art activity in the three mental health inpatient setting papers included music, drama and painting and dance (see Table 3).

3.2.2 | Emphasis on evaluation of the art form intervention

The focus for the majority of the different art form papers were concerned with evaluating the direct effects of the art form on the target group. Unlike the music listening studies, where papers were predominantly quantitative, the research designs were more varied, with six qualitative, six quantitative studies, and four mixed-methods studies.

Semi-structured interviews were largely applied in the qualitative studies. Such interviews were used by Guzman-Garcia, Mukaetova-Ladinska, and James (2012) to examine the effects of a dance-based intervention on people with dementia, exploring the views and experiences of both residents and care staff. In the quantitative papers, clinical outcomes were evaluated in three out of the five papers. For example, Crone et al. (2013) investigated the processes and outcomes of an arts intervention for patients with common mental health problems, such as anxiety, depression and stress. The art intervention was a 10-week programme to which 202 patients were referred and took part in a variety of participatory arts activities, such as poetry and ceramics in small groups. The Warwick-Edinburgh Mental Well-being Scale was completed pre- and post-intervention to examine the effects and changes in overall mental well-being.

In the four mixed-methods studies, a range of different data collection methods were applied. Observations, reflective diaries and questionnaires were used by Dowrick, Billington, Robinson, Hamer, and Williams (2012) to evaluate a reading intervention for people with common mental health problems, whereas Froggett and Little (2012) used semi-structured interviews and the Herth Hope Index to evaluate the effect of a dance intervention in a mental health inpatient setting.

The findings from the different types of art form papers are themed around four areas that consist of improvement in health and well-being, enjoyment and satisfaction, wider healthcare benefits, tensions and limitations.

3.2.3 | Improvements in health and well-being

In a number of papers, improvement in well-being was reported. For example, Crone et al. (2013) found well-being scores improved for those with common mental health problems who completed a person-centred arts programme. Similarly, although the art form was different in the studies by Baumann, Peck, Collins, and Eades (2012), and Guzman-Garcia et al. (2012), both studies reported improvements in well-being that was aided by the mental stimulation and interaction gained from the intervention.

A reduction in anxiety levels was recorded by Froggett and Little (2012) and Mouradian (2013). Likewise Dowrick et al. (2012) reported a reduction in depressive symptoms for those with common mental

health problems attending reading groups for 12 months. Thomson, Ander, Menon, Lanceley, and Chatterjee (2012) and Caddy, Crawford, and Page (2012) found improvements in scores in psychological measures of those who participated in creative activities. The evaluative feedback comments for an art-project for older people in a mental health trust by Shorters (2011) reported that creative expression had a role in recovery from mental distress that the authors suggest could be as important for some as medication. A similar finding was drawn in the study by Hurdle and Quinlan (2014) in their interviews with artists who delivered participatory art activities to patients in a hospital setting, as most artists felt participation in the arts could facilitate healing and well-being.

3.2.4 | Enjoyment and satisfaction

A common shared theme across this strand was the enjoyment and satisfaction patients/service users gained from the art intervention. For example, the young people with cystic fibrosis who took part in individual singing sessions expressed a high degree of enjoyment and satisfaction from the initiative (Yoon-Irons, Kuipers, & Petocz, 2013).

Gaining a sense of connection with others was also a valued feature in the study by Froggett and Little (2012) who evaluated a dance intervention in a mental health inpatient ward. Service users reported a feeling of inclusion from and within the group that was aided by a sense of everyone being in it together. Dancing also helped service users to relax by releasing tension. The study by Haraldsottir (2011) evaluated poetry reading and writing sessions for hospice patients and identified that the intervention was positively received by patients and enabled connections with staff by fostering dialogue and sharing of stories.

3.2.5 | Wider healthcare benefits

Nature art displays were found to significantly decrease the number of queries made at the front desk and significantly increase social interaction in the study by Nanda et al. (2012), who examined emergency department patients' behaviours to displays of nature. From the observations recorded, the authors reported a significant reduction in restlessness, noise level and people staring at other people in the waiting room. The authors conclude that a simple visual intervention can improve the patient waiting experience in the emergency department, which has implications for patient satisfaction levels.

3.2.6 | Tensions and limitations

In some of the different art form papers, a tension was identified in relation to whose voice was being heard and whose was being ignored. The study by Hurdle and Quinlan (2014) only sought the artists' perspectives in their review of a hospital-based arts programme, which limits the transferability of the findings. The robustness of findings that draw upon feedback comments from those receiving the art intervention was another area of weakness in some studies. For example, it was unclear in both the papers by Haraldsottir (2011) and Shorters

(2011) what the response rates were and how these comments were gathered and analysed. A lack of contextual background and detail was another area of weakness identified. For instance, the study by Low et al. (2016) is published as a short communication piece, but does not provide a link or reference to where the results of the study can be examined in greater depth.

