

# **A Literature Review of Arts in Healthcare Education and Practice 2000-2022**

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## **Table of Contents**

<b>Introduction</b> .....	2
<b>Methodology</b> .....	3
<b>Data Analysis</b> .....	3
<b>Results</b> .....	5
<b>Dance and Movement</b> .....	10
<b>Visual Arts</b> .....	12
<b>2020 Articles</b> .....	19
<b>Conclusion</b> .....	20
<b>References</b> .....	23

## **Introduction**

This paper comprises a survey of peer reviewed, academic literature addressing creative arts and healthcare education and practice, published from 2000 to 2020. A total of ninety-one articles are analysed, identified through the Web of Science database. The data are segmented to identify trends and patterns including year of publication; country and journal of origin; and art forms used. The paper argues that interest in the area of arts and healthcare education and practice has increased over the period 2000-2020, with particular growth from 2012. The paper further shows that most of the articles emanate from the western hemisphere. In addition, the paper argues that bringing arts studies and practices to healthcare curricula is conducive to the development of relevant skills, including empathy, as well as supporting the development of narrative, communication and diagnostic skills, and also challenging the mind-body dichotomy; supporting a self-other overlap; and blurring the distinction, where appropriate, between novice and expert.

This paper surveys articles exploring different aspects of combining arts with healthcare. The paper provides information on the level of interest in the subject; the focal points of relevant research and activity; and the specific benefits that the arts can bring to healthcare curricula. To this end, the paper, as part of its approach, surveys pedagogical approaches in the application of arts to healthcare education. Thus, a notable, intended outcome related to this paper is to identify key competences, concepts and pedagogical approaches of multiform pedagogy in arts and health education.

The paper is organised as follows: the methodology for the research is summarised.

Thereafter, the results are presented. The conclusion summarises the findings and identifies potential areas for further research and practice.

## **Methodology**

A range of approaches were used to explore the data. These included a literature search and resultant segmentation of the data by year of publication; the academic affiliation of the first author to signify country of origin; the journal title; article methodology; and subject area. Furthermore, sub-samples were identified and analysed, bringing particular practices to the foreground regarding the intersections of arts and healthcare.

Initially, the authors undertook a literature search for articles examining arts and healthcare in combination. The Web of Science database was used for this purpose. The specific search terms used were ‘arts’; ‘health’; and ‘interdisciplinary,’ broad terms selected so as not to exclude articles of potential interest. The search was undertaken in March-May 2021, resulting in 91 articles being identified. Two of the articles did not come from the Web of Science search but were co-authored by an author and a peer reviewer of this paper, respectively (Flavin & James 2018; Theorell *et al.* 2020). The abstracts of all the articles were read and discussed, to ensure they were relevant to the research project.

## **Data Analysis**

The sample of ninety-one was divided by year of publication, to identify publishing trends and levels of interest in the combination of arts and healthcare. The sample was also divided by place of publication, using the academic affiliation of the first author to determine country of origin. The aim of dividing the sample by country of origin was to indicate if certain countries were hubs of activity in the field. In addition, the sample was divided by the name of the journal in which each article was published, to identify if the subject field was of especial interest to specific journals.

Just over half of the overall sample comprised case studies. The authors took the case studies for analysis and identified the specific art forms used therein: a total of 47 articles were used for this purpose. Thereafter, the authors identified, through inter-rater discussion, ten articles which were especially relevant to the area of enquiry, exemplifying a diverse array of methods and practices used to bring arts subject content to healthcare contexts. The ten articles were read in detail, with key quotes identified, condensing notable points from each. A further sub-sample focused on articles in which visual arts were prominent, and a final sub-sample focused on the final year of this study (2020) to identify recent and current research practice.

The authors met regularly through the duration of the data gathering and compared analysis, to enhance inter-rater reliability.

## Results

When analysed by year of publication, the articles indicated the subject field was of very little interest in the first decade of the twenty-first century but has increased markedly since, as illustrated in table 1.

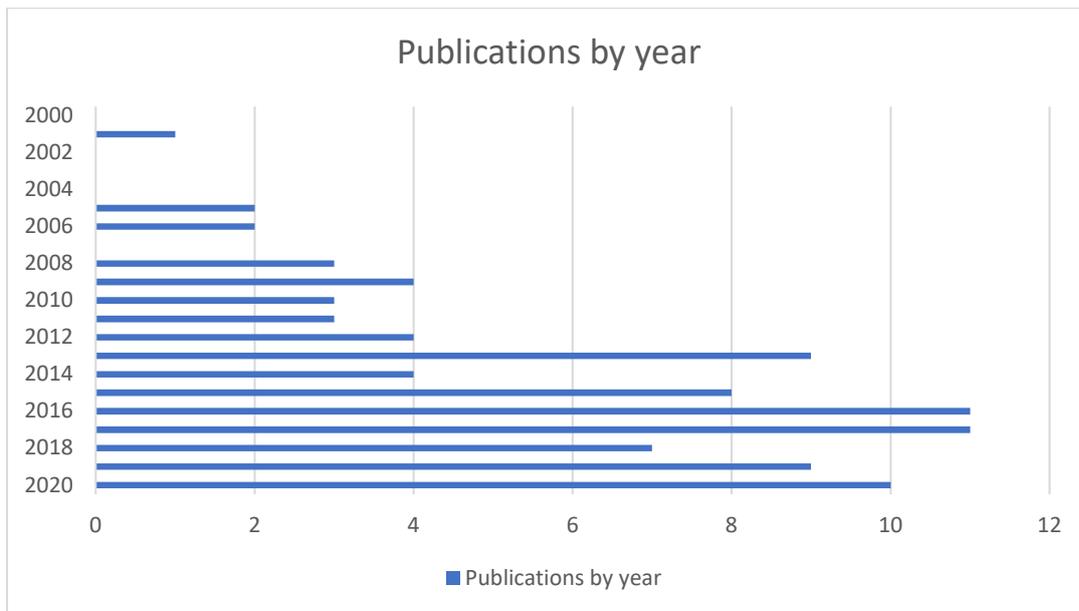


Table 1. The sample of 91 divided by year of publication.

When analysed by country of origin (denoted by the academic affiliation of the first author), the main producers of articles came from the western hemisphere, with the exception of Australia, as shown in table 2.

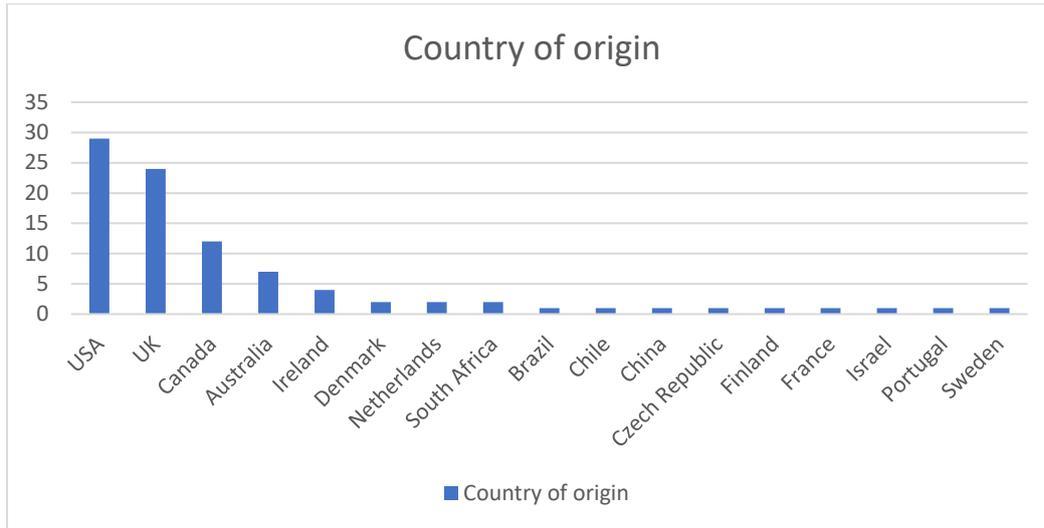


Table 2. The sample of 91 divided by country of origin.

When specific journals were identified within the sample, the most notable was *Medical Humanities* with seven articles, followed by *Arts and Health* and *Journal of Health Psychology* with three each.