4 | DISCUSSION

4.1 | Summary

The papers included in this review largely report only on the positive effects of the arts in healthcare on patients and service users. Furthermore, this review illustrates an emphasis in the current literature on examining the effects of music listening on patients/service users. The reasons, as to why there is a disproportionate representation of studies on music listening relative to other art forms, were beyond the scope of this review, although accessibility and low cost would appear to be an influencing factor. The most common setting for such evaluations was a surgical context, where the main aims of the studies were to look at the impact of music listening on reducing stress and anxiety, with some studies also evaluating its impact on pain management. The findings from the studies were overwhelmingly positive and in most cases statistically significant with positive physiological effects on blood pressure, heart rate and respiratory rates recorded. There were also emotional impacts reported across the music listening studies including strengthened capacity to endure treatment, a sense of control in unfamiliar surroundings and a sense of calm and detachment. Patients/service users also recorded positive effects in the reduction of anxiety and stress levels, although in relation to the effects on pain levels opinions and evidence differed, particularly in a surgical setting.

While music listening was the most commonly reported intervention, other art forms were also evaluated; these included: singing, dancing and a range of other arts activities. Overall the findings on the use of other arts forms were again mostly positive with improvements to breathing, endurance and muscle strength reported. As with music listening, there were also reductions in anxiety levels and depressive symptoms, including the suggestion that the role of the intervention in recovery could be as important as medication. Other benefits to the individuals included increased enjoyment and satisfaction, and the opportunity to share and connect with others, and increased social interaction. There were also wider healthcare benefits, in relation to patient satisfaction, length of hospital stay and potential cost-saving gains. Therefore, overall it is apparent in the studies reviewed that patients/service users positively valued the arts in healthcare settings and recognised its potential positive effects, benefits and gains.

4.2 | Tensions and limitations

The majority of studies included in this review only considered the impact and effect of the arts intervention within the boundaries of the study's clinical setting or contextual condition. This can be seen in

the number of studies that were undertaken to examine the effects of music listening on patients/service users, which were all very similar in research design, but were differentiated largely only by context and setting, with over half of studies undertaken in a surgical context.

Studies assessing the impact of music were quantitative, with typically pre- and post-test designs measuring physiological changes primarily focussed on measurable effects in relation to anxiety, stress and pain levels or some combination of these factors. This means that the results can be compared across studies, although it was noticeable that many authors did not refer to the existing "evidence base" in their write up of individual studies. The limited use of multi-method and qualitative designs in relation to music is a gap in the field. The flexibility of such approaches might guide future work to explore and understand why and how music is important from the perspectives of a variety of stakeholders.

The designs used to assess the impact of other art forms were more varied and flexible, which helped to illuminate important issues that would be missed by the simple use of pre- and post-test designs. However, qualitative studies, by nature, tended to be small in sample size, so comparison and generalisability is clearly limited. However, what this review illustrates is a lack of research, both quantitative and qualitative in nature, which examines the impact of different art forms in healthcare on patients and service users. A further limitation across studies is that designs tended to be cross-sectional rather than longitudinal in nature, and in some settings (e.g. long-term residential care), the latter design would be particularly important in assessing the sustainability of the positive impacts of the art form.

A common theme identified across the music listening papers was a lack of participant choice and control, as the style of music played was often chosen by the study investigators.

In those studies that examined the effects of music listening on patients/service users, slow-tempo music was usually the preferred choice and little consideration or accommodation was given to the diversity of individual style preferences. However, in the study that allowed patients and service users to choose their preferred style of music, there was some evidence to suggest this approach facilitated greater positive effects (Trangeberg & Stomberg, 2013). Similarly, patients/service users' voices were identified as missing in a number of the different art form studies, as instead, for example, the artists views were sought to examine the effects of the art intervention on patients/service users (Hurdle & Quinlan, 2014). The lack of consideration in the representation of voices in a number of the study papers thus raises questions about whose views are actually expressed and the ethical groundings of such studies.

4.3 | Reflections and recommendations

This critical review has examined the current research evidence base published since Staricoff and Clift's (2011) review, regarding the value of the arts in healthcare settings. The findings from this review further support the growing body of evidence that strongly attests to the benefits and positive impact on the health and well-being of patients/service users in introducing arts activities into a variety of healthcare

settings. However, the evidence base continues to remain narrow in relation to both methodological approach and healthcare setting. Therefore, we suggest that now is the time for different voices, art forms, methodologies and healthcare settings to be considered in the research on the arts in health.

In the UK, policy makers and healthcare commissioners are becoming more aware of the potential of arts in health to be used to support the healthcare services, as evidenced by their testimonials within the APPG report (All Party Parliamentary Group on Arts, Health and Wellbeing. Inquiry Report, 2017). However, it is not only in the UK that this movement is happening but also internationally, arts in health initiatives are being incorporated into policy across the world (Fancourt, 2017). In the UK, the current fiscal restraints and the increasing pressures on health and social care suggest the need for creative solutions to the looming crisis in the National Health Service. Duncan Selbie, Chief Executive of Public Health England, actively promotes the great potential of the creative arts to improve population health and for that of the individual (Selbie, 2017). If a simple intervention, such as patients listening to music during procedures, reduces the need for pain medication and the length of stay in hospital, then this would result in a cost saving that is measurable and also may improve patient satisfaction with their care. Similarly, if anxiety and depression can be reduced through participating in arts activities, use of anti-depressants may be reduced with a subsequent reduction in costs and fewer side effects for patients. Cost saving is a powerful driver of much government policy. While there is already some economic analyses of arts for health interventions, in addition to the research about individual health benefits, there is a need for further funded research and reviews focussing on both cost-effectiveness and the wider benefits to society if the continued integration of arts in health is to be maintained.

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