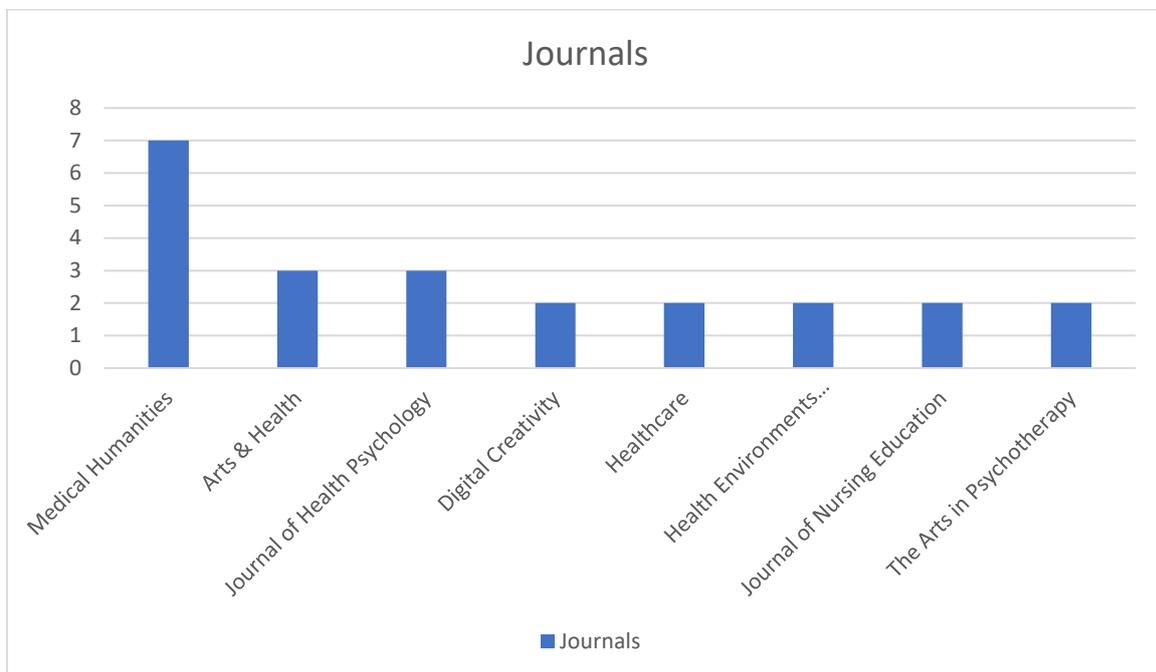


Table 3. Academic journals featuring most prominently in the sample.

For the sub-sample of forty-seven case studies, twenty-eight focused on one art form only. Nineteen focused on more than one art form. The most frequent art form used was visual arts, which featured thirty-one times (an aggregation of articles in which visual art was either the only art form used, or in combination with other art forms). The next most frequent art forms used were, in numerical order; literature (16 instances); music, and theatre (10 instances each). The art form used least was dance and movement, featuring five times (see Tables 4 and 5 below).

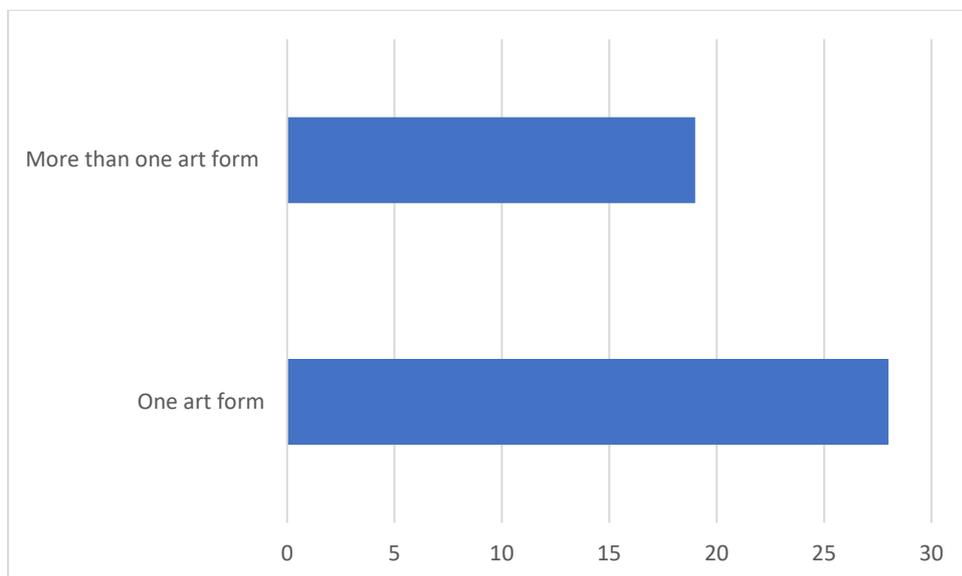


Table 4. Case studies focusing on one art form and more than one art form.

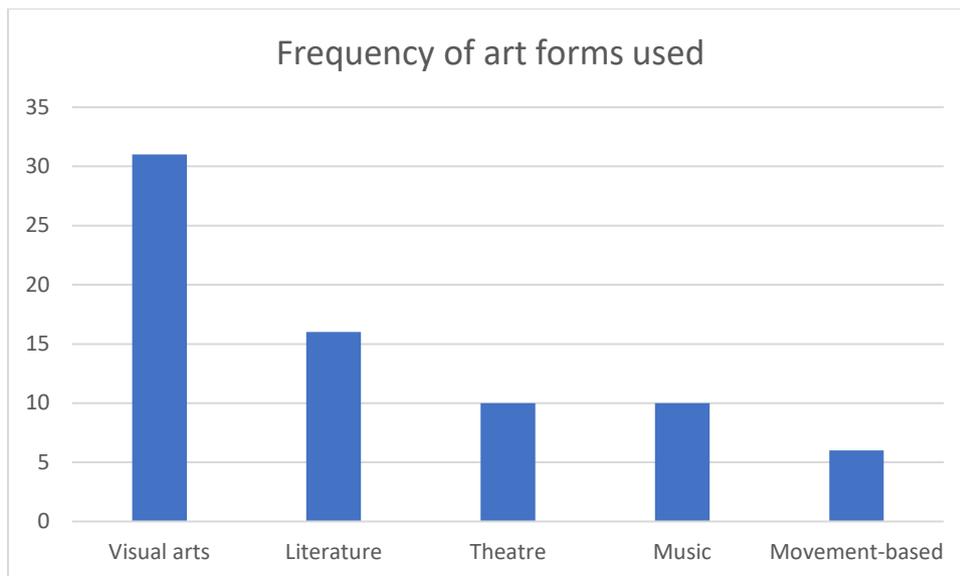


Table 5. Distribution of art forms across the case study sample of 47.

For the sample of ten articles subjected to close analysis, synoptic quotes were identified which mapped to the paper’s areas of interest. Inter-rater discussions were held to determine which quotes were most representative of both the topics of the articles and of their contents in relation to the focus of the research. The quotes are listed below in chronological order of publication, illustrating areas of practice together with benefits of bringing arts subject content and practices to healthcare curricula.

- Gordon (2005): ‘The separation of clinical care from the “human sciences” is a professional and social mistake, and the growth of medicine as an economic and rational profession has paradoxically contributed to the social diminution of the body, the very object of its focus’ (p7).
- Rossiter *et al.* (2008): ‘Epistemological and methodological differences between disciplines create barriers that may impede collaborative projects’ (p.277).

- Lo Faso *et al.* (2010): ‘The creative arts can be a vehicle to help conceptualize the lives of patients and tackle complex human experiences with an immediacy and range of responses often lacking in medicine’ (p.346).
- McCabe *et al.* (2013): ‘the value of art in health care lies not just in its aesthetic appeal but also in its ability to facilitate communication that is patient centred’ (p.113).
- Ierardi *et al.* (2014): ‘Educators are encouraged to explore possibilities for learning opportunities that foster the development of clinicians who acknowledge their clients’ sociocultural differences and systemic interactions’ (p.373).
- Klugman and Beckmann-Mendez (2015): ‘understanding the role the arts can play in understanding patient experiences, and how images in nursing and medicine are constructed similarly to images in art (e.g., perspective, time sense, light, and shadow)... observation is the key to diagnosis’ (p.221).
- Kidd *et al.* (2016): ‘participants were significantly more likely to endorse the statements that the observation and interpretive skills involved in viewing visual art are relevant to patient care and that visual art should be used in medical education to improve students’ observational skills, narrative skills, and empathy with their patients’ (p.22).
- Robeson and King (2017): ‘Performable case studies provide a launching point for ethics discussion that can engage, explore, and even challenge multiple viewpoints while minimizing antipathy’ (p.11).
- Atayero *et al.* (2020): ‘Effective engagement (between artists and scientists) could be facilitated by focussing on common goals, similarities between artists and scientists

(rather than merely differences) and the potential positive and innovative outcomes of interdisciplinary collaboration' (p.26).

- Mitzova-Vladinov and Torrents (2020): 'Raising awareness of unconscious and cultural bias can be done by using artifacts from different time periods and cultures' (p.369).

Having looked at year of publication; country of origin; journals; art forms used; and specific analyses within articles, the next sub-section focuses on dance and movement.

## **Dance and Movement**

Five articles from the case study sub-sample engaged with the practices of dance and/or movement, either in the form of healthcare education or interventions. Ai *et al.* (2001) assessed the effect of qigong on rehabilitating mid-life and older patients after cardiac surgery. Qigong combines movement, breathing exercises and meditation, a practice based on different belief systems from conventional health professionals. Qigong challenges a mind-body dichotomy, though Ai *et al.* (2001) note, 'skepticism about qigong usually stems from the suspicion that treatment benefits are due to expectations on the part of the research participants and perhaps of the therapist as well' (p.85).

The next article in the sample dealing with dance and/or movement is not published until 2013. Atkinson and Rubridge (2013), a social scientist and a choreographer respectively, attended a workshop for young children (5-6 years) at a school in the North of England. They argued that wellbeing is embodied and intersubjective, not an individually acquired attribute.

If wellbeing is acquired through physical engagement with others, dance and movement in educational settings can be conducive to wellbeing.

Katz and Khoshbin (2014) describe how, in an introductory exercise for medical students, ‘an abstract sculpture is explored in silence. Taking turns, each person makes a gesture that reflects some aspect of the object and shares it with the rest of the group, who then interpret what they see in the motion. The team then links their gestures to create a fluid movement piece that embodies their collective response to the artwork. The activity requires participants to be present to one another, highlights how a range of perspectives can deepen understanding, and provides an opportunity to discuss the role of nonverbal communication in the hospital’ (p.336). They argue, ‘Art museums offer the opportunity to teach medical students some of the most difficult to reach competencies, including professionalism, communication, teamwork, and empathy’ (p.338). The goal is to train better physicians, with art as a means of doing so, combining visual art appreciation with movement, using medical humanities to improve patient care.

Rova (2017) investigates kinaesthetic empathy within clinical practice. Her research sample includes dancers, dance movement psychotherapists and clinicians. Her research promotes intersubjectivity within clinical contexts. Rova argues, ‘Participants consistently commented on the self-other overlap they experienced during the shared experience of movement and then through their reflective and dialogic meaning making’ (p.168). She further states, ‘Both experienced and non-experienced movers, as well as audience members, were able to tap into their kinaesthetic sense during movement processing in order to understand, or come close to, the experience of another’ (p.168). Rova concludes, ‘Ongoing theorisation of the expressive

and psychosocial properties of our relational moving bodies is essential if we want to avoid a dualist abstraction of the body as a mere backdrop for the mind' (p.171).

Pohjola *et al.* (2020) report on a project in Eastern Finland, enabling older people and their caregivers to engage in music, visual arts and dance: 'The project aimed to enhance physiological, emotional, social, motor and cognitive functioning in the context of art pedagogy' (p.1781). The authors state: 'In creative dance sessions, movement memories were re-awakened through improvisation and instructed movements that were used to enhance body awareness and address physical abilities' (p.1782). Moreover, 'Music, dance and visual arts served as opportunities to recount their life histories in a new way, sometimes even without words' (p.1784). The authors argue: 'Social and healthcare professionals, respectively, also require further education on how to make use of art as part of care and well-being. Thus, dialogue between art pedagogues and healthcare professionals is encouraged' (p.1785).

## **Visual Arts**

This sub-section of the paper covers academic journal articles on a range of case studies, predominantly rooted in the study of visual arts, intended to develop skills and to support sustainable practice in healthcare education and interventions. The case studies are addressed chronologically.

Kidd *et al.* (2016) report on an interdisciplinary workshop, where the object of learning was 'a discomfiting oil portrait' ('Sticky' by Margaret Sutherland) in which a naked woman, crouching and facing away from the camera, has Post-It notes on her body with demeaning

labels such as, 'Sloth,' 'Broken,' 'Poor,' 'Trash' (Kidd *et al.* 2016, e22-e23). The article argues that 'visual art should be used in medical education to improve students' observational skills, narrative skills, and empathy with their patients' (e22) with the art object standing-in for the patient. The article argues, 'the visual arts may challenge clinicians' assumptions about patients and patterns of automatic thinking by making them uncomfortable,' adding, 'More than half of North American medical schools now use visual arts to achieve curriculum goals' (e23). The authors argue that part of the value of the activity is that it encourages health care professionals to consider ways in which patients may feel marked or violated by the clinical encounter (e26).

Schulz *et al.* (2017) report on a case study in Japan, in which creative practice is deployed to mediate ideas of building sustainable development in healthcare. A range of stakeholders, including both clinical and non-clinical postholders, used children's building blocks to represent sustainable healthcare, thereafter explicating their work through storytelling. The value of the exercise is that, 'the use of artistic tools and methods enables participants to expose their understanding of the object under consideration in a comprehensive way. Particularly emotional views on the object can be expressed. Additionally, artistic expressions can depict complexity in an understandable way' (p.1916). Using art to mediate ideas enables the inclusion of emotion, broadening the articulation from the conventions of rational, scientific discourse. Schulz *et al.* (2017) argue, 'possible answers are already present in the unconscious minds of the creators. The answers first come through after an intense and intuitive interaction between toolkit and creator. Such intuitive practice is characterized by unawareness and improvisation while the given task is being carried out' (p.1916).

In terms of how the case study has broader implications, ‘Serious play in idea creation requires a physical toolkit such as building blocks to set up the interaction or communication with the goal of creation. Without the reification of ideas in a physical model, the outcomes of the playful improvisation might not be retained and may be lost before reflection and further discussion’ (p.1917). The physical artefact memorialises the ideas, creating them in physical form and allowing them to be figuratively built upon through narrative explication. In the subsequent evaluation survey, the storytelling was rated higher than the physical modelling, but the former depends upon the latter. The act of building is both literally and figuratively foundational.

An advantage of undertaking an unconventional form of practice is that, ‘Ideas given by participants were equally recognized and no specific voice such as that of male physicians or senior managers dominated the process’ (p.1920). By moving out of any individual’s comfort zone, a democratic space was created in which contributions were valued equally. The case study, forming part of an MBA programme, shows creative practice can positively impact on healthcare in a broad sense, but with a defined aim for the practice being present in the first place, namely the construction of sustainable healthcare.

Adkins *et al.* (2018) undertake an agar art experiment in a microbiology classroom. Students draw patterns onto sheets of paper which can fit into the bottom of a petri dish, then attach bacteria to their patterns, observing how the bacteria grow-on and around the patterns thereafter, producing an additional, embellished creative work in the process. Students who had undertaken the agar art experiment reported more enjoyable educational experiences, expressing ‘greater confidence in their personal efficacy as scientists’ (p.1), than a control

group who had not undertaken the experiment. The authors conclude that introducing art into science classrooms can be conducive to enhanced retention in science, technology, engineering and mathematics courses: the agar art experiment engaged students who struggled with more traditional aspects of the curriculum. More broadly, ‘the use of art in a teaching laboratory helps to stimulate imaginative thinking about science’ (p.6). The authors argue that the traditional demarcation between arts and sciences is an academic artefact and that the two areas overlap in practice (p.2). In the course’s final project, ‘teams of students developed hypotheses based on their observations of their art plates along with the knowledge of the organisms’ other physiological characteristics gained during the course of the semester’ (p.6).

Switching to studies where art is used to support healthcare interventions, Humphrey *et al.* (2019), in a Canadian case study, observe eight participants in an ‘Artful Moments’ project, whereby dementia sufferers and their care partners engage in art appreciation and practice. The aim is to create a dementia-friendly environment; supportive communication strategies; and a well-planned activity (p.2343). An interdisciplinary team was required to develop the programme, including art gallery staff, hospital clinical staff and patients. Careful preparatory education was essential for the planning and implementation of the programme. It was originally conceived of as allowing dementia sufferers to continue to be a part of their community, though some of the sessions were in a hospital setting. That said, findings from the study indicated that the location of the sessions ‘did not seem to influence engagement’ (p.2355).

Casey and Webb (2019) present a case study of fourteen women, including mental health service users, who undertook a recovery training programme to support their roles as mental health support workers in Ireland. The participants produced visual representations of their 'perceptions and experiences of learning and recovery' (p.835) while undertaking the programme. The imagery produced in the visual pieces included a caterpillar becoming a butterfly; a horse undertaking a show jumping round; and a kite. The participants described their work to the rest of the group, a process which was facilitated by the authors. They argue, 'pedagogical approaches in recovery programs need to be flexible and sensitive to the diverse learning needs and styles of a range of participants. The lived experience and knowledge that participants bring to such programs as service users/service providers must also find expression and dialogue... Ongoing scrutiny of pedagogical processes and practice is required to guard against adopting taken-for-granted approaches and discourses that maintain power differentials, constrain alternative perspectives, and stifle the coproduction of knowledge' (p.843). The programme facilitated the democratic coproduction of knowledge, expressed through the production of visual art.

Moving forwards, and returning to arts practices informing healthcare education, Mitzova-Vladinov and Torrents (2020) report on the application of Visual Thinking Strategies (VTS) with a group of more than thirty nurses, physicians and executives (p.368), though their article is a position paper as well as a case study, arguing for the value of VTS, an approach which involves asking three questions in the presence of a work of art:

- What is going on here?
- What do you see that makes you say that?
- What more can you find? (p.368; see also Yenawine 2013)

The authors argue for the approach because of, ‘the need to develop interpersonal skills of health care professionals to be able to deliver respectful and compassionate patient care.

Visual thinking strategies (VTS) is a student-centred methodology using facilitated art-based discussions to create inclusive discussions’ (p.367).

In evaluation surveys, students noted the approach helped them understand how to hone their observational and listening skills. The approach also had merit with regard to collaborative practice; helped with patient interviewing skills; and improved overall communication skills (p.367). Students also stated that the application of visual thinking strategies, ‘improved their attention to detail, respect for the opinions and views of others, self-awareness of personal views, and improvement in self-reflection’ (p.368). One of the values of this kind of learning activity is that it takes place on a level playing field where the majority of participants cannot claim expertise (p.368).

Cham *et al.* (2020) describe an interdisciplinary learning intervention at the University of Melbourne, directed primarily at postgraduate optometry students and intended to enhance communication, interpersonal and teamwork skills. Groups of students visited a museum, selected an object that related to professionalism and then described the object and their rationale for choosing it.

The traditional curriculum at Melbourne focused on the acquisition of technical competencies and knowledge (p.962). In evaluation surveys, 80% of students stated that museum-based learning was ‘beneficial and enjoyable’ (p.965) and that it ‘seemed to stimulate their

creativity and cultivated new ways of thinking' (p.966). Students also said the group work was 'atypical, challenging, refreshing, and thought-provoking' (p.967). One group chose a colourful and enlarged music score designed to help musicians with failing eyesight; another selected a rickshaw with a white man as passenger and non-white men pulling it, using the object to talk about discrimination and racism in professional contexts (p.966). The authors state, 'students emerged from the program with the intent to transfer their learning to their future practice' (p.962).

Overall, the case studies indicate the potential value of democratising knowledge because no one participant could claim special expertise in the context of visual arts workshops.

Furthermore, being removed from the traditional learning environment had the capacity to broaden learning, stretching it beyond the acquisition of technical knowledge. Only one of the case studies found that a change of location was not a determinant of the learning that took place, but this was with a specific cohort including dementia sufferers (Humphrey *et al.* 2019). The case studies also enable the development of non-technical knowledge and skills, important for professional practice, where interaction with human subjects in need is a near-constant. The case study of Adkins *et al.* (2018), in which artistic practices with bacteria in a petri dish appealed to students who were less at ease with the technical aspects of their programme, runs the risk of visual arts interventions being perceived as remedial, but in most cases the introduction of visual arts workshops into the curriculum or as an adjunct to the curriculum comprised an enhancement of skills rather than a compensation for technical insufficiency.

## **2020 Articles**

A sample of articles published in the last year of this review (2020) gives a sense of current research and practice in the field and of possible future directions.

The most noticeable quality of the 2020 sub-sample (n.10 articles) is its eclecticism. For example, Haidet and Madigosky (2020) use the analogy of jazz musicians to analyse the interprofessional practice of a range of healthcare professionals, while Cham *et al.* (2020) analyse optometric education, especially as it pertains to the development of soft skills developed through a case study museum visit to enhance self-reflection. In other articles, Parsons *et al.* (2020) present Dance Movement Psychotherapy as a potential treatment for depression; Theorell *et al.* (2020) explore the fate of choirs in Scandinavia in the pandemic, whose singing activities and social interaction were unavoidably halted; and Lewis (2020) presents the novel concept of ‘planetary health humanities,’ linking the humanities with wellbeing. Atayero *et al.* (2020) present an arts-based approach co-designed by academics and artists to support mental health in the university and beyond, involving students creating their own art pieces.

The other four articles in the 2020 sub-sample could arguably be grouped together under broad themes to do with the development of health professionals through arts-based interventions and, relatedly, the field of medical humanities. Pohjola *et al.* (2020) examine educators’ experiences of arts pedagogy in healthcare contexts. Lijoi and Tovar (2020) analyse ‘Narrative Medicine,’ developing empathic skills in health professionals, conducive to patient care, communication skills and professionalism, while Mitzova-Vladinov and Torrents (2020) adopt the Visual Thinking Strategy approach (Yenawine 2013) for the development of healthcare professionals, supporting communication skills and teambuilding

through facilitated discussions on art. Finally, Sellberg *et al.* (2020) examine the medical humanities in one university in Australia in the post-pandemic phase, arguing for the importance of intersections between medicine and other disciplines.

The 2020 sub-sample illustrates both possibilities and limitations. On one level the field is fecund, with a range of methodologies and areas of focus, in articles engaging with a range of stakeholders, from students to healthcare professionals to patients. On the other hand, the field lacks an obvious, unifying direction. While research is clearly increasing in volume, it has yet to establish significant, common areas of interest, methodology and audience. A more formal community of academics, practitioners and other stakeholders could potentially establish a common research agenda.

## **Conclusion**

This paper surveys ninety-one academic journal articles on arts and healthcare. The paper reports on a sample of forty-seven case studies, from the original sample of ninety-one, in which visual arts were the most commonly used art form. The paper creates additional sub-samples dealing with dance and movement, with visual arts, and with articles published in 2020.

Engagement with arts, as described in the articles, is conceptualised, repeatedly though not universally, as a means of enhancing the clinical skill set, especially as it concerns relating empathetically; challenging the mind-body dichotomy; and enhancing narrative, communication and diagnostic skills. Engaging with the arts can also blur the line between expert and novice, democratising the production of knowledge on one hand (Casey & Webb

2019), though, on the other hand, the blurring of the distinction between expert and novice can lead to authoritative knowledge being subdued and relegated, thus potentially compromising effective learning and teaching and effective clinical practice.

The evidence gathered for this paper suggests that inclusion of arts-based practices in clinical curricula is conducive to intersubjectivity and the experience of a self-other overlap (Rova 2017). The presence of arts subjects in clinical curricula can challenge the mind-body dichotomy (Gordon 2005) by bringing the arts into learning contexts where they are pedagogically unorthodox. Studies in the arts can also be conducive to the development of clinicians' skill sets including observation skills, diagnostic skills, narrative skills and empathy: in Kidd *et al.* (2016), a discomfiting portrait (Margaret Sutherland's oil on linen painting, 'Sticky', in which a naked and kneeling person is covered in post-it notes containing words such as 'poor,' 'trash' and 'shame') designed to trigger provocative conversations, was shown to healthcare students and practitioners. The same article also argues for the presence of such activities in the medical curriculum rather than as an adjunct to the curriculum. Arts can exemplify and illuminate life stories in ways that can enhance both healthcare curricula for students and medical interventions for patients.

With specific regard to dance and movement, it can comprise a form of medical treatment, supporting, for example, the treatment of older people and their carers (Pohjola *et al.* 2018). At the same time, dance and movement can support the development of motor skills, the construction of trust and the broadening of educational experiences across the disciplines, as found in the observation studies. Moving from healthcare practice to healthcare education, Katz and Khoshbin (2014) report on an initiative for medical students, transposing responses

to an abstract sculpture into movement, developing communications skills, a valuable asset in clinical contexts where difficult or complicated information may need to be conveyed.

The limitations of this paper include the case studies within the sample, which are limited methodologically because they are not readily transferable to other contexts. Future studies could take more explicitly theoretical approaches to the inclusion of arts-related subjects in clinical curricula. Evaluative approaches could also be fruitful, indicating how the presence of arts-related content may be enhancing for both students and clinical practitioners.

Furthermore, there are opportunities to undertake additional research on music and drama as art forms relevant to the development of healthcare curricula: previous studies have explored using drama in mental health nurse education (Wasytko & Stickleby 2003); using theatre to enhance communicative skills development in healthcare (Middlewick *et al.* 2012); and drama in nursing education (Arveklev *et al.* 2015, 2018). Studies have also linked listening to music to enhanced acquisition of new knowledge and psychological capacities (Bojner Horwitz *et al.* 2021). In addition, more finely-honed database searches could be undertaken, to focus on papers where arts are used to enhance healthcare curricula, excluding research on healthcare practice. The final sub-section of this paper summarising articles published in 2020 indicates the research field is fertile and eclectic but arguably lacking in an overall sense of direction and purpose.

This paper suggests the interest in bringing arts-based practices to medical curricula is growing, with notable growth over the last decade, as measured by academic journal paper publications. As interest in this area grows, a sense of the most efficacious strategies for bringing arts to healthcare education is beneficial and is a process to which this paper can contribute. The research further indicates that certain art forms, most notably visual art, are

more likely to be used for healthcare, but that other art forms, specifically dance and movement, have potential which is not yet fully realised, creating ongoing opportunities for both practitioners and researchers.

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